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4th International Symposium – cum – Workshop
28th November to 4th December 2004, Talca, Chile

Alcido Elenor Wander and Hans Hemann (eds.)

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Foreword

This proceeding is a collection of papers presented at the 4th International Symposium-cum-Workshop for 'Red Cientifica Alemania Latinoamerica (RECALL) on International Scientific Cooperation in Higher Education: Participation, Partnership and Perspectives held in Talca, Chile from November 28 to December 4, 2004.

We would like to express our sincere appreciation and gratitude to our colleagues from the University of Göttingen, the University of Kassel, the University of Marburg, and the University of Talca, for their valuable assistance in serving on the steering and organizing committees as well as in working as supporting staff. Without their work, the success of the Symposium-cum-Workshop and the publication of this book could not be materialized. We would also like to thank the Journal of Agriculture and Rural Development in the Tropics and Subtropics for publishing our proceeding.

We are also greatly indebted to the German Academic Exchange Service (DAAD) and the German Ministry for Economic Co-operation and Development (BMZ) for financially supporting the symposium as well as the publication.

Alcido Elenor Wander
Hans Hemann
Editors

Preface

The goal of this proceeding, funded by German Academic Exchange Service (DAAD) and the German Ministry for Economic Co-operation and Development (BMZ), was to assist participants to establish or strengthen international scientific cooperation in Higher Education as a basis for the sustainable development of the network.

The proceeding was published in "Journal of Agriculture and Rural Development in the Tropics and Subtropics" University of Kassel, Germany. All of the topics and issues were revised versions of those presented in the 4th International Symposium-cum-Workshop on "International Scientific Cooperation in Higher Education: Participation, Partnership and Perspectives" held from November 28 to December 4, 2004 in Talca, Chile.

These experiences and research works were conducted in Germany and Latin American countries (Argentina, Bolivia, Brazil, Chile, Costa Rica, Cuba, Guatemala and Mexico).

Four keynotes were provided to all participants.

The first keynote address "The Experience of Academic Cooperation for Accreditation and Internationalization" was delivered by Prof. Dr. Alvaro Rojas Marin who has a lot of experience in higher education as professor and rector of University of Talca (Talca, Chile).

The second keynote address "International Alumni Network and the Scientific-Academic Exchange and Cooperation: Perspectives and Challenges" was given by Dr. Anne Sperschneider from German Academic Exchange Service (DAAD) (Santiago, Chile).

The third keynote address "Partnership of the University of Talca and the University of Applied Sciences Osnabrück" was provided by Prof. Dr. Hans R. Friedrich (University of Applied Sciences Osnabrück, Germany).

And the fourth keynote address "Academic and Scientific Cooperation: South-South and South-North Perspective" was presented by Marlene Vargas, Coordinator of the Latin American Program CONICYT of the Chilean Government (Santiago, Chile).

Following the articles are experience reports and scientific works which have been presented by Latin American Alumni in the Workshop. The Workshop was divided into 4 working groups (sessions) according to the topics. The four major topics were: (1) International Cooperation for Improving Joint Degree Programs in Higher Education, (2) International Cooperation for Improving Research and Research Management, (3) Extension and Technical Cooperation, and (4) Higher Education Management.

Finally, as supplement, additional contributions about networking and evaluation of the RECALL-Network have been provided.

The Editors
April, 2005

Table of Contents

OPENING CEREMONY

WELCOME ADDRESS

Paul Resch[1]

[1] *Advisor, Political Section of the German Embassy to Chile*

Distinguido señor Rector de la Universidad de Talca, Profesor Alvaro Rojas
Estimadas señoras y señores directores de los institutos y universidades participantes
Estimadas profesoras y profesores
Señoras y señores:

Con mucho agrado he aceptado la invitación de la Universidad de Talca a pronunciar unas palabras de saludo con motivo de la inauguración del Simposio Internacional, ya que Chile constituye uno de los temas centrales de nuestra cooperación científica en toda Latinoamérica y es el país con el que mantenemos las relaciones más intensas en muchas áreas del intercambio académico. Hoy en día, muchos científicos dan continuidad a un intercambio que sigue la tradición de hombres tan importantes como Rudolf Amandus Philippi.

Si bien el intercambio estudiantil y científico no es un fenómeno de la modernidad, en la actualidad ha adquirido otra dimensión y significado. Las montañas y los mares – y ésto nuestros amigos sudamericanos lo saben mejor que nosotros- hoy día ya no representan límites o desafíos tal como lo eran para los viajeros y exploradores de los siglos pasados. En nuestra era de la globalización, casi ya no existen límites físicos para el creciente intercambio de personas y conocimientos.

Los desafíos del futuro actualmente más bien residen en el campo de la competitividad económica y científica de un lugar. Un centro económico, competitivo a alto nivel, a largo plazo hoy día resulta inpensable sin la formación de los "recursos intelectuales" necesarios. Por ello, es necesario más que nunca asegurar y mejorar el atractivo y la calidad de cada uno de los centros de estudios, tanto para los estudiantes nacionales como para los extranjeros.

Es precisamente la política de educación que, en conjunto con la economía y la ciencia ha asumido esta temática. En este contexto estoy pensando en la creación de carreras en idiomas extranjeros, el otorgamiento de títulos dobles o, a modo de ejemplo, también en los inmensos esfuerzos de crear un espacio universitario europeo a través del proceso de Bologna.

Cabe señalar la atención que el Gobierno Federal alemán ha prestado desde hace años al incremento del número de estudiantes extranjeros en Alemania. Gracias a las inversiones en ciencia e investigación y a la mejora en cuanto a calidad y atractivo de las universidades alemanas, éstos han aumentado desde el 5,5% de estudiantes extranjeros en el año 1997 al 8,4% en el 2003. Las cifras publicadas ahora en noviembre en Nueva York por el Institute of International Education sobre estudiantes extranjeros en los Estados Unidos, que han bajado en un 2,4% registrando la baja más fuerte en los últimos 30 años, han recibido gran atención en los ámbitos de la educación y la política. Por qué? Porque una carrera o un doctorado en el extranjero no dejan de tener significación para los posteriores nexos con un país y su cultura. Los lazos humanos finalmente son fundamentales para las relaciones entre países.

No debemos cerrar los ojos ante el hecho que el querer atraer mentes listas naturalmente nos pone en una situación de competencia. Debemos entender esta competencia en el área de la formación e investigación como desafío y oportunidad. Oferta

y demanda pasan a ser los factores de mercado que determinan más y más incluso los "bienes de conocimiento". Por ello debemos celebrar que la cooperación internacional en el ámbito de la formación adquiera cada vez más importancia. Por interés propio, ya nadie puede renunciar a una orientación e interconexión internacional. En la era de la globalización, sólo tendrá éxito quien entienda la transferencia científica como intercambio y no como camino de una sóla vía; la historia nos ha enseñado que los sistemas científicos cerrados adolecen de una falta de fuerza innovadora después de cierto tiempo. De este modo, la competencia y cooperación internacional en el ámbito de la formación se pueden entender como dos caras de la moneda que invertimos en nuestro futuro.

Ante el trasfondo de estas reflexiones, las relaciones chileno-alemanas de los últimos años han experimentado una evolución sumamente satisfactoria con la conclusión de numerosos convenios en el área de la cooperación científica y con el creciente número de cooperaciones universitarias. Quisiera señalar por ello la subscripción de un convenio entre el Servicio Alemán de Intercambio Académico y el Consejo de Rectores de las Universidades Chilenas, así como un convenio de cooperación entre el Servicio Alemán de Intercambio Académico y la Universidad de Chile que han sido un notable aporte para seguir profundizando las largas y buenas relaciones en el ámbito de la cooperación académica y científica de nuestros países. Sin recurrir a estadísticas, me permito constatar que las cifras del intercambio bilateral estudiantil y científico en casi todas las áreas presentan una tendencia al alza. Quisiera aprovechar esta oportunidad para expresar mis agradecimientos a nuestros socios chilenos por su interés en la cooperación con Alemania. La Universidad de Talca está llevando a cabo un exitoso trabajo de cooperación con el Servicio Alemán de Intercambio Académico y con universidades alemanas en el marco de un consagrado programa de ingeniería.

Quisiera alentarlos a ustedes a seguir buscando y fortaleciendo el intercambio y solicitarles que estimulen a los jóvenes de ir a Alemania o de venir a Chile. En resumen: la base para una convivencia exitosa la siguen creando las personas que han aprendido a mirar más allá de los propios límites y que siguen las palabras de Johann Wolfgang von Goethe:

> *"La ciencia y el arte constituyen parte del mundo y hacen desaparecer las limitaciones de las nacionalidades".*

Muchas gracias.

WELLCOME ADDRESS

Alvaro Rojas Marin[1]

[1] *Rector, University of Talca, Chile*

Sean todos Uds. muy bienvenidos en nuestro país y a esta actividad organizada por el Consorcio Alumni – Nachkontakt de las Universidades de Göttingen, Marburg y Kassel.

Damos a todos los integrantes de la red, a los profesores de las Universidades alemanas que han fundado este grupo de trabajo, a los representantes de la embajada, del DAAD, y del Instituto Goethe la más cordial bienvenida a nuestro país.

Nos reunimos hoy día en el Museo Nacional de Bellas Artes, edificio que fuera construido hace casi un siglo con motivo del primer centenario de la independencia nacional y que hoy es el centro neurálgico de la plástica nacional, además de albergar la principal colección pictórica de nuestro país.

Iniciamos nuestro encuentro en esta ciudad, donde también nuestra Universidad tiene un Campus para actividades de postgrado, una semana después de concluida el encuentro de APEC, foro que reuniera a los principales presidentes de los países del Asia - Pacífico.

La declaración de esta cumbre realizada en Santiago de Chile aboga por la mejor integración económica entre los países, los esfuerzos conjuntos por promover un ambiente de paz en el mundo, el combate a la extrema pobreza y la lucha frontal contra el narcotráfico y el terrorismo.

Sin lugar a dudas que tanto la integración económica, como la promoción de la paz en el mundo requieren del trabajo integrado e intercultural de la comunidad mundial. Todo esfuerzo en este sentido contribuye a su concreción.

Nuestra Red ReCALL, sin lugar a dudas, realiza su contribución en este sentido, al aportar efectivamente al trabajo conjunto al mejor entendimiento entre nuestros pueblos, dándole además sustento cultural, académico e intelectual a relaciones, que pensamos, no pueden estar estrictamente basadas en la materialidad de los intercambios comerciales.

Para la Universidad de Talca es un verdadero honor servir de anfitriona de este simposio internacional, tanto por la importancia aludida, como también por que nos asiste el convencimiento que el trabajo académico y profesional moderno se estructura sobre la base de redes de trabajo yt cooperación, más aún, si a éstas converge la pluralidad de los países que hoy día se han dado cita.

Recall ha demostrado su capacidad de operar eficientemente en nuestro continente, toda vez que ha organizado ya 4 encuentros a los que se han integrado participantes de prácticamente todos los países latinoamericanos.

Durante la jornada de esta semana tendremos diversas oportunidades para comentar algunos aspectos relativos al sistema de educación superior del país, así como también del sector silvoagropecuario chileno, razón por la cual intentaremos responder vuestras consultas estos días.

Bástenos señalar en esta ceremonia, que la Universidad de Talca, es una de las 16 Universidades Públicas de Chile, que cuenta con una matrícula de 6000 estudiantes de pre y postgrado. Es una de las 10 instituciones de educación superior acreditadas en nuestro país y sus características principales dicen relación: con la calidad de sus profesores e investigadores, la calidad de sus instalaciones, su moderna tecnología y una actitud abierta al cambio y la innovación.

El programa de la cita ha puesto sus énfasis en los “procesos” de cambio y reforma en el sistema de educación superior que están ocurriendo tanto en Alemania y Europa al

tenor del denominado Acuerdo de Bolonia, como los procesos que se han iniciado en América Latina.

Nuestros países, crecientemente integrados a la sociedad del conocimiento y de la información, operando cada vez en escenarios comerciales y culturales globalizados, requieren urgentemente de adaptaciones en sus instituciones, particularmente en sus sistemas universitarios.

Cambios y adaptaciones que dicen relación tanto con la estructura del currículo, sus contenidos y metodologías de enseñanza, que permitan conseguir objetivos relevantes en cuanto a la formación de competencia para la nueva sociedad, una educación que promueva la capacidad de autoaprender, un sistema que haga posible la movilidad estudiantil y profesional y finalmente sistemas de enseñanza acreditables, que aseguren standares de calidad comparables.

La interacción en la sociedad global ha producido cambios en todas las instituciones de la sociedad, en todos los sectores de la economía. La Universidad no está ajeno a ello.

Además, resulta fácil comprender que estos temas son de particular relevancia paras ciencias agropecuarias y forestales, toda vez que las economías agrarias de nuestros países, sin excepción se encuentran en mayor o menor medida insertas en complejos mercados internacionales y operan en sistemas productivos de una alta fragilidad ambiental.

De estos temas conversaremos estos días, revisaremos experiencias interesantes que están ocurriendo en nuestros países, para que de esta manera podamos cumplir con uno de los principales objetivos de la ReCALL, cual es, el de servir de un espacio de intercambio, de colaboración y de entendimiento entre los egresados vinculados a las ciencias de la agricultura, de la ganadería y del bosque.

Al concluir estas palabras, quisieramos agradecer una vez el notable esfuerzo que realizan las Universidades de Göttingen, Kassel y Marburg por sustentar esta red, así como también el permanente apoyo que tanto la red, como sus integrantes reciben del Servicio Alemán de Intercambio Académico. Agradecemos también a los panelistas que hoy nos acompañan y que han acogido nuestra invitación de participar en las distintas etapas del Taller y al Milán Ivelic, Director del Museo Nacional de Bellas Artes, quien una vez acoge a la Universidad de Talca en su casa, para organizar esta relevante ceremonia.

Les deseamos una grata estadía en éste país con forma de espada, que tiene a la Cordillera de los Andes, como su columna vertebral, a un Océano Pacífico que lo baña en sus casi 5.400 kms de extensión norte – sur.

Bienvenidos a la tierra de Pablo Neruda y Gabriela Mistral.

Muchas Gracias.

SEMINAR OPENING

ACREDITACIÓN E INTERNACIONALIZACIÓN DE LAS UNIVERSIDADES: UN NUEVO DESAFÍO

Pilar Armanet[1]

[1] *Director of Higher Education Ministry, Chile*

Lo nuevo y lo viejo

Desde sus inicios la ciencia ha sido un fenómeno global y acumulativo. Lo que ha reconocido fronteras y propietarios han sido las aplicaciones de dicho conocimiento en el terreno de la producción y la tecnología pero la ciencia ha sido desde su génesis un patrimonio de la humanidad.

Los científicos y los académicos han privilegiado, en sus preferencias para hacer ciencia, el espacio en el que existe el ambiente intelectual y material necesario para satisfacer su capacidad de trabajar, en contacto con y en referencia al trabajo y el avance de sus pares. El ámbito universitario que ha sido el espacio preferente para el desarrollo de la ciencia y el quehacer científico la internacionalización ha sido la norma y no la excepción.

Si bien la ciencia ha sido como señalábamos un espacio de vocación universal, la internacionalización universitaria de hoy tiene un sello completamente distinto. Por una parte, el conocimiento ha dejado de ser en una aventura por entender y descubrir para convertirse en una actividad con directa significación económica.

De un mundo en el que la jerarquización internacional de los países estaba relacionada con el tamaño de su territorio, la disponibilidad de recursos básicos, la población y su cercanía o lejanía de los centros de consumo, hemos transitado hacia una estratificación basada en la capacidad de generar y utilizar el conocimiento integrado tanto a la producción de bienes físicos en procesos crecientemente sofisticados, como en la generación de servicios y procesos donde la inteligencia es un elemento central. En ese entorno la universidad como espacio en el que se genera conocimiento adquiere una dimensión distinta, tanto por la velocidad en el desarrollo de la ciencia y su expresión en los procesos productivos, como en la conciencia del valor económico del conocimiento científico.

La economía del conocimiento exige personas mejor formadas, nuevas competencias generales y específicas ello ha incrementado sistemáticamente la demanda por mas educación. Las Universidades han debido transitar en un período histórico relativamente corto desde un diseño selectivo y elitista a uno masivo e incluyente.

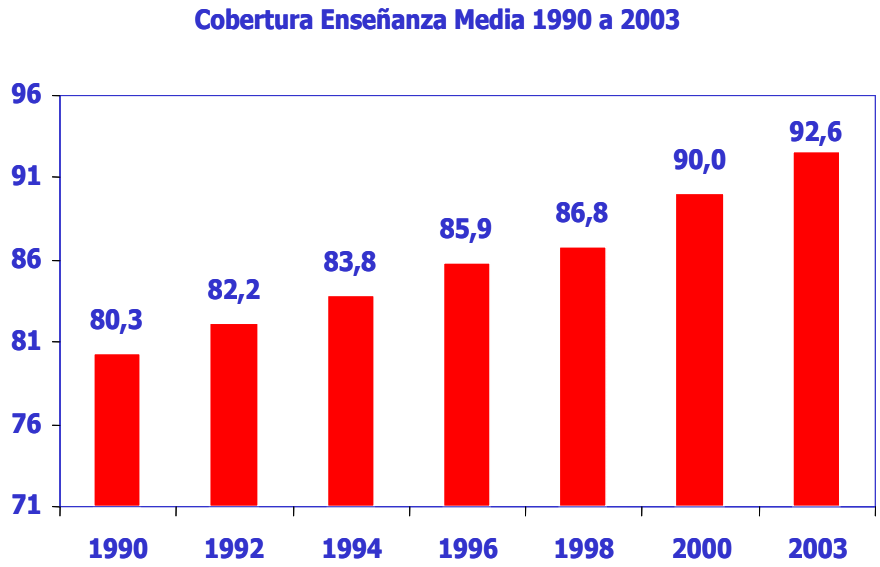
Este proceso, de transformación de las viejas instituciones ha sido acompañado del surgimiento de nuevas universidades que, alentadas por esta demanda educativa creciente, han integrado a su diseño institucional un significado eminentemente económico en el que los conceptos de rentabilidad y mercado coexisten con las visiones de función social que han inspirado por largos siglos el quehacer universitario.

Es en este contexto complejo en el que quisiéramos insertar nuestras reflexiones sobre internacionalización de la educación superior y sus efectos para las instituciones de educación superior chilena.

La educación superior chilena

Expansión de la matrícula

El año 2004 Chile consagró en su legislación el compromiso de entregar a todos los niños chilenos doce años de escolaridad, coronando con ello un sostenido esfuerzo por ampliar la cobertura y la retención en la enseñanza básica y media. A ello, se agrega una profunda reforma de los currículos de enseñanza y la ampliación de la jornada escolar para lo cual han debido realizarse inversiones muy significativas en infraestructura, bibliotecas, computadores, libros y útiles escolares.



Encuesta Casen. Ministerio de Planificación y Cooperación

- En 1990 había 240.000 jóvenes cursando estudios superiores, en el año 2004 más de medio millón de jóvenes y niñas chilenas estudian en programas de pre y postgrado en universidades, institutos profesionales y centros de formación técnica.
- Un 37.5% de cobertura entre los jóvenes de 18 a 24 años.
- Según la proyección de población de los organismos internacionales, el año 2012 seremos unos 17 millones 400 mil chilenos, de los cuales 2 millones tendrán entre 18 y 24 años.
- En el año 2012, para el Bicentenario de la República de Chile un millón de estudiantes estarán cursando estudios postsecundario.

Expansión y diversidad de las instituciones que imparten educación superior

La expansión de la matrícula ha sido causa y efecto del crecimiento y diversificación de la oferta educativa.

A partir de la promulgación de la Ley Orgánica Constitucional de Enseñanza en 1980 se autorizó en Chile la constitución y gestión de instituciones de educación superior privada. Ello motivó una ampliación y diversificación acelerada de la oferta en los diversos sectores: Universidades públicas y privadas, tradicionales y nuevas, Institutos

Profesionales y Centros de Formación Técnica, todos ellos compitiendo por captar a los egresados de la educación media que aspiran a continuar estudios superiores.

N° de Instituciones de Educación Superior 2004

UNIVERSIDADES CONSEJO DE RECTORES	25
UNIVERSIDADES PRIVADAS	38
INSTITUTOS PROFESIONALES	46
CENTROS DE FORMACIÓN TECNICA	116

En los cuadros siguientes se resume esta diversidad institucional y el número de estudiantes matriculados.

Matrícula por tipo de Institucion

	1990			2003		
TipoInst	Hombres	Mujeres	Total	Hombres	Mujeres	Total
Centro de Formación Técnica	40.542	37.232	77.774	30.149	31.921	62.070
Instituto Profesional	15.791	17.743	33.534	60.926	40.748	101.674
Universidad Tradicional	65.518	46.675	112.193	127.663	119.087	246.750
Universidad Privada	12.153	7.356	19.509	77.098	79.522	156.620

Desafíos de la Educación Superior chilena en un sistema global

Acreditación

La expansión de la matrícula y la diversidad de instituciones de educación superior, nos permite afirmar que contaremos con más recursos humanos calificados en los años por venir. Sin embargo no es posible afirmar con igual certidumbre que recibirán una educación superior de calidad.

Existe un amplio consenso en Chile respecto a que el enorme esfuerzo realizado por las personas y el país en su conjunto por expandir la cobertura de la educación superior no puede hacerse a costa de rebajar su calidad.

Por ello, resulta fundamental contar con mecanismos efectivos y confiables que instalen una cultura de mejoramiento continuo de la actividad docente y de investigación y que sirvan al mismo tiempo para orientar a los jóvenes en sus decisiones sobre donde estudiar y a los empleadores respecto de la calidad y pertinencia de los programas ofrecidos.

Asimismo, en un mundo global, es imprescindible ofrecer y demandar elementos objetivos de comparación entre universidades, carreras y programas para fomentar la movilidad, el reconocimiento mutuo de títulos y grados y garantizar la fe pública respecto de la idoneidad de la formación de los profesionales.

Por ello me parece estratégico el proyecto de ley de acreditación que está en discusión en el Parlamento cuyo objetivo central es institucionalizar un sistema nacional de aseguramiento de la calidad de la educación superior.

A partir de 1999, con la creación de la Comisión Nacional de Acreditación de Pregrado, (CNAP) organismo de carácter experimental y asesor del Ministro de Educación, se ha avanzado mucho a través de procesos voluntarios de acreditación institucional, de carreras y programas.

- La Comisión Nacional de Acreditación de Pregrado (CNAP) ha llevado a cabo una exitosa labor. institucional. Son 59 las instituciones de educación superior que se han incorporado a esta iniciativa,13 Universidades ya han sido acreditadas.
- Actualmente se encuentran en acreditación más de 500 carreras. A diciembre de 2004, 171 han finalizado su proceso, 160 de las cuales han obtenido su acreditación.

Lo mismo puede afirmarse para la Comisión Nacional de Acreditación de Postgrado, que también ha permitido que estos programas estratégicos sean sometidos al juicio de expertos. Estas iniciativas han permitido introducir una visión moderna de regulación de la calidad, en la cuál las instituciones de educación superior aceptan e incluso promueven la evaluación de sus carreras. Se entiende que estos mecanismos, lejos de ser una amenaza para la autonomía educativa, son una real oportunidad de mejorar el desempeño institucional y de brindar el servicio educativo que los estudiantes y el país se merecen.

Constituir un Sistema Nacional de Aseguramiento de la Calidad es una meta que debemos alcanzar. Esta es una garantía de que se cumple con los estándares requeridos, pero también es una respuesta a una creciente exigencia de transparencia de la sociedad, que desea que se rinda cuenta respecto de las inversiones públicas y privadas. Pero adicionalmente hay otra dimensión en juego: esta "garantía de calidad" es también un requisito para poder participar activamente de las múltiples oportunidades de alianzas que se abren con la globalización.

Reforma curricular

La creciente integración de Chile en el concierto internacional, con la próxima concreción de tres acuerdos comerciales, es un hecho de una importancia superior. No cabe duda que estos acuerdos dibujarán otro país que el que conocemos en las próximas décadas, abriendo posibilidades inéditas de desarrollo económico y social, y también generando nuevos desafíos.

Uno de ellos refiere precisamente al tipo de formación de pregrado que nuestras universidades ofrecen y a las posibilidades de armonizarla con aquella que desarrollan nuestros (ahora) socios del Norte. Como es sabido, los países de la Unión Europea decidieron hace ya unos años en Bolonia avanzar hacia un sistema de equivalencias entre sus estudios superiores y se fijaron un plazo: contar con dicho sistema operativo hacia el año 2010. Nuestra educación superior no puede estar ajena a este proceso, y corresponde que se le dé una respuesta común, como sistema nacional, definiendo como participará Chile en esta expresión tangible de la integración. Se podrán definir unos u otros plazos, unos u otros mecanismos, es un debate por realizar con las comunidades académicas, pero difícilmente podrá sostenerse que no se reaccione ni se busquen caminos para sumar a nuestras academias, como conjunto, a estas poderosas alianzas globales.

Así, por distintas vías, la integración acelerada de Chile en el mundo presiona con fuerza hacia el mejoramiento de la calidad de nuestra educación superior.

El necesario cambio de la formación de pregrado tiene diversas implicancias. Me interesa subrayar dos de ellas. Una refiere a la duración: no es posible ni conveniente seguir extendiendo nuestras carreras profesionales. Se deben diseñar curriculums que logren entregar, en tiempos más acotados, las competencias básicas, en el entendido que los profesionales, más que nadie, deberán seguir perfeccionándose continuamente durante toda su cambiante vida laboral.

Conclusiones

El proceso de internacionalización de la educación superior ha llegado para quedarse. Redes internacionales, grupos empresariales, sedes de instituciones fuera de sus fronteras nacionales, o alianzas entre instituciones a nivel regional o global, son las formas que ha venido adoptando este proceso y que se hacen cada vez más evidentes. Acreditación, información confiable y trato recíproco y sin discriminación son las normas que los Estados deben hacer valer para garantizar a sus ciudadanos la calidad de la educación y la confiabilidad de los títulos otorgados por las instituciones de educación superior sean ellas estrictamente nacionales, regionales o globales.

COOPERACIÓN CIENTÍFICA Y ACADÉMICA ENTRE LA UNIÓN EUROPEA Y AMÉRICA LATINA

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Señor Representante de la Embajada de la Republica Federal Alemana
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Señores Representantes de Universidades Alemanas
Cuerpo Académico Presente, Señoras, Señores

Hoy nos hemos reunido para fortalecer la cooperación científica y académica entre la Unión Europa y Chile gracias a la gentil invitación de la Universidad de Talca.

Existen varios vínculos institucionales que unen a Chile y la Unión Europa en estos ámbitos:

- El tratado de Ciencia y Tecnología y Sexto Programa Marco de Investigación
- El Acuerdo de Asociación entre Chile y La Union Europea
- El Programa de cooperación Birregional con America Latina

Me referiré en primer lugar a un ámbito de gran impacto de nuestra cooperación con América Latina, como han sido los programas en el sector de educación, que fueron diseñados con el objetivo de intercambiar experiencias de ambas regiones del mundo en torno al mejoramiento de la calidad de la educación superior de las futuras generaciones.

En 1999, treinta y dos Ministros Europeos reunidos en Bologna convinieron en la necesidad de dar una expresión comunitaria a las oportunidades de acceso a la educación de todos sus ciudadanos, voluntad que fue plasmada en la llamada Declaración de Bologna. Dos años después, en mayo del 2001, se lanzó oficialmente el proceso de creación de un "Área Europea de Educación Superior" iniciativa que aspira a consolidar los esfuerzos de integración hacia el ano 2010.

Cuáles son las principales ideas del proceso de Bologna?

En primer lugar, la adopción de un sistema europeo de homologación y reconocimiento de los títulos otorgados por las Instituciones de educación Superior de los países de la región. Se trata de desarrollar un sistema de titulaciones comparable y de fácil lectura, de los estudios de pre y post-título que permitan que los ciudadanos usen sus calificaciones competencias y habilidades en toda el área Europea de educación Superior.

Un segundo objetivo es el aumento de la movilidad de estudiantes dentro de la propia Europa como también la atracción de estudiantes de otras regiones del mundo. Los Ministros confirmaron su compromiso con la remoción de todo tipo de obstáculos que impidan el libre movimiento de estudiantes, profesores, investigadores por las Instituciones de Educación Superior del Área. La legibilidad y comparabilidad de los títulos europeos en todo el mundo debe promoverse por medio de la implantación de un marco común de calificaciones, como también, por medio de mecanismos coherentes de certificación de calidad y acreditación.

La tercera columna del proceso de Bologna consiste en forjar un sello de Calidad en torno a la educación impartida por las Instituciones europeas de educación superior, como condición esencial para generar confianza, relevancia, movilidad, compatibilidad y atractivo para los propios estudiantes europeos como para aquellos provenientes de otros países. Los sistemas de certificación de calidad juegan un rol vital en asegurar estándares de alta calidad y en facilitar la comparabilidad de las calificaciones otorgadas por los distintos países. Por ello, se estimula hoy a las Universidades e instituciones de educación superior a diseminar ejemplos de buenas prácticas y a configurar escenarios para la mutua aceptación de mecanismos de evaluación y acreditación de estudios.

Bajo el impulso del proceso de Bologna, el Consejo y Parlamento Europeo recomiendan tempranamente a la Comisión Europea en 1998, fortalecer recursos para promover la cooperación entre Instituciones Académicas, autoridades nacionales de Países Miembros y agencias de certificación de calidad y acreditación así como presentar reportes sobre el progreso del proceso y los programas de cooperación.

Actualmente son alrededor de 15 los programas creados por la Comisión Europea para apoyar el desarrollo del Area Europea de Educación Superior, algunos de los cuáles han sido orientados específicamente a fortalecer el intercambio y apoyo mutuo con Instituciones Académicas de terceros países.

En el caso de Chile, la cooperación de mayor impacto en el sector de enseñanza superior e investigación, proviene de los Programas regionales ALBAN y ALFA especialmente diseñados para América Latina.

El programa ALBAN a ejecutarse entre el 2002 y el 2009 es un programa de becas de estudios de alto nivel de la UE, que permite la movilidad de los estudiantes y profesionales de esta región hacia Europa para estudios de post-grado y doctorados, así como para formación especializada en una amplia variedad de ámbitos. Prevé un presupuesto total de € 75 millones para otorgar alrededor de 3.000 becas sólo en Latinoamérica y en sus dos primeras rondas, 84 profesionales chilenos han sido ya beneficiados.

El programa ALFA (América Latina- Formación Académica) trata de impulsar la cooperación entre los centros de enseñanza superior de ambas regiones con el fin de mejorar la calidad de la educación y promover el intercambio de experiencias y buenas prácticas. En su segunda fase 2000-2005 cuenta con 42 millones de euros para la creación y fortalecimiento de redes de Instituciones de Educación Superior en torno a proyectos de mejoramiento en la gestión institucional y académica, así como de formación científica y técnica de postgraduados y estudiantes de las Universidades participantes. A la fecha Chile es uno de los tres países con mayor participación en proyectos ALFA en la región, llegando a cincuenta las iniciativas donde se incorpora alguna Universidad Chilena, en la mayor parte de los casos, como líder del programa.

Además de los programas regionales en el ámbito educacional, la Unión Europea extiende otras iniciativas a terceros países como Chile:

- La acción Jean Monnet para la implantación de nuevas enseñanzas sobre la integración europea en las universidades y la puesta en marcha de grupos de investigación sobre estos temas en todo el mundo.
- Erasmus Mundus, una iniciativa que busca mejorar la calidad de la enseñanza superior en la Unión Europea y promover el entendimiento intercultural con terceros países, ofreciendo oportunidades de becas para estudios en Masters acreditados como Erasmus Mundus y la promoción de paternariados entre consorcios universitarios Erasmus Mundus y universidades de otros países.

El año 2002 marcó un hito en las relaciones entre la Unión Europea y Chile al firmarse el Tratado de Ciencia y Tecnología que el parlamento Europeo aprobó en junio de 2003. Sus objetivos son fomentar, desarrollar y facilitar actividades de investigación y desarrollo entre la Comunidad y Chile, en los campos científicos y tecnológicos de interés común.

Las actividades de cooperación se realizan basadas en 4 principios que son, el beneficio mutuo, el acceso recíproco a las actividades de investigación y desarrollo tecnológico, el intercambio de la información, y la protección de los derechos de propiedad intelectual.

Además el Tratado da acceso al país al Sexto Programa Marco de Investigación de la Unión Europea, establecido por la UE para sus Estados Miembros, con fondos, que para el 2002-2006, ascienden a 16.270 millones de euros. Chile podría beneficiarse de los 600 millones de Euros que la Comunidad Europea dispuso para financiar la participación de entidades de terceros países en los distintos proyectos de este Programa.

Todo lo anterior sin duda apoyará el aumento en el gasto en investigación y desarrollo tecnológico de Chile, que ascendió a 0,55% en los últimos cinco años, cifra lejana del 2,1% de los países del G-7. También debe permitir superar cifras que hablan que este financiamiento en Chile es principalmente realizado por el Estado con un 68,8%.

La cooperación científica con Chile ya es importante. Más de 46% de los doctorados chilenos de la última década se hicieron en Europa y más del 50% de las publicaciones científicas se han realizado con Europa.

La Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) es el organismo de Gobierno que tiene como misión la implementación y ejecución del Tratado.

Para participar, las universidades, los centros de investigación y las empresas chilenas deberán formar o integrarse a consorcios con empresas o centros de investigación europeos, y postular proyectos en áreas de ciencias de la vida; genómica y biotecnología; tecnología para sociedad de la información; nanotecnología; aeronáutica; calidad y seguridad de alimentos; desarrollo sostenible; y ciudadanos en una sociedad basada en el conocimiento. Será clave que las empresas identifiquen áreas prioritarias de interés común, lo que vislumbramos podría ocurrir especialmente en seguridad alimentaria (relevante para ingresar a la UE) y tecnología de la información.

Además, el programa promueve actividades específicas para la pequeña y mediana empresa, las que pueden presentar proyectos de investigación ajenos a estas áreas prioritarias.

Las oportunidades para las empresas son enormes: les permitirá entender la importancia de la ciencia y tecnología en un mundo global; La Participación en consorcios les generará una red de "socios"; el desarrollo de investigaciones de punta les permitirá contar con información adelantada de lo que "podría venir" en el mercado europeo; en definitiva, las empresas que logren integrarse a este programa ganarán imagen frente al mercado.

El programa @LIS, una acción enmarcada por la Alianza para la Sociedad de la Información, hace también un importante aporte a la cooperación educativa entre ambas regiones.

El desarrollo de la Sociedad de la Información ha sido erigido por la Comisión como principal prioridad para la cooperación con América Latina fomentando el Diálogo político normativo, la generación de redes, y el impulso a proyectos de demostración.

Un aporte importante a la producción académica y científica, es el establecimiento de una red pan-americana de investigadores y científicos que trabajan en conjunto con sus homólogos europeos sobre proyectos de interés común. Chile fue el primer país de América Latina en ser conectado a GEANT, la red avanzada europea de centros

académicos, en un acto que tuvo lugar en Octubre pasado. REUNA, la Red Universitaria Nacional, es responsable de gestionar la red a nivel nacional.

Agradezco a todos ustedes atención.

Muchas Gracias.

KEY NOTES

THE ROLE OF REGIONAL ALUMNI NETWORK PROGRAMMES OF CGKM IN IMPROVING SCIENTIFIC AND ACADEMIC COOPERATION

Michael Kirk [1)]

with contributions of
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1) University of Marburg,2) University of Kassel,3) University of Göttingen

1. Performance

The work of the Consortium of the Universities of Göttingen, Kassel, and Marburg is driven by

- Interdisciplinary,
- Interregionality and
- Internationality

The "Tropenzentrum" at Göttingen University is composed of the following faculties: Agriculture, Forestry, Biology and Geography. ISOS (Institut für soziokulturelle Studien) at Kassel University/Witzenhausen is attached to the Faculty of Ecological Agriculture; ICDC (Institute for Co-operation in Developing Countries) is part of the Faculty of Business Administration and Economics at Philipps-University Marburg.

Key competences of the three centres in alumni networking are manifested in the following:

- Tropenzentrum, Göttingen University: Since 1975, Msc-Programmes are offered in Tropical Agriculture and Forestry with approximately 450 graduates, including more than 300 Alumni from 70 so-called developing countries; 140 of them from Indonesia. Since 1963, about 600 PhD dissertations have been published with developed-centred topics, amongst them 90 from Egypt, 70 from Indonesia, and 50 from Iran.
- ISOS at Kassel University offers post-graduate studies from DCs (three to six months) since 1973 in Witzenhausen, focusing on didactics of higher education, agricultural extension, unistaff development, etc. More than 950 experts participated from more than 70 DCs as well as newly industrializing economies.
- ICDC, Marburg University, offered international master studies in "Co-operation in Developing Countries" from 1964 – 2002. More than 300 students from more than 20 countries participated successfully. From winter term 2005/2006 a new interdisciplinary MA in "Development Issues" will be launched.

Based on its competences in interdisciplinarity, internationality and an interregional focus and long-lasting experience, the Consortium has launched together with its partners four regional interdisciplinary Alumni Networks: GEAR, SEAG, ReCALL, GIAN from 1999 on.

Figure 1: One Consortium –
four Interdisciplinary Regional Networks:

A challenge for Sustainable Development and Cooperation

- **SEAG** (**S**outh **E**ast **A**sia **G**ermany) (2000)
- **GEAR** (**G**erman **E**gypt **A**rab **R**egion) (1999)
- **ReCALL** (**Re**d **C**ientífica **A**lemania **L**atinoamérica) (2001)
- **GIAN** (**G**ermany **I**ran **A**lumni **N**etwork) (2002)

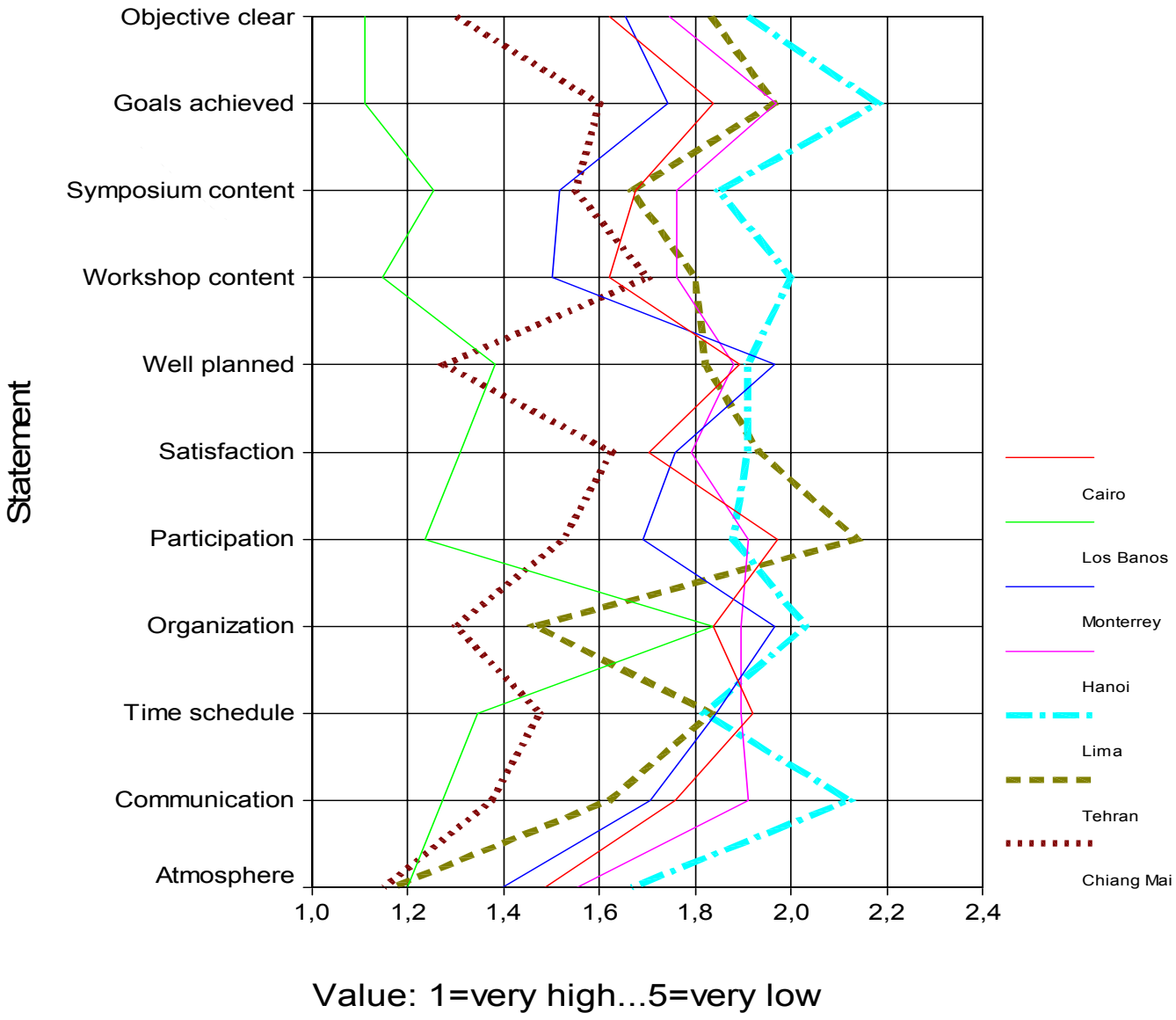
Five years of BMZ-DAAD supported Alumni activities in different regions of the world are the outcome of this endeavour. All four regional networks can be addressed on one homepage (www.alumni-network.de), a broad database has been established, newsletters have become an important instrument of regional communication, 13 network offices have been established yet in the partner countries, 15 Symposia-cum-Workshop events have taken place in 11 countries and one Summer School (2004 in Witzenhausen) to reflect on achievements, challenges and future strategies.

Table 1: Symposia-cum workshops:

GEAR:	Kairo (Egypt)
	Sinai (Egypt)
	Kairo (Egypt)
	Amman (Jordan)
SEAG:	Bogor (Indonesia)
	Manila (Philippines)
	Hanoi (Vietnam)
	Chiang Mai (Thailand)
	Phnom Penh (Cambodia)
ReCALL:	
	Managua (Nicaragua)
	Lima (Peru)
	Monterrey (Mexico)
	San José (Costa Rica)
	Recife (Brasilia)
	Talca (Chile)
GIAN:	Teheran (Iran)
	Isfahan (Iran)

The following chart gives an impression of the performance of these symposia- cum-workshops. The evaluation of the events from 1999-2003 clearly shows the high acceptance of and satisfaction of the participants with the approach chosen by the Consortium.

Figure 2: Evaluation results



success and good performance are the following:

- Financial, personal, organizational and mental support by DAAD and BMZ;
- A continuously positive assessment of the work by the participants and partner universities until now, which is a strong legacy for the future;
- A strictly cooperative planning together with our partners and organizations at place enabled by the local alumni network;
- Cooperation with other, internationally acknowledged partner institutions;
- Outstanding efforts of devoted alumni in establishing and operating the joint network;
- Making participation of alumni with different disciplinary background as easy as possible.

These preconditions have created win-win-situations being a key asset for future perspectives, re-orientation of the network or fine-tuning of running priorities:

- An increase in joint experience for both partners,
- International scientific publications,
- Institutionalized contacts with German and international universities and research centres,
- The establishment of robust working relations with renounced scientific partners,
- Enhanced chances for joint scientific projects and programmes,
- Additional external funding for partner universities,
- The recruitment of graduates and PhD students as an important investment in a new generation of researchers, implementers, and policy makers.

2. Partners

A key for success:

- Efficient networks
- Innovative models of partnership
- Trust
- Voice and exit
- Self restraint
- ➔ Dynamics

Figure 3: The CGKM Network

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VERSITÄT

Why to create a network?

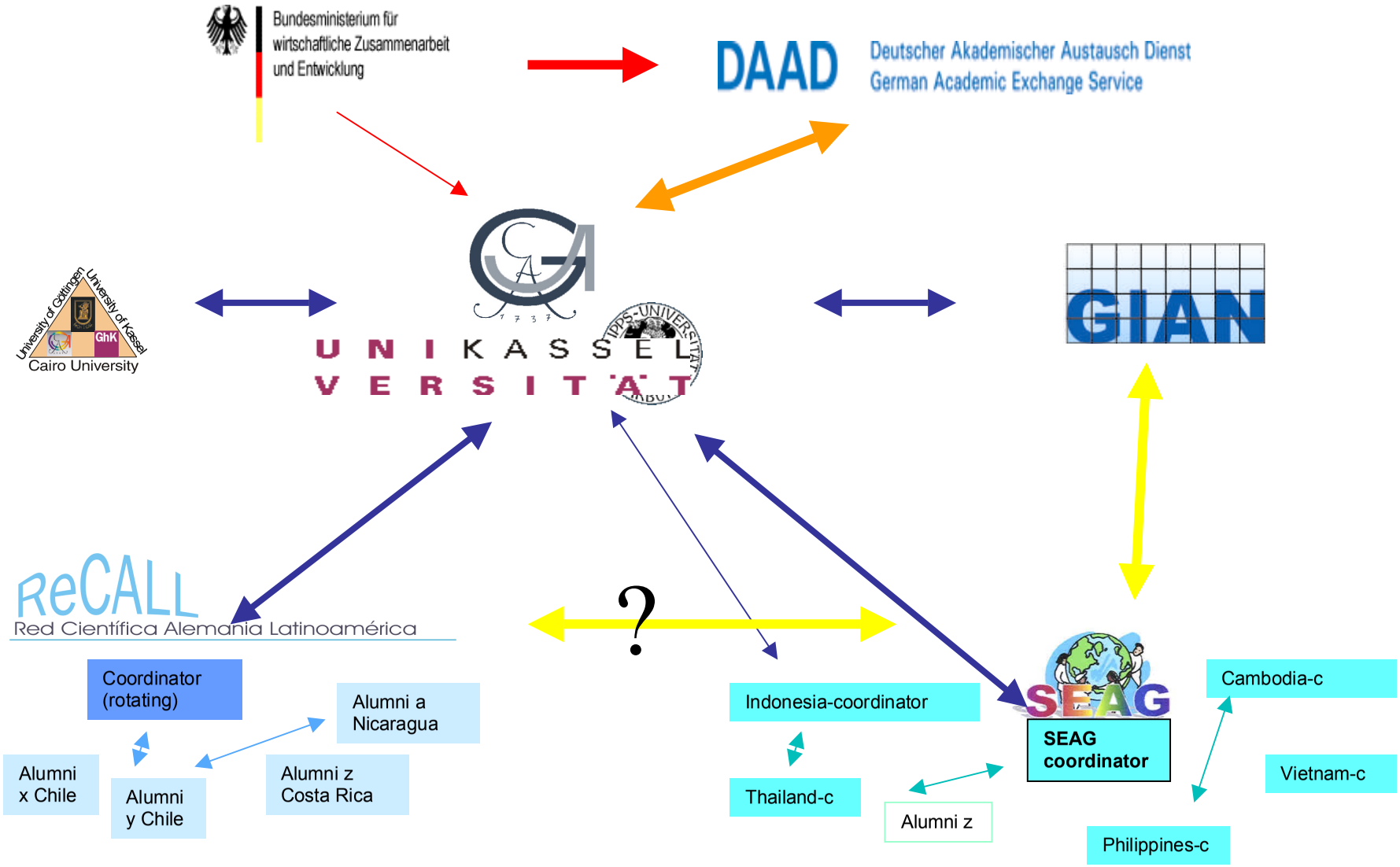
- Low direct costs for the establishment and maintenance of a network (compared to more formalized organizations)
- in particular, as the partners already share joint experiences for many years
- and have established trust
- A network delivers “club goods” for its members (higher research and teaching qualities, intranet information, spill over to other networks)

- A continuing low degree of formalization, no registration as an association, no by-laws
- Easy entry and exit options
- Different intensities and different speeds depending on the capabilities and commitment of partners
- Openness for new members
- Quick and flexible reaction patterns on sudden challenges
- Concentration on our own core competencies
- "coopetition" between the partners remains an option
- ➔ all leading to high flexibility, mobility, a transparent division of labour, and a high level of motivation

However, limitations and problems arise as well from loose networks:

- no creation of a legal body, no rights to sign legal contracts or a Memorandum of Understanding
- inherent, latent danger of instability through free riding behaviour of its members
- no formalized mechanisms for quality assessment, no clear rules for benchmarking
- no standard mechanisms for revenue and cost sharing
- easy loss of corporate, tacit ("idiosyncratic") knowledge is easily transferable to competitors (such as other alumni networks)
- high direct costs to maintain trust and social capital (such as the democratic principle, culture of compromise, being inclusive)

Figure 4: Models of partnership



Trust[2]

On the relevance of trust

- Trust plays a crucial role as social capital and is a precondition for successful networking,
- Hypothesis: low trust is the major problem of effective international scientific co-operation at a personal and institutional level
- Trust can be abused as soon as it is placed instead of being honoured in a general low-trust environment
- Establishing trust is an investment, its payoff matrix depends on if it is rewarded and honoured
- Trust works as a key variable in cooperative and non-cooperative games
- Trustors with more and stronger ties themselves trust a trustee more (SEAG) than trustors with fewer ties (such as GEAR, ReCALL)
- ➔ tense networks improve trust, but distrust is often disregarded
- ➔ networks increase the control of behaviour of trustees due to experiences and risks shared (as a learning process)

Voice and Exit

Network members can use voice and exit options in an organization (Hirschmann 1971) in many different ways:

Voice (= actively contributing to a joint product, actively and constructively criticizing objectives and instruments, improving network quality through participation):

- joint peer review of abstracts and the full scientific papers
- joint publication of proceedings
- joint writing of proposal for new alumni network phases
- joint research proposals, either within the regional networks, with CGKM members or external partners
- member initiatives for complementary mini-workshop
- joint decision making on future funding priorities and strategies
- mutual criticism and joint proposals for improvement through the intranet, during workshops and through newsletters
- initiatives on meta-networks between the continents
- initiatives to integrate new, additional partners, such as other universities, the private sector

Exit (= decisions against our network and pro alternative ones, creating incentives for the remaining members to re-think strategies and to improve the network)

- leaving the net, joining competing ones
- continuing inertia, passive membership ("inner emigration")
- dominant free riding (profiting from the external German DAAD-BMZ funding without actively contributing time and human capital to the net)
- undermining the network through "intellectual sabotage"
- ➔ the consortium is regarded as a "useful/purposeful idiot"

[2] based on Amini 2004

Self restraint can work as a pro-active and a reaction pattern to create incentives for partners to be more initiative

- At best it works as a catalyst to overcome selected bottlenecks in scientific and academic cooperation although it will never work as a once-for-all solution
- It creates a new freedom of choice to invite new partners to participate in the alumni process
- The delivery of services is not a compulsory issue, the intensity chosen depends very much on the built-up of mutual trust between partners involved
- There is no interest to substitute existing bilateral networks (e.g. university networks, joint master programs)
- However, it is intended to build complementarities to them.

As a consequence, new **dynamics** emerge from alumni networks:

- CGKM and its partners is a success story, it is a bench marker defining best practices
- It is associated with a high growth rate: from one to four networks. Further extensions may be possible
- However, does an increase in numbers mean an increase in quality? Quality indicators are (joint) research projects, either proposed or even accepted, number of reviewed articles as an outcome of improved quality of papers or of the proceedings edited by SEAG and other networks
- All is guided by the identification of focal points: environmental protection, entrepreneurship, quality improvement in teaching and training
- Based on this solid basis, first steps for meta-networks are made
- Without loosing sight of a deepening of network relations, such as a new division of labour, new activities including the sponsoring and a tighter integration of the private sector
- this process is accompanied by decreasing external funding and
- a more sophisticated monitoring and evaluation system, for example through a Summer School in 2004
- however, there remains the danger of over-streching in network activities provoking the need to formulate clear priorities

3. Problems

In concentrating on the relation between the “northern” partners of CGKM and their “southern” counterparts, manifold problems have arisen during the last years. Interpreting the results of a survey hold at the 2004 Alumni Summer School in Witzenhausen, a mixed picture emerges:

Table 2 : Survey results from Alumni Summer School, 2004

	GEAR	GIAN	RECALL	SEAG
Social context	low	low	low	high
Participation	low	middle	low	high
Information	low	low	low	high
Trust	low	middle	very low	middle
Conflicts	high	middle	middle	low
Scientific Exchange	high	high	high	high
Cooperation	high	low	high	middle
Individualism	high	high	high	middle
Mini-workshop	very low	high	middle	high
Network density	low	low	low	middle

Source : Amini, 2004

Putting it into a nutshell, the following key issues come up :

- 'Ownership' and mental models,
- local organizations and structures,
- motivation and incentives,
- leadership and management,
- measurable achievements and improvements,
- functions,
- communication,
- investing in a vision.

Ownership and mental models:
Four patterns, or mental models, have are being reproduced in the Alumni Networks:

- GEAR: tackling the vision of "Pan-Arabism" again: How to get free from Egyptian domination within the network structures?
- SEAG: Young "tigers" are around – hungry to get a larger piece of cake from the "Asian Miracle" within a globalized world
- ReCALL: "Dependencia" revisited, or: please, do not disturb!! We better can do it alone!
- GIAN: Being proud on their own achievement, though hungry for orientation from outside (in particular, from Germany)
- CGKM: "we are the champions!" or, to rephrase it: "We can make it if we really want!"

These stereotyped patterns strongly influence the working atmosphere within as well as between the networks!

Local organizations and structures
A wide range of organizational patterns and structures has been emerged inside the networks:

- There is a lack of interaction between committee members
- and between the committee members and the alumni at large.
- Information systems work slowly, sometimes caused by insufficient IT equipment, large distances and a lack of access to homepages
- Passive members form a large part of the network who need prodding
- Future financial support cannot be ensured
- No mutual trust
- A deeply rooted perceptions that all necessary things are already sorted out and organized by the Consortium (in particular, the infusion with fresh money from BMZ/DAAD)
- The Summer School results for ReCALL are enlightening: confusing organizational structures dominate, there is a need to clear up different functions of the alumni involved, it is necessary for alumni to accept the role of coordinators and to support him/her actively with a higher proportion of trust.

Motivation and incentives
A high motivation and strong incentives are the precondition for successful work, however, motivation and incentives are often difficult to be created:

- Personal, individual benefits are not yet clearly enough communicated within the networks,

- Who is responsible for motivation and incentives? First of all it is each individual member, in addition the coordinators and the consortium play an important role as catalysts
- A typical "public good" dilemma with notorious free riding arises: there are insufficient privately appropriable incentives to motivate a stronger contribution of time, money, intellectual capacities for the network. How to deliver a strong "club good" which is shared by other members, however, not easily accessible to outsiders?
- In order to focus on such kind of goods, a rethinking of the social embeddedness of network action seems to be urgently needed
- More specific incentive structures should motivate members for the in-between routine work following the highlights of the workshops
- Mistrust between alumni and between alumni and the Consortium makes it very difficult to reward individual initiatives ("image of the shared good" which prevents individuals to develop profiles outside cemented group structures)

Leadership and Management

Leadership is an ambiguous concept easily creating mistrust, envy and greed. Management may be regarded as a challenge for those who do not feel apt to practice it as well as a seduction for others to misuse handed-over responsibility and power:

- Missing team work dominates in organizational committees
- Paternalism in leadership exists leading to "one man/one woman" shows in the network
- Non-professionalized management creates negative outcomes; lacking managerial skills lead to inefficiency (delivering services at low costs) and ineffectiveness (delivering the right services)
- The management of editing and printing proceedings does not yet work in all networks
- Financial problems dominate decisions or inertia.

Measurable achievement and improvements

- No measurable benchmarks and indicators have been identified yet to assess the long-term impact of the networks on improved scientific and academic cooperation
- Is there an increase in number of internationally placed and peer-reviewed publications of alumni of the different networks?
- Have additional research projects been initiated after x-years of networking?
- How to measure personal promotion of network members? How many Alexander von Humboldt- or Georg-Forster- scholarships have been awarded to alumni during the last x years?
- What is the number of Feodor Lynen Scholarships awarded to German post-docs being willing to work at partner institutions world wide which have been created as an outcome of our Alumni work?
- How much money has been attracted through public-private partnerships and the cooperation with the private sector as a direct outcome of alumni cooperation in the past?

Although we are only at the beginning to establish an M&E quality control system, these critical questions should be asked!

Functions
The different functions of and within the networks are not always well appreciated and lead to coordination and cooperation problems:

- There is still a lack of continuous performance evaluation
- We are loosing members due to a lack of intense communication and budget restrictions
- In addition, the presence of some inactive and only poorly motivated members remains a challenge
- Time budget and time allocation has be improved
- There are still unclear tasks in management and job sharing
- And an insufficient promotion of a good relationship between alumni and the German institutions abroad
- Scientific projects for sustainable cooperation with the German side are missing
- And insufficient support from German institutions, such as GTZ or the private sector continues.

Communication
Communication remains the glue for intensified cooperation and future perspectives of the network

- Internet communication remains a major problem in some partner regions, in particular, in Latin America and the Near East
- Some shortcomings arise through the lack of proficiency in languages, in particular, in Latin America
- Never ending discussions on the language used as lingua franca in the workshops and daily communication and/or publications has become a boring endeavour
- The net is still in search for team-work models on a world-wide scale, e.g. between the Consortium and the alumni

Investing in a vision
Networking means permanent investment in goods and services which are in danger to get lost due to free riding and inertia:

- Is there a real interest in a sustainable network which can survive a termination of external funding during the next years?
- For this scenario, exit strategies for fading out of financial support do not exist yet
- No think tank has yet been established to reflect on additional sources of external funding from third sides
- No vision exists on new, perhaps even more innovative organizational models for the net
- No strategies have yet been developed on the necessary sequencing and prioritizing under stronger financial pressure
- A strong discrepancy remains between the promises given at workshops and the work performance sustaining between the meeting during the year (e.g. writing proposals for new funding to DAAD)
- In case of criticism on the relation between the consortium, coordinators and individual alumni, no convincing alternative models have been developed yet by its members.

Perspectives
A broad perspective often has to be developed based on first practical steps, although wider strategic issues have to be incorporated systematically to be sustainable.

Practical Issues

- There is a need to enhance and harmonize language competences of some of our members
- Selection mechanisms and criteria are needed to invite alumni to workshops and meetings in case demand exceeds existing funding
- We have to work on the quality of scientific publications further
- And have to deal with too high expectations of our alumni in the net
- But as well in levelling existing hierarchical structures
- Do we need professional conflict management and coaching for our groups?
- At least, we have to overcome difficulties in integrating more disciplinary competences into an interdisciplinary dialogue
- And to deal with existing work overload of some coordinators (multiple employment patterns are the rule for them)
- And have to deal with low income streams of our activists leading to high opportunity costs of networking

Strategic issues

- A further re-assignment of tasks, competencies, responsibilities and duties (including financial ones) to alumni networks is needed:
- leading the catalyst and support function behind: what is the role of the Consortium in future?
- Networking of the different networks has to be extended on a national, regional international level
- More effective cooperation with higher education and research funding organizations in Germany is desirable in the context of global challenges (internationalization of education and research, competition on "brains")
- New or increasing tasks and challenges arise in alumni work due to shrinking financial and human resources at universities
- Prioritizing alumni work is forced by time and financial constraints: exit strategies for non-performing networks are required, giving chances for new ones (such as in Africa)
- ➔ competition between networks on limited financial and time resources is a matter of fact!

Instead of conclusions

What has to characterize the networks in future?

- Open processes
- Prioritizing
- Deepening
- Restructuring
- Trust
- Competition
- Incentives
- Private plus club goods
- Visible results
- Vision

PARTNERSHIP OF THE UNIVERSITY OF TALCA AND THE UNIVERSITY OF APPLIED SCIENCES OSNABRÜCK

Hans R. Friedrich[1]

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Distinguished Guests,
Ladies and Gentlemen,

It is my honour and my pleasure to attend this international symposium at the University of Talca in Chile, during which we will explore further opportunities for increased cooperation at the academic level between our two countries and perhaps with other partners worldwide.

Since I am new in this meeting, I might perhaps add a few words on my personal background.

I am economist and one of the five external members and vice-chairman of the board of the foundation which carries the University of Applied Sciences Osnabrück. Before that and up to the end of 2002, I have been the Director-General for Higher Education in the Federal Ministry for Education and Research (BMBF) for more than 12 and half years. I was involved in the drafting of the Sorbonne Declaration of 1998 and of the Bologna Declaration of 1999 and from 2001 to November 2002 I was chairman of the Bologna Follow-up Group of high officials which promote the Bologna Process towards a European Higher Education Area in the time between the bi-annual conferences of ministers (www.bologna-bergen2005.no). I am also an honorary professor at the University of Applied Sciences Bremen since 1997 and I am teaching in the MBA-programme for higher education management about which I am going to talk.

The University of Applied Sciences Osnabrück (www.fh-osnabrueck.de) is an innovative and internationally-minded institution of higher education in Germany, which – due to its construction under the umbrella of a foundation under public law – can act flexibly and has higher degrees of autonomy from state authorities than other universities. This institution is well placed in the market and actually has 101 contractual cooperation-agreements with higher education institutions in 26 countries in the world (www.hrk.de and www.hochschulkompass.de).

As a consequence of globalisation and worldwide networking with modern information and communication technologies, transparency of formerly separated educational markets has dramatically increased. Comparative analyses of the range of academic offers, of quality and of performance are now possible and "internationalisation" has become a strategic goal at the institutional level of higher education institutions. Philosophies of marketing and of entrepreneurial spirit have found their way into higher education institutions and into higher education policy. Quality performance and placement in the emerging international education market have now become competitive factors which determine the future perspectives of universities of different type, mission and profile.

Following these developments, the requirements for personnel working in higher education and other scientific institutions have also changed. While some ten or fifteen years ago legal and juridical questions may still have dominated, there is now a new demand for specific managerial qualifications needed for manoeuvring, administrating and

steering scientific and higher education institutions under new international circumstances. We call this an increasing professionalisation of academic staff working in this arena.

To respond to this demand, we designed at the University of Applied Sciences Osnabrück a new study programme, a Master of Business Administration (MBA) with the specification "for higher education and science management". The programme – which is absolved part-time and parallel to working in a relevant job – is now running for a little bit more than two years and we expect to soon have our first graduates. It is a very intense four-semester course which equals a one-year full-time course with 60 credits in the European Credit Transfer System (ECTS). The programme is built up of modules comprising 5 credit points each, an obligatory practical phase in a scientific institution and a master thesis of 15 credit points at the end. Applicants have to prove evidence of at least two years of practical work in an academic field relevant to the subject and have to demonstrate good knowledge of English (parts of the courses and parts of the learning material are produced in English). The modules and the whole study programme are in the process of being accredited by one of our leading accreditation agencies (ZevA) under the supervision of the German Accreditation Council (www.akkreditierungsrat.de).

There was a tender for the design of such new study programmes issued by the Donor's Association of German Industry for the German Sciences (www.stifterverband.de) and the Universities of Applied Sciences Bremen and Osnabrück – which jointly developed the curriculum – belonged to the winners of this contest and are now receiving funding from the Donor's Association.

Following another recent contest issued by the Donor's Association of German Industry, Bremen has just been elected as "City of Sciences for the year 2005" (www.stadt-der-wissenschaft.de) and beating traditional university towns like Tübingen and Dresden in this competition.

We consider our new study programme for future higher education professionals to be a "learning curriculum" which we will develop and adapt to new demands as they become evident in cooperations in the emerging world education market.

We know that here at the University of Talca there are also deliberations to design a new master study programme for professionalisation in higher education management.

We would be very glad to share our experience in the design and operation of such a programme with you.

This could – according to funding and capacities available – happen in several forms:

- Chilean professors involved in the design of a study programme come to Osnabrück for a limited period of time to discuss questions of the further development of a curriculum that earns international awareness and meets demands of the national and international clients, and, of course, vice-versa. I know that two members of the University of Talca – Prof. Bernasconi, dean of the faculty for economics and social sciences and Prof. Prieto, vice-president for academic affairs, will depart for Osnabrück on December 2nd, 2004.
- Teachers from Talca come to Osnabrück for a limited period of time and see how the programme is operated.
- Teachers from Osnabrück come to Talca to see how the programme is operated once it has been established (and could perhaps actively participate in parts of the curriculum in the English language).
- Students from Talca and students from Osnabrück could come to the other place for one semester or for a period of practical experience. This would require some proficiency in German for the Chilean students and some proficiency in Spanish for

the German students. This may be difficult in the beginning, but it is a perspective. It may also be that we expand the English language parts in our programme.

- On the basis of discussions on a suitable curriculum, there may be joint publications of Talca and Osnabrück authors on how to develop higher education management and professional skills needed. The University of Applied Sciences Osnabrück regularly offers a conference event each year during which new ideas and papers on "higher education management" can be presented and will subsequently be published.

I am prepared to further discuss details of a possible cooperation and would be glad to do so. I hope that we can establish a very fruitful and cordial relationship with the University of Talca.

Thank you very much for your attention.

WORKSHOP:
WORKING GROUP 1:
INTERNATIONAL COOPERATION FOR IMPROVING JOINT DEGREE PROGRAMS IN HIGHER EDUCATION

CONDITIONS AND DEVELOPMENT OF JOINT DEGREE PROGRAMS IN INTERNATIONAL EDUCATIONAL COOPERATION

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Abstract

The international cooperation between organizations of higher education (universities, applied universities) has to be very intensive with respect to the establishment of joint degree programs in order to orchestrate and harmonize

- The educational programs
- curricula
- legal framework
- admission and examination procedures.

At the end of a long path to achieve the necessary harmonization, it is possible to confer a joint degree to the candidates.
Keywords: Joint study programs, joint degrees, higher education, international scientific cooperation, partnership programs

Internet Search

An internet search "Joint Degree Programs" led to the following results:

- Worldwide search: 585,000 hits, mainly from the USA and UK with other developed countries. The joint degree programs often concentrated on "Regional Studies" such as East Asian Studies, etc.
- Germany (in German): 15,000 hits, mainly with other industrialized countries. Here language programs dominated the lists.
- Göttingen (worldwide): 3,560 hits.

Not all of the findings were really joint degree programs but had that *termini* in their title. Analysing the contents of the main findings, it could be summarized that only a few programs exist between north/south and south/south countries, and only a few programs exist that have joint degree programs.

Definitions and Delimitations

A joint degree is one academic degree conferred by two or more institutions of higher education after a candidate has successfully finished a joint study program. The study program has to have been jointly developed and implemented by all of the participating institutions.

A double degree means two or more degrees are conferred by all of the participating institutions for the same study program. The study programs can be developed separately and each institution confers one degree. If only two institutions are

involved, this degree is considered a dual degree. Double degrees are often the first step on the way to a joint degree.

Twinning programs are collaborative arrangements between institutions of higher education leading to joint or double degrees after the study program is finished.

Basic Requirements for Joint Degree Programs

When two or more institutions of higher education in different countries offer a joint study program with a joint degree, a few basic requirements have to be fulfilled:

- The study programs have to be harmonized with respect to the curricula, lecture contents and level and time sequences of the lectures. The students should have the chance to select lectures at all of the participating institutions or are tied into one program with binding time sequences. Harmonizing does not mean offering the same lectures but rather combining them to form a study program.
- Examination requirements should ensure the same level and have to follow the same or a similar procedure.
- Minimum requirements for the acceptance of students have to be equivalent concerning their basic knowledge in relevant scientific disciplines. In a broad sense, this also calls for a certain coordination of the primary and secondary educational systems.
- A common language is necessary, or the students have to be fluent in at least two languages.
- Kind of degrees: it is useful to follow the accepted English/American system with Bachelor, Master and Ph.D. degrees.
- The legal framework in the participating countries has to permit the necessary changes to harmonize the study programs and degrees. The legal framework is often a hindrance, especially when the autonomy of the institutions of higher education is limited and all regulations are dominated by government rules.
- Visa requirements: Students should be granted a quasi-automatic right of residency during their enrolment in the joint study program. This is very difficult to achieve because of the dominance of immigrations or consular offices.
- Tuition fee regulations have to be tuned between the participating institutions.
- The funding of the study programs has to be ensured for a reasonable period of time. This may also include covering additional costs for students (tuition fees, travelling costs, extension of study time). Altogether, joint study and degree programs are not cheap.
- Quality assurance for study programs and examinations call for permanent control because the reputation and recognition of the programs depend on their quality. Accreditation of the programs is a possible basis for quality assurance.
- The mobility of the students' is an important aspect of a joint degree program. The students have to respect different cultural traits and have to be respected themselves by the hosting countries. Within these study programs, students learn inter-cultural management and collaborative skills, team work etc.

Summarizing the requirements, it can be ascertained that it is not possible to design one ideal model for all of the types of partnership and joint degree programs. The conditions for joint programs are too heterogeneous. The partners have to find the best solution by means of their own experience.

The Master's and other above-mentioned programs already ensure a certain harmonization of the requirements. Therefore, they are the most predominant among the existing joint degree programs.

Development of Joint Degree Study Programs

Before a joint degree study program is implemented, it is recommended to establish a partnership study program in which at least two institutions of higher education cooperate in one way or another. The aim of this cooperative study program consisting of various degrees of partnership intensity is to harmonize the curricula and administrative and educative procedures.

At the very beginning, a small-sized and informal communication structure network should be established. This cooperation could be in the form of an exchange of lectures and students to integrate them into each partner's own study programs. Such exchange programs would start with only a few people who have a common interest at the participating universities. During this period of the cooperation, experience has to be gathered with partnership programs, trust and mutual respect have to be built up and small structures have to be established with a high degree of stability (for at least short periods of time). Time is needed to achieve a mutual understanding. A common interest on the part of all of the partners is a prerequisite and what glues the cooperation together.

When the cooperation between various institutions of higher education has reached a certain maturity, partnership or joint programs have to be institutionalised in order to be independent of individual interests and certain personal events. The establishment of joint study programs is the cumulative point. This requires special formalization with a formal "Memo of Understandings" (MoU) or partnership agreements. The intensity of the cooperation very often ends at this stage of the development because the partners lose at the same time a certain degree of sovereignty when moving on to the next step.

The establishment of joint degree programs is the last and final integration and harmonization step of a joint study program. At this stage, a formal, high level agreement is required.

Selected Joint Study Programs at the University of Göttingen / Germany (GAUG)

The University of Goettingen with its diverse faculties has several joint study international cooperation programs of varying intensity with other universities. A few of them which are coordinated and administered by the "Center of Tropical and Subtropical Agriculture and Forestry" (Tropencenter) will be listed here. Those Master's and Ph.D. programs have not yet reached the stage of joint degree programs. They can be considered as pace makers for joint degree programs.

GAUG / University of Bogor, Indonesia (PPB):

- M.Sc.-Program of 'Integrated Tropical Agriculture and Forestry Sciences'
- M.Sc.-Program of 'Agribusiness in Asia'
- IDEAS-Program (Indonesian Decentralized Education in the Agricultural Sector) with the Indonesian Ministry of Agriculture as part of the M.Sc.-study program 'Tropical and International Agriculture'

GAUG / University of Talca, Chile:

- M.Sc.-Program 'International Agribusiness'

GAUG / various Southeast Asian Universities:

- M.Sc.-Program 'Tropical and International Forestry'

GAUG / University Chiang Mai, Thailand:

- Exchange of lectures and students

GAUG / University La Paz, Bolivia:

- Exchange of lectures and students. An M.Sc.-Program 'Resource Use' is in the stage of preparation.

GAUG / various universities in developing countries:

- International Ph.D.-Program for Agricultural Sciences (IPAG)
- Ph.D.-Program 'Holzbiologie und Holztechnologie'

Scientific Partnership Programs: GAUG / University of Bogor, Indonesia (IPB)

These very intensive scientific cooperation programs in higher education and research are considered to be examples:

- The cooperation is organized by the Tropencenter of the University of Goettingen and is an outstanding program in the fields of research and higher education.
- The scientific cooperation between the two partners was institutionalised in a formal agreement in 1991. Previously, many individually organized cooperation programs existed in teaching, exchange and research.
- The Master's study program 'Integrated Tropical Agriculture and Forestry Sciences' started in 1991 at the University of Goettingen at the request of IPB, Indonesia with the target of qualifying lecturers at Indonesian universities.
- The English study program integrated the following important elements:
    - joint responsibilities of both universities
    - joint selection of students
    - joint steering committee
    - exchange of lecturers (teaching, examinations, supervision of Master's theses)
    - pre-overseas training in Bogor: English and German languages, PC training courses, study and living conditions in Goettingen
    - social and scientific tutorial support of Indonesian students in Goettingen
    - joint supervision of empirical field research in Indonesia
- The Master's program consists of two years of lectures and research:
    - 10 months lectures in Goettingen
    - 8 months field research in Indonesia

    - 6 months data analysis, writing of thesis, final colloquia in Goettingen
- The program was extended to include students from other developing countries.
- 130 successful participants have completed their studies with a Master's degree. Many of those participants continued within a Ph.D. program.
- Due to the success of that program, other study programs have been established:
    - M.Sc. program 'Agribusiness in Asia', financed by the Asian Development Bank and DAAD
    - IDEAS (Indonesian Decentralized Education in the Agricultural Sector) as part of the regular M.Sc. study program 'Tropical and International Agricultural Sciences' in Goettingen, financed by the Ministry of Agriculture and DAAD
- Establishment of an extended research program ("Sonderforschungsbereich") 'Stability of Rain-Forest Margins in Indonesia' (STORMA), financed by the German Research Association (DFG). The program is a partnership between the universities of Goettingen, Kassel/Witzenhausen with Bogor (IPB) and Palu in Indonesia.
- In addition, many individual and structured Ph.D. programs have been established at all of the partner universities.
- The general conditions for the success of the program are:
    - an institutionalised partnership with formal agreements
    - personal engagement and commitment of all the partners with mutual interests
    - the development of mutual trust and respect
    - the universities' governance and support of university administrations
    - participatory planning, implementation and execution of the programs
    - client-oriented and highly attractive programs and projects
    - ownership structure: intellectual, administrative, financial
    - financed by various sources: DAAD, GTZ, various ministries in Germany and Indonesia, ADB
    - establishment of win-win situations for all of the partners.

The intensive cooperation in higher education between the universities of Goettingen and Bogor/Indonesia has not yet led to a joint degree program. The reasons may be associated with the excellent reputation of the Goettingen University and the degrees it confers. With respect to the personal career of the students, they are very interested in receiving a foreign academic degree which also grants them a higher status.

JOINT ACADEMIC PROGRAM "MASTER IN INTERNATIONAL AGRIBUSINESS" UNIVERSITIES OF GOETTINGEN/GERMANY AND THE UNIVERSITY OF TALCA/CHILE

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Abstract

In 2000, the University of Talca and the University of Göttingen, accepting the challenge formulated by the DAAD, jointly designed an academic program that allowed the operational structuring of a strategic alliance, the search for funding and the curricular design of a "Master in International Agribusiness". As a result of existing collaborative efforts, this initiative was structured formally by means of a MEMORANDUM OF UNDERSTANDING, that in a first phase links both Universities in the area of Agricultural Sciences. This Master of Sciences, with specialization in Agribusiness, started in 2002 with 10 students from Argentina, Chile, Costa Rica, and Peru. These students are finishing the writing of their Thesis and graduate by April, 2004. The 2003-2005 cohorts are comprised of 8 students from Germany, Argentina, Bolivia, Chile and Honduras. For the 2004-2006 cohorts, there are 8 students from Chile, Colombia, Ecuador, Costa Rica, Honduras, Mexico and Venezuela. From the total of 26 students who are now in the program, 23 have a scholarship from the DAAD. Therefore, an important challenge facing both Universities in the near future is to attract students with other sources of funding, such as governmental, ONG, scholarships from other German and/or Latin American foundations. With respect to the exchange of professors, which is intended to enhance both the course offerings as well as the supervision of theses work, the University of Talca has had the visit of Professor of the Institut für Rurale Entwicklung, Institut für Agrarökonomie of the University of Göttingen. Other visitors include Professor of the Fakultät für Landwirtschaft und Gartenbau of the Technische Universität de München and Professors from the University of Talca have traveled to Germany, including Professor of the Faculty of Managerial Sciences and Department of Agricultural Economics of the Faculty of Agrarian Sciences. Considering the facts already mentioned, it is clear that the market for this M.S. program is among students who have completed their undergraduate degrees in Latin American and German universities, particularly graduates from agricultural engineering, agronomy, forestry, veterinary science, economics, business administration, and other related fields. Finally, it should be mentioned that this program was accredited since 2002. The accreditation of this program is a significant accomplishment and is an important recognition that reflects the academic excellence of the participating professors as well as the support given by both Universities and the Institutes that are involved in this partnership.

Keywords: Joint Academic Program, Master, Agribusiness, Strategic Alliance

Hintergrund und Ausgangslage

Das 1961 gegründete Forschungs- und Studienzentrum der Agrarwissenschaften der Tropen und Subtropen (Tropenzentrum) der Georg-August-Universität Göttingen mit den dahinter stehenden Fakultäten für Agrar-, Bio-, Forst- und Geowissenschaften fördert die entwicklungsländerbezogene Forschung, Ausbildung, Weiterbildung und den entsprechenden Wissenstransfer. Über 40 international erfahrene Professoren sind in entsprechenden grundständigen, Aufbau- und Promotions-Studiengängen tätig, davon allein acht hauptamtliche Professoren in den tropischen Agrarwissenschaften.

Seit 1976 führt das Tropenzentrum den Aufbaustudiengang „Agrarwissenschaften der Tropen und Subtropen" durch, den über 400 Graduierte aus mehr als 70 Ländern, darunter zahlreichen Entwicklungsländern, abgeschlossen haben. In enger Kooperation mit Hochschulen in Entwicklungsländern wird seit 1991 der englischsprachige Master of Science-Postgraduiertenkurs „Integrated Tropical Agriculture and Forestry Sciences" durchgeführt. Gegenwärtig läuft der fünfte englischsprachige MSc-Kurs mit Teilnehmern aus Entwicklungsländern.

In Chile und anderen lateinamerikanischen Ländern sind agrarökonomische Postgraduiertenstudiengänge noch ausgebaut. Es besteht aber eine beträchtliche Nachfrage von berufserfahrenen Studienabsolventen mit einem ersten berufsqualifizierenden Abschluss nach einem postgradualen Studium in International Agribusiness**.**

Mit der UTalca arbeitet das Tropenzentrum seit vielen Jahren wissenschaftlich zusammen. Seit 1998 ist das Tropenzentrum in ein Kooperationsprogramm mit den chilenischen Universitäten Talca eingebunden, in dem bisher chilenische Studierende aus grundständigen Studiengängen beraten und betreut wurden.

Die UTalca ist eine staatliche Universität. Vor 25 Jahren ging sie als Regionale Universität aus der staatlichen Universität von Chile hervor. Von Anbeginn war die UTalca der Förderung der Region in Forschung, Lehre, Weiterbildung und Wissenstransfer verpflichtet. Deswegen wurde auch die Agrarwissenschaftliche Fakultät stark ausgebaut, um den regionalen Bedürfnissen gerecht zu werden.

Die Agrarfakultät der UTalca verfügt über drei „Departamentos", nämlich Agrarproduktion, Obst-, Wein- und Gemüseanbau und Agrarökonomie. Darüber hinaus bestehen drei Forschungs-Transfer-Zentren („Centros Tecnologicos"), die mit staatlichen und privaten Unternehmungen auf der regionalen und nationalen Ebene zusammenarbeiten.

Im strategischen Entwicklungsplan der UTalca ist vorgesehen, die Angebot von Postgraduiertenstudiengängen auszuweiten (Master- und Promotionsstudiengänge). Die Agrarfakultät der UTalca wurde verpflichtet, entsprechende Studiengänge zu planen und durchzuführen. Seit 1999 besteht bereits ein MSc-Studiengang in Obst- und Gemüseanbau. Gleichzeitig begann das Departamento „Agrarökonomie" mit Planung eines MSc-Studiengangs „International Agribusiness" und nahm Kontakte zu ausländischen Hochschulen in den USA und Europa auf, um einen gemeinsamen Studiengang zu konzipieren und zu realisieren. Nach Prüfung verschiedener Alternativen hat sich das Departamento Agrarökonomie der UTalca entschlossen, mit der Göttinger Agrarfakultät und dem Tropenzentrum einen gemeinsamen englischsprachigen MSc-Studiengang zu entwickeln und ab dem Jahr 2002 durchzuführen. Entscheidend für diese partnerschaftliche Zusammenarbeit waren zum einen die Erfahrungen des Göttinger Tropenzentrums in der partnerschaftlichen Zusammenarbeit mit ausländischen Hochschulen bei der Durchführung international ausgerichteter MSc-Studiengänge. Zum anderen bestehen über den Austausch von Studierenden und Dozenten zwischen den Agrarfakultäten von Talca und Göttingen entsprechende positive Erfahrungen.

Im Sinne des regionalen Entwicklungsauftrages der UTalca wird auch die Qualifizierung von chilenischen Fach- und Führungskräften im Bereich Agribusiness gesehen, die für die regionalen Erzeugnisse aus dem Einzugsgebiet der Universität Talca Kenntnisse europäischer Exportmärkte besitzen sollen, wobei dem deutschen Markt besondere Bedeutung zukommt.

Die von Talca gewünschte Zusammenarbeit im MSc-Bereich mit Göttingen ist ein wesentlicher Teil der angestrebten Internationalisierung der UTalca. Dazu gehört die Entsendung von chilenischen Nachwuchswissenschaftlern zur Qualifizierung im Bereich der Forschung an ausländische Hochschulen, wobei die USA und auch eine Reihe von europäischen Ländern (Spanien, Frankreich, Belgien, Grossbritannien, Niederlande, etc.) bevorzugt ausgewählt wurden. Eine weitere Massnahme zur Stärkung der Internationalisierung der UTalca ist die Entsendung von Studierenden an ausländische Hochschulen (USA, Kanada, Lateinamerika, Europa).

Als zentral wichtige Aufgabe für eine nachhaltige Konsolidierung der international ausgerichteten Postgraduiertenstudiengänge wird von der Leitung der UTalca und von der Leitung der Agrarfakultät die Entwicklung des MSc-Studienganges „International Agribusiness“ angesehen und entsprechend unterstützt. Dabei steht im Vordergrund die Gewinnung von Studierenden aus anderen lateinamerikanischen Ländern für eine Teilnahme an diesem Studiengang (Süd-Süd-Verflechtung).

Auf der Basis dieser Erfahrungen haben die Universität Göttingen und Talca, Chile die Einrichtung des Postgraduiertenstudienganges MSc „International Agribusiness“. Für lateinamerikanische und deutsche Absolventen/innen eines solchen gemeinsam von beiden Partnern konzipierten und durchgeführten englischsprachigen Studiengangs bestehen hervorragende berufliche Einstiegs- und Aufstiegschancen als Fach- und Führungskräfte sowie voraussichtlich wenig Reintegrationsprobleme nach der Rückkehr aus Deutschland.

Begründung und Zukunftsorientierung

In Lateinamerika haben viele Hochschulen ein breites Angebot an grundständigen Studiengängen im Bereich der Agrarwissenschaften entwickelt und ausgebaut. Bei einer Reihe von Hochschulen bestehen auch Postgraduiertenstudiengänge, vor allem in den naturwissenschaftlich ausgerichteten Agrarwissenschaften, insbes. bei Pflanzen- und Tierproduktion. Weniger ausgebaut sind bisher jedoch agrarökonomische Postgraduiertenstudiengänge, vor allem im Bereich des Agribusiness. Für dieses Gebiet besteht jedoch eine erhebliche Nachfrage, da im Prozess der Handelsliberalisierung und wirtschaftlichen Globalisierung in vielen lateinamerikanischen Ländern sowie insbes. im Hinblick auf den Ausbau der Freihandelszone von Nord-, Mittel- und Südamerika nach akademisch qualifiziertem Fach- und Führungskräften gesucht wird, die für Aufgaben des Agribusiness im nationalen und vor allem im internationalen Bereich gerüstet sind. Absolventen des Studiengangs „International Agribusiness“ haben gegenwärtig und in absehbarer Zukunft hervorragende berufliche Einstiegs- und Aufstiegschancen sowie voraussichtlich äußerst geringe Reintegrationsprobleme.

Der MSc-Postgraduiertenstudiengang “International Agribusiness”
- Konzeption und Ziele

1. Konzeption

Die wissenschaftliche Kooperation zwischen den Universitäten Talca und Göttingen ist langfristig angelegt. Sie erstreckt sich die Zusammenarbeit in der grundständigen und postgradualen agrarwissenschaftlichen Ausbildung und Forschung.

Kern der künftigen Zusammenarbeit ist die gemeinsame Planung und Durchführung des englischsprachigen Master of Science-Studiengangs „International Agribusiness. Dieser Studiengang wird für ausländische und deutsche Graduierte partnerschaftlich angeboten und an beiden Standorten durchgeführt. Der erste Durchgang begann 2002.

Der erste Durchgang ist als Pilotprogramm anzusehen. Daher ist in dieser Phase ein erhöhter Bedarf an Abstimmung und Koordination erforderlich. Im ersten „Pilot-Kurs sind solche Module an die jeweiligen Standorte Talca und Göttingen zu verlagern, die personell und fachlich besonders geeignet sind. Es ist vorgesehen, im Verlauf des Hochschulkooperationsprogramms gemeinsam Module zu entwickeln und verstärkt Dozenten/innen und Betreuer/innen für Forschungsarbeiten sowie Studierende auszutauschen.

In den Vorphase war ein gemeinsamer Workshop anzusetzen, bei dem weitere und detaillierte verbindliche Absprachen und Vereinbarungen über Planung, Durchführung und Kontrolle sowie begleitende Evaluierungen und über die jeweiligen Zuständigkeiten und Verantwortlichkeiten zu treffen sind.

Frühzeitig begannen beide Partner mit abgestimmten Strategien zur Einwerbung von finanziellen Zuschüssen für Stipendien und für Forschungs- und Betreuungsmittel sowie mit konkreten Einwerbemaßnahmen für Studierende, insbes. in Ländern Mittel- und Südamerikas.

Das Programm ist grundsätzlich offen für die Beteiligung weiterer Hochschulen und Träger von Stipendienprogrammen sowie von interessierten Wissenschaftlern und Professoren in Lateinamerika und Deutschland. Talca und Göttingen als Partner bemühen sich, weitere Partner zu gewinnen, um die Süd-Süd- und Nord-Süd-Kooperation zu erweitern und zu festigen. Das kann sich z.B. auf die Verlagerung von ausgewählten Modulen an andere Standorte und auf die Betreuung von MSc-Arbeiten während der Feldforschungsphase beziehen. Grundsätzlich besteht die Bereitschaft, weitere postgraduale Studiengänge der Partnerhochschulen zu entwickeln und gemeinsam durchzuführen.

Der Studiengang Agribusiness vermittelt wirtschafts- und sozialwissenschaftliche Kenntnisse und Methoden für angehende Managementkräfte. Er richtet sich an berufserfahrene Hochschulabsolventen/innen, die eine wissenschaftlich basierte Ausbildung für Führungsaufgaben bei national und international agierenden Unternehmen der Ernährungs- und Agrarwirtschaft nachfragen.

Folgende Merkmale sind in diesem Zusammenhang bedeutsam:

- Bei dem MSc-Progamm handelt es sich nicht um einen „Kurs“, sondern um einen Studiengang. Studierende haben die Möglichkeit, aus dem Lehrangebot eine ihrer Vorbildung und beruflichen Profilbildung angemessene individuelle Auswahl zu treffen.
- Gemeinsame Planung, Steuerung und Durchführung.
- Gemeinsame Informationsarbeit.
- Gemeinsame Einwerbestrategien zur Rekrutierung von Studierenden.
- Partnerschaftliche Auswahl von Bewerbern/innen.
- Sandwich-Ansatz.
- Verlagerung von Modulen an Partnerhochschulen.
- Austausch von Studierenden und Dozenten/innen.
- Gegenseitige Anerkennung von Lehr- und Prüfungsleistungen bzw. Abschlussgraden, langfristig die Vergabe gemeinsamer Abschlussgrade.

- Verleihung eines international akzeptierten MSc-Grades (Kriterium: Grundsätzliche Aufnahmemöglichkeit eines Promotionsstudiums bei Vorliegen guter Leistungen in Prüfungen und Forschungsarbeit).
- Englisch als Unterrichtssprache.
- Modularisiertes Lehrangebot.
- Gemeinsame Betreuung von Forschungsarbeiten.
- Sicherung eines hohen Qualitätsniveaus in Lehre und Forschung.
- Soziale und administrative Unterstützung der Studierenden in allen Belangen.
- Offen für die Beteiligung anderer Kooperationspartner: Hochschulen, Regierungen, Stiftungen, Drittmittelgeber, Wirtschaftsunternehmungen.
- Lehre (Module) an beiden Standorten.
- Nord-Süd-Partnerschaft (Göttingen-Talca) und Süd-Süd-Partnerschaft (Talca und lateinamerikanische Länder).

2. Ziele

Übergeordnetes Ziel ist der weitere Ausbau der internationalen Zusammenarbeit zwischen den Hochschulen Göttingen und Talca. Wegen der günstigen Ausgangsbedingungen und der bestehenden Nachfrage ist das unmittelbare Ziel der konkreten Zusammenarbeit die gemeinsame Durchführung von postgradualen Studiengängen auf dem zukunftsträchtigen Gebiet der Qualifizierung von berufserfahrenen lateinamerikanischen und deutschen Fach- und Führungskräften im Bereich internationales Agribusiness. Damit werden beide Wissenschaftsstandorte gefördert und die gemeinsame Position im internationalen Wettbewerb um qualifizierte Studierende gestärkt.

Im Hinblick auf die Studierenden verfolgt der MSc-Studiengang die folgenden Weiterbildungs- und Lernziele:

- Berufsfeldbezogene wissenschaftliche Fortbildung von berufserfahrenen lateinamerikanischen und deutschen Studierenden für Fach- und Führungspositionen im Bereich Agribusiness/International Agribusiness.
- Fachwissenschaftliche Kompetenz.
- Erwerb von Problemanalyse- und Problemlösungskompetenz: Es sollen Einsichten in Problemzusammenhänge gefördert und der Entwurf von eigenständigen Lösungsvorschlägen erarbeitet werden. Die Studierenden sollen befähigt werden, Ausgangs- und Rahmenbedingungen des internationalen Agribusiness zu verstehen. Sie sollen lernen, Aktivitäten zur Erreichung von Zielen einer nachhaltigen Entwicklung des Agribusiness zu erkennen, zu bewerten und im Hinblick auf die Umsetzung anzuwenden. Damit soll eine Verbesserung der individuellen Analyse-, Planungs-, Entscheidungs- und Handlungskompetenz der Studierenden erreicht werden.
- Methodenkompetenz: Die Studierenden sind darin zu schulen, fachwissenschaftliche und fachlich übergreifende Methoden zur Analyse von Situationen, zur Planung, Bewertung, Steuerung und Kontrolle von Prozessen und Aktivitäten im Bereich internationales Agribusiness zu verstehen und praktisch einzusetzen.
- Forschungskompetenz: Schulung der Fähigkeit, eigenständige Forschungsziele für Problemfelder des Agribusiness zu formulieren, Ausgangsbedingungen und Ansätze zur Erreichung dieser Ziele auf der Grundlage vorhandener wissenschaftlicher Literatur zu diskutieren, geeignet erscheinende Methoden

vorzustellen und eine entsprechende Methodenauswahl zu begründen, Forschungspläne aufzustellen und Forschungsstrategien umzusetzen, Daten zu erheben, zu analysieren und zu bewerten und auf dieser Basis Lösungsvorschläge zu erarbeiten und vorzustellen und im Hinblick auf ihre Umsetzbarkeit zu bewerten.

- Kommunikationskompetenz, Teamfähigkeit, Schlüsselqualifikations- und prozessorientierte Kompetenz: Die Studierenden sollen lernen, moderne Informations- und Kommunikationssysteme und -techniken zu verstehen und in komplexen organisatorischen Zusammenhängen bzw. in Agribusiness-Managementaufgaben einzusetzen. Damit wird der Erwerb von Fähigkeiten für eine Zusammenarbeit in Gruppen bei der Lösung von Aufgabenstellungen im internationalen Kontext gefördert. Praxis der Teamarbeit, Moderation und Motivation, anwendungsbezogenes Erlernen von Schlüsselqualifikationen, die im Berufsfeld oft erfolgsbestimmend sind.
- Visualisierungs- und Sprachkompetenz: Vermittlung von fachsprachlichen Termini mit Anwendungsbezug, verhandlungssichere Kenntnisse der englischen Sprache, Erwerb der Fähigkeit, Probleme und Ablauf sowie Ergebnisse des Problemlösungsprozesses mit modernen Visualisierungstechniken zu vermitteln.
- Arbeit im internationalen und interkulturellen Kontext mit Praxisbezug: Möglichkeit zur Gewinnung von Praxiserfahrungen in Europa/Deutschland bzw. Lateinamerika/Chile und Bearbeitung der Probleme in international und interkulturelle zusammengesetzten Gruppen von Lehrenden und Lernenden.

Hochschul- und entwicklungspolitische Bewertung

Langfristig hat nur ein Programm mit hohem Leistungsstand und internationaler Akzeptanz sowie erheblicher Nachfrage durch deutsche und ausländische Studieninteressenten und Bewerber die Chance, im weltweiten Wettbewerb zu bestehen. Mit dem vorgelegten Konzept bestehen gute Voraussetzungen für die Schaffung und Entwicklung eines nachhaltigen neuen Modells der internationalen Zusammenarbeit von Partnerhochschulen auf einem „Wachstumsmarkt“. Bei positivem Verlauf lässt sich dieses Modell der partnerschaftlichen Zusammenarbeit auf andere Entwicklungsregionen übertragen. Beispielsweise können Partnerhochschulen im östlichen Afrika, in Mittelamerika und der Karibik und vor allem in Südostasien eingebunden und somit eine überregionale Verbreitung der gewonnenen Erfahrungen sichergestellt werden.

Der partnerschaftliche Ansatz, die gegenseitige Einbindung und Beteiligung von Dozenten, die Verlagerung von Lehrveranstaltungen an ausländische Hochschulen, die gemeinsame Planung und Durchführung des Programms, die Integration weiterer Hochschulen in die regionale Zusammenarbeit, die gegenseitige Anrechnung von Studien- und Prüfungsleistungen und die angestrebte Vergabe eines gemeinsamen Abschlussgrades hat unter Aspekten der Hochschulentwicklung und Standortsicherung einerseits und unter Gesichtspunkten einer nachhaltig angelegten Bildungs- und Wissenschaftszusammenarbeit einen Vorbildcharakter.

Zusammenfassung

Die Agrarfakultäten der Universitäten Talca/Chile (UTalca) und Göttingen arbeiten seit vielen Jahren wissenschaftlich in grundständigen und postgradualen Studiengängen und in der Forschung bzw. bei der Qualifizierung von Nachwuchswissenschaftlern (Doktoranden) zusammen.

Das vor 40 Jahren gegründete Göttinger Tropenzentrum bietet seit 1976 deutschsprachige und seit 1991 englischsprachige MSc-Studiengänge an.

In Chile und anderen lateinamerikanischen Ländern besteht aber eine beträchtliche Nachfrage von Studienabsolventen mit einem ersten berufsqualifizierenden Abschluss nach einem postgradualen Studium in International Agribusiness.

Das Departamento de Economia Agraria der UTalca und das Göttinger Tropenzentrum haben 2000 vereinbart, einen gemeinsamen englischsprachigen MSc-Studiengang „International Agribusiness“ durchzuführen.

Die beiden Partner werben gemeinsam Studierende aus Chile und anderen lateinamerikanischen Ländern sowie aus anderen Ländern ein und betreuen sie partnerschaftlich.

Ein gegenseitiger Austausch von Studierenden und Dozenten war vorgesehen. Curricula werden gemeinsam erarbeitet. Unterrichtseinheiten (Module) werden in Göttingen und Talca angeboten und gegenseitig anerkannt.

Forschungsaufenthalte der Teilnehmer sind gemeinsam vorbereitet und betreut.

Das Projekt wird auf allen Ebenen von beiden Hochschulleitungen unterstützt und gefördert. Vorleistungen wie die Finanzierung gegenseitiger Besuche sind erbracht worden. Detaillierte Absprachen über das Programm und die Ausgestaltung der Partnerschaft sind in Göttingen, Talca und während eines Symposiums in Costa Rica im einzelnen getroffen worden. Formelle Grundlage der Partnerschaft ist ein von beiden Hochschulleitungen unterzeichnetes MoU.

Bei erfolgreichem Verlauf soll dieses innovative Modell der gemeinsamen postgradualen Studiengänge auf weitere Regionen in Lateinamerika, Afrika und Asien ausgeweitet und weitere Disziplinen oder Fachbereiche einbezogenen werden.

Wir halten das geplante Kooperationsmodell sowohl von der Konzeption her als auch aus der Sicht der internationalen Nachfrage für zukunfts- und wettbewerbsfähig: Es fördert eine gleichberechtigte partnerschaftliche Zusammenarbeit, stärkt die Süd-Süd- und die Nord-Süd-Kooperation, garantiert eine qualifizierte internationale Weiterbildung und sichert die jeweiligen Wissenschaftsstandorte der beteiligten Partner nachhaltig.

HISTORY AND PERSPECTIVES OF THE MSC. PROGRAMME "TROPICAL AND INTERNATIONAL FORESTRY", FACULTY OF FOREST SCIENCES AND FOREST ECOLOGY, UNIVERSITY OF GÖTTINGEN

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History

It was in 1985, when the Faculty of Forestry of the University of Göttingen launched the Master Program ***Forestry in the Tropics and Subtropics***. At that time, it was the first 2-year Master Program in Forestry in Germany and offered parallel to the traditional Diplom-system, which constituted of 2 years undergraduate studies (so-called "Vordiplom") and 3 years postgraduate studies (so-called "Diplom"). Both titles where not internationally recognized and didn`t allow BScs from outside to enter the system. Thus, the implementation of the program allowed for the first time an international compatibility. This German Language Program was supported by the German Academic Exchange Service with scholarships in the program "Postgraduate Programs with Relevance for Developing Countries" and focussed on the qualification of professionals from developing countries, namely from the tropics and subtropics. It consisted of 2 semesters course-work, 1 semester field research (in general in the students home countries) and 1 semester data/analyses and writing the thesis. This program was offered until 2001 and was coordinated at the Institute of Silviculture, Sect. II: Tropical Silviculture. As a parallel Program with slightly different courses but under with the same Curriculum, the English language MSc-Program ***Integrated Tropical and Subtropical Agriculture and Forestry Sciences*** was offered from 1991 till 2001. It was the first English MSc. Programme in Germany and coordinated jointly at CeTSAF and the Institute of Silviculture, Sect. II: Tropical Silviculture. This program was substantially financed by the German Agency for Technical Cooperation GTZ and most of the participants came from Indonesia. In total, 257 participants from 42 countries graduated in these Programs.

In 2001, the study program at the Faculty of Forestry switched from the former Vordiplom/Diplom-structure to the BSc/MSc-system. One out of 5 MSc studies is the ***Tropical and International Forestry***; a follow-up of the previous programs with a different curriculum. This English MSc Programme has a modularised structure, is in line with the European Credit Transfer System ECTS and consists of 2 semesters course work, 1 semester interdisciplinary project work and one semester Thesis including field research. A Memorandum of Understanding secures that Modules also may be taken from a Partner University in the Philippines, the Leyte State University LSU. The partnership is supported by DAAD and allows both staff and students exchange in both directions. The MSc-Program is coordinated jointly at CeTSAF and the Institute of Silvicutlure, Sect. II: Tropical Silviculture. Again, it is being supported by DAAD with up to 8 full scholarships/year.

Regarding the amount of students enrolled, a constant increase can be recognized over the past years, yet reaching a desirable level of about 25 – 30 students per year consisting of roughly 40 % Germans and 60 % foreigners from different countries.

Table 1: Enrolled students in the years 2000 – 2004, MSc Tropical and International Forestry

Years	German students	Foreign students	DAAD scholarships	Total
2000 – 2002	2	14	6	16
2001 – 2003	1	17	8	18
2002 – 2004	4	16	9	20
2003 – 2005	12	15	10	27
2004 - 2006	11	17	8	28

As so far only postgraduate studies are being offered completely in English, the majority of foreign students is entering after having completed BSc studies abroad at MSc level. Having successfully completed the MSc studies, they may continue at doctorate level in structured PhD-Programs, where many other foreign students enter as well.

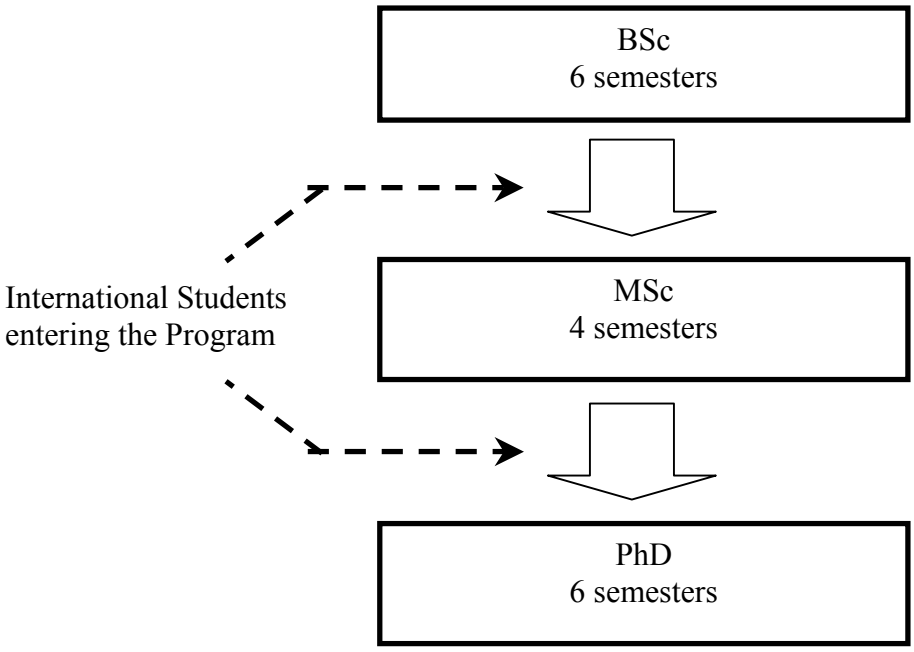

Figure 1: General structure of the study programs at the Faculty of Forest Sciences and Forest Ecology, University of Göttingen

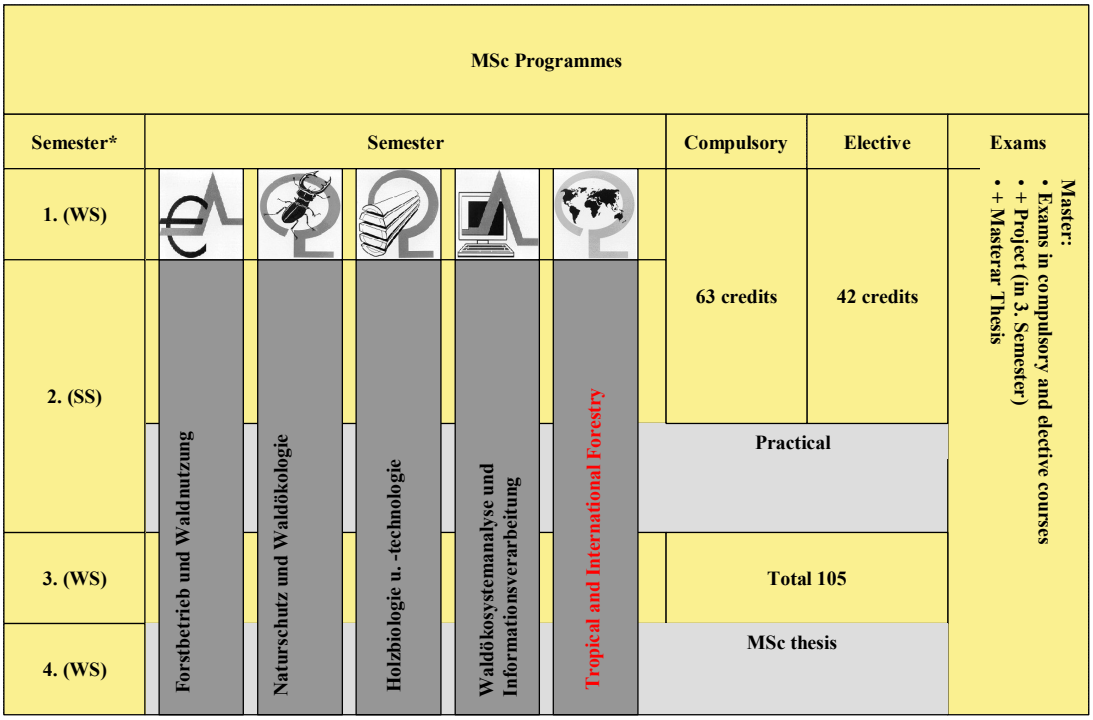

Figure 2: Further 4 (German Language) MSc-Programmes are being offered at the Faculty of Forest Sciences and Forest Ecology, University of Goettingen

Of in total 105 credits, 63 are compulsory and the remaining 42 electives. Any course must be successfully completed with exam. As far as elective subjects is concerned, students may also take lectures / credits from other Faculties, Universities or Universities of Applied Sciences:

- Students can take any modules at Masters level within Univ. Göttingen;
- For courses taken from other Universities within or outside Germany, there is need of clarification upfront in each case;
- Modules taken from Leyte State University at MSc level are automatically accepted as agreed upon by a signed MoU.

Additional courses exceeding 105 credits may be taken and listed additionally in the transcript without influencing the mark. The thesis is being done without earning any credits, it however of course has significant weight (30 %) in the final mark. German students have to carry out the project outside of Germany, namely in the tropics or subtropics (so far cost-benefit analysis have been carried out in Chile, Ecuador, Indonesia and the Philippines), while the foreign students do their project in Germany, usually near Goettingen (see table 2).

Table 2: Compulsories, MSc Tropical and International Forestry

SEMEST	COMPULSORY MODULES	ECTS Credits	Disciplines involved
1st (Winter)	Forest ecology and tropical silviculture	6.0	Tropical Silviculture
	International forest economics	6.0	Economics and Forest Marketing
	Biometric data analysis and planning methods for plantations and natural forests	6.0	Forest Biometry & Informatics, Forest Management and Tree Growth
	Forest inventory	6.0	Remote Sensing, Forest Mensuration and Inventory
	Forest development policy	6.0	Forest and Nature Conservation Policy and History
2nd (Summer)	Project planning, management and evaluation	6.0	Economics and Forest Marketing, Forest Managerial Economics
	Ecopedology of the tropics and subtropics	6.0	Tropical Ecopedology
	Forest Utilization	6.0	Forest Labor Science & Engineering, Wood Biology and Wood products
3rd (Winter)	Project 1: Development of a forest region (outside Germany) *	15.0	Various Disciplines
	Project 2: Managing sustainable forest system (in Germany) *	15.0	Various Disciplines
4th (Summer)	Master Thesis		

In Goettingen and nearby Kassel/Witzenhausen, there are many related MSc & PhD Programmes with English Curriculum, which offer a huge amount of electives:

Table 3: Postgraduate programmes in Goettingen and Witzenhausen

Programme	**Faculty**	**Coordination**
MSc Tropical & International Agriculture	Agriculture Goettingen	Institute of Agricultural Engeneering
MSc Tropical & Intern. Forestry	Forestry Goettingen	CeTSAF / Trop. Silviculture
MSc International Agribusiness	Agriculture Goettingen	CeTSAF / Institute of Rural Development
MSc Ecological Agriculture	Ecol. Agriculture Kassel/Witzenhausen	Faculty of Ecol. Agriculture
MSc Biological Diversity & Ecology	Biology Goettingen	Institute of Ecology and Ecosystems
MSc Ressourcenanalysis & Biodiversity	Geosciences Goettingen	CeTSAF / Institue for Landscape Ecology
PhD Wood Biology & Wood Technology	Forestry Goettingen	Institute of Wood Biology and Wood Technology
PhD International Agricultural Sciences	Agriculture Goettingen	Institute of Agricultural Engeneering
PhD Biological Diversity and Ecology	Biology Goettingen	Institute of Ecology and Ecosystems

Main features:

- Course language is English
- Thematic emphasis on Tropics and Subtropics, but also on German Forestry
- Interdisciplinary Course (e.g.: Modules from Faculty of Agriculture)
- Online examination board
- Support by DAAD through scholarships (8/year) and a financed University Partnership for lecturers and students exchange
- Frequent cultural events and excursions

Present research questions:

- Management strategies
- Role of forest plantation and natural forest in Carbon sequestration
- Rehabilitation of Degraded Areas
- Community Forestry
- Forest Resource Assessment
- Ecological Research
- Monetary valuation of forest functions
- Inventory of genetic resources
- Multiplication stratigies
- Non-wood products

Alumni Network

More than 260 Graduates from 42 countries are organized in the International Alumni Networks of CGKM (Consortium of the Universities Göttingen, Kassel and Marburg):

- since 1999 **GEAR** (**G**ermany – **E**gypt-**A**rab-**R**egion Alumni Network)
- since 2000 **SEAG** (**S**outh**E**ast-**A**sia-**G**ermany-Alumni Network)
- since 2001 **ReCALL** (**Re**d **C**ientífica **A**lemania-**L**atinoamérica)
- since 2003 **GIAN** (**G**erman-**I**ranian-**A**lumni-**N**etwork)

Perspectives and strategy

The Program is part of an overall strategy aiming at having complementary strategic programmes and partnerships all over the world with regional centers of activity. For example in South East Asia, the following activities are leading to an effective and long-lasting network:

- Alumni-Network SEAG / frequent symposia and summerschools mainly supported by DAAD
- Several University Partnerships, e.g. with Chiang Mai University; Thailand, Leyte State Univ.; Phillippines (incl. MoU on lectures), IPB Bogor; Indonesia
- Member of SEAMEO-SEARCA (South East Asian Ministers of Agriculture – South East Asian Regional Centre for Agriculture
- Several Research Programmes incl. DFG-financed Collaborative Research Centre on the Stability of Rainforest Margins in Indonesia

Perspectives are especially seen in the establishing new partnerships, e.g. in Latin America and Africa; as an intermediate goal, it is desired to have one main partner in each

region, which serves as a platform in the region. The diversification of potential donors is very important as the dependence on only few or even one donor bears the risk to drop out as soon as support is suspended. Good chances to seek for funds are seen in programmes from DAAD (DIES, ISAP, University-Partnerships) and the European Union (for Latin America: Alpha, Alßan and others)

GERMAN COOPERATION IN THE POSTGRADUATE STUDIES IN THE UNIVERSIDAD NACIONAL DE TUCUMAN (NW OF ARGENTINA): THEIR CONTRIBUTION TO THE GEOGRAPHICAL DISCIPLINE

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Introduction

The postgraduate activities in Social Sciences in the Argentinean national universities have had a late beginning with regard to that manifested by the natural sciences. In this context the studies in Geography have shown, from middle of the 80's, a gradual development and, particularly in those Universities where some antecedent in postgraduate studies existed.

In what concerns to the National University of Tucuman the graduate degree in Geography has began around the academic activities developed by the "Institute Geographical Studies Dr. Guillermo Rohmeder". This center was founded in the beginnings of the 40's, and it was closed in 1959 due to an academic restructuring of the Faculty of Philosophy and Letters, being created in its place the denominated Departments whose attention was centered in the educational activities. Almost 25 years later the Institute was open again under initiative and control of the Prof. Enrique J. Würschmidt (former scholarship holder of the DAAD); from that moment their directives, first the Prof. Würchmidt and then the Dr. Alfredo Bolsi, looked to recover and to increase the scientific level of the institution through the formation of their integral youths. Such ends were achieved by means of an opening politics toward the exterior achieved through the exchange and the cooperation and, it was particularly from Germany of where the first and more valuable scientific contributions came.

In this sense we pretended, through this presentation, to meditate about the origins and contexts in which the studies of postgraduate were generated in Geography, in the National University of Tucuman and to demonstrate the relevance that maintained, and they even maintain, the established academic knots among the Institute of Geographical Studies Dr. Guillermo Rohmeder of the National University of Tucuman and diverse Institutes of Geography of German Universities in the development of the postgraduate activities. Also, it is necessary to indicate that who present these results; they have been participants of such processes and also beneficiaries of the advances achieved with the German scientific cooperation.

Scientific Cooperation and Formation of Human Resources

In 1983, their authorities of the Institute of Geographical Studies intended to improve the scientific level of their members. To assume such objective was an entire challenge and in consequence you acted bolstering a politics of relationships international whereas clause that the cooperation and the exchange were the decisive mechanisms to

promote the superior education. On the other hand, it is necessary to highlight that in those years the postgraduate activities in the National University of Tucuman and particularly in Geography, it didn't evidence a solid line of activities, in consequence inside the Social Sciences each discipline would open its own way, offering isolated courses.

In that context, in the Institute of Geographical Studies a growing necessity was profiled to form human resources and to develop with more intensity the investigation tasks in the area of the physical geography as human, in search of forming citizens that are participate active in the society and integral part of the higher educational systems of the National Univesity of Tucuman and the world.

It was the beginning of a new opening politics sustained in bonds of friendship between the academics of the Institute and a dozen of educational and European investigators. However, those personal covenants were developed mainly with centers of studies of German universities with who we started a progressive cooperation process and intellectual and scientific exchange. Indeed, the Institute of Geographical Studies associated, at the end of the decade of the '80, with 5 centers of investigation of the following German universities: Tübingen, Kiel, Marburg, Freiburg and Münster. In this way, from 1988, it was constituted in center receiver of educators and German investigators whose demurrage was managed to the offer of courses, with many thematic, organized inside what was denominated courses of fourth level. The participation and approval of anyone of the offered courses credited the students to be able to consent to the postgraduate studies.

In table 1 we can observe the received cooperation chronologically from different German institutions, whose thematic areas were pointed to offer a methodological and theoretical formation inside the studies of the urban geography (climatology, ecology, etc.), agrarian geography, physical geography and also in the didactics of the geography.

Table 1. Evolution of the participation of educational and investigators from Germany in the Institute of Geographical Studies, period 1988-1995

Year	Institute	University	Educators	Subject of study
1988	Institut für Physische Geographie	Albert-Ludwigs Universität zu Freiburg	Dr. Wilfried Endlicher	Remote Sensing in Geography
1989	Institut f. Didaktik d. Geographie, WWU	Universität zu Münster	Prof. Dr. Jurgen Bünstorf	Seminar of Didactics of the Geography
1990	Geographisches Institut	Universität zu Tübingen	Prof. Dr. Gerd Kohlhepp	Agrarian transformations in Latin America and expansion of the agrarian frontiers (Seminar)
1990	Geographisches Institut	Christian_Albrechts-Universität zu Kiel	Dr. Paul Gans	Statistical method in Urban Geography
1990	Fachbereich Geographie der Philipps Universität Marburg	Philipps Universität Marburg	Dr. Wilfried Endlicher	Ecology and Urban climatology

1991	Fachb. Geographie der Philipps Universität Marburg	Philipps Universität Marburg	Dr. Günter Mertins	Method of Investigation in Urban Geography
Year	Institute	University	Educators	Subject of study
1991	Institut f. Didaktik d. Geographie, WWU	Universität zu Münster	Prof. Dr. Jurgen Bünstorf	II Seminar of Didactics of the Geography
1992	Geographie Institut	Universität zu Tübingen	Dr. Heinrich Pachner	Workshop of Urban Geography
1993	Fachbereich Geographie der Philipps Universität Marburg	Philipps Universität Marburg	Dr. Wilfried Endlicher	Ecology of the landscape (geoecología I); Landscapes and agrarian structures in Latin America
		Servicio Meteorologico Nacional de Alemania	Dr. Günter Mertins	Workshop of Rural Geography
			Dr. Eckart Schultz	Mensurations of the contamination of the air in Tucumán: methods, results and recommendations
1994	Fachbereich Geographie der Philipps Universität Marburg	Philipps Universität Marburg	Dr. Günter Mertins	Structure urban and urbanization processes in the big Latin American cities. A case study: San Miguel of Tucuman
1995	Geographisches Institut	Universität zu Tübingen	Dr. Martin Coy	Problems of rural geography and regional rural planning in the South American tropics

It is necessary to highlight that this whole process was executed practically in absence of letters agreements and formal agreements, in its place the "personal covenants" prevailed among the Argentinean and German professors. Alone an exception deserves to be outstanding, it is the agreement of Academic Collaboration summed up among the "Institut f. Didaktik d. Geographie", WWU and the Institute of Geographical Studies of the National University of Tucuman represented by the Prof. Dr. Jürgens Bünstorf and the Dr. Alfredo Bolsi respectively, inside which it was developed an oriented investigation project to the Didactics of the Geography.

As a consequence of this action, together with the German universities, was created interactive net directed to:

- to foment the contacts among the investigators and educational of both institutions, identifying investigation areas that facilitate a narrow and solid scientific cooperation and the academic exchange.

- to exchange information referred to the investigation activities and academic programs developed by both parts.
- to recognize the possibilities of advanced students' exchange and of postgradute by means of a reciprocal system of acceptance.
- to foment and to program, inside a mark of scientific cooperation, bi-national research projects.

Also our institution was beneficiated with the donation of bibliographical material, cartographic production and technological equipment. On the other hand, during the demurrage in Tucuman the educational ones German they also organized round-tables, conferences referred to the cultural and political aspects of Germany and they generated spaces of consultations and dialogues with the local investigating youths.

Another fact to highlight is that this scientific exchange could be summed up thanks to the contributions received by the Service of Exchange German Academic (DAAD) and also by means of an agreement maintained between this organism and the National Council of Scientific and Technological Investigations (CONICET). Through both it was possible to finance the reasonable demurrage of the educational ones from Germany; also by means of the collaboration of the CONICET the German professors diffused their scientific contributions in other universities of Argentina, example of they are it the demurrages maintained by the educational of Marburg in The National University of Whose and in the National University of the Northeast.

During this period among the local graduate youths, as much in geography as in social sciences, it was taking bigger relevance the insert necessity in the postgraduate studies. This was summed up with the formal incorporation of the students denominated doctorate tutorials whose formal aspects assisted him the Department of Graduate of the Faculty of Philosophy and Letters. This career didn't show any systematizing to offer courses, therefore the graduate ones interested in the doctorate they should select, inside the local or regional offer, postgraduate courses in function of its own specialization interests and, the Department of Graduates, according to the established rules inside the Doctorate Tutorial, decided if such courses were authenticated or not. For the graduate ones in geography and sciences to ends, in great measure the opportunity of improvement came from the asset established exchange with the German Universities during the decade of the 90's (reflected in table 1) and, logically the whole offer was evaluated by the Department of Graduate of the Faculty of Philosophy and Letters.

This way the starting point was possible to design a postgraduate project that locates the student in a wider and structured perspective, that which became possible increasing the national and international connections of the Institute. Indeed, parallel to the German cooperation a firm association was generated with other similar centers of the national universities, for example Cuyo and Buenos Aires and international as the University of Alcalá de Henares of Madrid, the University of Seville or Córdoba in Spain, and later with The College of Mexico and the university of Berckeley, California. In consequence this allowed to diversify the origin of the educational ones of the postgraduate, to develop bi-national research projects and to send graduates to those centers to complete their academic formation. That is to say the opportune context to develop an academic environment sustained in the scientific research, which was supplemented very well with the postgraduate activities that one came profiling.

Exchange of Students and Graduates in Geography

The relationships and cooperation with the centers of high German studies not alone they were centered in the reception of professors, because it was also sustained in the

exchange of students and graduated in geography. Particularly this action was developed actively with the University of Marburg.

During the whole decade of the 90's were generated to the scientific cooperation parallel an intensive movement of students. On one hand the Institute tucumano it was receiving of an important number of advanced students that came interested in completing, by means of their holding in the scientific chore of the National University of Tucuman, their studies to obtain their diploma. Also, they were guided to develop internships in official organisms (Municipalities, center of sciences to ends, etc) with the purpose of knowing the development of topics as the urban and regional planning; also during their stay in Tucuman, they incorporated in the investigation projects that were executed in the Institute of Geographical Studies with that which was developed an asset exchange of knowledge and experience with the local students. It was young students that came from the universities of Kiel, Münster and Marburg.

On the other hand this exchange was supplemented with a reciprocal exchange of having graduated in Geography between the Institute of Geographical Studies of the National University of Tucuman and the "Fachbereich Geographie der Philipps Universität Marburg" whose mobility had as purpose to advance in the formation of the graduate degree and in its work of final investigation. In the following table you can appreciate this asset exchange.

Table 2. Evolution of the exchange of granting a doctorate in Geography between the Institute of Geographical Studies and Institutes of Germany, period 1990-2000.

Date	Student	University	Destination	Condition and purpose of the demurrage
1990	Lic. Ulrich Müller	University of Marburg	Institute of Geography of the National University of Tucumán	Scholarship holder of the DAAD and under the direction of the Dr. Mertins it developed their thesis *"The ecological and economic parameters of the current process of urbanization of the Great San Miguel of Tucumán."*
1993	Lic. Marta Madariaga	Institute of Geography of the National University of Tucumán	University of Marburg	Scholarship holder of the DAAD with the purpose of carrying out postgraduate studies with their director Dr. Günter Mertins. Their thesis was *"Transformations of the agrarian structures in the border of the Great Chaco"*
1993	Ralph Fischer and Jürgen Michel Popp	University of Marburg	Institute of Geography of the National University of Tucumán	Scholarship holders with demurrage of 3 months inside the mark of project two-nationality between the University of Marburg and the National Univesity of Tucumán.
1993-1994	Lic. Claudia Hernández	Institute of Geography of the National University of Tucumán	University of Marburg	Scholarship holder of the DAAD with the purpose of carrying out graduate degree studies with their director Dr. Wilfried Endlicher. Her doctoral thesis *The changes of the parameters antrópicos among the urban and rural atmospheres: the case of San Miguel of Tucumán.*
1994-1997	Harald Hunzinger	University of Marburg	Institute of Geography of the National University of Tucumán	Scholarship holder of the DAAD with the purpose of carrying out postgraduate studies with their director Dr. Wilfried Endlicher. Their doctoral thesis was: The climatological and hydrological natural watering in the piedemonte of Tucumán with the interference antropica in the geoeconsistema under the direction of Wilfried Endlicher.
1995	Lic. Ana I. Rivas	Institute of Geography of the National University of Tucumán	University of Marburg	Scholarship holder of the DAAD with the purpose of carrying out postgraduate studies with their director Dr. Günter Mertins. Their doctoral thesis: *It structures agrarian and economic social in the area of intensive cultivations of Lules, coNational Univesity of Tucumány of Tucumán (Argentina)*
1997	Lic. Claudia Hernández	Institute of Geography of the National University of Tucumán	University of Marburg	Scholarship holder of the DAAD with the purpose of carrying out graduate degree studies with their director Dr. Wilfried Endlicher. Her doctoral thesis *The changes of the parameters antrópicos among the urban and rural atmospheres: the case of San Miguel of Tucumán*
	Lic. Ana I. Rivas	Institute of Geography of the National University of Tucumán	University of Marburg	Scholarship holder of the DAAD with the purpose of carrying out postgraduate studies with their director Dr. Günter Mertins
2000	Anke Pötter	Fachbereich Geographie der Philipps Universität Marburg	Institute of Geography of the National University of Tucumán	Advanced student in the career of Geography with internship to develop their final work and to obtain their Diploma. Their director was Dr. Günter Mertins

The results of this cooperation were reflected in the finalization and approval of two doctoral thesis in the University of Marburg, two in the National University of Tucuman and two next to also be defended in Tucuman. Once again we should stand out the valuable contribution carried out by the DAAD, since 90% of the exchange was developed by means of scholarships granted by this organism.

Another aspect to highlight is the fact that this asset exchange of granting a doctorate opened the possibility of labor insert for each one from the graduate ones when returning to its National Univesity of Tucuman. In the German case of the graduate ones they were inserted in the mark of investigation of the "Geselschaft für Technische Zusammenarbeit" (GTZ), on the other hand for the graduate women Argentinean ones their inclusion was generated inside the educational environment and of investigation of the Faculty of Philosophy and Letters; today all these graduate ones act as educational and they have maintained a wide trajectory in the projects of investigation of the Institute of Geographical Studies.

This way it is noticed that on the whole, the cooperation process and exchange that it experienced our University with the German Universities allowed to consolidate the tasks of the investigation and to fortify the road for the superior studies in search of a more solid academic excellence.

The Postgraduate Studies at the Present Time

From the middle of the 90's in the environment of the Faculty of Philosophy and Letters of the National Univesity of Tucuman the postgraduate studies in social and Human Sciences began to acquire bigger relevance, this way to the traditional Granted a doctorate Tutorial it was incorporated the structured postgraduate; on the other hand the postgraduate secretary increased its functions and also its personnel.

In the area of the Geography, by means of a work on the whole among educational of the area of History and Geography, it arose in 1995 the Master in Social Sciences (orientation History or Geography) with headquarters in the Institute of Geographical Studies. Their origin responded rather to proposals and personal necessities arisen between the educational ones and investigators of these two disciplines and, it was not the result of a general politics established in the own National University of Tucumán. "*There was not, in spite of the strong growth of the postgraduate offer, a change that allowed to incorporate the personnel of the postgraduate careers in the university budget. In the national order accelerated the process of evaluation of the offer through the CONEAU (Comisión Nacional para la Evaluación y la Acreditacion Universitaria), some plans of scholarships were developed for postgraduate, in short, norms were dictated and they put into practice excellent projects like for example the compound number FOMEC (Fondo de Mejoramiento de la Calidad Educativa) that allowed a remarkable growth and it improves of the postgraduate that consented to its financing. However, this project was given had concluded in 2003 and another was not implemented in its substitution"* (Bolsi, 2004). However, this Master didn't decay on the contrary, with the help of a group of enthusiasts and tenacious educational and investigators of the Institute of Geographical Studies and of the Department of History road opened up toward a postgraduate structured solid and sustained with the financial support that the same creators looked inside the means that the National University of Tucuman or other national organisms offered.

This Master in Social Sciences is oriented to the training of the graduate ones in history and geography, so much for the scientific investigation as for its educational acting in the superior level; their program of studies understands the methodological and technical aspects of investigation for the advanced formation in history and general geography, Latin American and regional. From their beginning it has maintained a facility of noted

professors conformed by national and international professors. In this group once again is present the cooperation from Germany, since the development of this career has had the participation of educational German: Dr. Ulrich Müller and Prof. Dr. Günter Mertins of the Universidad of Marburg and the Dr. Rainer Wehrhahn of the University of Kiel who offered courses referred to topics of the Urban Geography. Here it is very outstanding the fact that the contacts with the University of Marburg stay firm and that a participant ex-estudiante of the signal exchange previously this present as educational inside this graduate degree career.

A sign of good development of this career constitutes its registration, because from its beginning a gradual and growing acceptance that has been evidenced among the graduate ones local and others Argentinean areas, who consent in great measure leaning with the grant of scholarships as the one that offers the CONICET, the National University of Tucuman or the Antorcha Foundation.

From the year 2003 to this Master were supplemented the Doctorate with the purpose of consenting at the superior level that follow to such Master and as a consequence arose this way the Master and Doctorate in Social Sciences (orientation History or Geography) with an offer of courses of methodological content and of general formation and specialized in Geography and History. For this today it is had a stable group of 11 professors: 3 of Buenos Aires, 2 of Tucuman, 1 of Quilmes and 1 of Resistencia, between the Argentineans and 2 of Madrid, 1 of Paris and another of Marburg, among the foreigners. They also have a body of invited professors, where to those of Buenos Aires and Tucuman, colleagues of Essex are added, Berkeley, Madrid, Turín, etc. As you can observe in this proposal it is maintained the contact with Germany, because from Marburg it is had the stable participation of the Dr. Günter Mertins. National Univesity of Tucumánil the present time the master has maintained a growing number of graduates, up to a total of 10, among the graduate of History and Geography.

As a conclusion it is possible to notice that for the directives and integral of the Institute of Studies it has been valuable and notable the support toasted from Germany. The received contributions, from their foundation and along their development as center of scientific investigation, it has contributed, on one hand to the formation of the geographers of the National University of Tucuman and also to the students and graduate German and, for another to maintain and to strengthen the academic bonds between Tucuman and Germany, which stay firm National Univesity of Tucuman in the present time.

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CHILENISCHE INGENIEURSTUDENTEN AN DEUTSCHEN HOCHSCHULEN – EIN ERFAHRUNGSBERICHT

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Abstract

Das chilenische Ingenieurprogramm entstand 1998 zunächst mit zwei chilenischen Universitäten (Universidad de Talca/ Universidad de la Frontera- Temuco). Es orientierte sich an der Kooperation, die zu dieser Zeit zwischen Brasilien und dem DAAD bestand. Im Laufe der vergangenen Jahre hat das Programm eine wesentliche Erweiterung erfahren, so dass heute neun chilenische Universitäten teilnehmen und die Zahl der Austauschstudenten bis auf 60 angestiegen ist. Die bilaterale Finanzierung des Programms, die Einbindung der Heimatuniversitäten in die sprachliche Vorbereitung der Stipendiaten sowie die Anrechnung der in Deutschland erbrachten Studienleistungen stehen nicht nur für den Erfolg des Programms, sondern sorgen auch immer wieder für erhöhten Diskussionsbedarf bei den chilenischen Hochschulen.

Auf lange Sicht soll das Programm dazu beitragen, ein Netzwerk unter den teilnehmenden (Ex-)Stipendiaten sowie den deutschen Hochschulen zu bilden, neue Kooperationen ins Leben zu rufen sowie den Austausch von Doktoranden und Wissenschaftlern zu fördern.

Einleitung

Das Pilotprogramm zur Förderung praxisnaher Studienaufenthalte chilenischer Studenten der Ingenieurwissenschaften an deutschen Hochschulen wurde 1997 aufgrund einer Initiative des Rektors der Universität Talca, Professor Alvaro Rojas Marín, in Kooperation mit dem DAAD ins Leben gerufen. Im Jahr darauf konnten die ersten zwanzig Studenten dieser Hochschule gemeinsam mit Studenten der Universität La Frontera/ Temuco für ein einjähriges Teilstudium an die deutschen Universitäten Göttingen und Dresden reisen.

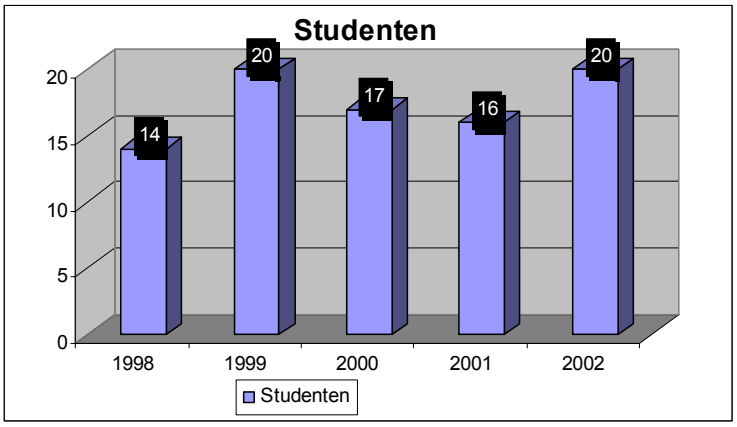
Zielsetzung dieses Programms war neben der wissenschaftlichen und kulturellen Annäherung beider Länder eine langfristige Perspektive für eine zukünftige Modernisierung der Ingenieurwissenschaften in Chile zu schaffen.

Die Voraussetzungen für eine erfolgreiche Bewerbung im Ingenieurprogramm sowie die Erwartungen von Seiten des DAAD sind relativ niedrig angesetzt und lassen insofern den teilnehmenden chilenischen Universitäten einen großen Handlungsspielraum bei der Auswahl geeigneter Kandidaten. Erwartet wird, dass die Bewerber zum Zeitpunkt der Ausreise das dritte Studienjahr an der Heimathochschule erfolgreich beendet haben, um auf diese Weise eine unproblematische Aufnahme der Studenten ins Hauptstudium ihres Fachbereichs zu gewährleisten. Neben den herausragenden akademischen Leistungen, die man von den Programmteilnehmern erwartet, wird in der Ausschreibung explizit die Fähigkeit zur Integration in einem fremden kulturellen und sprachlichen Kontext hervorgehoben. Die Verpflichtungen der Stipendiaten während des Deutschlandaufenthaltes sind im wesentlichen in den folgenden drei Punkten konkretisiert:

Engagierte Teilnahme an den Deutschkursen, Besuch und erfolgreiches Bestehen von (mindestens) vier Lehrveranstaltung sowie die Durchführung eines Praktikums.

Die Programmjahre 1998-2001

Die ersten Jahre des Ingenieurprogramms für chilenische Studenten zeichneten sich durch ein Austauschvolumen von maximal 20 Studierenden jährlich aus. Aufgrund schon vorhandener akademischer Beziehungen der Universität Talca mit einzelnen Fakultäten der Universität Göttingen wurden auch die Studienfächer Agronomie, Forstwissenschaften und Betriebswirtschaftslehre ins Programm aufgenommen, die an der hiesigen Uni zu den Ingenieurwissenschaften zählen.

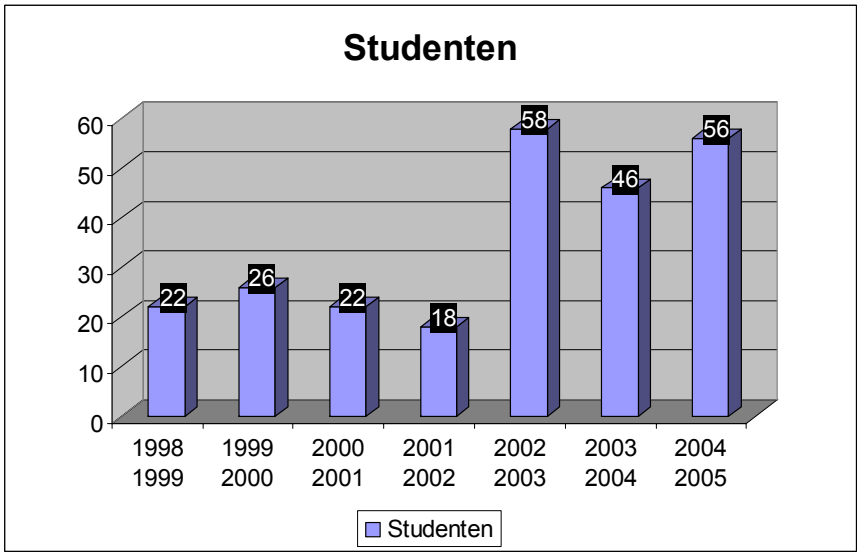


Graphik 1: Anzahl der Austauschstudenten der Universität Talca in Deutschland, Quelle: DAAD

Erweiterung des Programms seit 2002

Die durchweg positiven Erfahrungen der chilenischen Studenten in Deutschland, sowohl auf akademischem wie auch auf persönlichem Gebiet, führte zügig dazu, dass auch die traditionellen Ingenieurwissenschaftliche Fakultäten anderer staatlicher Universitäten Interesse zeigten, ihren Studiererenden die Teilnahme am Ingenieurprogramm zu ermöglichen. Neben der Universität von Santiago de Chile, der Universität Austral von Chile (Valdivia), den in Valparaíso ansässigen Hochschulen, Katholische Universität und Technische Universität Federico Santa María, schloss sich im Jahre 2002 noch die Katholische Universität des Nordens (Antofagasta) dem Programm an. Damit wurde der Umfang der Teilnehmeranzahl auf bis zu 60 jährlich aufgestockt. Gleichzeitig mussten auch andere deutsche Hochschulen gefunden werden, um die große Anzahl der Programmteilnehmer aufzunehmen. Neben den oben schon erwähnten Universitäten Göttingen und Dresden konnten die TU-Berlin, die RWTH-Aachen, die Ruhr-Universität Bochum sowie die Universität Karlsruhe als Gasthochschulen für die chilenischen Universitäten gewonnen werden.

Im folgenden Jahr 2003 schlossen sich zudem noch die Universitäten von Concepción und La Serena dem Studienprogramm an.



Graphik 2: Anzahl der Programmteilnehmer bis 2004, Quelle: DAAD

Einschließlich der zur Zeit in Deutschland weilenden chilenischen Ingenieurstudenten hat das Programm bisher 248 Teilnehmer an deutsche Universitäten geschickt. Aufgrund der erhöhten Teilnehmerzahlen hat sich auch eine Erweiterung bei den Studienfächern durchgesetzt. Auch Studierende seltenerer ingenieurwissenschaftlicher Fächer wie beispielsweise Schiffsbau konnten von diesem einjährigen Deutschlandaufenthalt profitieren.

Der größte Anteil der Studienbewerber kommt aus den folgenden Fachbereichen: Wirtschaftsingenieurwesen (48), Bauingenieurwesen (30), Betriebswirtschaftslehre (29) und Maschinenbau (27).

Finanzierung

Die Kosten für die Realisierung des Studienaufenthaltes teilen sich der DAAD und die beteiligten chilenischen Hochschulen.

Auf der einen Seite zahlt der DAAD aus Mitteln des BMZ (Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung) die Deutsch-Intensivkurse für die ausgewählten Stipendiaten an der Hochschule Talca (insg. 5 Wochen ab Anfang Januar) sowie an den deutschen Gasthochschulen nach Ankunft für die Dauer von zwei Monaten.

Außerdem stellt der DAAD an allen Gasthochschulen Tutoren für die akademische und organisatorische Betreuung der ausländischen Studierenden bereit.

Das Teilstipendium umfasst ferner eine Kranken- Unfall- und Haftpflichtversicherung, eine monatliche Summe von 205,- Euro zur Deckung der Unterbringungskosten sowie eine einmalige Starthilfe von 460,- Euro zu Beginn des Deutschlandaufenthaltes.

Die chilenische Seite verpflichtet sich, den Stipendiaten während zwei Semestern einen vorbereitenden Deutschkurs an ihren Heimathochschulen anzubieten, die Hin-und Rückflugpassage zu zahlen sowie einen Kredit in Höhe von mindesten.400,- Euro während des Deutschlandaufenthaltes einzuräumen. Außerdem wird von deutscher Seite erwartet, dass die Stipendiaten während ihrer einjährigen Abwesenheit von den Studiengebühren ihrer Heimathochschule befreit werden.

Chronogramm

Die Bewerbungen und Auswahlgespräche an den Heimatuniversitäten laufen rund ein Jahr vor Ausreise an. Dann müssen sich die Stipendiaten an einem ersten vorbereitenden Deutschkurs an ihrer Universität beteiligen. Ab Anfang Januar sind alle Programmteilnehmer aufgefordert, an dem eigens für sie an der Uni Talca und von der dortigen DAAD-Lektorin organisierten Intensivkurs teilzunehmen. Neben einem Sprachkursangebot von rund 120 Stunden erhalten die Teilnehmer in diesem Rahmen Informationsveranstaltungen und Seminare zu den deutschen Hochschulen, dem Studium der Ingenieurwissenschaften im allgemeinen, sie beteiligen sich an Internet-Recherchen zur Vorbereitung des Studienplans und erhalten ein breites Angebot an kulturellen sowie alltagsrelevanten Seminaren.

In der Regel reisen die Stipendiaten Ende Juli des Folgejahres nach Deutschland, um dort ab Anfang August an einem zweimonatigen Deutschkurs teilzunehmen. Ab Oktober besuchen sie das Wintersemester ihrer Hochschule und sind aufgefordert möglichst frühzeitig einen Praktikumsplatz zu suchen, so dass die meisten Stipendiaten entweder in den Semesterferien (Februar bis April) oder im darauffolgenden Frühjahrsemester ein Praktikum durchführen können, in aller Regel an ihrem Institut.

Schwierigkeiten

Auf drei Gebieten zeigt das ansonsten erfolgreich installierte Ingenieurprogramm immer noch seine Tücken. Zum einen ist die Finanzierung auf chilenischer Seite nicht wirklich gedeckt, das heißt, vielerorts können die Stipendiaten nicht auf einen umfassenden Kredit ihrer Hochschule zurückgreifen, sodass die Familien in hohem Maße in die Pflicht genommen werden, ihren Söhnen und Töchtern die nötigen Mittel zur Verfügung zu stellen. Auf der anderen Seite geben die geringen Deutschkenntnisse der ausreisenden Stipendiaten immer wieder Anlass zur Beunruhigung. Die defizitäre Sprachausbildung an den chilenischen Schulen hat zur Folge, dass die Studenten auch nur über äußerst rudimentäre Englischkenntnisse verfügen. Leider muss man sagen, dass für die meisten chilenischen Programmteilnehmer das Sprachenlernen eine sehr große Hürde in diesem Programm darstellt. Da die rasche und erfolgreiche Eingliederung der Stipendiaten ins deutsche Hochschulsystem nur mit guten Deutschkenntnissen zu erreichen ist, müssen die beteiligten chilenischen Universitäten sehen, wie sie die sprachliche Vorbereitung ihrer Studenten verbessern können.

Ein anderer Punkt der dem Erfolg des Programms bisweilen im Weg ist, betrifft die Anrechnung der in Deutschland erbrachten Studienleistungen. Obwohl die meisten Studierenden mit der Idee nach Deutschland gehen ausschließlich komplementäre Unterrichtsveranstaltungen zu belegen, so scheint es doch wünschenswert, wenn die in Deutschland erbrachten Studienleistungen in größerem Umfang anerkannt würden und nicht nur aus dem Bereich der Wahlfächer.

Ergebnisse und Ausblick

Zweifellos hat das Ingenieurprogramm einen hohen Stellenwert in der Internationalisierung der hiesigen Hochschulen. Die traditionell engen kulturellen Beziehungen zwischen beiden Ländern zeigen sich auch durch die Teilnahme von Absolventen der Deutschen Schulen, die natürlich sprachlich gut gerüstet ihren Deutschlandaufenthalt angehen.

Für alle Teilnehmer bietet das Programm außerordentliche neue kulturelle und sprachliche Erfahrungen, die für dieses durch seine einzigartige geographische Lage (Andenkordillere und Pazifik) recht isolierte Land von äußerster Wichtigkeit sind.

Auch die Einblicke in die andersartige, freiere und wissenschaftlicher ausgerichtete akademische Welt stellt für die Programmteilnehmer eine große Bereicherung dar. Steigendes Interesse der zurückkehrenden Stipendiaten an weiterqualifizierenden Programmen im Postgraduierten Bereich (in Chile und Deutschland) sowie die enge Verbindung zur deutschen Gasthochschule stellen die wesentlichen Erfolge des Programms dar.

Für die Zukunft soll das Programm zu einer umfassenden Netzwerkbildung beitragen, den Austausch Masterstudenten, Doktoranden und Wissenschaftlern fördern, sowie langlebige Kooperationspartnerschaften ins Leben rufen.

NETWORKS OF SCIENTIFIC, TECHNICAL AND ACADEMIC INTERCHANGE: AN EXERCISE TO FIND NEXUSES THAT CAPITALIZE CULTURALLY THEIR POTENTIALS IN THE HORIZONTAL AND VERTICAL SCALES FROM A UNIVERSITY VIEW

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Abstract

The main contribution of this article intends to identify the functions of the networks, trying to establish a way to understand the particularly case of the scientific, technical and academic networks, showing its configuration, results and challenges for concise activities.

A Review About the Semantic Conception Among the Networks

This article starts making a review of the networks conception, providing an understanding about the "physical" and "social" networks. The primary focus in this part are the social networks, but it is important to know that the coexistences among physical and social networks are necessary for their own existences.

It is interesting to notice the networks resulting from a human organization and joint of groups and institutions. However, it is important to know the social networks related to physical networks and communication resources. The development of new technologies and the possibility to create communication networks, of specific interests, techniques, using the most variable resources and channels are basic for the development of these social networks.

The social networks use the possibilities offered by technological systems and horizontal trade of information to improve its strategies of growth into the society. Nowadays, many social and cultural networks appear stimulated by the information networks from their "locus".

As DIAS (in CASTRO, 2000) pointed out in her studies, the conception of technical networks appears detailed as a answer for a social demand, which can be related to railroads, highways, telegraphy, telephony and computation.

LIST (1841) says that social innovations are basic in the history of World Capitalism processes. They produce and change the national spaces, presenting the lines and technical networks, making possible fast circulation of goods, people and information. Each day, these networks are more present in the space, changing landscapes and existing at the same time with other elements. These technical networks make impacts in the territory organization.

SCHERER-WARREN shows others conceptions of networks defined by the different uses and senses of the society. This way, appears some brand new networks based in a study of collective actions:

- Strategic Networks;
- Solidarity Networks;
- Non-Governmental Networks;
- Universities Networks;
- Energy Networks;
- Information Networks.

The conception of networks appears to SAINT-SIMON (MATTELART, 1999, *apud*: Souza) as basic element. He used to defend a creation of a State rationally organized by scientists and industrials, intending to be a General System of communication and territorial integration. Saint-Simon brings the idea of a network composed by a metaphor which provides a society like an alive organism. The society is conceived as an organic system.

From the analysis of the different types of networks, it will analyze the "social network", highlighting the alumni networks and its particularities. This type of network results from social demands, it is independent from physical distances, because the nexuses join the different points of the network. The social network is solidary, strategic, innovative, and has non-lucrative intentions. It is based on an existence of an affinity. In the case of ReCALL Alumni Network, that affinity corresponds to the exchange of knowledge, experiences, and cultures of distinct realities (Germany and Latin America).

Network of Institutions or Institutions in a Network?

Before starting to answer this question is necessary to establish some ideas about how social networks are adapted for scientific, technical and academic intentions, specially in the case of ReCALL Alumni Network.

The network that is mentioned here appears from relationships in different scales (Local, National and Global). This way, it is necessary to make some considerations of how these relationships occur in the space, providing communication, circulation and a growth mobility of ideas and orders.

Some properties can support an understanding about the relationships and the establishment of a network. An important property is the capacity of connection, the one that allows the network to be developed, from the actions of its participants of each point of the space. Diffusion is another property that starts the processing of information and a constant actualization of primary goals of the network. Maintenance is another property that should be considered as a constant in the "life" of a network, so the future generations can access all knowledge and relationships accumulated during the existence of the network. Flexibility it is one of the most important properties because the network is present in many points of the world, with many distinct cultures.

These properties allow the networks to incorporate new segments of the society in a general way. The incorporation of new segments is responsible for the materialization of the networks, bringing new actions to the space. It is important to know that the capacity of "incorporation" do not bring risks for the dimension of the networks. A basic prove of that is the fact that networks do not work in a homogeneous way.

The networks could not be understood resulting from a totality of direct relations, but can be understood from technical, economic, political and social actions and relationships. Thus, they are an answer to the necessity of fast communication and transfers of knowledge.

As DUPUY (1984) explains, the organisms in charge of the network management, related to a technical, economic, policies management do not work alone, but they put in action the social relations in a solidary perspective.

SCHERER-WARREN works analyzing the interactions of different social actors, in different scales. This way, the movements of the networks can be analyzed from a view of joint from the local to global, among the particular and universal.

After all those considerations, the question is still alive, Networks of Institutions or Institutions in Networks: It can be possible to consider the two ways. The networks can add different institutions making decentralized decisions at the same time that these institutions work thru a common goal. This particularity of work brings the institutions into a common intention that gives finally, the two possibilities to the networks. Below comes a table showing some examples of forms and actions of the networks.

Table 1. Networks of Institutions or Institutions in Networks

Institution	Intention	History	Performance
OXFAM International	Provide strategies of solutions related to poverty and injustice.	Network of Institutions that extended its actions in the last years. Congregate 12 institutions working to-gather with 3000 local organizations in the world. To reach its objectives, OXFAM improve some policies in joint of international institutions, promo-ting campaigns of information and participating in development programs.	Promotion of information campaigns, elaboration of documents. 12 institutions acting at the same time in more than 100 countries.
The Palestinian NGO Network	Coordinate actions to give support to organizations that work for the "Palestinian cause" around the world;	Founded in 1993, after the signature of "Oslo Treat-ed", this network support civilian entities that fight for the Palestinian rights, acting coordinating 92 organizations. The PNGO works with others networks of institutions, like Sabeel Ecumenical Liberation Theology Center, The General Union of Palestinian Women, Christian Aid Christian Peacemaker Teams (CPT), Coalition of Women for Peace, Ecumenical Accompaniment Program in Palestine and Israel (EAPPI), International-al Solidarity Movement (ISM), International Woo-men's Peace Service (IWPS), Israeli Committee Against House	From its website, the PNGO shows its strategies of action, publications, advertising, information, projects in progress, news and documents. Its website became a basic vehicle of reference, integration and exchange of information.

		Demolitions e World Council of Churches.	
Institution	Intention	History	Performance
IGC and APC (Institute for Global Communications and Association for Progressive Communications).	Support Organizations in the world that work for better conditions of human rights, peace, environment, sustainable development, woman rights.	Founded in 1987 to support a Network of peacefully organizations (PeaceNet). Working together with 6 international organizations, the IGC established in 1990, the APC. APC is a coalition of international and progressists organizations by the internet, with 25 members and 40 partners. Some of the members: Peacefire.org, Greenmarket place, Project Change Anti-Racism Initiative, Envirolink Network, The Women's Network.	The IGC offers a service hosting websites of more than 250 organizations with non-lucrative intentions. It also offers support to others networks like EcoNet, WomensNet, LaborNet e AntiRacismNet. The APC offers tools of communication and sharing of information in more than 130 countries.
Indymedia (Independent Media Centre - IMCs)	Support and Promotion of news inter theApoiar e promover the interchange of news from independent medias centre of the world.	It congregates independent media centers around the world. It was formed to cover the WTO (World Trade Organization) in 1999 using the internet to show news, videos, photos and audio of the registration. Started to publish a journal in Seattle (United States) – and in other cities of the network - established a radio station. In the website, developed an innovative publication system. The diffusion of IMCs started in 2000, after protests against IMF (International Monetary Fund) and World Bank around the world. By now, there are more than a hundred IMCs around the world.	The actions of this organization happen using the internet, involving international discussions among the members of the Centre. It also uses a management system of information called "Twiki", that works as website with free access. The Indymedia does not have a central office, address, and telephone and fax numbers.
Global Trade Watch (GTW)	Foment democracy through a promotion of a responsible trade market as an alternative to the actual model of	A great example of an Organization that makes part of others networks in a global scale. The main subjects of GTW are environment protection, health, economic justice, democracy and efficient policies (GTW,	Uses the network to notice its documents, claim for problems, show campaigns, make funds, join its members and provide support to organizations around

	the world trades and corporative behavior	2004). GTW is part of an executive committee (Citizen Trade Campaign), coalition organizations involving workers, environment, religion, customers, farmers, intending to fight for commercial, social and environment policies in a equality way for the society.	the world.
BAN (Berlin Alumni Network)	Provides an exchange of information, research experiences, long distance education trough its members	It is an Alumni-Network dedicated to postgraduates from developing countries that have once studied at one of the Universities in the region of Berlin and Brandenburg, Germany in the interdisciplinary subject areas of International Life Sciences. The network exists since 1999 and has been implemented with the support of the German Academic Exchange Service (DAAD) and the Federal Ministry for Economic Cooperation and Development (BMZ). BAN representatives are based in Brazil, China, Cuba, Egypt, Kenya, Syria, Thailand and Vietnam.	The network wants to establish workshops, Symposiums, Newsletters to improve its activities and actions trough thematic subjects that allow interdisciplinary discussions among its 700 members in more than 50 countries.

The Role of the Alumni Networks

The Alumni Networks have as a basic characteristic the exchange of technical and scientific information among its members, involving "alumni" (graduated students) from differences of origins (universities), cultures, values, histories, competences contributing profoundly to a successful network.

To establish an integrated process among its members it is necessary to develop a structure based on "solidarity", being responsible for its maintenance; it can be attributed to a unique combination of interacting social, cultural and technical of each member of the network. All these properties enter in action with the promotion of a previous and established communication structure. There are some examples of that, as the database that allows the contact to each member, newsletters bringing the latest ideas to the network, the proceeding of the scientific contributions, containing thematic discussions, workshops and symposiums, providing a kind of "real" contact between the participants.

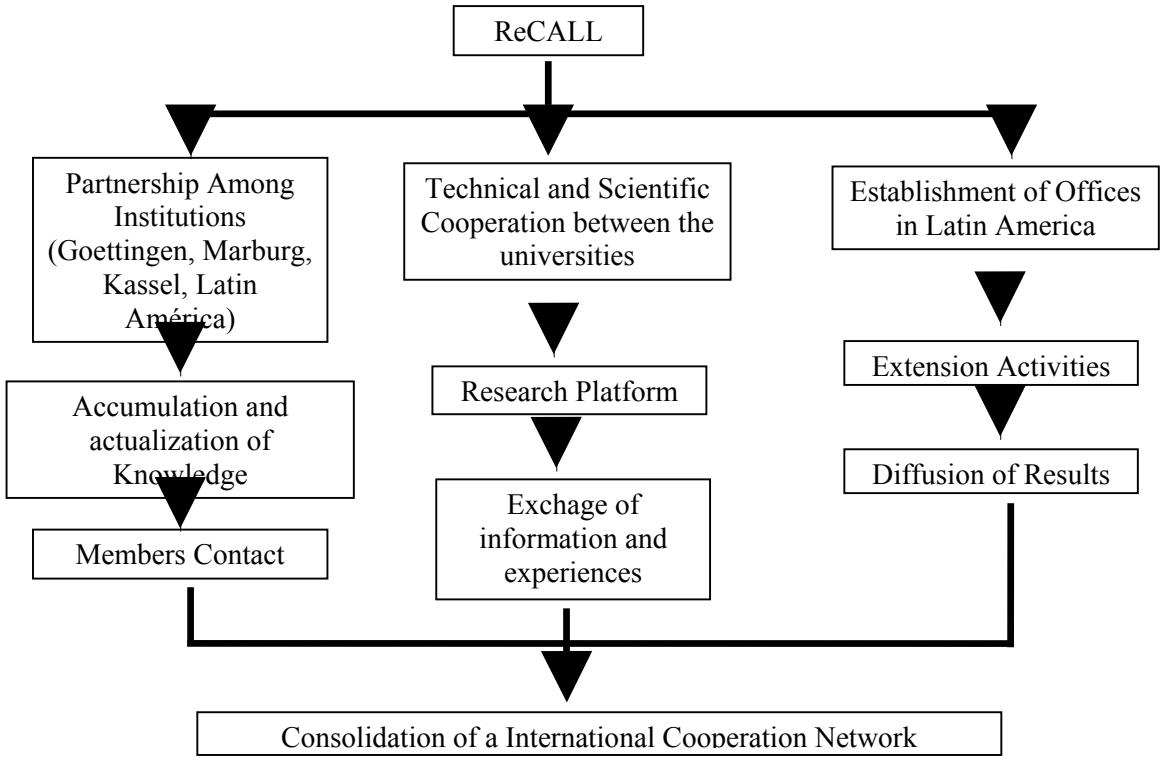
The meetings are very interesting instruments of the Network, establishing functionality like a social network. This social network needs to materialize its actions, than there's the importance of physical networks.

As a type of meeting among the members of the network is providing "workshops", where are discussed thematic subjects (related to a specific topic) and transversal subjects (related to an interdisciplinary way). An example of a thematic subject is the workshop "Water and Challenges of the Coexistences in Semi-Arid" that took place in Xingó, Brasil, in November 2004, promoted by BAN (Berlin Alumni Network). As a transversal subject, it could point out the symposium-cum-workshop "Globalization and Poverty – The Role of Science", promoted by ReCALL (Red Científica Alemania Latinoamérica), in November 2003.

These events have different profiles of participants and members. They can involve Researchers, Professors, Technical Representatives, Governmental and Non-Governmental Representatives related to similar areas of work and / or from complementary areas of work.

To make a better examination of an alumni network, it can take ReCALL Alumni Network as an example. This one is based on large scale and intensive communication, related to a contact between Germany and Latin America, in a priority way. In this case, Germany is the country that organizes the network composed by alumni of German universities (Goettingen Marburg and Kassel). In the other side, these alumni come from Latin America. It is interesting to know that the Countries in Latin America and Germany are the points of materialization of the actions in the space, diffusing the information and stimulating the accumulation of all discoveries, inventions, improvements, perfections and exertions of the Network. Below there is a diagram showing some aspects of ReCALL's Dynamic.

Diagram 1. ReCALL's Action Structure



However, every network is composed by differences and inequalities that should be ended. Otherwise the Network will not work as well as its primary and basic intentions.

Challenges for a More Concise Alumni Networks

The Alumni Networks should establish ways to guarantee its progressive growth and existence. To make all these possible, it is necessary to solve some specific challenges that bring problems to its functions.

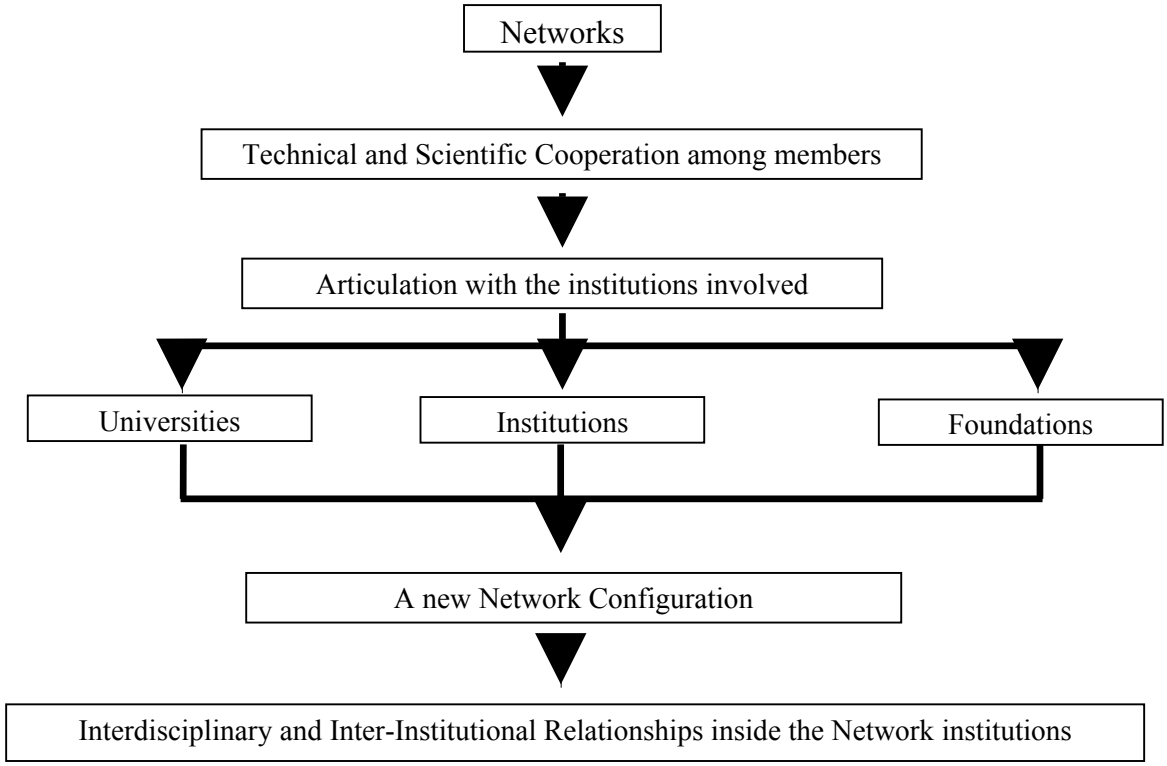
The Alumni Networks should articulate solutions for the different scales of action. It is necessary to know the existence of problems related to distances, countries dimensions, and scales of mobilization. This way, it could be built an efficient and permanent database that should contemplate members or participants from different regions of each country. The local offices have an important role of update the database and to establish a strong communication with its members and offices. So, the offices should not exist as a representation form only, because the activities should proceed all year long. It would be an assurance for the general structure of the Networks.

The cultural aspects are important during the processes of growth of the networks. These aspects should be respected and considerated during each planning project of action. As it was previously mentioned, the networks articulate different cultures, and more aspects could be used as an advantage.

The political reasons or political aspects are basic for the networks. Each country have a different political configuration and tendencies and the networks should not be influenced at all by a specific tendency, but strive them out in a better way to keep the best potentials of each country directly involved.

The economic structure of the network should be reviewed every time when a possibility of growth of the actual structure appears. Thus, some new partnerships could be established; involving traditional partners (universities, academic and research institutions) and partnerships with a new profile as private institutions, organizations and enterprises. This conception of partners and partnerships should extend the activities and guarantee its “life”.

Below, there’s a diagram showing possibilities of development of the networks.



In this manner, the Networks should remember that its importance and functions are related to all those aspects that have been mentioned before in this article (social, economic, cultural, and political) and could be considered. These aspects are responsible for the capacity of innovation and future perspectives for a more concise and efficient network.

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WORKSHOP:
WORKING GROUP 2:
INTERNATIONAL COOPERATION FOR IMPROVING RESEARCH AND RESEARCH MANAGEMENT

PROPOSAL OF A MODEL OF PARTNERSHIPS FOR RESEARCH AND DEVELOPMENT

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Abstract

Public-private partnerships incorporate activities of both sectors for mutual benefit, which in case of this study included the public research sector (Universities) and the private sector entities. The logic behind this argument is that although the public and private benefits may not coincide, in fact they are usually very different, an area exists in which the public and private entities share a common interest: for example in research that generates benefits that are of interest to both sides. But, mostly because the lack of information, considerations about a common interest space and costs and benefits of collaboration are not made and therefore the partnership are not or inadequately. But, how do they create and what can be done that they create adequately?

The objective of this study was to find out how to build and strengthen partnerships that contribute to innovations for the development in Costa Rica[3]. The study distinguishes the following steps in the building of partnerships: (1) exploration of the partnerships option, (2) identification of technological options, (3) identification and selection of partners, (4) negotiation and design, (5) implementation according to commitments made, (6) monitoring and evaluation, and (7) projection or termination.

The main results of this experience in partnership building indicate that:

- Partnerships should be seen as a means for generating innovations, and not as an end in itself.
- For the identification of technological options which the partnerships shall deal with, the participation of the actors is important.
- Roundtable meetings are well adapted to discuss in-depth technological options, the problem field, what has been done in research, on what level technology can solve problems.
- To accomplish the identification of technological options to be pursued in the partnership the presence of a "promoter", an individual or organization which promotes and supports the partnership from the outside but does not participate in it, is crucial.
- Alter having identified the technological options to be pursued the presence of a "partnership champion", an individual affiliated with one of the partners that usually has a broader vision of the partnership and who supports the partnership, motivates partners and defends its interest, is crucial.
- In the process of partnerships building, actors are required which have the capacity to technically and intellectually contribute to the work in the partnerships. As well leaders that take decisions and make the partnership evolve are required.

[3] The study is a part of a Public-Private-Partnership Project (PPP-Project) and was based on principal hypothesis of ISNAR/CHF's project on Partnerships for Agroindustrial R&D in Costa Rica and El Salvador: Towards a Robust Model of Financing Support to Industry".

In general it was found that partnerships enable approaching of the public research, academic and private sectors and profiting from synergies which are generated through the use of complementary resources and joint learning.

Introduction

The technological innovation for the development of the competitive capacity in the agriculture-productive chains that it allows the agricultural development has diverse forms of happening. Costa Rica in particular and the region in general, faces disjunctive on how she/he should get ready to face the challenges of the innovation, developing effective and efficient answers, appropriate to its possibilities and that, in turn use and develop its diverse capacities. Investigation in partnerships among public institutions (Universities and Centers of Investigation) and companies or organizations of the private sector can improve the operation and the competitiveness of the agriculture-productive chains. The public-private partnerships generate synergic effects for the invested resources and the involved institutions. These new potentialities of innovating in countries with economies of low growth and with more and more limited resources dedicated to the innovation come to offer a new paradigm that applied in an effective way can return gradually competitive to the productive and academic sectors, increasing the agricultural and agro-industrial development in benefit of the rural economy and of managerial sectors, regions and groups that already face the challenges of the globalization and of the imminent commercial opening of the Central American region.

The objective of this study was to find out how to build and strengthen partnerships that contribute to innovations for the development in Costa Rica. This objective is based in the main hypothesis of the work: "the public-private partnerships need promoters' interventions so that they can be created and that they work appropriately".

Starting from this hypothesis the following investigation questions were identified:

- or is it fundamental for the formation of public-private partnerships the sensibilisation of the actors and the policy makers who takes the decisions in the organizations potential partners?
- or is it fundamental for the formation of public-private partnerships the help/intervention for the identification of the potential partners?

Through an analysis of the existent methodologies to strengthen partnerships, an own focus was developed that was applied to the efforts of the project of supporting to the formation of the partnerships in Costa Rica taking as example the organic coffee. With the interviews driven with key actors of the selected agriculture-productive chain and with other experiences studied during the investigation as well as a revision of the existent literature, recommendations were developed it has more than enough steps and interventions for the formation and the invigoration of partnerships that can be taken by the decisive levels in the governments, investigation centers, academic institutions and agro-companies managers.

How partnerships are formed?

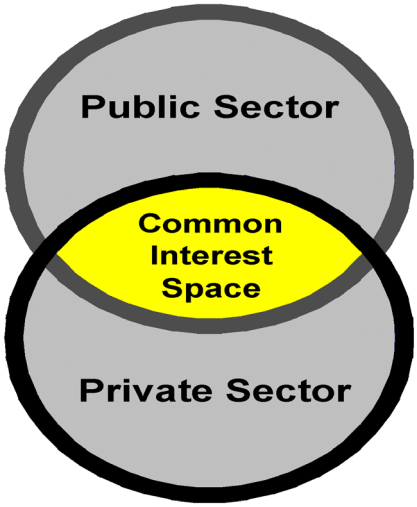
Since the objective of the study is to analyze interventions for the formation of public-private partnerships, it is important first to try to understand the dynamics in which partnerships are formed and which they are the steps that can be raised in its formation process.

Public-private partnerships are defined as the contractual arrangements in those which, according to agreements of shared property, the resources and risks are shared from both parties of public and private organizations with the purpose of reaching mutual benefits. In other words, each sector contributes to the planning, contributes with resources and develops the required activities to reach a common objective. If the partnerships for the innovation (for example in agro-industry) are structured and well managed they can generate the following benefits:

- Positioning and acceptance of the society for the entities involved through showing the relevance of their work.
- Benefits for the participants of both parts through the training in a concrete work and incorporating scientific tools.
- Through the synergy that is generated by the use of critical masses of resources, of the work on the whole, and of the learning the result of the collaboration gives an added value in common; this would not happen if each one of the parts makes it in isolated form.
- There exist the option that they are built up and evaluate strategic relationships in those which through a better understanding of the two parts, public and private; more objectives are reached for the strategic development of the sector.

The public-private partnerships join activities of both sectors for mutual benefit. The logic behind this argument is that although the public and private benefits could not coincide, and that in fact they are usually very different, a space exists in the one which the public and private entities can share a common interest, as generator of benefits that can interest to both parts. Viera and Hartwich (2002) argue that this "common interest space" is the only environment in which the public-private partnerships evolve (to see Illustration 1).

Illustration 1. Space of common interest.



Source: Vieira and Hartwich, 2002.

When partnerships can be formed? The partnerships can be seen as an answer to existent opportunities in the environment of the partners. Of course, from a theoretical point of view, the partners will be involved in a partnership if the difference among their

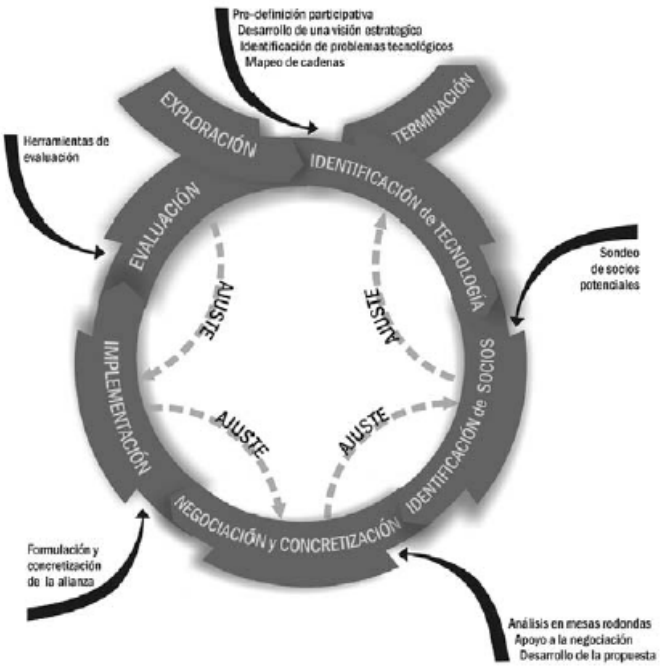
benefits - later a possible redistribution - and their costs are same or bigger than zero for each one. It has been conceived the process of the formation like a "set" of sequential steps that take to a successful partnership. In this model the following steps can be distinguished:

- Exploration of the partnerships option.
- Identification of technological options (partnership's theme).
- Identification and selection of partners.
- Negotiation and design.
- Implementation according to the acquired commitments.
- Develop, monitoring and evaluation.
- Projection or termination.

Interventions for the formation of partnerships

The creation of a partnership doesn't happen automatically; however, it exists an environment of different interests that gives opportunity to the intervention of the state and other promoters for the formation of the partnerships. Cases exist in that is recommended to promote the creation of partnerships, that is to say when the accumulated social, economic and environmental benefits by the developed initiative overcome the costs of growth. But there are situations in that the state or another promoter should intervene to give support to his formation. In this sense, an intervention of partnership's formation is defined as an activity carried out by a third institution (that could but not necessary form part of the partnership) with the purpose of supporting the creation and the operation of her. Taking into account the steps of formation of partnerships above mentioned, different entrance points exist for interventions that have the end of supporting the formation of the same ones (Illustration 2).

Illustration 2. Interventions for the formation of partnerships.



Methodology of the study

In this section is described the methodology used to reach the objective of the study that is to give recommendations on the use of tools that potentially form and strengthen the public-private partnerships. For the carry out of the case study, based in the agriculture-chain of organic coffee in Costa Rica, the focus of the "investigation-action" was used, that means, the formation of partnerships was studied while at the same time the project intervened supporting the formation of these. In general, the investigation-action is a method in which the investigator joint together temporarily to the "community" of which treats the investigation and with theoretical tools contributes to the solution of the problems that faces (Red, 2002; González, 2003).The applied investigation-action focus also was combined with the focus of "case study".

The study takes into account the information coming from studies previous of the same project titled *Proposal for the formation of public-private partnerships for innovation in the agro-industry: The case of the organic coffee in Costa Rica* (Quirós et al. 2004) and *Public-private Partnerships for investigation and development in agro-industrial chains: the situation in Costa Rica* (Quirós and Hartwich, 2003). The support activities to the formation of partnerships in the organic coffee chain were developed between September 2003 and March 2004. In total were taken interactions (personal and phone interviews, experts interviews, information and planning workshops) in a wide range of organizations and individuals involved or related with the agriculture-productive chains (Table 1).

Table 1. Interaction with key actors of the chain in the study.

	Organic coffee chain
Farmers association and cooperatives	5
Traders and exports firms	5
Public institutions (Ministry of Agriculture, Research Institute)	3
Extension services	1
Universities, International research centers	2
Certification agencies	2
NGO	1
Total	19

The analysis of the agri-chain was followed for a plan of interventions titled "road-map" designed for the formation of partnerships. This route leaf consists of a series of sequential steps and the necessary "interventions" in the different points for the consolidation of the respective step. The main steps / interventions give a vision of the followed process as a result, the one that represents in summary "the road-map for the formation of partnerships" (Table 2).

Table 2. Road-map for the formation of partnerships.

	Roadmap for creating PPPs in the Costa Rican organic coffee agri-chain
Steps for partnership creation	Intervention process
1. Exploration of the partnership option	1. Participatory pre-definition using SWAT analyses 2. Building up the agri-chain map using secondary information and conducting interviews

2. Identification of technological options (topics/ themes)	3. Systematization process of technological options and interviews 4. Discussion process: analysis of specific technological options in round tables
3. Identification and selection of potential partners	5. Survey of potential partners
4. Concrete negotiation and legal arrangements	6. Proposal development 7. Contract formulation
5. Partnership implementation	This phase is pending (the project's results expected ended in the previous step)
6. Monitoring and evaluation	This phase is pending (the project's results expected ended in the previous step)
7. Projection and/ or conclusion	This phase is pending (the project's results expected ended in the previous step)

Results and Discussion

The application of the technical elements for the partnerships formation in the real context, also approaching different agri-chains, allows to show and to share results, lessons and the learning that leaves the application of the investigation-action methodology. To facilitate their understanding these have been classified in the diverse stages of the formation of partnerships.

Opportunity and efficiency of the exploration tools of the partnership

The stage of sensitization is the base for the position of possibilities of APP. In countries in those that there is little culture toward the topic of partnerships, makes that the initial process of sensitization is decisive for the future success of a partnership in the agriculture-productive chain. The organization of a shop with key actors of the chain is important and efficient tools. The mapped of the agriculture-productive chain is a tool that allows the exploration of options. Therefore, this mapped facilitates the location of the points of the chain where partnerships can be made and which interventions are required.

Opportunity and efficiency of tools for the identification of technological options (topics for a partnership)

The identification of the technological options is vital for the formation of the partnerships in the agri-chain, and are indispensable to base the objectives of the same one. There are different techniques or tools to identify the technological options. The round tables for the specific analysis of proposals to the formation of partnerships turned out to be very opportune and efficient.

Opportunity and efficiency of tools for the identification of the potential partners

The selection of the partners for the partnership treats to the identification of the institutions, as well as of the important actors in the topic because the partnership depends on their capacity and interest in giving answer to the necessities. If one or several partners are not able to identify their other partners to collaborate in the partnership, a promoter should facilitate in second instance, a process of selection of these.

Opportunity and efficiency of tools for negotiation and materialization

When an external financing for the negotiation is identified the partnership is presented in general easy. In the cases where there is not financing, the negotiation it is usually long and difficult because the private entities analyze (formal or informally) along the process if their investment will be profitable. Likewise, the formulation of the contract is an indispensable tool for the materialization of the partnership. It is the final phase of the materialization.

Opportunity and efficiency of tools for the implementation of the partnership

As first step for the implementation of the partnership, it is necessary that each one of the parts contribute on what committed in the explicitly moment. Here again, the figure of the champion of the partnership is fundamental. The involved actors represent institutions and become a work team that represents the partnership rather than and not exclusively the participant institutions.

Opportunity and efficiency of tools for the evaluation and monitoring of the partnership

The present study did not reach this phase of development tools for the monitoring and evaluation. Nevertheless it was possible to observe other experiences. It is important to remember that a good definition of parameters or indicators, and their programming in the time facilitates an appropriate pursuit and evaluation of the results outlined for the partnership.

Opportunity and efficiency of tools for the projection and termination

The evaluation of results is an appropriate tool to value the continuation or termination of a partnership. If the obtained results and the outcomes satisfy the actors, it could lead to end the partnership. The success for the achievement of results, can likewise, to encourage the actors to look for solve new challenges or identified new problems. A failure in the obtaining of the prospective results of a partnership, it can easily contribute to end a relationship among public and private actors.

Recommendations

The studied partnership is a formation process and obtaining possible technological results along the agriculture-productive chain that can contribute to diminish inefficiencies in a specific sector. Indispensable elements in the formation of partnerships are: a - The existence of a promoter who gives support to the partnership but it doesn't necessary participate in it, contributes to the achievement of the success in their formation, especially when there is not a work culture among the public sector and private to approach the solution of problems; b - the presence of a champion who represent the partners, supports internally the partnership in a very active way that facilitates the formation process and guarantees the motivation and internal energy inside the partnership; c - the topic of the partnership should motivate the participation of the different actors. The existence of funds to finance activities should not be the only reason to involved partners in a partnership. Following the logic process of the partnerships formation the different steps can be listed by phase, as follow:

- **Sensibilisation-information**: All the actors need to be informed about the opportunities that partnership offers in general for all.
- **Identification of options** (themes/ topics): begin with an inventory of the possible topics to build up a partnership can lead to a success in the process. What to be investigated, innovate, or carried out in the public research centers and universities avoids the unnecessary duality.
- **The potential partners' identification:** To identify which partners can possibly participate in a partnership, should be taken into account among to the real interest of these to collaborate in the conformation and their technical capacity.
- **Negotiation and materialization:** The negotiation process depends much of the scale of the interest of the partners in the topic of the partnership and of the available resources. With less interest and less resources will be more difficult the negotiations.
- **Implementation:** Once formalized the partnership, corresponds the actors to implement what in the contract is specified.
- **Evaluation:** With the implementation the evaluation of the results outlined initially according to the defined indicators is also included.
- **Termination:** The partnership should be finished when the outlined objectives have not been achieved or if there are changes in the interests of the partners of the partnership, deficiencies in the financing or contribution of each one of the partners, changes in the faced problem. The good partnerships can sometimes also influence giving light to others with related purposes.

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THE GERMAN COOPERATION AND THE GEOGRAPHICAL RESEARCH IN TUCUMAN (NW OF ARGENTINA)

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Abstract

The origins of the German scientific cooperation in the field of geography in the province of Tucuman, they go back to the decade of 1940, when the Universidad Nacional de Tucuman entrusted to geographer Wilhelm Rohmeder the foundation of the "Instituto de Estudios Geograficos". More recently, from 1989, with the project "The Urban Climate of the Greater San Miguel de Tucuman", one narrow cooperation between scientific and academic institutions of both countries (DAAD, GTZ, BMZ, Philipps Universität Marburg, among others, by the German side; Universidad Nacional de Tucuman and CONICET by the Argentinean), was reinitiated, and the same keep up until nowadays.

In this new phase, unlike the restored one in the decade of 1940, it was privileged, on the one hand, the elaboration of joint projects on specific geographic subjects, integrating work teams which include both Argentine and German scientist (the last project was oriented to the study of "The Rural Fairs in the Plain of the Province of Tucuman"), and on the other hand, the formation of human resources, through short duration stages in Germany, but also through postgraduate seminars dictated by German professors, that benefited to Tucuman's geographers in process of academic formation, in addition to the concretion of a series of doctoral thesis and other works on the part of German students.

This type of link not only allowed to advance in the knowledge of the geography of Tucuman and the Northwest region of Argentina, but also to improve the formation of the Tucuman's geographers and to contribute to the specialization of the Germans.

The successes achieved through such modality, they indicate that the established links offer a model, susceptible to be improved and to be perfected, in order to reach common goals also in other scientific fields.

Keywords: Research, Geography, University, Tucumán, Germany, Science

The German Geographers and the Origins of the Academic Geography in Tucumán

The academic geography in Tucumán was closely linked, from its origins, with the presence of German geographers. The Instituto de Estudios Geográficos, in the scope of the School of Philosophy and Literature of the Universidad Nacional de Tucumán, began to work in 1941. Their management was commended to the Dr. Wilhem Rohmeder, hired especially to the effect, who invited other three renowned German geographers to complement its work: Fritz Machatschek, Willi Czajka and Gustav Fochler-Hauke, which was incorporated to the Institute of Geography in 1949 (Fochler-Hauke, 1973: 105; Würschmidt, 2002: 4).

The socio-political conditions in Europe and a favorable academic and cultural atmosphere in the Argentina and Tucumán, among other factors, were those that facilitated

the arrival and the installation of the German scientists in the province[4]. Prior to their arrival, the geography in Tucumán had lacked a scientific status. They had been carried out diverse descriptions of the physical-natural means of the province, it is certain, but the same ones didn't constitute more than mere collections of data and they had a character markedly descriptive[5].

In that way, with the resolved contribution of Rohmeder and their collaborators, and the almost unconditional support of the university authorities, the geography in Tucumán recognized a period of splendor among the decades of 1940 and 1950. The investigations carried out in those years that covered all the geographical topics practically, became to the Institute of Tucumán the most important of the country in that academic field[6].

The Decline

The premature death of Rohmeder in 1952, and the return of their collaborators to Germany in 1954, they impacted notably in the decline of the geography in Tucumán. To it was added, also, the beginning of a period of political sways that rebounded in an important way in the academic chore. In 1959 was decided to close the institutes, among them that of geography, replacing them for departments, which assumed, partly, the functions of those.

The short permanency of the German geographers, or perhaps, the fact that their teachings were ahead of time, as well as the lack of academic exchange, or the puny situation of the Tucuman's university (Bolsi, 1991: 179), they impeded the conformation of a local group that continued - with the same rigor - the task undertaken by them.

The investigations carried out in the decades of 1960 and 1970, show, this way, an important scientific regression. Not only diminish the number of contributions, but rather also, a significant theoretical and methodological impoverishment took place. It demonstrates that the teachings of Rohmeder and their colleagues didn't clot in an appropriate way in their short period of action.

A New Stage

At the beginning of the decade of 1980, the one that had been a young pupil of the German geographers during the decades of 1940 and 1950, Enrique Würschmidt, reopened the doors of the Instituto de Estudios Geográficos.

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[4] Czajka remembered that toward ends of the decade of 1940 Tucumán it was to "a distance of 1200 kilometers of Buenos Aires, been founded under the sign of the economic prosperity..., with a resolved vocation to enlarge the investigation and the teaching - beyond the Great Chaco and to the foot of the Andean mountain ranges - almost a half hundred of foreigners was hired there. San Miguel of Tucumán is not located, in no way, in the end of the world. Together with other city-oasis to the foot of the Andean chains, this city belonged to the historical nuclear region previous to the peak of Buenos Aires. In 1949 he/she already had 200.000 inhabitants. They lived a good number of of German dealers, likewise - from the times previous to the Second World War - some German scientists and technicians. To the University belonged a Department of Fine arts, with a symphonic orchestra; together with a choir, they maintained an active life of concerts (mentioned by Bolsi, 1991: 174-175).

[5] The most representative works during the first half of the XX century were the works it has more than enough physical geography of Franz Kühn, carried out in the decade of the '20 and the "general Geography of the province of Tucumán" of Antonio Correa that had appeared in 1925 with the auspices of the recently created Universidad Nacional de Tucumán. A detailed idea on the previous geographical bibliography to the foundation of the Instituto de Estudios Geográficos can be consulted in Santamarina et al., 1972.

[6] The evolution of the different currents of the geographical thought in the Argentina can be consulted in Bolsi, 1991. Also, a listing of the investigations published by those years is in Würschmidt et al., 2002.

They were restarted, in that way, starting from 1983, the tasks properly of research, those which after the closing of the institution in 1959, they had been taken ahead by the personnel of the Department of Geography, in the one which work the professors that dictated the different courses of Geography.

The Instituto de Estudios Geográficos was nourished of a varied group of young geographers that recently finished their studies and of professionals of other similar disciplines. Also, at the little time of their re-foundation, the IEG could have the invaluable contribution of Alfredo Bolsi, an outstanding geographer that had been formed in Tucumán and had specialized in Berkeley with the famous Carl Sauer, and in the Sorbona with Jean Bastié and Jacqueline Beaujeau-Garnier; it had been, pupil of Würschmidt and had carried out a great part of their academic career in the National University of the Northeast and in the scope of the National Council of Scientific and Technical Investigations, in the Chaco.

The tender bases on which settled the formation of the tucuman's geographers, result of the decadence of the Tucuman's geography in the previous years, motivated that alternative roads were looked for improve the formation of the local human resources and to motivate the generation of investigations realized with scientific rigor.

In that way, as much Würschmidt, as Bolsi, decided to reinitiate the cooperation with the German geographers, but now under very different conditions.

The times had changed notoriously. The national university that had been able to pay the recruiting of foreign scientists economically in the decades of 1940 and 1950, but besides endowing to the institutes of modern and appropriate equipment, as well as of offering the necessary resources for their operation, was not, for those years, in an ample financial situation. Difficultly it covered the personnel's salaries and the funds for equipment and the financing of the investigation tasks they were scarce.

In that context, it was looked for to restart the contact with the scientists and the foreign universities, for this way to be able to escape to the limitations that the local means imposed to the formation of the professionals and the course of the geographical investigations.

The Project of “The Urban Climate of Tucumán"

Toward ends of 1986 they were carried out the first contacts among personnel of the IEG and an outstanding professor and German investigator: Wilfried Endlicher who at that time was in the University of Freiburg, but that little time later would move to Marburg. Of those contacts the idea arose of carrying out a combined investigation project, which was framed inside a much wider cooperation plan, which also included the formation of the human resources and the technical-instrumental modernization of the IEG.

The result become in a project named "model investigation on ecology and urban climatology of a great Argentinean city, San Miguel of Tucumán"[7], which achieved financing, firstly in 1989, on the part of the Deutsche Forschungsgemeinschaft (DFG) through the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). It was recognized that "the goal of this binational collaboration was always the search of new knowledge on the Tucumán's Space [sic]. [In] the transformation of the Geography toward a modern science of the space was shown clearly in the years '80 as necessary investigative situation the urban-ecological aspects. The human contaminations of the soils, waters and air of the urban ecosystems had not been, in these times, still analyzed with the adequate width and depth. This 'model investigation', conceived by those reasons of itself, to offer some contributions of the partial complex of the 'urban Atmosphere and [the] contamination of the air' of a provincial capital" (Endlicher/Würschmidt, 1995: VII).

[7] The project was known in an abbreviated way as "Urban climate project of Tucumán" and was identified with the Spanish acronym PROCUT.

In this project they were involved, besides the Universidad Nacional de Tucumán, through the IEG, different Argentinean institutions, as the Servicio Meteorológico Nacional (National Meteorological Service), the Instituto Nacional de Tecnología Agropecuaria (National Institute of Agricultural Technology, INTA), the Consejo Nacional de Investigaciones Científicas y Técnicas (National Council of Scientific and Technical Investigations, CONICET), the Estación Experimental Agroindustrial "Obispo Colombres (Agroindustrial Experimental Station, EEAOC), the Municipality of San Miguel of Tucumán and the Secretary of Planning and Coordination of the province. For the German side, besides the pointed out institutions (DFG; GTZ), participated the Provincial Office of Environmental Protection of the state of Baden-Württemberg, with headquarters in Karlsruhe (Würschmidt, 1990: 1).

In turn, in the mark of the project, the exchange was foreseen of personal, that is to say, German professors that, through graduate degree courses, they improved the formation of the Tucuman´s geographers, and of scholarship holders in both senses with the same objective, involving actively, this way, to the German Service of Academic Exchange (DAAD), which financed the demurrages of the German investigators and it granted a certain number of argentineans scholarships (between 3 and 6 months).

The results of this project were published in 1995 in the Marburger Geographische Schriften, performed like coordinators of the dozen of works there written W. Endlicher and E. Würschmidt.

It was inside those conditions that, toward ends of the decade of 1980, an asset exchange was restarted between the University of Tucumán and diverse German universities[8].

The Didactics of the Geography

In an almost simultaneous way, a cooperation agreement settled down between the IEG and the Institut für Didaktik der Geographie of the Westfälische Wilhelms Universität Münster, directed by Jürgen Bünstorf. This agreement settled down clearly that the German institute was committed to lend advice in the field of the didactics of the geography under the form of seminars, courses, works in collaboration or other forms that went convenient to the achievement of those goals. The purpose was to achieve an improvement in the level of the secondary education and university level of the geography in Tucumán, to organize a working team in the IEG that developed the investigation in the field of the didactics of the geography, the elaboration of combined works and to pay preferable attention to the realization of demurrages in Germany on the part of the Tucuman´s graduate or of those professors that enjoyed special licenses or they had a Sabbath year. On the other hand, the IEG, as compensation, would take charge of assisting preferably to graduate coming from Münster that wanted to carry out graduate degree thesis referred to the Argentina and, in particular, to Tucumán., but would also lend advice in the field of population's geography. Again the DAAD had an outstanding participation in the concretion of the agreement, because it contributed to finance the demurrages in Argentina and Germany of the involved investigators.

The result of this cooperation agreement was summed up in courses and seminars through which a collective work was elaborated under the direction of one of the young researchers of the IEG - Patricia Ortiz of D'Arterio - that was denominated "didactic Geography of Tucumán", published in 1995 by an important national editorial, becoming a

[8] Although the most important exchange was carried out with the German universities, the same one also involved to other European and North American institutions whose course escapes to the objectives of this work.

reference work quickly for the teaching of the geography in all the schools of the province of Tucumán.

The Rural Fairs in the Plain of Tucuman

The pointed out projects, they culminated by the middle of the decade of 1990. Meantime, the exchange of scholarship holders was increased that, beyond the combined programs, they carried out its own investigations to complete the graduate degree studies.

The combined investigations were recaptured when concluding the decade, with the oriented project to study "The rural fairs in the plain of Tucumán", in which investigators of the schools of Marburg, Vechta and Tucumán intervened.

The study of the rural fairs in the county of Tucumán pointed to make an inventory of the periodic markets, a classification of the same ones, as well as to determine the structure of the offer, the influence area for the offerers and the plaintiffs and to establish the modalities of exchange. Was intended, also, to make an identification, together with their differentiation, of the groups of offerers and plaintiffs and their socioeconomic situation, of the groups of merchants, of the functions of the same ones and of the space reach of their business dealings.

It was looked for, also, to determine the role as communication centers, that is to say, as central places for the exchange of information has more than enough social, economic and political processes. Therewith was put on of relief the dominant function of those "basic central places" in rural areas, that is to say, "to be a central point."

Lastly, it was sought to respond to the query about the importance that the sugar crises had had in the emergence and the consolidation of the fairs.

The results of this investigation were materialized in a book published in combined form by the universities of Marburg and Tucumán (Mertins/Paolasso, 2004).

The Investigations Tied to the Studies of Postgraduate Degree

Besides the combined projects of investigation, they were carried out a certain number of investigations oriented to complete the postgraduate degree studies, of German and Argentinean graduates.

In that sense, they were decisive the realized efforts from the university of Marburg for G. Mertins and W. Endlicher who directed or they co-directed most of those investigation works.

For their concretion, those investigations had the valuable support of different German and Argentinean organisms (DAAD, GTZ, DFG, CONICET, etc.), which financed the demurrages in Germany and Argentina, respectively, and they provided a series of subsidies for purchase of indispensable equipment to take the investigations ahead.

As consequence, diverse Tucuman´s and German's researchers were able to complete their postgraduate studies, others obtained the superior academic title of doctor, or they are in process of finalization of their respective thesis[9].

The approached topics understand a great variety of specialties that go from the climatology or the hydrology, until the rural and urban phenomena, always of the province of Tucumán.

[9] On the topics of the theses and the complete payroll of people of Argentinean-German scholarship holders, our work can be consulted "German cooperation in the posgraduate studies in the National University of Tucumán (NW of Argentina): their contribution to the geographical disciplines" presented in this same symposium.

Conclusions

The development of the academic geography in Tucumán was product, basically, of the joint action of a series of German scientists starting from the decade of 1940, which created a school that, in its moment of splendor, it ended up being the most important in the Argentina.

For diverse reasons, fundamentally due to the return of the German geographers to their homeland, the geography in Tucumán suffered a severe regression process during the decades of 1960 and 1970.

However, starting from the decade of 1980 the bonds were recaptured between the university of Tucumán and diverse German academic institutions, fundamentally with the Philipps Universität Marburg.

In this second time, contrary to the first one, when the Argentinean State hired the German professors, narrow cooperation nets settled down, sometimes through tacit agreements, others by means of agreements. The organisms of financing of the extra-universitaries scientific activities of both countries, but fundamentally the Germans (DAAD, DFG, GTZ, etc.) and the CONICET of the Argentinean side, they carried out a central role in the success of these nets, because they contributed important sums of money dedicated to scholarships, mobility and equipment.

The results, captured in the realization of a great variety and quantity of investigation works and in the formation of more than a dozen of high-level investigators in the last twenty years, it demonstrates that this bond type, constitutes a clear example of how investigation nets they can be developed in different scientific fields.

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GOVERNANCE – A CHALLENGE FOR INTERNATIONAL COLLABORATIVE RESEARCH AND DEVELOPMENT: SOME RECENT EXPERIENCES FROM BRAZIL

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Abstract

International partnership to carry out collaborative research and development programs has been implemented for a long time. However, with globalization, the economic, social, political and cultural diversity of interacting partners reached levels where this variety of collaborators often has shown some weaknesses in issues like governance. Strong and sound partnerships must be manageable in order to ensure the achievement of the set objectives. Embrapa, as a Brazilian public agricultural research and development institution that coordinates the Brazilian National Agricultural Research System (NARS), has acquired some experience in strengthening the inter-institutional relationship across continents. Recently, Embrapa was involved in a new research program focusing participatory and adaptive research to improve the production and marketability of small ruminants in arid areas of Latin America. The program is supported by the International Fund for Agricultural Development (IFAD) and coordinated by a CGIAR-Center - the International Center for Agricultural Research in the Dry Areas (ICARDA). The program was started at the end of 2003 with the participation of two countries, Brazil and Mexico. Brazil is being represented by Embrapa and Mexico by the National Research Institute for Forestry, Agriculture and Livestock (INIFAP). The program has a Steering Committee, where all involved institutions have a representative member, including the donor (IFAD) and research institutions (CGIAR/ICARDA, Embrapa for Brazil and INIFAP for Mexico). The so far obtained results show the viability of international collaborative research programs to improve fund raising and to optimize the use of available human resources.

Keywords: International collaborative research, international cooperation, project management, adaptive research.

Introduction

Carrying out international collaborative research is not a new issue. Many research institutions from several countries recognized some years ago that the synergic effects of joint efforts in research and development are favorable if compared to the costs.

However, during the last few years, globalization is also affecting directly the research activities. With the globalization, the economic, social, political and cultural diversity of research partners among different countries reached such high levels of complexity that the governance of such arrangements became an important issue to be addressed. Legal aspects in different collaborating countries often lead to weaknesses in

governance of research carried out in international partnerships. Strong and sound partnerships must be manageable in order to ensure the achievement of the set objectives.

The Brazilian National Agricultural Research System (NARS) consists of universities, research institutes and state research corporations. They are distributed over the whole territory and operate interlinked according to the regional demands for research and the necessities of each institution's work.

The Brazilian Agricultural Research Corporation (Embrapa) coordinates the Brazilian NARS with cooperated institutions carrying out research in geographical areas or in defined fields of scientific knowledge.

Embrapa's mission is to provide solutions for the sustainable development of rural areas with focus on the agribusiness by generating, adapting and transferring knowledge and technology that benefit the different segments of Brazilian society.

From the very beginning, on April 26, 1973, Embrapa has generated and recommended more than nine thousand technologies for Brazilian agriculture, reduced production costs and helped Brazil to increase the offer of food while, at the same time, conserving natural resources and the environment and diminishing external dependence on technologies, basic products and genetic materials.

Networking through 40 research units distributed throughout the country with the headquarters located in Brasília, Embrapa is present in almost all the states of the Union, each with its own ecological conditions. Embrapa's purpose is to develop technology that helps increase agricultural yields, at lower costs and without damage to the environment. There are 8,530 employees in Embrapa, of which 2,045 are research scientists working on different areas, products and ecosystems, connecting agriculture, livestock farming, agro industry and environment. At present, the company's staff includes 2,045 researchers, 49% of whom hold doctoral degrees and 47%, Master's degrees.

Embrapa's research has enabled Brazil to significantly increase grain production. Since 1973, when Embrapa was created, soybean production has increased by 360%; maize, by 128%; wheat, by 49%; and rice and beans, by 27%. Research has also enabled farmers to produce soybean in the *Cerrado*, to eliminate numerous pests and to grow fruit in the semi-arid region. It has also developed alternative logging techniques that prevent the destruction of forests.

Embrapa was founded and implanted with the support of international cooperation. From the start, the Corporation counted on the collaboration of international and foreign organizations, Universities, the World Bank (BIRD), the Inter-American Institute for Cooperation on Agriculture (IICA), the Inter-American Development Bank (IDB), all of which continue as outstanding collaborators up to the present.

Embrapa's growing participation in the international scene, and perspectives for its enlargement at an ever increasing rate in view of globalization and international economic integration, represent a decisive invitation for Embrapa to play an active role in the transfer of agricultural science and technology at the international level.

Embrapa has ongoing technical and scientific co-operation programs with more than 150 institutions from 56 countries in order to perfect knowledge of technical and scientific activities or to share knowledge and technology with other countries.

The benefits derived from this cooperation have been transferred to Brazilian society, and Embrapa has been, at the same time, a beneficiary of this process. The Corporation is today recognized internationally as possessing a significant and qualified reserve of scientific and technological knowledge, especially for tropical regions. With these credentials, Embrapa has been functioning as a provider of technical-scientific cooperation to other countries.

Recently, Embrapa was involved in a new research program focusing participatory and adaptive research to improve the production and marketability of small ruminants in

arid areas of Latin America. The program is supported by the International Fund for Agricultural Development (IFAD) and coordinated by a CGIAR-Center - the International Center for Agricultural Research in the Dry Areas (ICARDA). The program was started at the end of 2003 with the participation of two countries, Brazil and Mexico. Brazil is being represented by Embrapa and Mexico by the National Research Institute for Forestry, Agriculture and Livestock (INIFAP).

This paper aims to show how one of the last international cooperation agreements was established and what the preliminary outcomes are.

Implementation

In a first step, the main research issues were enumerated by scientists of ICARDA (Aleppo, Syria), in interaction with researchers of EMBRAPA (Brazil) and INIFAP (Mexico) and a concept note was elaborated.

In a second step, the concept note was submitted to the Technical Assistance Group (TAG) of the International Fund for Agricultural Development (IFAD). The concept note was approved by IFAD.

After the approval of the whole concept note, the implementation of research issues followed several steps, including:

- At national level (Brazil and Mexico):
  - Search for potential partners in implementation (development projects supported by IFAD);
  - Definition of a national coordinator for each country;
  - Elaboration of work plans and budgets for the first year together with partners at national level;
  - Definition of a mechanism of funds withdrawal to carry out project activities, including foundations to administrate national budgets within the project through a cooperation agreement involving ICARDA, research organization (Embrapa and INIFAP), the foundations and the development programs.
- At international level:
  - Formation of a governing board – the Steering Committee - for the program.

The program's Steering Committee has a representative of each involved institution, including the donor (TAG/IFAD) and research institutions (CGIAR/ICARDA, Embrapa for Brazil and INIFAP for Mexico).

The development projects carried out in the same communities with support of IFAD (PDHC/Brazil and MWSP/Mexico) also have a representative in the Steering Committee.

The expansion of the program to other Latin American countries is already being discussed.

Outcomes

IFAD approved a total budget of US$ 1,000,000 for three years. These funds wouldn't be available for research neither in Mexico nor in Brazil without a multilateral cooperation.

National coordinators had a hard job to elaborate a cooperation agreement between their research institution, the development program, the foundation and ICARDA.

After the legal peculiarities of each involved country and respective institutions were considered, a working fund withdrawal mechanism was established in both countries.

After the first six months of implementation of the program, in the Brazilian project many of the set objectives have already been accomplished.

Two research pilot sites were selected and the community-based adaptive research mechanism has been established. This represented the first step for implementation of program's activities in Brazil.

On both communities two participatory workshops with the partners (farmers and development program) were conducted. The work plans and the consolidated budgets for both involved research stations of Embrapa[10] were elaborated and submitted to the program's Steering Committee. All partners, including farmers, were involved in the discussions for work plan elaboration.

After the Steering Committee and IFAD approved the work plans, socioeconomic and community based studies of pilot sites have been conducted and the main constraints were identified: (a) the existent productive infra-structure is in very bad stage of conservation with limit fences falling apart; (b) the water reservoirs are not well distributed; (c) the income rates of peasants are very low; (d) the pastoral land areas with forage are not sufficient to supply forage for the existent livestock throughout the year; and (e) the constant presence of middlemen in commercialization of plant and animal products.

Three new market opportunities for small ruminant products were identified and the community potential for product processing and value addition has been assessed.

A Brazilian griller of goat meat was sent to Mexico for two weeks to be trained in producing, preparing and broiling of grilled *cabrito*[11] to be offered to the consumers in Petrolina.

A Brazilian national scientist visited three countries (Spain, Syria and Tunisia) where he became acquainted with different small ruminant production systems as well as organization forms to market their products. In Spain, the trained scientist became acquainted with the production system to raise nannies of the native breeds Murciana and Malagueña in confinement manner for milk production. He had a chance to follow thoroughly the process of milk production; cheese making and others derived products of goat milk. Additionally, he visited a Cooperative of Goats Raisers for milk production which makes diversified types of cheese and others derived goat milk products for exportation. He also became familiar with production and commercialization of the *Chivo lechal*, a kind of "suckling kid" slaughtered at the age of 35 days fed exclusively with goat milk. In Syria, the trained scientist had a chance to learn how sheep are commercialized in the internal and external markets. He also learnt about the technology of "feed block" made using regional products for sheep and goat consumption. A trip was done to visit ICARDA and its research facilities. Also a visit was implemented on site where participatory research is being carried out with small sheep and goat producers. In Tunisia, the scientist saw cacti fruit cultivation for human consumption and cacti plantation for direct animal consumption, sheep and goat production procedure in dry environments and terrace construction on degraded areas.

All these aspects of raising goats and sheep in different countries would not have been possible without the scope of the project.

To finalize the preliminary results, it is important to mention the important direct contribution of the research institutions in training technicians and extension workers from the development programs. In the Brazilian case, 33 technicians of development program were trained in management of agrosilvopastoral systems, nutrition of goats and sheep

[10] National Goats Research Center (CNPC) and Agricultural Research Center for the Semi Arid Region (CPATSA).

[11] A goat kid at 30-35 days of age.

raised in the *caatinga*[12] vegetation of Northeastern Brazil for one week. These technicians work in areas of coverage of the development program. In the next few months they will take part of two more modules of training, in order to enable them to conduct farm trials together with the communities they work in.

Conclusions and Perspectives

The so far obtained results confirm the expectations that international collaborative research programs to improve fund raising and to optimize the use of available human resources are viable and provide new opportunities for researchers to interact with colleagues from different countries, enabling them to manage new situations with a broader knowledge in their specific working areas.

Acknowledgement

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[12] Natural vegetation of the semiarid region of the Brazilian Northeast.

WISSENSCHAFTLICHE FORSCHUNGSKOOPERATION ZWISCHEN DEN AGRAR- UND FORSTÖKONOMISCHEN INSTITUTEN DER GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN, DEUTSCHLAND, UND DER UNIVERSITÄT TALCA, CHILE

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Zusammenfassung

Der akademische Austausch zwischen den Universitäten von Göttingen und Talca zeichnet sich durch eine intensive Zusammenarbeit aus. Einige der Professoren der Universität Talca, die an diesem Unternehmen beteiligt sind, haben ihre Aufbaustudiengänge und Promotionen an der Universität Göttingen absolviert, so dass eine wichtige akademische Verbundenheit entstanden ist. Dies hat auch den Studentenaustausch im Grund- und Hauptstudium und der Entwicklung eines Aufbaustudiums den Weg geebnet. Diese Bindung, der sich beide Institutionen verpflichtet fühlen, hat es ermöglicht, einen Rahmen für eine rege und intensive Kooperation der Partner zu entwerfen. Dies gilt vor allem für die Agrar- und Forstwissenschaften und hier insbesondere in den Bereichen der ländlichen Entwicklung, der Agrar- und Forstökonomie. Die folgende Arbeit bezieht sich auf diese drei Bereiche und gibt eine Antwort auf eine konkrete Problemstellung der ländlichen chilenischen Wirklichkeit. Beide Universitäten haben die drei Forschungsschwerpunkte festgelegt, welche die Grundlage für die interdisziplinäre Kooperation darstellen: (1) Ökonomische Bewertung der Natur; (2) Umweltschonende und nachhaltige Nutzung des Waldes; und (3) Agrarpolitische Szenarien möglicher Alternativen der Bodennutzung. In Rahmen dieser wissenschaftlichen Forschungskooperation entstanden Magister- und Doktorarbeiten.

Keywords: Akademischer Austausch, Forschungskooperation, Wissenschaftliche Zusammenarbeit

Einleitung

Der akademische Austausch zwischen den Universitäten von Göttingen und Talca zeichnet sich durch eine intensive Zusammenarbeit aus.

Dies gilt vor allem für die Agrar- und Forstwissenschaften und hier insbesondere in den Bereichen der ländlichen Entwicklung, der Agrar- und Forstökonomie. Die folgende Arbeit bezieht sich auf diese drei Bereiche und gibt eine Antwort auf eine konkrete Problemstellung der ländlichen chilenischen Wirklichkeit.

Aus dem Kontext der Forschung resultieren drei zentrale Elemente:

- **Problemstellung**: Die Entwicklung der landwirtschaftlichen Produktion im Forschungsgebiet hat zu einer nicht mehr nachhaltigen Nutzung der natürlichen Ressourcen geführt. Dieses Problem verlangt eine Lösung unter Berücksichtigung des Erhalts der Biodiversität und der Partizipation der ländlichen Bevölkerung.
- **Die Umsetzung bezug der Vorschläge**: Die erarbeiteten Vorschläge müssen Umsetzungsreif sein und Lösungen der Umweltschutzprobleme, die durch die derzeitigen land- und forstwirtschaftlichen Produktionssysteme verursacht werden, darstellen.
- **Erarbeitung nachhaltiger Landnutzungskonzepte**: Der Beitrag der Forschung ist - nach Analyse der Ausgangssituation - die Erarbeitung von Vorschlägen bezüglich der nachhaltigen Nutzung natürlicher Ressourcen und der Verbesserung der wirtschaftlichen Situation kleinbäuerlicher Familien.

Die hohe Bodendegradation aufgrund ungeeigneter landwirtschaftlicher Arbeitspraktiken, die vermehrte chemische Überdüngung, die zudem das Grundwasser belastet und ein nicht nachhaltiges Forstmanagement sind einige der Ursachen, deren Folgen man heute weltweit in allen ländlichen Gebieten beobachten kann.

Aus diesem Grund sind die Konzeption und die Umsetzung von Strategien für die kleinbäuerliche Landwirtschaft auf lokaler Ebene auf eine angemessene Bewertung der Produktionssysteme und der natürlichen Ressourcen angewiesen. Die Probleme der Umweltzerstörung und die umweltschädigenden Produktionsverfahren in der Land- und Forstwirtschaft wirken sich negativ auf die Erhaltung der natürlichen Ressourcen aus.

Die chilenische Situation ist diesbezüglich keineswegs eine Ausnahme, wenn man sich vor Augen führt, dass etwa in den nicht bewässerten Flächen über 50% der Böden als Folge der Rodung von Wäldern und Bränden, durch Wasser- und Winderosion abgetragen wurden. Die bäuerliche Landwirtschaft versucht die Zerstörung der natürlichen Ressourcen durch eine intensivere Nutzung derselben wettzumachen, welche Einkommenseinbußen und die Abnahme der Eigenversorgung verursacht und langfristig zur Verarmung führen.

Der Staat in seiner Rolle als Wahrer des natürlichen nationalen Erbes stellt den Produzenten eine Vielzahl an Programmen und Aktivitäten zur Verfügung, die zum Ziel die Erhaltung, den Schutz und die rationale Nutzung der natürlichen Ressourcen haben. Leider lehrt uns die Praxis, dass nur wenige diese Förderungen erhalten und dass besonders die kleinen Betriebe nicht davon Gebrauch machen können. Zusätzlich wird die Auswirkung der Förderungen auf die Umwelt nicht quantifiziert. Es stellt sich die Frage, in wie weit die bisher angewendeten Instrumente (wie z.B. Subventionen) die nachhaltige Nutzung der natürlichen Ressourcen sicherstellen und in welcher Form diese Unterstützung zur konstruktiven Problemlösung der Umweltprobleme im ländlichen Raum beiträgt.

Forschungsschwerpunkte

Beide Universitäten haben die drei Forschungsschwerpunkte festgelegt, welche die Grundlage für die interdisziplinäre Kooperation darstellen:

- Ökonomische Bewertung der Natur;
- Umweltschonende und nachhaltige Nutzung des Waldes; und
- Agrarpolitische Szenarien möglicher Alternativen der Bodennutzung.

Im Folgenden werden diese Schwerpunkte auch im Hinblick auf deren Bedeutung im globalen Kontext beschrieben. Im Einzelnen wird dabei auf Ober- und Unterziele eingegangen.

Forschungsschwerpunkt Nr. 1: Ökonomische Bewertung der Natur

Der erste Forschungsschwerpunkt beschäftigt sich mit der Bestimmung des ökonomischen Wertes öffentlicher Leistungen, wie z.B. Erhaltung der Natur und Sicherung der Erholungsfunktion der Landschaft. Er leistet darüber hinaus in zweierlei Hinsicht einen Beitrag zum Gesamtprojekt. Die monetäre Bewertung dieser Leistungen ist zum einen eine notwendige Voraussetzung für die Verbesserung der agrarpolitischen Entscheidungsprozeße und der regionalen Planung. Sie kann darüber hinaus als Grundlage für die Beurteilung von Umweltschäden und für eine eventuelle Entschädigung dienen. Zum anderen ist die ökonomische Bewertung eine wichtige Komponente bei der Entwicklung von Umweltindikatoren für die Land- und Forstwirtschaft, die es erlauben, Korrekturmaßnahmen für den Schutz natürlichen Ressourcen durchzuführen.

Ziele des ersten Forschungsschwerpunktes

- Die im Untersuchungsgebiet durch Kleinbauern genutzten natürlichen Ressourcen sind ökonomisch zu bewerten.
- Die Anwendbarkeit der ökonomischen Bewertungsmethoden bezüglich der Umweltwirkungen im Forschungsgebiet ist zu ermitteln.
- Indikatoren für die Nachhaltigkeit im Forschungsgebiet sind zu erarbeiten.

Forschungsschwerpunkt Nr. 2: Umweltschonende und nachhaltige Nutzung des Waldes

Die wirtschaftliche Entwicklung des Forschungsgebietes beruht geschichtlich auf der Nutzung erneuerbaren natürlicher Ressourcen. Diese Entwicklung wird sich voraussichtlich in den nächsten Jahren nicht ändern, es kann im Gegenteil sogar eine starke Zunahme der Ressourcennutzung mit deutlicher Übernutzung vorausgesagt werden. Aus diesem Grund nehmen der Schutz und die Erhaltung des Waldes eine Schlüsselposition ein. Die Wälder liefern nicht nur Holz, sondern sind eine wichtige Quelle für Nahrungsmittel und den Erhalt der natürlichen Umgebung. Weiterhin ist zu betonen, dass Wälder als Kohlenstoffsenken den negativen Folgen der globalen Erwärmung entgegenwirken können. Aus dieser speziellen Leistung des Waldes könnten sich im Rahmen der Kyoto-Protokoll-Mechanismen eine zusätzliche Einnahmequelle für die kleinbäuerlichen Betriebe erschließen. Außerdem finden pädagogische, ästhetische, kulturelle und Erholungswerte des Waldes immer mehr Berücksichtigung. Dieser zweite Forschungsschwerpunkt dient der Konzeption einer nachhaltigen Nutzung und eines Forst-Managements, dass die obigen Werte für die gegenwärtige und zukünftigen Generationen berücksichtigt.

Ziele des Zweiten Forschungsschwerpunktes

- Förderung der nachhaltigen Nutzung des Waldes im Forschungsgebiet.
- Ökonomische Evaluation der Umsetzung nachhaltiger Verfahrensweisen auf betrieblicher Ebene.
- Möglichkeiten eines nachhaltigen Forstmanagements für Kleinbauern im Forschungsgebiet erarbeiten und bekannt machen.
- Ökonomische Bewertung der Nutzung einheimischer und eingeführter Baumarten in einem Agroforstsystem für landwirtschaftliche Flächen.

Forschungsschwerpunkt Nr. 3: Agrarpolitische Szenarien für die unterschiedliche Alternativen der Landnutzung

Die Landwirtschaft und die Agrarpolitik eines Landes verursachen Umweltprobleme, welche die Stabilität von Ökosystemen beeinflussen. Die Größe dieser Effekte ist unter anderem abhängig von der landwirtschaftlichen Betriebsstruktur und der landwirtschaftlichen Nutzung, den landestypischen Produktionsmethoden, sowie den regionalen und internationalen Rahmenbedingungen auf den Märkten. Diese Probleme verschärfen sich in den Gebieten, in denen die Umwelt bereits geschädigt ist und dort, wo ökonomische Instrumente die Schädigung der Ressourcen weiter vorantreiben. Daher ist es notwendig die Qualität der anzuwendenden Instrumente und Mittel dahingehend zu prüfen, ob die Nachhaltigkeit sichergestellt ist.

Die Sensibilität der Landnutzungssysteme im Forschungsgebiet macht ein Überdenken des derzeitig angewendeten agrar-politischen Instrumentariums (z.B. Subventionen) notwendig. Es ist zu untersuchen, wie die aktuelle Situation verändert werden kann, um den Schutz der Ökosysteme zu verbessern.

Im Rahmen des dritten Schwerpunktes soll also nach alternativen Lösungen mit nachhaltigem Charakter gesucht werden.

Ziele des Dritten Forschungsschwerpunktes

- Eine nachhaltige forst- und landwirtschaftliche Strategie für das Forschungsgebiet ist zu entwickeln, die sowohl die staatlichen agrarpolitischen Maßnahmen als auch den Umweltschutz umfasst.
- Die aktuellen landwirtschaftlichen Subventionen und deren Effekte auf den Erhalt von natürlichen Ressourcen sind zu analysieren.
- Ein Konzept für ein umweltpolitisches Instrumentarium ist zu entwickeln, das eine nachhaltige Ressourcennutzung sicherstellt.
- Vorschläge zur Neuorientierung der Produktion unter Verwendung nachhaltiger Bodennutzungsformen sind zu erarbeiten, welche die Schonung der Ressourcen und die Erhaltung der Biodiversität beinhalten.

Ergebnisse

1. Forschung

- Als Ergebnis wird erwartet, dass neue Bewertungsmethoden der Umweltwirkungen insbesondere für den ländlichen Raum eingeführt und umgesetzt werden.
- Entwicklung und Analyse von anwendungsbezogenen nachhaltigen Landnutzungskonzepten für die Landwirtschaft und Waldnutzung der Kleinbauern im Untersuchungsgebiet.
- Erarbeitung von Kriterien für eine bodenschutzorientierte Landbewirtschaftung im Untersuchungsgebiet.
- Vorschlag einer neuen staatlichen Subventionsstrategie für Kleinbauern, sowie Anleitungen für politische Strategien, die den Erhalt und Schutz der Umwelt berücksichtigen.
- Vorschlag von Agrar-Umweltindikatoren für die Überprüfung des ökologischen Erfolges von umweltpolitischen Maßnahmen.
- Übertragbarkeit der entwickelten Methoden und Konzepte auf ähnliche Problemstellungen anderer Regionen.

2. Akademischer Austausch

- Die gemeinsame Forschungserfahrung beider Universitäten führt zu einer Intensivierung der wissenschaftlichen Kontakte zwischen den beteiligten Universitäten und darüber hinaus zu einer Förderung der Leistungsfähigkeit der Agrar- und Forstwissenschaft. Ein besonderer Schwerpunkt liegt in der Integration und Ausbildung junger Wissenschaftler und Doktoranden in einem internationalen Forschungsvorhaben.

3. Praxis

- Es wird erwartet, dass das Vorhaben konkrete Lösungen für die Umweltprobleme in der Untersuchungsregion anbietet. Dafür werden nachhaltige Landnutzungssysteme konzipiert, die sowohl den Biodiversitäts- und Klimaschutz als auch die wirtschaftliche Situation der kleinbäuerlichen Familien berücksichtigen. Zugleich werden Empfehlungen für den politischen Entscheidungsprozeß gegeben.

Abschließende Bemerkungen

Entwurf und Umsetzung von Strategien für die bäuerliche Landwirtschaft auf lokaler Ebene benötigen eine angemessene Evaluation der Produktionssysteme und der natürlichen Ressourcen. Die natürlichen Ressourcen sind die Grundlage der landwirtschaftlichen Verfahren, daher sollen sie aus dem Blickwinkel der Nachhaltigkeit analysiert und verstanden werden. Die Bodennutzung der Agroforst-Aktivitäten soll an das Potential der Ökosysteme unter Berücksichtigung der zur Verfügung stehenden Technologien und deren Zugänglichkeit für die Landwirte angepasst werden. Die nachhaltige Nutzung der Umwelt kann als Aufgabe sowohl für den Staat sowie für andere wirtschaftliche Akteure verstanden werden. Auch die kleinbäuerlichen Betriebe in der Untersuchungsregion können, mit neuen Umweltschutztechniken ausgestattet und aufgrund von ökonomischen Anreizen, die Umweltqualität verbessern und zur Umsetzung der nachhaltigen Nutzungskonzepte angeregt werden. Die beteiligten Universitäten haben das Ziel mit ihren wissenschaftlichen Kenntnissen umsetzbare Lösungen für die Umweltprobleme zu bieten. Das vorgeschlagene Kooperationsprojekt erreicht dieses Ziel und eröffnet den ländlichen Gebieten Lösungswege für deren Umweltproblematik.

Danksagung

Diese wissenschaftliche Forschungskooperation ist möglich dank der Unterstützung des Deutschen Akademischen Austausch Dienst (**DAAD**) und der Comisión Nacional Cientifica y Técnica (**CONYCIT - ALECHILE-Programm**).

GOVERNANCE AND MODELING – STRATEGIES FOR A MULTI-PARTNERSHIP COOPERATION IN RESEARCH AND DEVELOPMENT

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Abstract

With the aim of developing a decision-support tool, that provides planning information based on the simulation of decision-making from different water users stakeholders in the Maule River Basin, a research project gathered the collaborative work of different institutions. The Consultative Group on International Agricultural Research (CGIAR) develops the Challenge Program on Water and Food (CP). The CP is envisaged as major program of research, extension and capacity building over a period of ten to fifteen years. Through the participation one of the Consortium Members (18), the International Food Policy Research Institute (IFPRI) the CGIAR funded the research project called: "Integrating knowledge from computational modeling with multi-stakeholder governance". The project involves academic partner institutions from Germany; Center for Development Research (ZEF, Bonn), Institute of Rural Development (IRE, Goettingen) and Center for Environmental Research (UFZ, Leipzig Halle). In Chile, South America, the counterpart corresponds to the University of Talca, with the joint collaboration of two Faculties (Agrarian and Forestry Sciences). Since this project is also taking place in Ghana, Africa, as part of a comparative analysis, it indirectly involves other academic institutions there like, the Institute of Statistical, Economic and Social Research (ISSER, Ghana), and the Water Research Institute (WRI, Ghana). Every discipline considered in each component of the project has a research leader with a counterpart in Chile. This is improving the transfer of knowledge on both parts, exchanging different points of views respecting to the development of the outputs considered in the project. Apart from the obvious participation of the stakeholders to build the products of the project, other research institutions in Chile are invited to get involved in this initiative. This is the case of the National Institute of Agricultural Research (INIA). The mutual collaboration with the public institutions like the National Commission of Irrigation (CNR), the Department of Hydraulic Infrastructure (DOH) and the General Direction of Water (DGA) is also a key point for the project development. In summary, the international, as well as the national collaborative research project has promoted the fund raising and has increased the potential of the human capital involved.

Keywords: Collaborative Research, Governance, International Joint Research, Modeling, Stakeholders participation

Introduction

An international project has various ways to be originated. One of them is the flow of students and research fellows exchange between educational institutions with the same orientations in different countries. This context is also the source for contacts around the world that allows to concrete ideas for common problems and needs.

The Project described in this document is an example of how a proposed idea crosses three continents (America, Europe and Africa), exchanging and applying knowledge, to face an issue that is potentially a source of conflicts through the world: The use of scarce water resources.

Objective of the Project

The objective of the Project is to research the use of integrated simulation models as decision-tools in multi-stakeholder negotiation processes at the sub-basin level.

The project sites are the Volta-Basin (Ghana) and the 'virtual' Andes basin (Melado basin, Chile), where construction of agent-based simulation models that combine economic and hydrological sub-models is already underway.

The project is focus on: (1) the analysis and strengthening of multi-stakeholder governance structures in the two project sites (Sub-Basin Management Board in Ghana, Water User Associations in Chile), (2) the identification of problems, policy options to address the problems, and criteria for evaluation policy options by the stakeholders, (3) the extension of simulation models to incorporate the impact of climate change on land and water use decisions of risk-averse producers, (4) the evaluation of alternative policy options, as identified by stakeholders, (5) the development of decision-support tools that present and visualize the outputs of the simulation models in a form that is useful for the stakeholders, and (6) the actual use of the decision-support tools in negotiation and planning processes in the multi-stakeholder governance structures.

The Project

"Integrating Knowledge from Computational Modelling with Multi-Stakeholder Governance Structures: Towards Better and More Secure Livelihoods through Improved Tools for Integrated River Basin Management" involved the following structure, covers 3 of 5 thematic working lines in the Water and Food Challenge Program at CGIAR. These lines are:

Line 2 - Multiple use of Upper Catchments 40%

Description: This line pursues the improvement of sustainable livelihoods for people who live both in upper catchments and downstream, through significant and unambiguous improvements in water productivity. This will be achieved through comparative research at benchmark sites that will identify opportunities and incentives for measurable improvements in use of the water resource, develop useful tools and methodologies, and enable the learning processes that influence groups of people to adopt them.

Line 4 - Integrated Basin Water Management Systems 50%

Description: To improve the productivity of water (in crop, livestock and fisheries production systems and ecosystem services) within the basin, by generating and applying knowledge on how to manage trade-offs and promote synergies to enhance water productivity, while maintaining or improving food security and environmental sustainability.

This is be achieved through research, capacity building and outreach activities in three key areas at a basin level:

- integrated decision support tools and information
- innovative technologies and management strategies and
- effective policies and institutional mechanisms.

Line 5 - Global & National Food and Water System 10%

Description: To undertake research to improve basic and applied knowledge on how policies, institutions, and processes of change in the global and national food and water system affect food security, livelihoods, health, and the environment and to engage in action research, outreach and capacity building at the individual and institution level to facilitate better policy and implementation of necessary changes.

Hypothesis and Methodology used in the Project

The research hypothesis are: The use of integrated simulation models as decision-support tools within multi-stakeholder governance systems will significantly contribute to the sustainable management of river basins.

- Methodology: The Multi-Agent Modelling and Simulation Techniques

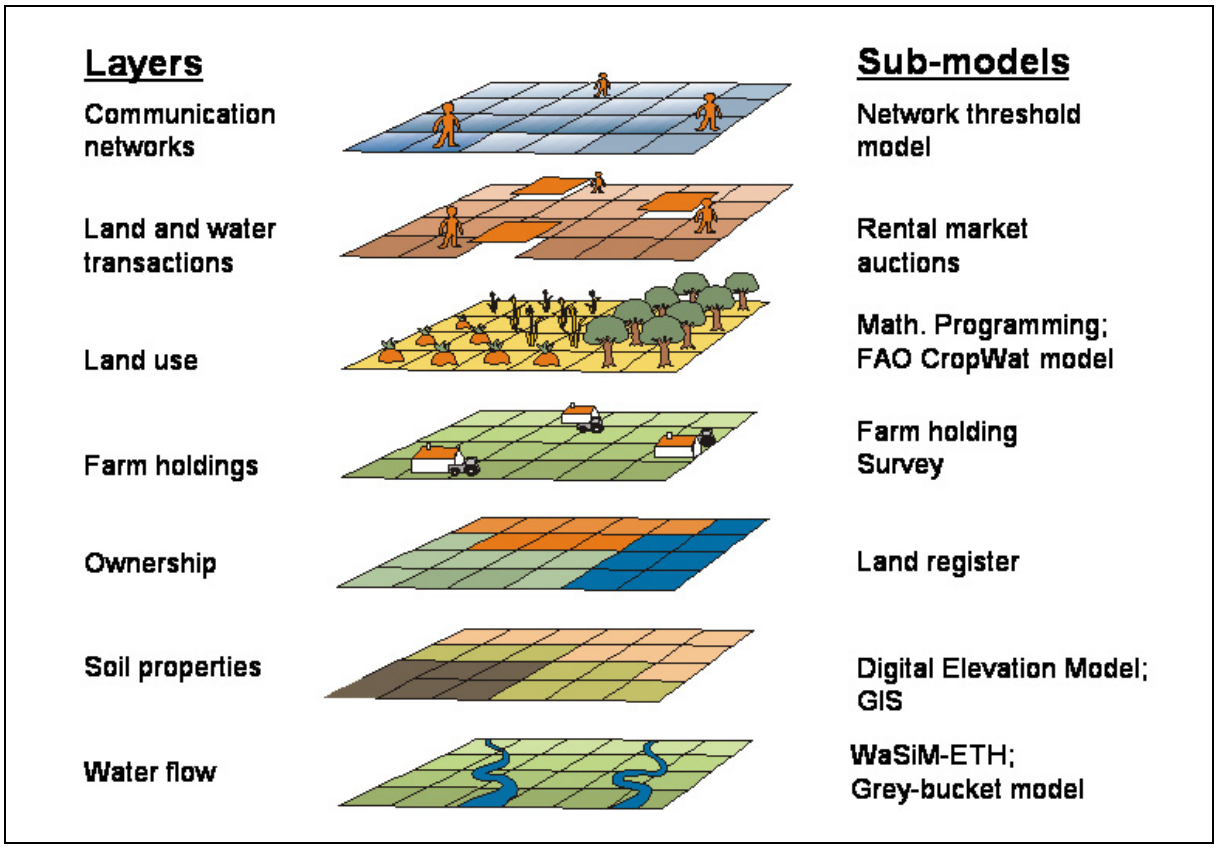
A particularly promising new development is multi-agent modelling, which captures the interactions between resource users (the "agents") and resources used (the "environment") at different scales. Alternatively, approaches to deal with the social and institutional complexities of basin management have focused on researching the governance structures, the patterns of participation of different stakeholders, and how integrated water resources management is applied in practice.

Major methodologies used include action-oriented research, and the application of analytical concepts such as property rights analysis, collective action theory, game theory, and legal pluralism. Integrating the lessons learned from these separate approaches remains a critical challenge.

Simulation models will assist stakeholders in putting water policies into action and developing effective management strategies that improve efficiency of water use, ensure equity in access, and reduce vulnerability to climate shocks.

By using integrated simulation models as decision-tools in multi-stakeholder governance systems, the project aims to contribute to the overall goal of managing land and water resources in river basins in a manner that is economically efficient, environmentally sustainable and socially acceptable. The use of simulation models helps to identify and quantify trade-offs that may arise in the short run, between the goals of economic growth, reduced vulnerability and food insecurity, environmental sustainability and equity.

Simulation modelling can also be used to examine long run impacts of predicted changes in climate, and to evaluate alternative policies under different climate scenarios. Though simulation models help to identify technical, economic and institutional options that increase water productivity and reduce vulnerability to shocks, dealing with the remaining trade-offs involves value judgments that have to be politically negotiated within appropriate governance structures. The following figure graphs the components of the integrated model:



Source: Presentation to the Sub-Secretary of Agriculture, Chile. 2004.

Figure 1: Sub-models Considered in the Integrated Model and Corresponding GIS equivalency

Though simulation models help to identify technical, economic and institutional options that increase water productivity and reduce vulnerability to shocks, dealing with the remaining trade-offs involves value judgments that have to be politically negotiated within appropriate governance structures.

Therefore, the project also aims at contributing to the design and implementation of governance structures that improve the prospects that such negotiation processes lead to equitable and socially desirable outcomes. Of critical importance to the success of these processes is bridging the gap between scientific information and stakeholders' knowledge and perceptions.

Thus, the development of the decision-support tools will build upon a proto-type agent-based simulation model combining economic and hydrological sub-models, which has been developed and tested for the Melado-Basin in Chile. A similar model is currently being developed for the GLOWA-Volta project in Ghana.

The model will be extended to incorporate the impact of changes in climate – including increased climate variability – on land and water use decisions of risk-averse producers.

In Chile, the need for field surveys is limited to information required to update the model, and collect information on current risk coping and management strategies. Similarly in Ghana, a large range of field data on agriculture and land use, hydrology and economics is currently being collected within the GLOWA-Volta project. Already concluded fieldwork need be complemented by a household questionnaire on risk and site-specific surveys. Thus, the project can concentrate on extending and adapting the simulation models and generating alternative simulation scenarios and particularly on the

development of decision-support tools based on these simulation models, while spending a limited amount of time on data collection. For the simulation modelling, an integrated optimization approach consisting of cellular model components and agent-based model components are used:

- The cellular model components provide the spatial framework to link biophysical simulation models with socio-economic decision models.
- The agent-based model components represent - via mathematical programming - the decision rules of human actors, their environmental feedbacks, and carry-over of spatially distributed resources to the next simulation period.

The spatially distributed aspect of the model will be particularly useful for modelling predicted changes in climate conditions, e.g. rainfall. Since the modelling system represents agents and environments at a disaggregated level of analysis, it allows for assessing the distributional consequences of different policy interventions. A series of "what-if" scenarios will be generated to determine disaggregated impacts in terms of food security, poverty levels, ecological services, and other important management-specific objectives. Similarly, a series of "what-if" scenarios based on global climate change predictions will be generated, and potential policy interventions evaluated in light of these changes. Once we have identified critical parameters and appropriate forms of technical coupling and performed sensivity analyses, we will implement our scientific modelling system and create user interfaces for decision support. Building on software engineering concepts such as Unified Modelling Language (UML), the approach is to design a 'back end' and 'front end' of our modelling system.

The project plans to apply, test and further develop the decision-support tools with partners at existing water institutions. These institutions, based on multi-stakeholder governance, are legally empowered to make decisions on integrated water management and allocation; specifically, the Sub-Basin Management Board of the White Volta River in Ghana and the Water User Associations ("Juntas de vigilancias") of the Melado River Basin in Chile. Since the stage of development and the institutional set-up in the basins differ, comparing the Ghanaian and Chilean case studies offer a valuable chance to study how decision tools and governance structures can be created and maintained that ensure a sustained involvement of different stakeholder groups during the progression of river basin development.

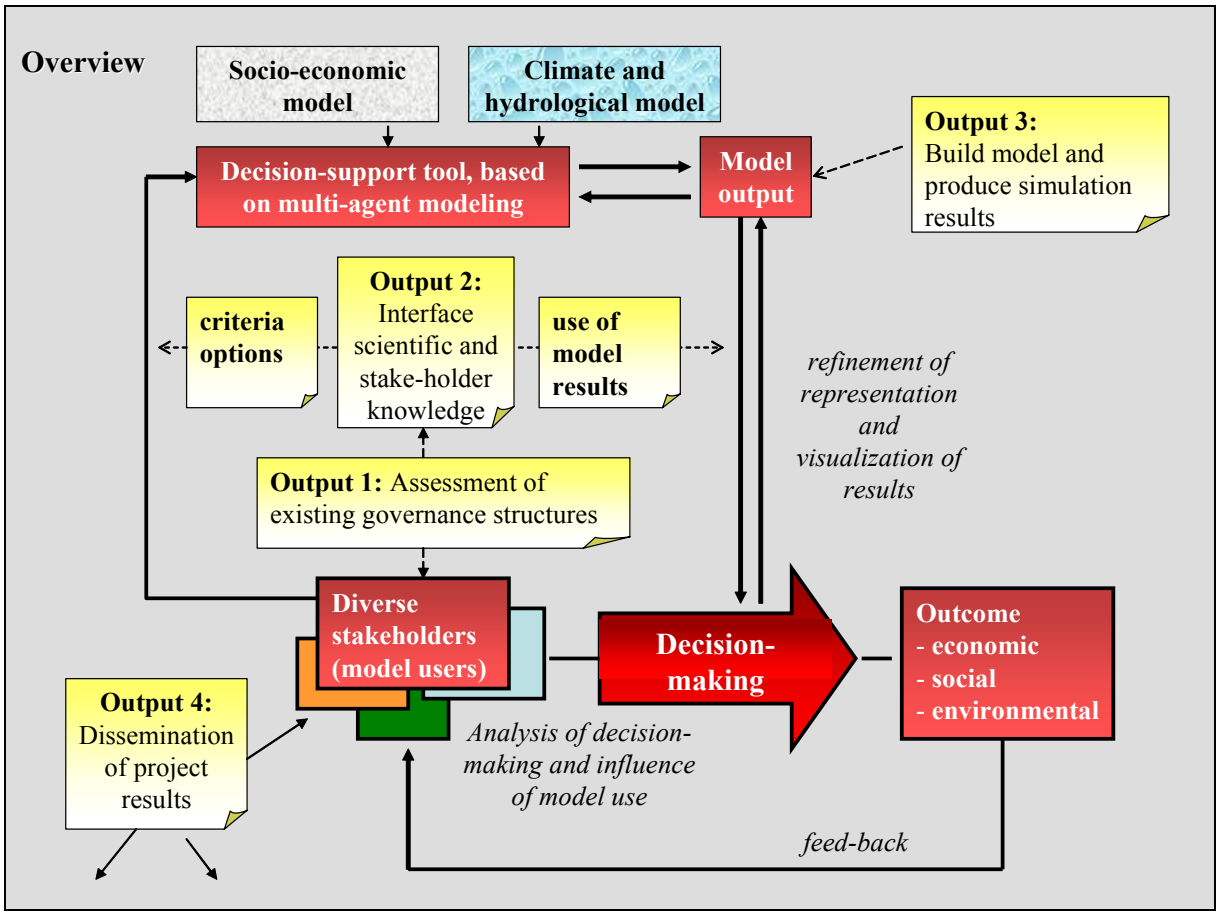


Figure 2: Flow chart of the Simulation Model.

Research Collaborative Net

Complementing the contacts net among the researchers, there is also a valuable help of the students staff. In this way, the Project involves the participation of German students in Chile (Goettingen University) whose master's thesis are a source of input and feedback for the development of the study. Undergraduate students of the University of Talca are also involved in the research activities, collaborating with two comparative analyses of the water users stakeholders in Latin America, and a specific study-case in Argentina.

These last activities with students have allowed maintaining a close interaction with the authorities of water distribution institutions in Provincia de Cuyo, Argentina, who are willing to collaborate in the research initiatives.

In the national context, the public institutions are involved through agreements that benefit both parts through the objectives of the Project. One of those agreements allowed the participation of one hydrology expert from the National Institute for Agricultural Research in the development of the model. In the same way, the water users organizations of the study area are compromised in the research sharing all the information necessary for the gathering of the different subcomponents of the integrated model.

Preliminary Products of the Project

1. One of the products that benefit the public and private stakeholders is the creation of a complete database, in progress, that includes a Geographical System of Information (GIS) of the study area.
2. Publications in proceeding to different Congresses and Seminars, describing the advances of the Project in both sides, Chile and Ghana.
3. Four thesis in progress, two master thesis and two undergraduate thesis in Germany and Chile respectively.

Acknowledgement

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WORKSHOP:
WORKING GROUP 3:
EXTENSION AND TECHNICAL COOPERATION

EXTENSION AND COOPERATION: WITHIN THE USAID ENVIRONMENTAL PROGRAM IN BOLIVIA

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Abstract

The United States Agency for International Development (USAID), through its environmental program in Bolivia, provides technical assistance to government institutions, individuals, private companies, communities and indigenous groups trough out the country.

The Cleaner Production activity was designed to assist industrial companies in improving the use of supplies and reduce their production costs. At the same time, as the demand for cleaner production experts increased, the activity started a program to train professionals in cleaner production techniques. Currently, over 60 students per semester, from different Universities and fields of expertise are being trained in cleaner production; as many as 200 industrial technicians from the industries have been also trained.

The forestry portfolio includes four field projects; they provide assistance at different levels:

- At national level. It includes assistance to high government officials of the Executive Power, as well as promoting the forestry sector in the National Congress (Senators and House of Representatives), opinion leaders, social leaders and other groups of the civil society.
- At middle level, assistance is provided to local governments, and civil society.
- At local level, the projects focus their efforts on municipal authorities, communities and indigenous groups; the technical assistance includes working with organizations as well as with individuals and private owners.

As part of its activities, USAID is currently leading the environmental donors group for the period of 2004-05, which provides another opportunity to coordinate the efforts work together with other agencies.

The following sections describe both portfolios and each activity within each portfolio, the assistance approach taken in each case, results achieved to date, problems faced and solutions proposed when possible.

Keywords: Cleaner Production, Communities, Forestry development, Policy making.

Introduction

While economically poor, Bolivia is rich in natural resources, with more forests than Central America and Mexico combined. Proper management of these natural resources could be the basis for the country's economic growth, particularly in rural areas where poverty is greatest. Environment management and pollution prevention is not a priority in the country, the levels of contamination in the cities due to industrial development have increased in the last decade, as the implementations of the Environment

Law has proven to failed. The United States Agency for International Development (USAID) employs an approach of supporting public-private partnerships to: (1) reduce pollution generated by industry; and (2) increase the capacity to manage natural forests. This will produce local benefits build upon equitable and participatory governance, foster economic development, and create incentives for resource stewardship.

Cleaner Production

USAID introduced cleaner production practices in Bolivia through the Environmental Pollution Prevention Project (EP3). EP3/Bolivia began activities in September 1995, with the Cámara Nacional de Industrias (CNI) as its counterpart, and established an office within CNI to lead efforts to build greater awareness of industrial pollution problems and cleaner production approaches and solutions, through cleaner production assessments (CPAs), demonstration projects, training, and information dissemination.

In September 1998, EP3/Bolivia project personnel joined the staff of the Energy Sector Management Assistance Program (ESMAP), an energy efficiency World Bank (WB) project though a grant by the Government of the Netherlands, to establish Centro de Promoción de Tecnologías Sostenibles (CPTS). Like EP3/Bolivia, CPTS was created to operate under the auspices of the CNI and to coordinate its training and outreach activities with the CNI's environmental unit as well as with the other departmental chambers of industry in Bolivia. While EP3/Bolivia had focused on introducing pollution prevention concepts and principles to industrial companies, CPTS broadened its scope to address cleaner production within the services sector, including hospitals and other medical facilities, hotels, and other sources of urban pollution.

Since its beginnings, EP3/CPTS conducted numerous activities aimed towards the creation of a cleaner production market through assessments in several industry sub-sectors, training courses and workshops, environmental policy dialogues with local and national governments, and began working on the development of financial schemes and promotional mechanisms for financing cleaner production projects.

Forest Management

Bolivia became the global leader in sustainable tropical forestry, with 1.4 million ha of natural forests independently certified as economically, ecologically and socially well managed. In 2003, the value of certified forest product exports surpassed $13 million, up 61 percent since 1999; it is expected to reach $21 million this year.

By working closely with government, the private sector, universities, and civil society since 1994, the Bolivia Sustainable Forestry Program has catalyzed these dramatic changes in the forest sector. This program is supported by the Ministry of Sustainable Development and USAID. It strengthens Bolivia's public and private sector capacity to manage natural forests sustainably, focusing on six areas:

1. Policy support. In contrast to the non-renewable resource sectors traditionally favored by Bolivia's public policies, sustainable forestry can provide for the long-term creation of wealth across several social sectors and without the same risks of wild cycles of boom and bust. To realize the promise of more stable and equitable development through forestry, the Program aim to raise the profile of the forest sector within the public policy agenda.
2. Public Sector Strengthening. As the nation's primary agency for the regulation and enforcement of the forestry sector, the Superintendencia Forestal is a

cornerstone of the Bolivian forestry model. It performs an essential, albeit underdeveloped, role in the protection and nurturing of the sustainable forestry sector. However, the effectiveness of the Superintendencia is at risk. The Superintendencia's ability to function as a credible, reliable, and efficient regulatory agency has been steadily eroded by a lack of secure and adequate funding.

3. Community Forestry. Bolivia's Agrarian Reform of 1953 was one of the most comprehensive and lasting Latin American efforts to improve equity and access to the principal means of production. Equity was the central issue addressed by the Reform, and there is no doubt that impact was significant when it first took place. However, a ten-minute drive out of any city in the highlands today shows us that the achievements of the 1953 Reform did not last. Prevailing poverty, a lack of social services, and inadequate production systems are proof of how the equity gains have eroded over the past fifty years. The 1996 INRA Law, redistributed millions of hectares, this time to lowland indigenous and local groups. One of the challenges for the forestry Program is to thus avoid the replication of the shortcomings of the Agrarian Reform.
4. Communication. Over the past decade, there have been environmental education and communication interventions in Bolivia at various scales: community, municipal, regional, and even national. A wide variety of government institutions, NGOs, and private companies have dedicated time, personnel, and funds to environmental education projects with communication components, but these actions have not been implemented in a planned, coordinated, and sustained manner. Too often, projects have included communication components only in a perfunctory way. They have been relegated to annexes or addenda where they provide support for the achievement of programmatic objectives.
5. Forest Management. The business practices and management of forest enterprises in Bolivia are characterized by numerous deficiencies that act to impede the development of the sector's competitiveness and ultimately threaten the long-term viability of forestry and thus the maintenance of native forests in Bolivia's lowlands. These problems include a lack of entrepreneurial organization, limited business administrative skills and capacities, low efficiency in the production chain, a lack of credit and investment, out-dated harvesting and production technologies, and limited development of sustainable forest planning and operations methods.
6. Exports Promotion. Bolivia has made great progress in advancing the adoption of forest planning and better forest practices. Impressive amount of forest has been certified, but this success has not translated into increased exports of Bolivian forest products. While the international trade of tropical timber has increased by an average of 3% a year, Bolivia's forest exports and its share of the international market have decreased. Isolated attempts to promote forest products exports have had little success. Bolivia's small economy and limited local market for forestry products mean that it is necessary to develop linkages to outside markets. The sector needs access to information that would support a broader understanding of the value and potential of the resources at its disposal and how its products and species compare to those of foreign producers.

Materials and Methods

Different strategies have been tested in the last decade, some of them have proven to be effective. This section describes those strategies to provide technical assistance; however, they should be look at as an integrated way of providing technical assistance and not as individual efforts. At the moment we see the success of the program, as a result of the components.

Cleaner Production

1. Technical assistance to reduce pollution: Cleaner production assessments, with cleaner production follow-up assessments have been performed. These assessments are aimed to proposed recommendations, which once they are implemented, will lead to savings. This allowed companies to reduce: water consumption, reduce the pollution generated by industrial processes, reduce their product losses; and save in raw materials.
2. Creating local capacity: Cleaner production training courses. Also, scholarships were granted to students completing their academic training in areas related to CP and environmental issues within industries.
3. Incentives for industries: Establishment of the Bolivian Industry Eco-Efficiency Award and the Cleaner Production Fund.
4. Legal framework: Since environmental regulations in Bolivia are weak and poorly enforced, the program tries to contribute through new and better regulations.
5. Support to municipalities: technical assistance on waste characterization and landfill management and a residential energy efficiency campaigns.

Forest Management

1. Policy support. This will include providing support for the creation and implementation of national policies that make forest management a more competitive land use for communities and other forests users. It will also promote the reform of confusing or contradictory legislation that has resulted too frequently in a lack of clearly defined land title and social conflicts in the nation's forested regions. The creation of more secure and equitable forestland tenure is a central challenge for the development of sustainable forest management and it is a prerequisite for attracting long-term investment in the forestry sector.
2. Public Sector Strengthening. Although it is supposed to be largely self-financing through patentes forestales, the Superintendencia lacks adequate financial resources to fulfill its responsibilities because the forest concessions are not paying this fee. Left unchecked, this emerging financial crisis could eventually cripple the Superintendencia, threaten the precarious achievements realized to date in the Bolivian forest sector, and jeopardize the past investments made by USAID. The fledgling Bolivian Forestry Research Institute (IBIF) was created under the auspices of the BOLFOR-1. It was given a mandate to focus research efforts on the establishment, measurement, and analysis of data from a series of 1 ha and 27 ha study plots established in areas where concession logging has occurred. The smaller plots - required by the Forestry Law - are expected to generate important data on the regeneration, growth, and yield of native species, as well as their response to disturbance.

However, the information remains incomplete because many concessionaires have not complied with their legal requirements. The larger plots are expected to shed light on some of the impacts that logging has on wildlife and ecological processes. However, this important applied research is constrained by a number of factors, such as IBIF's small size, a lack of technical expertise, and inadequate funding.

3. Community Forestry. The approach use for this component is: (1) providing technical assistance to improve production systems; (2) creating greater market access and investment opportunities to ensure new income for communities; and (3) offering assistance in community and business organization to facilitate linkages with the business world at large. This will be done while strengthening the role of women and forestry producer groups within communities.
4. Communication. Communications strategies were developed according to the public and the thematic area.
5. Forest Management. The Program assists forest enterprises to undertake strategic business and forest planning make the necessary investments in administration, training, forest operations, processing technologies and public relations and marketing.
6. Exports Promotion. Offices for business relations in US and Europe are encouraged.

Results and Discussion

Cleaner Production

- Technical assistance to reduce pollution: 39 cleaner production assessments, with 14 cleaner production follow-up assessments performed to date. Results include 11 case studies amounting to 135 recommendations proposed, 107 (80%) implemented, US$ 1,180,000/year generated in savings with an investment of US$ 2,360,000 per year. This allowed companies to reduce: 4,200,000 m3/year in water consumption (equivalent to two months of water consumption of the city of La Paz); 4,000 tons of chemical Oxygen Demand (COD)/year in organic discharge (equivalent to 1.5 months of organic discharge of the city of La Paz); 383 ton/year in product losses; and 113 ton/year in raw materials.
- Creating local capacity: Over 1,000 professionals attended cleaner production training courses. Also, 120 scholarships were granted to students completing their academic training in areas related to CP and environmental issues within industries.

Name of the course	Partner institution	Effective hours
Environmental Systems Management and Cleaner Production Techniques	National Chamber of Industry and Military School of Engineering	24
Environmental Systems Management and Cleaner Production Techniques	Universidad Privada de Oruro – Universidad Externado de Colombia	24
Environmental Systems Management and Cleaner Production Techniques	Universidad Los Andes	24

Environmental Protection and pollution prevention	Universidad Técnica de Oruro	12
Cleaner production techniques	National Chamber of Industry	88
Cleaner production techniques	National Chamber of Industry	120

4 cleaner production guidelines have been produced.

- Incentives for industries: Establishment of the Bolivian Industry Eco-Efficiency Award: the first award was granted on April 2001, with the presence of the Bolivian President and three Ministers.
- Legal framework: Since environmental regulations in Bolivia are weak and poorly enforced, the program made a significant contribution to the new water and electricity tariff laws. One of the most important contributions was to the Viceministerio de Industria y Comercio Interno (VICI) in order to introduce CP practices into the Reglamento Ambiental para el Sector Industrial Manufacturero (RASIM), as a first step to eliminate command-and-control mechanisms.
- Support to municipalities: a waste characterization and landfill management study for the Municipality of La Paz was completed, and a residential energy efficiency campaign with the mayor's office of Cochabamba is under way.

Outreach: The program achievements in demonstrating the effects of cleaner production in industry sectors such as meat processing, textiles, sugar cane mills, leather tanning, and breweries were broadly disseminated through CNI channels. Consequently other industries solicited CPTS services.

Forest Management

Because of the significance of this milestone in the history of USAID/Bolivia forestry program and the forest sector of Bolivia, an overview of accomplishments is in order. These are not limited to achievements of the Project per se, but instead reflect the advancement of the forest sector of Bolivia resulting from the establishment of the sustainable forest management model. Some of the more important benchmarks can be very briefly summarized as follows:

- The new model brought on a crucial shift in direction with technical application of sustainable forest management practices.
- Total land area under sustainable forest management has grown to nearly 9 million hectares.
- The Forest Superintendence began functioning 1997 with an annual budget of more than $3 million generated entirely by the productive forest sector.
- More than 5 million hectares of public forest lands have sanitized land rights as a result of the Program. These lands include 34 forest concessions and 35 are more in process of sanitizing.
- Forest Committees have been formed in 26 municipalities with participation of such diverse actors as carpenters, Local Social Groups with forest concessions, Indigenous communities, truckers, dealers, sawmill owners, property owners, and others.
- The area in community forest management has risen to cover more than 2 million hectares distributed among 24 municipalities in five departments.

- In the past four years, 32 Indigenous Forestry Units and 52 Local Social Groups (ASL) have been formed.
- Approximately 20% of ASL members are women. But more importance has been placed on equal participation of both spouses in decision making.
- Community forest enterprises have annual sales of more than $500 thousand dollars. At least 16 such enterprises participate in chains of production than end in export markets.
- Bolivia is the world leader in certification of natural tropical forests with more than 1.6 million hectares certified under the Forest Stewardship Council (FSC) system. The area certified could soon surpass 2 million hectares.
- Forest research has amassed a substantial amount of information published in 61 books, 130 technical documents, 80 scientific articles published in international journals, and other working documents and technical notes.
- A National Network of Experimental Plots and monitoring system has been put in place.
- Training has been directed to technicians and professionals including:
    - 160 thesis
    - 18 graduate studies
    - 218 workshops and seminars
    - 4488 persons have participated
- Persons trained in this Program occupy key decision-level positions in public and private organizations.
- Public policies are being defined in favor of the forest sector. For example, the MDS reviewed the Forestry Law and corrected the application of area/based concession fees, thereby saving the forest model from imminent collapse.
- New private and public organizations now support the sector. Among them:
    - Forest Superintendence
    - Bolivian Institute of Forestry Research
    - Bolivian Society of Environmental Law
    - Amazonian Center for Forest Enterprise Development
    - Foundation José Manuel Pando

Conclusions and Perspectives

In both cases presented, different approaches were taken in order to provide technical assistance. However, the commonality between both of them is the integrality of the approach, providing technical assistance to different levels and to different stakeholders within the same sector.

This kind of approach starts with a country assessment of the full sector, this provides enough information to see all the linkages between the stakeholders, and identify the most important bottle- necks and potentialities.

In this way, specific technical assistance is provided to specific groups, and the impacts of this are foreseeing.

Regarding land use and land use planning, and when implementing agrarian reform, policy and decisions makers must consider that access to the land resource should not be the aim, but a productive system based on the land, and therefore a technical assistance system should be put in place and accompany the whole process, and all stakeholder should have access to the same quality of technical assistance.

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EVALUATING THE GLOBAL RENEWABLE ENERGY EDUCATION AND TRAINING (GREET) PROGRAM: AN UNESCO INITIATIVE TO PROMOTE CAPACITY BUILDING FOR RENEWABLE ENERGIES IN LATIN AMERICA

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Abstract

In June 2004, in Bonn, Government delegates from 154 countries adopted the Political Declaration of Renewables 2004. The declaration contains definitions of common political objectives for promoting the role of renewable energies. In the International Action Program, governments, international organizations and stakeholders have committed to a plethora of activities that are geared towards the increased use of renewable energies. So far, 165 of the proposals for voluntary measures have been endorsed while many further submissions for action are being screened at present. The Policy Recommendations give practical advice on how to promote the development of the market for renewable energies in the North and in the South.

Within this context, UNESCO is promoting for renewable energies, capacity-building, development of competent human resources, mobilizing functions in raising awareness and to give priority to sustainability in the use of renewable energies and provision of related policy advice. Within the Global Renewable Energy Education and Training (GREET) Program, efforts in particular in Latin American countries will be pursued towards the development of human resources geared to promoting renewable energies. Activities will aim mainly at the improvement of use, maintenance and management of renewable energy projects and programs and transfer of technological know-how.

In this paper we described and explored the implementation process of GREET in Latin America. We identified possible impacts of GREET in capacity-building, development of competent human resources at university level. Finally, we identified new determinants and key factor for development of renewable energies in the region.

Keywords*:* Renewable energies, UNESCO, capacity building, education.

Introduction

The International Conference for Renewable Energies - Renewables 2004 - concluded with a declaration by 154 governments that renewable energy should play a major role in the energy economy of the 21st century. In this sense, the conference did meet its objectives by raising public awareness. Bonn has shown that the international community is now seriously considering renewable energy as a rational and credible alternative. The renewable energy manufacturers and suppliers said increases in fossil fuel prices due to environmental costs and the depletion of resources will make renewable technologies more cost effective. Amid concern about rising oil prices and the environmental and health costs of a fossil fuel economy, much of the world has now settled

on renewable energy as a key priority. For developing countries, renewable energy has the potential to provide power for the rural poor, reduce dependence on fossil fuels, and create thousands of new jobs.

This growing awareness has led the international community, and the developed countries in particular, to make a firm commitment to renewable energy in recent years. In Europe, wind power grew by more than 35% annually between 1996 and 2003; last year, the photovoltaic sector grew by 33%. Today, the European renewable energy industry has a turnover of 10 billion euros and employs 200 000 people. On the other hand, almost half of the world's population does not have reliable and/or even very much energy access at all on any given day. Recent global trends and in deed specific events have reminded us all how fragile is humanity's complex, technology-based industrial civilization with its dependence on reliable and sustainable energy.

Renewables 2004 was unusual in that it was designed as a formal intergovernmental conference but with official participation of U.N. and other international organizations and a variety of other "stakeholder" groups, ranging from the private sector to rural development organizations. It turned out to be the largest ever meeting of government and private sector leaders on renewable energy, with over 3,000 participants according to the organizers.

The conference produced a two-page political declaration that affirms the importance of renewable energy in meeting energy needs, reducing poverty, and protecting the world's climate. The declaration did not include binding numerical targets (the main sticking point in the decade-long battle over the Kyoto Protocol) and is therefore more voluntary and less-binding in character. However, the conference also produced an international action program that contains 165 individual commitments by governments, international agencies, and private groups to promote the use of renewable energy—many of which represent important new initiatives.

The follow-up mechanisms for Renewables 2004 are still being developed, but are likely to include an official monitoring process that reports to the U.N. Commission on Sustainable Development in 2006 and 2007. In addition, a global policy "network" or "forum" will likely be created to provide information exchange, analysis, and capacity building both in governments and in non-governmental organizations. UNESCO will actively be involved in these processes.

UNESCO is promoting for renewable energies, capacity-building, development of competent human resources, mobilizing functions in raising awareness and to give priority to sustainability in the use of renewable energies and provision of related policy advice. Within the Global Renewable Energy Education and Training (GREET) Program, efforts in particular in Latin American countries will be pursued towards the development of human resources geared to promoting renewable energies. Activities will aim mainly at the improvement of use, maintenance and management of renewable energy projects and programs and transfer of technological know-how.

Materials and Methods

This study gives a literature-based overview of Renewable Energy policy and strategies implemented within the Renewables in Bonn 2004. It first describes the stage of renewable energy worldwide and then analyses the environmental, economic, and social impact of renewable energies education programs in Latin America.

Furthermore, we described and explored the implementation process of GREET in Latin America. We identified possible impacts of GREET in capacity-building, development of competent human resources at university level. Finally, we use a SWOP

analysis (Success, Weaknesses, Potentials, Obstacles) to identify new determinants and key factor for development of renewable energies in the region.

Results and Discussion

During the fuel crisis of the 1970s, many countries began exploring alternative sources of energy. The international community's first major attempt to develop a strategy for the use of alternative fuels was the 1981 UN General Assembly Resolution A/RES/36/193 on the outcomes of the UN Conference on New and Renewable Sources of Energy. However, it was only following the 1992 UN Conference on Environment and Development (UNCED) that renewable energy issues began to feature more prominently on the international environment and development agenda.

In the years following UNCED, several UN Conferences and Summits addressed renewable energy and sustainable development issues in their outcome documents.

As a follow-up to UNCED, the UN Educational, Scientific and Cultural Organization (UNESCO) organized a High-level Expert Meeting in Paris in 1993 and launched the World Solar Programme 1996-2005, a ten-year programme for the promotion of renewable energy.

The regional preparatory meeting for the Latin America and Caribbean (LAC) region was held in October 2003, in Brasilia, Brazil. The meeting adopted the "Brasilia Platform on Renewable Energies." The Platform reaffirms the goal set out in the "Latin American and Caribbean Initiative for Sustainable Development" to ensure that, by 2010, the use of renewable energy in the region as a whole will amount to at least 10% of the region's total energy consumption. This will be achieved through voluntary efforts and take into account national situations.

The Brasilia Platform also calls on renewables 2004 to support the creation of a technical and financial cooperation fund to facilitate cooperation between industrialized countries and the LAC region with the aim of reducing costs and increasing investment in renewable energy in LAC countries.

After the conference on Renewables 2004 in Bonn, almost all government and civil society speakers agreed on the role that Renewable Energies can and should play in the future development of both industrialised and developing countries. Renewable Energies have the potential to provide the major share of energy supplies in the foreseeable future and has been identify as a crucial role to play in access to energy, particularly for the poor.

Multiple benefits those renewable energies can provide, including improving local as well as indoor air-pollution, which kills millions of people worldwide. Renewable Energies help to solve the increasing issues on access to water. RE can help to prevent deforestation and desertification. It can help to turn consumers into producers. It supports democracy, ownership, peace, and security.

The UNESCO Global Renewable Energy Education and Training (UNESCO-GREET) programme

UNESCO is promoting capacity building in renewable energies through implementation of education and training activities identified within the Global Renewable Energy Education and Training (GREET) Program. UNESCO is coordinating efforts of all stakeholders in education including development partners, governments, NGOs and civil society.

GREET will help developing countries define and implement renewable energy program, including solar energy, while raising public awareness of their importance and efficiency. Some key activities that were considered to achieve these goals are:

- To assist countries in formulating educational policies develop and disseminate materials such as best practices, manuals and teacher training packages.
- To identify new trends and appropriate strategies to cope with emerging issues in education on RE, such as urban waste management, and rural solar and biomass production, with special attention to the least regions.

Noting significant gaps in education, training, and public awareness raising, UNESCO delegates propose that these elements are often missing from renewable energy projects. GREET supports for collaboration between existing training programs, the launching of regional and global networks for information exchange, and other activities to promote training and education.

Education and training activities will target the organization of summer schools, training of trainers sessions and implementation such as the Training Platform example in Zimbabwe[13] - Africa. Within the GREET Program, the training activities will aim at enhancing knowledge of managers, engineers, technicians and trainers on use, application and maintenance of renewable energy technologies. The Learning/teaching material produced within the GREET program will serve as a tool to assist in teaching courses on renewable energy in universities and also as a reference material for the scientific community. The innovative concept of Renewable Energy Training Platform will be duplicated and implemented in other countries and regions to develop and enhance local capacity building on the use and maintenance of renewable energy systems. This will therefore improve the implementation of renewable energy projects and contribute to their sustainability.

UNESCO tabled a proposal in Bonn for the setting-up of an 'open university' on renewable energy. This virtual university would function via existing centres in the North and South. UNESCO will be launching the initiative in 2005, hopefully with other partners. Africa, Latin America and the Caribbean, and Asia and the Pacific, have all proposed that renewable energy be one of the priorities for the Organization's next Program and Budget covering 2006–2007.

SWOP Analysis for the GREET implementation in Latin America

Success

- Latin American universities have shown a strong social capital since they built already research and scientific networks in several related areas.
- There is, in general, a political will a general acceptance from societies to adopt and to implement RE in most Latin American countries.
- The capacity building process in Africa has proven be effective at involving a wide range of people in the learning process.
- There is a demand for innovative education programs that allow student effective absorption to private and public markets.

[13] The concept of Renewable Energy Training Platform in Zimbabwe was very good and innovative and this concept of Training Platform constitutes an adapted training tool and simulator for spreading renewable energy knowledge for decentralised electrification. The platform implemented at SIRDC, in Zimbabwe, covers i) solar photovoltaic, ii) mini hydro and iii) mini grid. The platform can be used for conducting weeklong seminars and training programmes at national and sub regional levels in the SADC region.

Weaknesses

- There are, in general, a lack of financial support, lack of specialize trainers, and inequity on access to education in LA. Existing facilities are poor and rustics and students normally don't have facilities that motivate participation.
- Success of GREET may be sensitive to external factors related to the conversion of RE such as: price of oil, trade between develop and less develop countries, subsidies, and price that affect RE production.

Potentials

There is the potential to develop the following initiatives:

- Design and implementation of appropriate national, regional and international policies and measures to create an enabling environment for the development, utilization and distribution of renewable energy sources;
- Developing of domestic programs to increase the contribution of renewable energy to total energy consumption;
- Encouraging the role of the private sector in the development and utilization of renewable energy technologies;
- Strengthening research, development, demonstration and institutional capacities in the field of renewable energy utilization;
- Promoting the utilization of renewable resources, such as solar, wind, biomass, geothermal, hydro (including mini-hydro), and ocean (wave, tidal, and thermal energy conversion) to meet part of the energy needs for sustainable development;
- Developing and using indigenous sources of renewable energy, where appropriate;
- Strengthening financial support to developing countries for the promotion of renewable energy.
- At national and global levels, and that renewable energy can provide important new ways to reduce pollution, diversify and secure energy supply, and improve access to energy in support of poverty eradication.

Obstacles

- One of the main obstacles for the application of renewable energy technologies is the lack of knowledge about how they work, about their potentials and how to use them. Research on applications of renewable energies and training of local experts play thus a pivotal role in global solutions to environmental problems.

Conclusions and Perspectives

Energy is essential for economic and social development and for improved quality of life, and that sustainable patterns of production, distribution and use of energy are crucial. It is also central to achieving sustainable development goals, notes wide disparities in the levels of energy consumption within and between developed and developing countries. Current patterns of energy production, distribution and utilization are unsustainable.

Renewable energy could play a major role in rural development in many Latin American countries. Despite its importance, there is still a need to identify new strategies

and national policies and legislation to promote renewable energy sources. Efforts on capacity building are necessary to implement cost effective technologies.

In general terms, so far, governments agreed to increase substantially the global share of renewable energy sources, with the objective of increasing the contribution of renewable energy to total energy supply with a sense of urgency. They recognized the role of national and voluntary regional targets and initiatives, and the need to ensure that energy policies support developing countries' efforts to eradicate poverty. They also agreed to develop and disseminate alternative energy technologies with the aim of giving a greater share of the energy mix to renewable energy; combine the increased use of renewable energy resources, more efficient use of energy, and greater reliance on advanced energy technologies; and develop and utilize indigenous energy sources and infrastructures for local use and promote rural community participation in the development and utilization of renewable energy technologies.

Strategies consider improving access to modern biomass technologies and fuel wood sources and supplies; commercializing biomass operations; developing locally available energy resources for greater energy diversification; and promoting renewable energy, especially in rural areas, through community-based development methods.

- To improve access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources through various means, such as enhanced rural electrification and decentralized energy systems, and increased use of renewables;
- To improve access to modern biomass technologies and fuelwood sources and supplies, and commercialize biomass operations; and
- To promote the sustainable use of biomass and other forms of renewable energy through improved patterns of use.

Increasingly financing renewable energy projects is necessary for the economic viability of renewable energy. Market launch and research and development of renewable energies must be coordinated. There is a need to integrate renewable energy into society in Latin American postgraduate courses in renewable energy and a proposal for an internet-based information exchange and education system.

The experiences of GREET in Africa demonstrates the significance of science, research, education, and training for the regional dissemination and application of renewable energy technologies, and for the goal of sustainable development. In this sense, GREET in LA is expected to connect both human and institutional capacities to research and training programs, and discuss what actions need to be taken.

The technological solutions to energy problems are available today. We now need the political will and action to implement them. Research and education policies must bridge the existing knowledge gaps.

Acknowledgement

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DIE INTERNATIONALE ZUSAMMENARBEIT IN DER NACHHALTIGEN LANDWIRTSCHAFT. KUBANISCHE ERFAHRUNGEN

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Die internationale Zusammenarbeit hat durch moderne Techniken der Kommunikation neue Dimensionen angenommen. Trotzdem müssen direkte Kontakte zwischen den einzelnen Partnern aufrechterhalten werden, um effektiv und erfolgreich agieren zu können.

Besonders beteiligt sind daran das Humankapital und das Finanzkapital.

Die kubanischen Erfahrungen und Beiträge beinhalten eine vorbehaltslose Hilfe mit eigenen Fachkräften, um internationale Projekte der nachhaltigen Landwirtschaft zu unterstützen.

Die wertvollsten Ergebnisse konnten im Rahmen der technischen Zusammenarbeit und durch professionelle Beratung erreicht werden, die durch internationale Hilfe finanziert wurden.

Die ersten Aktivitäten im Rahmen der geschilderten Aufgaben zur Entwicklung der nachhaltigen Landwirtschaft wurden in den folgenden Schwerpunkten durchgeführt:

- Sammlung von historischen, regionalen Daten und Erfahrungen;
- Weiterbildung von Akteuren und Entscheidungsträgern für die ausgewählten Regionen;
- Aus- und Weiterbildung von regionalen Fachkräften und Bauern;
- Anlage von integrierten Fincas als Forschungs- und Demonstrationsobjekte für die vorgesehenen partizipativen Aktivitäten im jeweiligen Territorium; und
- Bearbeitung und Lösung territorialer Probleme mittels partizipativer Aktivitäten entsprechend kurzfristiger, mittelfristiger und langfristiger Projektentscheidungen.

Wir sind der Meinung, dass Kuba bisher noch nicht ausreichend an der aktiven internationalen Diskussion teilgenommen hat. Andererseits ist es nötig, dass dieses Problem positiv gelöst wird. Die modernen elektronischen Medien dürften dazu beitragen können. Natürlich können damit noch nicht die typischen vor Ort – Probleme angegangen werden. Dafür benötigt man den ständigen direkten Kontakt zwischen den Humanressourcen vor Ort und den internationalen Fachkräften, damit mittels einer soliden Vertrauensbasis kreativ regional typische und relevante Probleme bearbeitet werden können.

Wie sind die kubanischen Erfahrungen chronologisch entstanden?

Sammlung von historischen, regionalen Daten und Erfahrungen

Als ersten Schritt wurden alle möglichen theoretischen und praktischen Kontakte eingeleitet, um eine harmonische Plattform zur Bewertung der historischen Besonderheiten

erreichen und die nötigen Analysen zur Einleitung neuer Aktivitäten anfertigen zu können. Unabdingbar dafür sind eine vertrauensvolle und uneigennützige Zusammenarbeit.

Weiterbildung von Akteuren und Entscheidungsträgern für die ausgewählten Regionen

Der zweite Schritt beinhaltet die Gewinnung und Einbeziehung aller Personen, die am Prozess der regionalen ruralen Entwicklung beteiligt sind. Besonders wurde dabei darauf geachtet, dass sie auch eine zukunftsweisende Landwirtschaft unterstützen, welche auf agrooekologischen Prinzipien basiert. Als methodisches Grundprinzip wurde dafür der runde Tisch eingeführt und verschiedene Varianten von ZOPP angewendet. Dies führte dazu, dass unterschiedliche persönliche Meinungen und institutionelle Standpunkte auf ein gemeinsames Ziel ausgerichtet werden konnten. Diese multidisziplinäre und integrierte Zusammenarbeit stellte die Basis für eine erfolgreiche Aus- und Weiterbildung aller Personen der verschiedenen Zielgruppen dar.

Aus- und Weiterbildung von regionalen Fachkräften und Bauern

Als entscheidendes Element für eine erfolgreiche Implementierung und Weiterführung von Projekten stellte sich die nachhaltige Etablierung von theoretischem Wissen und praktischem Können der ausgewählten Zielgruppen heraus. Wesentlich dafür war die mentale und ethische Anreicherung von agrooekologisch geprägten Positionen bei den Entscheidungsträgern und ausführenden Bauern. Besonders bewähren konnten sich dabei Programme zur bäuerlichen sowie zur universitären und postgradualen Ausbildung. Zur universitären theoretischen Ausbildung genügten die ortsüblichen Einrichtungen. Die postgraduale Ausbildung erfordert jedoch weiterhin eine Einschreibung an kubanischen Universitäten und/oder Instituten, um das nötige hohe, international vergleichbare und anerkannte Niveau absichern zu können.

Anlage von integrierten Fincas als Forschungs- und Demonstrationsobjekte für die vorgesehenen partizipativen Aktivitäten im jeweiligen Territorium

In Anwendung der Interaktion Boden – Pflanze – Tier und der Ausrichtung auf eine hohe Biodiversität mit ihren agrooekologischen technologischen Möglichkeiten, wurden Ausbildungsprogramme und didaktische Materialien erarbeitet, nach denen die Teilnehmer auf die neuen agrooekologischen Prinzipien in der nachhaltigen Landwirtschaft vorbereitet wurden. Andererseits wurde darauf geachtet, dass lokale, regionale und nationale Besonderheiten in der Umweltpolitik, im Naturschutz und im Ressourcenschutz von den Teilnehmern selbständig eingebracht wurden.

Bearbeitung und Lösung territorialer Probleme mittels partizipativer Aktivitäten entsprechend kurzfristiger, mittelfristiger und langfristiger Projektentscheidungen

In der Durchführung unserer Projekte stellte sich heraus, dass nicht immer die individuellen sowie kollektiven Wünsche und Ansprüche mittels der multidisziplinaeren Arbeit lösbar sind. Es war deshalb nötig, gegebenenfalls neue Fachdisziplinen einzubeziehen.

Primäre Bedeutung hatte die Einbeziehung von politischen Entscheidungsträgern in die Projektarbeit. Nur auf diesem Wege konnten Strategien zur kurz-, mittel- und langfristigen Entwicklung lokaler Projekte abgestimmt werden.

Die Datensammlung und Projektanalyse standen dabei im engen Zusammenhang mit der Offenlegung von finanziellen Mitteln zur Projektabsicherung und zur arbeitsmäßigen Bindung der ausgebildeten Fachkräfte.

Zusammenfassend und rückblickend möchte ich auf die Möglichkeiten der Informationstechniken verweisen. Auch wenn bisher dazu in Kuba nur bescheidene Erfahrungen vorliegen, ist es unumstritten, dass zukünftig diese Fachdisziplin einen hohen Anteil beim Monitoreo übernehmen wird. Dafür müssen die finanziellen und technischen Absicherungen geschaffen werden, die derzeitig nur durch internationale Projekthilfe bereitgestellt werden können.

Weitere Informationen, Publikationen und Erfahrungsberichte können bei mir nachgefragt werden [14]

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COOPERACION EN LA EDUCACIÓN Y EL DESARROLLO A TRAVÉS DEL PROGRAMA DE PASANTÍAS DE LA GTZ

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Abstract

La Agencia Alemana de Cooperación Técnica (GTZ) brinda apoyo a países en desarrollo a través de muchas iniciativas, una de las cuales es el programa de pasantías para estudiantes de educación superior. Los entes participantes son la GTZ, la Universidad, el Estudiante y la Comunidad en donde se realiza la investigación. Existen dos formas de aplicar para una pasantía: a) aplicar para una pasantía en la oficina central, b) contactar directamente a un proyecto en el país donde se ejecuta. En general, el apoyo para los estudiantes consiste en logística. El programa ofrece ventajas para todas las partes, principalmente para la organización y el estudiante. Para la GTZ significa profesionales calificados y a bajo costo, quienes contribuyen con nuevas investigaciones. Para el estudiante es una buena oportunidad para realizar práctica profesional al tiempo que logra la fase final de sus estudios. También se pueden presentar problemas. Puede suceder que los estudiantes no tengan la capacidad ni el interés suficiente para la realización del estudio. Por otra parte, puede suceder que la persona a cargo del pasante no lleve a cabo en forma apropiada su rol de guía para el estudiante. Para mejorar el programa y obtener mayores beneficios, es importante realizar una adecuada planeación de lo que será la investigación, donde los estudiantes demuestren su capacidad y conocimiento del tema, la institución debe ser específica en como y cuando puede apoyar al estudiante, a la vez que es importante determinar si la investigación tiene relevancia en la zona.

Palabras clave: Beneficios, cooperación, educación, pasantías, estudiante, problemas

Introducción

Una de las principales preocupaciones de los estudiantes a nivel universitario y de pos grado es la realización del trabajo de investigación que normalmente es requerido como requisito último para culminar una carrera.

En ocasiones es difícil tomar una decisión debido a los problemas que la ejecución de un proyecto conlleva, como lo son la disponibilidad de información, recursos y apoyo por parte de algún organismo o institución, así como la compatibilidad del tema de investigación con los estudios realizados.

En este contexto, algunas organizaciones ponen a disposición del estudiante la posibilidad de realizar una investigación en el contexto de su actividad, de manera que éste pueda concluir con su programa de estudios y que al mismo tiempo beneficie o aporte a los objetivos de la organización.

En este sentido, la Agencia Alemana de Cooperación Técnica (GTZ) contempla los programas de pasantías en oficinas centrales o en países donde ejecuta proyectos. Estas pasantías pueden ser realizadas por estudiantes universitarios o de pos grado, que además de beneficiarse con la conclusión de sus estudios y la adquisición de experiencia,

benefician los proyectos en diferentes lugares y por ende contribuyen al desarrollo de comunidades y países subdesarrollados.

Este documento explica en forma sucinta lo que son los programas de pasantías, cómo los estudiantes pueden tener acceso a éstas, los beneficiarios de dichas iniciativas y los problemas que pueden presentarse.

Con el fin ejemplificar o dar luz sobre que tipos de proyectos se pueden ejecutar como proyectos de investigación, se mencionan las iniciativas que actualmente se ejecutan en Ecuador y Costa Rica, y a los que se puede tener acceso si se lleva a cabo el debido proceso de búsqueda y proposición de iniciativas de investigación.

Materiales y Métodos

Para la realización de éste documento, se tomó en cuenta la experiencia de algunos estudiantes que realizaron prácticas de investigación con la GTZ, quienes brindaron su punto de vista sobre las pasantías.

De igual forma, se procedió a la revisión de diversa documentación existente en las oficinas de GTZ Ecuador y GTZ Costa Rica, así como páginas web relacionadas con éstas y otras oficinas de la organización.

También se llevaron a cabo entrevistas con funcionarios de GTZ Ecuador y GTZ Costa Rica, quienes aportaron con su experiencia y conocimiento acerca de la forma como funcionan los programas de pasantías en sus respectivos países.

Resultados y Discusión

La GTZ actúa en diferentes países. Sus proyectos cubren muchas iniciativas como lo son el apoyo a programas para la reducción de la pobreza, conservación ambiental, enfoque de género, limpieza de aguas, planes forestales. Estos programas tienen en común que intentan apoyar comunidades y países en desarrollo.

Estudiantes de diversos países, principalmente que estudien en Alemania, pueden apoyar estas iniciativas mediante la ejecución de investigaciones que se enmarquen dentro de los objetivos de los programas de la GTZ. Estos estudiantes pueden presentar propuestas de proyectos que también les sirven como trabajo final de graduación para sus carreras. Seguidamente se incluye una breve descripción de la forma como se puede aplicar para realizar una pasantía, los tipos de investigación susceptibles de apoyo, las ventajas y desventajas que conllevan estas pasantías tanto para los estudiantes como para los proyectos de GTZ.

Como Aplicar al Programa de Pasantías

El acceso a una pasantía puede realizarse a través de dos caminos distintos. Por un lado el estudiante se puede postular al programa de hospitantes de la GTZ central (Hospitationsprogramme) el cual es financiado por un fondo especial que tiene la casa matriz. Para poder acceder a un puesto de pasantes a través de la casa matriz, los estudiantes deben postularse directamente con una carta de presentación y su Curriculum Vitae enviándolo a la central. En caso de haber pasado una primera selección, el estudiante es invitado a un día de entrevistas y otras dinámicas de selección, que le permiten al personal de la GTZ elegir a los candidatos finales. Como la selección se realiza en alemán, este es un acceso difícil para estudiantes extranjeros que no manejan el idioma. Los estudiantes son financiados por un monto general que se entrega al inicio de su estadía, con el cual puede financiar algunos de sus gastos.

Otra posibilidad de acceder a una pasantía consiste en contactar directamente a los proyectos en los distintos países. Esta pasantía es financiada con fondos de los proyectos o programas locales. El monto de una pasantía obtenida a través de la central o una a través de los programas depende de la capacidad del programa o proyecto local y de los acuerdos entre pasantes y los proyectos.

En general el Proyecto o Programa debe apoyar con la logística (fotocopias, documentos y la movilización en el campo, información, contactos).

En los países donde la GTZ ejecuta proyectos, no existe una oficina específica dedicada a la atención de solicitudes de estudiantes que quieran aplicar para desarrollar algún proyecto de investigación. No existe un enlace definido entre las oficinas centrales y los proyectos para la comunicación de pasantes. Puede darse el caso de que alguien realice una práctica en un proyecto y no tenga la necesidad de visitar o de ser conocido en oficinas centrales.

Ventajas de las Pasantías

Para GTZ:

- Significa tener gente capacitada, no muy cara que le facilita estudios; y
- Le permite crear nuevas estrategias u orientar sus actividades.

Para los pasantes:

- Finalización de sus estudios;
- Adquirir experiencia en el campo, conocer el trabajo de la cooperación, su funcionamiento y estructura, y financiarse parcialmente el trabajo de campo de su tesis; y
- Conocer una nueva cultura, aprender o mejorar un nuevo idioma.

En general, las pasantías son una posibilidad de empezar a trabajar en la GTZ y después ir creciendo dentro de la organización.

Problemas de las Pasantías

Al igual que existen ventajas, también se pueden presentar problemas, como los siguientes:

- Los estudiantes seleccionados no tienen las capacidades necesarias y causan más trabajo al proyecto que el apoyo que le pueden brindar;
- Puede que los proyectos no cumplan su rol de consejería y dejen a los estudiantes solos;
- También existe el caso de que muchos de los estudiantes no tienen responsabilidad u interés necesario para realizar un trabajo serio;
- Pocos programas tiene responsables concretos para pasantes y a veces los estudiantes van sin un tema especifico, sin saber que hacer y no pueden aprovechar el tiempo en el extranjero. Todo depende de la coordinación entre ambos y de las características particulares para cada uno.

Con el fin de minimizar estos problemas, en los últimos tiempos los proyectos se encargan de pedir a los estudiantes los requerimientos que actúan selectivamente, pudiendo reconocer con anterioridad posibles problemas (caso de construcción de términos de referencia, construcción y envío de propuesta, etc.).

Beneficiarios

Los principales beneficiarios de los programas de pasantías de la GTZ son los estudiantes quienes pueden terminar sus estudios. También existe beneficio directo para los proyectos que realiza la GTZ, ya que pueden acceder a mano de obra profesional. Las comunidades en donde se ejecutan los proyectos también pueden considerarse entre los beneficiarios ya que se promueven las iniciativas en sus comunidades. Las universidades también pueden contarse entre los beneficiarios, ya que los estudiantes terminan en forma práctica y en un tiempo definido su plan de estudios. Aunque este beneficio no es tan perceptible y directo como con el caso del estudiante mismo, es importante de mencionar ya que la mayoría de estudiantes que realizan pasantías estudian en Alemania, donde la universidad es gratuita, por lo que a la universidad le conviene que el estudiante termine rápido.

Tipos de Investigación que se Apoyan

Los tipos de investigación que normalmente apoya la institución son diversos. En los últimos años sin embargo, se le ha dado énfasis a proyectos de desarrollo social, desarrollo sostenible, producción más limpia.

Para efectos ilustrativos, seguidamente se mencionan brevemente los proyectos que se ejecutan en Ecuador y Costa Rica, y donde existen diferentes iniciativas que pueden ser aprovechadas por los pasantes.

El Caso de Ecuador

La GTZ en Ecuador está trabajando en 2 programas (www.redamazonia-umds.net).

1. Gestión sustentable de los recursos naturales, GESOREN

El objetivo general consiste en que pequeños y medianos productores agrícolas y forestales, ubicados en las zonas de intervención del programa, logren incrementar sus ingresos y mejorar sus condiciones de vida, a través de la implementación de métodos de producción rentables que no destruyan y ni agoten los recursos naturales.

El programa trabaja en cuatro componentes, estos son:

- Asesoramiento político en la gestión de recursos;
- Forestación y manejo de zonas protegidas;
- Producción agrícola sustentable y comercialización; y
- Gestión de cuencas hidrográficas.

De forma directa el trabajo del programa contribuye con la reducción de la pobreza a través del:

- Aumento de ingresos provenientes de actividades productivas sustentables de pequeños y medianos productores; y
- Fomento de la comercialización de productos de calidad, junto con el establecimiento de mecanismos para equilibrar intereses de las distintas partes.

De forma indirecta, contribuye con la reducción de la pobreza, por medio del:

- Asesoramiento de las estrategias políticas;
- Integración de aspectos ecológicos y sociales de sustentabilidad en todas las actividades del programa; y

- La implementación de temas transversales relevantes para las políticas de desarrollo, dichos temas son género, equidad cultural y manejo de conflictos.

La orientación del programa se guía de acuerdo a los principios de la política de desarrollo del Gobierno Contraparte y del Ministerio Federal de Cooperación Económica y Desarrollo (BMZ).

2. Programa de modernización del Estado, PROMODE

PROMODE - GTZ es un programa que tiene como objetivo consolidar el proceso de descentralización del Ecuador y lograr que la administración pública cumpla con sus responsabilidades en todos sus niveles.

El Caso de Costa Rica

Actualmente en Costa Rica se están desarrollando cuatro iniciativas a nivel nacional y dos a nivel regional (Centro América).

1. Iniciativas Nacionales:

   - *Proyecto Aire Limpio San José*
     Objetivo: Entidades públicas y privadas mejoran la calidad del aire en San José, mediante la integración de la planificación urbana y del transporte con la política ambiental.

   - *Desarrollo Local y Comunal en Costa Rica (PRODELO)*
     Objetivo: Han mejorado el acceso y la calidad de los servicios y la gestión de los actores en procesos de desarrollo local sostenible, especialmente para los grupos menos favorecidos de la población.

   - *Manejo Sostenible de los Recursos Naturales en la Región ACOSA, Costa Rica*
     Objetivo: La sociedad civil organizada, las comunidades y los Gobiernos Locales en la región ACOSA así como las dependencias del Gobierno Central asumen de forma compartida responsabilidades por la protección y el manejo sostenible de los recursos naturales y contribuyen a la satisfacción de las necesidades económicas y sociales de la población local.
     Este proyecto se inició a comienzos del 2003 y se ejecuta junto con el Ministerio de Ambiente y Energía (MINAE).

   - *Establecimiento de un Programa de Maestría para la creación de paz a nivel internacional en la Universidad para la Paz de las Naciones Unidas, Costa Rica.*

2. Iniciativas regionales:

   - *Fomento de Productos Fitosanitarios No-Sintéticos por medio de la empresa privada en Centroamérica (CATIE/GTZ).*
     Objetivo: El proyecto tiene como propósito el aumentar la oferta de productos fitosanitarios no sintéticos. Esto con el fin de ofrecerles a

pequeñas y medianas empresas agrícolas de índole familiar en Centroamérica la posibilidad de utilizar alternativas amigables para el medio ambiente en la agricultura. Para alcanzar este cometido se está trabajando en conjunto con el sector privado, organizaciones gubernamentales y usuarios.

- *Red de la Agenda Local 21 para América Latina y El Caribe*
  Objetivo: Fortalecer la capacidad de los municipios en al menos cuatro países de la Región, para llevar a cabo procesos planificados de desarrollo sostenible con participación activa de la comunidad local, del sector privado y otras organizaciones de base.

Conclusiones

La GTZ brinda apoyo a la educación y al desarrollo mediante la ejecución de muchas iniciativas en diferentes países. Dentro de éstas, se pueden enmarcar los programas de pasantías que brindan oportunidad a estudiantes universitarios y de pos grado para que terminen sus estudios.

Existen dos formas de acceder a las pasantías que brinda la GTZ. Una es a través de las Oficinas Centrales en Alemania, en donde se realiza un proceso de selección y el estudiante debe mostrar sus cualidades. Esta forma tiene la desventaja de que las entrevistas son en alemán lo que pone en desventaja a muchos estudiantes que no dominan el idioma.

Otra forma de acceder es poniéndose en contacto con los proyectos en los países donde se ejecutan. En este caso no existe mediación de una oficina del programa para acceder a la pasantía. El estudiante debe negociar directamente los términos de referencia sobre los aportes de los proyectos y el estudio a realizar.

El programa da oportunidad a estudiantes, principalmente alemanes o que estudien en Alemania, para concluir sus estudios mediante la ejecución de una investigación en alguna de las iniciativas de la GTZ en diferentes países.

En general, existe gran especio y oportunidades para estudiantes, que incluyen muchos campos y lugares de investigación. Sin embargo, el apoyo económico, que es una de las cosas que el estudiante busca, es limitado.

Los programas de pasantías brindan beneficios para cuatro actores que son los estudiantes, los proyectos o programas de la GTZ, las comunidades y las Universidades. Los principales beneficiados son los estudiantes y los proyectos de la GTZ. Los primeros pueden terminar en forma práctica y oportuna sus estudios, a la vez que adquieren experiencia en el campo. Los programas se benefician al poder realizar ciertas iniciativas con profesionales calificados y a bajo costo.

Los principales problemas que conlleva la realización de una pasantía se orientan en dos sentidos. Uno afecta a quienes están a cargo del proyecto en donde se enmarca la investigación del estudiante, y obedece al hecho de que en ocasiones el estudiante no está debidamente preparado o no tiene el interés suficiente como para ejecutar en forma apropiada su estudio. En este caso, más que beneficiar los programas de la GTZ, el estudiante se convierte en una carga. Por otro lado, los estudiantes pueden verse afectados cuando no se les brinda el adecuado apoyo y asesoría por parte de quienes están a cargo del programa en GTZ, lo que puede ocasionar que el estudiante pierda el rumbo en inclusive puede que no termine apropiadamente su estudio.

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THE TECHNICAL COOPERATION IN THE PATAGONIAN ANDES FOREST REGION

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Abstract

The main objective of this paper is to describe an example of technical cooperation in the Patagonian Andes Region. Firstly, a general description of the environmental characteristics and forestry features of the area is shown. Later, a review of the CIEFAP (Patagonian Andes Forest Research and Extension Center) is exposed. Finally, the main accomplishments and difficulties occurred in the past and the future perspectives and challenges were analysed.

CIEFAP was created to make a contribution towards the conservation, expansion and sustainable use of this Natural Resource, by carrying out applied research and technology transfer activities. It is a public regional institution composed by a group of funding members and a group of participating members. The government of Germany, through GTZ (Foreign Technical Cooperation Agency) has provided funds for this project during the first ten years through valuable human and technical resources.

Nowadays, there is a high land use pressure on the Patagonian ecosystems. On the one hand, there are many small local economic activities, like timber use, tourism and cattle raising. On the other hand, there is a pressure for natural conservation by ecologist groups. Therefore, the conservation of these forests means much more a socio-political and economic problem than a technical one. All approaches to a solution should promote the interest of the different related sectors in the conservation and the sustainable use of these areas. In this framework, the Recall initiative could play a very important role, because it could contribute to the sustainable development of the local communities through the South-South and South-North cooperation.

Keywords: GTZ, Patagonia, technical cooperation, forestry, research center.

Introduction

The main objective of this paper is to describe an example of technical cooperation in the Patagonian Andes Region. Firstly, a general description of the environmental characteristics and forestry features of the area is shown. Later, a review of the CIEFAP (Patagonian Andes Forest Research and Extension Center) is exposed. Finally, the main accomplishments and difficulties occurred in the past and the future perspectives and challenges were analysed.

Environment characteristics of the Patagonian Andes Forest

The Patagonian Andes Region is located in the southernmost area of the Andes Cordillera, stretching from north of the Neuquén Province up to Tierra del Fuego. Approximately half of the region is covered by temperate forest within the Antarctic

Floristic Kingdom. Rainfall, latitude and altitude are the main factors which determinate the different characteristics of three species (CIEFAP, 1995).

Trees and shrubs are the main elements maintaining the equilibrium of the ecosystem. This forest plays an important role, not only because of water regulation and the wonderful landscape it constitutes, but also because of the timber it can provide. Soils have developed over volcanic ash deposits, with moderate to high allophone content. The landscape is characterized by slopes with native forest, valleys and lakes in the western area, and plateaus, and natural grasslands to the east (SAGPyA, 2001).

The altitude where the afforestation take place range from 200 to 900 m above sea level and receiving precipitation between 500 to 1,500 mm per year. The rains decrease abruptly from west to east and are concentrated mostly in winter. While there is no water deficit in the western area, the east part bordering the steppe has water deficits up to 300 mm during the dry season (SAGPyA, 2001).

Overgrazing, fires and dry year cycles have caused scarce regeneration of the native forest, leaving lands with a disperse vegetation and soils exposed to erosion. This situation reduces the capacity for livestock production (SAGPyA, 2001). Roughly, 25% of the land in Patagonia has severe grade of desertification (INTA, 1995; PROSA, 1988, cited by Naumann, 1999). Nevertheless, most of these degraded sites could be suitable to conifer afforestation.

Patagonia Forestry Sector Features

Patagonia has 2.3 million hectares of native forest where 90% is protected forest and only 10% can be used for commercial purposes (SAGPyA, 2001). *Nothofagus pumilio* so called "Lenga" is the native specie with the largest distribution.

In addition, Patagonian Andes has more than two millions hectares of suitable soils to be afforested with plantations (see Table 1). This area is found from the 37° to 44° South parallels and from the isohyet of 500 mm in the East to the Andean-Patagonian native forest in the West. The area is seen as a narrow strip of 750 km long and 40 km wide along the Andes (CIEFAP, GTZ, INTA, 1997).

Up to now, there are 70,000 ha of pine plantations in Neuquén, Río Negro and Chubut Provinces representing roughly only 3% of the total suitable potential area to be afforested. According to the SAGPyA (2001[15]) the annual forest-planting rate is about 3,300 ha/year in Neuquén, 750 ha/year in Río Negro and 2,500 ha/year in Chubut.

Table 1. Distribution of suitable forest soils by Province and quality.

Province	Land Suitability classified in each Province according to mean annual increment [m^3/ha/year]			
	Moderately suitable 12 to 18 *	Suitable 19 to 21*	Very suitable 22 to 25*	Total
Neuquén	600,000	500,000	150,000	1,250,000 ha
Río Negro	60,000	80,000	60,000	200,000 ha
Chubut	70,000	430,000	300,000	800,000 ha
Total	730,000 (32%)	1010 (45%)	510,000 (23%)	2,250,000 ha

* Mean annual increment measured in m^3/ha/year and estimated to *Pinus ponderosa*.
Source: (CIEFAP & GTZ & INTA, 1997)

[15] Using data from the Forest Province Services to the year 1997.

The specie most utilized is *Pinus ponderosa* - around 75% of current plantations – and it is planted in the drier sites. The remaining 25% is mainly *Pseudotsuga menziesii* and *Pinus contorta*. The former is planted in the most humid sites and the latter in less fertile and dry soils (SAGPyA, 2001).

The land ownership of forest soils is characterised by private property (70 %), and are extensively used for ranching activities (sheep breeding). The rest of the land, about 30 %, is state owned and in many cases occupied by precarious tenants. (CIEFAP, GTZ, INTA, 1997).

The land property regimes present differences between the provinces, for example, around 40 to 50% of the property of suitable land in Neuquén and Río Negro are state owned. Instead, in Chubut most forest suitable lands are privately owned (90 %). In addition, the farm size in areas of forest soils in Chubut Province is characterized by 60% of the farmers with less than 500 ha, 24% have between 500 to 5000, 8% have between 5,000 to 10,000 ha and 8% have more than 10,000 ha (SAGPyA, 2001).

Around 50 sawmills commercialize forest products from planted forest. They utilize approximately 60,000 m3/year of roundwood. The sawnwood is sold locally or at Atlantic coast cities. Furthermore, resale of pine from the Northeast of Argentina and importation of native timber from Chile is usually used (SAGPyA, 2001).

Materials and Methods

The information shown in this paper came from primary and secondary data. A bibliographic compilation was made in order to know the institutional objectives, resource availability, institutional organization and the main line of actions. Moreover, the opinion of key informants was gathered in order to sum up the lesson learning's during the German cooperation. The objective of the interviews was to determinate the main accomplishments and difficulties of the GTZ-CIEFAP cooperation during the last 10 years.

Results and Discussion

An Example of Technical Cooperation

The Patagonian Andes Forest Research and Extension Center (CIEFAP) was created to make a contribution towards the conservation, expansion and sustainable use of this Natural Resource, by carrying out applied research and technology transfer activities. The Center was created in 1988 and it started working in 1990. It is a public regional institution composed by a group of funding members and a group of participating members. In addition, the government of Germany, through GTZ (Foreign Technical Cooperation Agency) has provided funds for this project during the first ten years through valuable human and technical resources (CIEFAP, 1995).

Institutional Objectives

The general objective of CIEFAP is "to tend towards the economical and social development of the Andean Patagonian forest region by means of sustainable use of implanted and native forest resources, preservation of the environment and promotion of ecotourism in the region" (CIEFAP 1995; CIEFAP 2004).

The secondary goals of the CIEFAP are the following:

- To contribute to the development of forestry in Patagonia through applied research and technology transference activities;

- To provide an adequate institutional policy for forestry sustainable development;
- To create a "forestry conscience", not only in the inhabitants of this region, but at governmental level as well;
- To improve the skill of human resources at all levels: workers, technicians, professionals, managers and decision makers; and
- To find solutions to the technical and scientific problems of the forestry sector in Patagonia.

Resource Availability

The staff of the CIEFAP is made up of 41 people, but only 12 are direct employees. The other researchers, professionals, supporting employees, voluntaries, and students assistants take part in CIEFAP through projects. The financing sources are diverse, among the researchers 12 are financed by the Chubut Province, 4 by Patagonia National University, 7 by CONyCET (3 researchers and 4 grant holders), and 4 are financed by projects; among the support workers 7 are financed by Chubut Province and 1 by CONyCET; and the rest are student assistants and voluntaries. This is how integration is possible among Patagonian provinces, Forestry Services, Universities, National Parks Administration, Government institutions, farms and also services and industrial sector.

Institutional Organization

CIEFAP is made up of four main thematic departments (Conservation and Forest Management, Wood Technology, Forest Protection and Extension), two laboratories (laboratory of Soils and GIS and the laboratory of Seeds), and the administrative department.

Main Line of Actions

The Conservation and Forest Management Department studies the silviculture of economically important species in order to attain a bigger quantity and better quality of forest products, through sustainable management techniques. Its main current study areas are: silvicultural systems for the main native species; installation of management areas in native forests; dynamics and natural regeneration of native forests; pruning and thinning trials in native and implanted forests; improvement of nursery practices and plantation techniques for native and exotic species, introduction of better harvesting technology; and technical aspects of the Clean Development Mechanisms of the Kyoto Protocol.

The main goal of the Wood Technology Department is to promote wood utilization and a better use of timber. Its main activities include: consulting actions with enterprises in order to introduce new technology; analysis of alternative products for wood from Patagonian native and exotic species; and developing and adapting construction systems for wooden houses.

The objectives of the Protection Department are control and prevention of the main forest diseases, insects, fire and mammals. The two main working areas of this Department are: forest pathology of native and exotic species and forest fire.

Finally, the Extension Department works in cooperation with other CIEFAP Departments, as well as with other forestry institutions of the region. Its main objective is to promote the sustainable use of the forest. It is involved in teaching and training by undertaking activities such as: edition of written material, production of audiovisual

material, to perform a radio program, and organization of instruction and training events at all levels.

Lesson learning's during the GTZ-CIEFAP cooperation project

According to the opinion gathered from the interviews to key informants, the main accomplishments and difficulties of the GTZ-CIEFAP cooperation during the last 10 years in Patagonia would be summarized in the following points. First, the main achievements were:

- GTZ provided the political support and funds to make it possible to establish a regional research center; this would have never occurred without the involvement of GTZ;
- GTZ provided the funds for Argentinean foresters to pursue graduate studies in German and American universities. This was an important contribution towards improving the academic level of the forestry community in Patagonia and the country;
- Most German forestry experts sent by GTZ clearly showed the way CIEFAP should conduct itself to have an impact on the forestry sector in Patagonia. An example of this is the encouragement to mainly embark into regional comprehensive projects rather than into local concerns;
- This cooperation also provided equipment and supplies for laboratories, and helped in providing the necessary stability a scientific and technical institution needs at least at its beginnings to convince the local authorities about the importance of support its activities; and
- The last but not least point is the day by day advice given by the German experts.

Second, the main difficulties of the GTZ-CIEFAP cooperation project would be sum up as follow:

- Different idiosyncrasy to solve problems, especially on administrative issues.
- The German planning system is much tied to rules, schedules, timetables, etc. that we were not accustomed to. It results in many cases in an inflexible planning system.
- Payments to be made by Patagonian provinces, universities, and other CIEFAP Argentinean sponsoring institutions were usually late. This produced a feeling of uncertainty about the continuation of the institution and logical worries among CIEFAP researchers about their working stability.
- There were difficulties to achieve a participatory approach in the decision-making process.

Challenges of the South-South technical cooperation

Besides the main accomplishments and difficulties of the GTZ-CIEFAP cooperation projects, the questions made on the interview also were addressed to find out the researcher's expectative about the South-South cooperation. Up to now, the Center has developed more experience en some topics than others. It means that there are themes that CIEFAP is able to offer a technical cooperation, and there are matters that the Center would need technical support.

As an example, the main forestry subjects that CIEFAP is able to offer a technical cooperation are related with:

- Determination of base lines and carbon fixation by afforestations;
- Development of forest and non forest products (manufacturing of home and office furniture using native and introduced species, house construction using thinning residues (ponderosa pine), essential oils);
- Development of geographical information systems and digital modeling;
- Fire ecology and management;
- Forest inventory;
- Forest pathology (general);
- Management of protected areas; and
- Silviculture and sustainable management of native (mainly Lenga and cypress) and introduced species (mainly ponderosa pine and douglas fir).

On the other hand, the main forestry subjects that CIEFAP would need technical support are:

- Forest policy;
- Assessment of environmental impacts in plantations;
- Participatory management of protected areas;
- Development of technology for small scale projects;
- Development of value added products;
- Development of marketing strategies for domestic and external markets;
- Mediation, extension, management of human resources; and
- Training and internships programs oriented to students.

This scenario gives us an opportunity to share experiences, not only successful projects but also failure events. The challenges are to find a common solution towards the economical and social development of local communities, to improve the skill of human resources and to find joint solutions to technical and scientific problems.

Conclusions and Perspectives

The Patagonian Andes Forest Research and Extension Center (CIEFAP) is a regional public institution which aims at developing the region of the Andean-Patagonian forests by ensuring the sustainable use of native and sown forests through: sustainable management of natural resources, advice in forestry matters, preservation of the environment, creation of public awareness, eco-tourism and scientific research.

The government of Germany, through GTZ (Foreign Technical Cooperation Agency) has provided funds for this project during the first ten years through valuable human and technical resources. The CIEFAP-GTZ cooperation has had many accomplishments but also difficulties. On the one hand, the main accomplishments of the GTZ-CIEFAP cooperation project would be summarized in the political support and funds to make it possible to establish a regional research center; this would have never occurred without the involvement of GTZ. Moreover, the international training achieved for many researchers (M Sc. and PhD studies) was an important contribution towards improving the academic level of the forestry community in Patagonia. On the other hand, the main difficulty of the GTZ-CIEFAP cooperation project was the different idiosyncrasy in order to solve problems and make decisions between them.

Nowadays, there is a high land use pressure on the Patagonian natural ecosystems. On the one hand, there are many small local economic activities, like timber use, tourism and cattle raising. On the other hand, there is a pressure for natural conservation by ecologist groups. Therefore, the conservation of these forests means much more a socio-

political and economic problem than a technical one. All approaches to a solution should promote the interest of the different related sectors in the conservation and the sustainable use of these areas. In this framework, the Recall initiative could play a very important role, because it could contribute to the sustainable development of the local communities through the South-South and South-North cooperation.

Acknowledgement

I would like to express my gratitude to the RECALL Organising Committee for the financial support provided in order to attend to the 4th International Symposium-cum-Workshop. Moreover, I appreciate the willingness of the key informants interviewed.

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WORKSHOP:
WORKING GROUP 4:
HIGHER EDUCATION MANAGEMENT

COOPERATION IN TRANSFERENCE OF PUBLIC HEALTH INFORMATION AND DISEASE CONTROL MEASURES IN VETERINARY TEACHING. AN EXPERIENCE OF COOPERATION BETWEEN AGRICULTURE AND LIVESTOCK SERVICES OF THE GOVERNMENT OF CHILE, THE FACULTY OF VETERINARY OF UNIVERSITY SAN CARLOS GUATEMALA, THE DAAD GERMANY AND OTHER INSTITUTIONS

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Abstract

This kind of cooperation between institutions or people inside the institutions is possible because the sponsorship of the DAAD and it involves a huge amount of interest in the different instances.

Thanks to the sponsorship of the DAAD I was able to attend an international workshop in Chile (region V) related with Higher Education and organized by the Talca University, the DAAD and the HRK of Germany Viña de Mar, January 2004.

After the workshop I was invited by the authorities of the region V Agriculture and Livestock Services (branch of the Chile Government) as a teacher of Epidemiology of the Faculty of Veterinary medicine visit and understand different programs of Veterinary Epidemiological Surveillance in the region and to observe hygienic measures in the farms, everything under the supervision of Dr. Hugo Yavar Oñate, Director of the Region V and Dr. Jorge Fuller Catalan, member of the professional staff in Quillota as a part of cooperation in order to have a different view about the control of the diseases to be transmitted to the students of Veterinary Science in Guatemala.

It is also necessary to indicate that in this region was developed an excellent system of prevention and detection of the animal diseases especially in the case of avian diseases that can be used as a model to understand the national disease control systems not only to the students of Veterinary but also to professionals related with this area.

Keywords: Cooperation, Chile, Germany, Guatemala, optimization, resources.

Introduction

As a result of the invitation that the author received to be a participant in the international workshop related with Higher Education and organized by the Talca University, the DAAD and the HRK of Germany, Viña de Mar, January 2004, it was also possible to organize an post-workshop activity in coordination with personal of the region V Agriculture and Livestock Services of Chile through an invitation in order to observe

and take notes of the most relevant aspects related with the maintenance of the animal health status in the region.

The activity was arranged trough internet, developed during 3 days of January 2004, 16, 17 and 18, and it was partially sponsored by the personal of the region V Agriculture and Livestock Services. The opportunity came at the beginning because the invitation of the Talca University and DAAD, the sponsorship of other expenses by DAAD and the final results should be received by the students and other animal health workers in Guatemala.

Materials and Methods

Some of information obtained will be presented in Power Point because is mostly demonstrative.

Results

As a result of this double chance of cooperation is possible to gain the following extra benefits:

1. Optimization of the resources;
2. Actualization and learning in different knowledge areas;
3. Distribution of the gained information in activities of teaching, investigation and extension; and
4. Active sharing of information trough dialog between the 2 new organizations.

The information obtained in the region V of Chile consisted mainly in:

1. Books and other written materials;
2. Photographic documentation (see example in Power Point);
3. Use of Internet in animal health information service and animal population;
4. Field visits (farms and premises); and
5. Visit to the Valparaiso port premises.

The information obtained was distributed between in these 3 different levels:

1. Students of Veterinary Medicine that are attending the course of epidemiology;
2. Veterinary professionals working with in the animal health area; and
3. Reunion with the Vice-ministry of Livestock Production of Guatemala and the Veterinary Association of Guatemala.

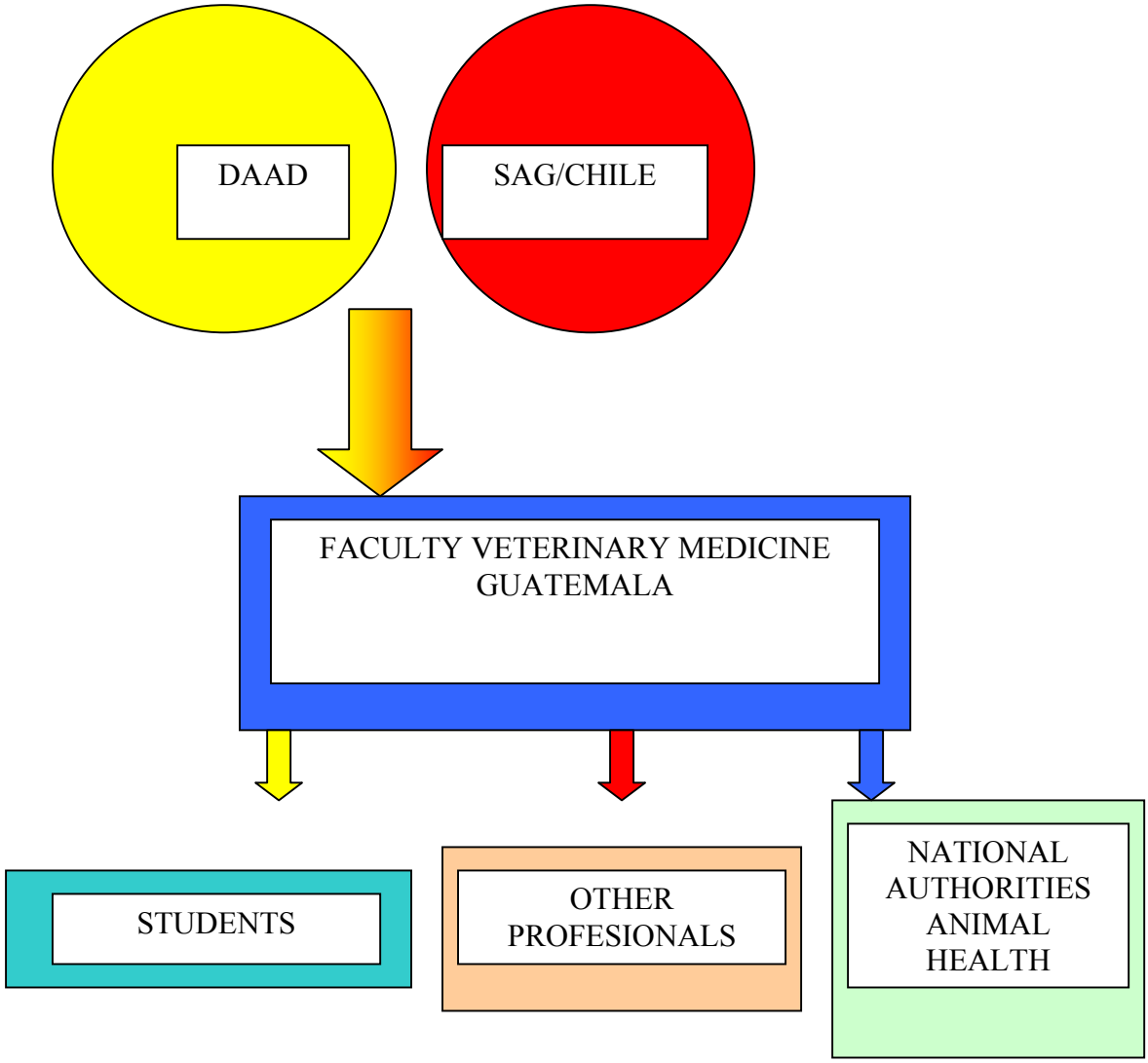

Figure 1. Diagram of the distribution of the information obtained trough the cooperation between Agriculture and Livestock Services of the Government of Chile, the Faculty of Veterinary of University San Carlos Guatemala, the DAAD Germany and other institutions.

Conclusions and Perspectives

A conclusion of this work is that it is possible to optimize the use of the resources employed in activities of cooperation between the countries and between institutions with the obviously increase of the benefits. The potentiality of this kind of work between different countries and institutions should be encouraged because represents an extra-component of the international cooperation and therefore another weapon in the development of the developing countries.

This kind of extra-cooperation is not always counted as cooperation, because is not always formal in the strict meaning of the word. Not because that it should be dismissed and considered not important in the context of the relations between the countries and the institutions who are concerned with the development of the world.

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ACCREDITATION: QUALITY ASSURANCE OR QUALITY IMPROVEMENT? THE EXPERIENCE OF THE UNIVERSITY OF COSTA RICA

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Abstract

Accreditation deals with the verification of results, coming from a self analysis carried out by an institution. This verification is done by an external accrediting agency, according to some established criteria, norms and regulations. Accreditation therefore is not a process but an act, dealing with certifying that an institution, program or career does what it is aim to do.

There is a growing interest, at the university level, in becoming "accredited" for several reasons, being one of them the quest for quality. Since accreditation is based upon a process of evaluation carried out by a university, the way this process is conducted and the intentions behind it, could either lead to quality assurance or to quality improvement. The first one is judgmental, retrospective, formal and geared towards accountability while the second one seeks to enhance different aspects of the organization and therefore it is future oriented, relatively informal, reflexive and intends to be a self-learning process.

Based on research being done, this paper analyses the experience of the University of Costa Rica in several evaluation processes, all of them oriented towards accreditation of careers. Some have being carried out mainly to obtain information for a third party (quality assurance) while others go beyond that in their quest for quality improvement. Two specific cases are considered as examples of different results of being accredited, depending on the characteristics of the process of evaluation that was carried out.

Keywords: Accreditation, Evaluation, Higher education, Quality.

Introduction

This presentation is based on research being done at the University of Costa Rica (Echeverría and López, 2001; Picado, 2004; Quirós, Rojas and Arce, 2003; Vargas, 2001) and also on a reflection of the experience and practice of the author at the Center for Academic Evaluation at the University of Costa Rica (UCR) (Vargas 2002).

The meaning if quality assurance and of quality improvement is presented in this paper, as two aspects associated with organizational change which have different meanings, depending upon the characteristics of the evaluation process carried out, as a way to obtain information towards accreditation of a career or program. In that respect, the concepts of quality, evaluation and accreditation are discussed as aspects that interrelate in the consolidation of processes that may gear to changes or establish only ways to obtain and give information regarding the development of a career or program.

Accreditation is not a concept incorporated in the academic life of the universities with an empty meaning, nor is an innocent way of organizing our higher educational systems. There has been a change in the relationship between the state, different groups of society and universities and new trends have been developed in the context of the

globalization of the economy, the influence of international corporations, a technological revolution, the advances in communication, and the strengthening or regional integration in economic, social and cultural terms. For that reason it is important to start with a short historical review of the situation.

Historical background of accreditation

The UCR, as well as other Latin American universities, have been undergoing an increasing interest towards accreditation of careers or programs, under a new socioeconomical, cultural and political world situation. During the decade of 1980, some common aspects drew, in general, a unique panorama. There was an increment in higher education population that caused the pressure of a *quantitative growth* at the university level and, along with that, there *were financial constrains* in the countries, do to their difficult economic situation and the need to implement "Financial Adjustment Programs". As mentioned by Yarzabal (1999), at the end of the 1980´s the Latin American region assigned the lowest public budget to higher education. Africa was investing in education three times more per student, Asia four times more and the United States and Canada fourteen times more. Even in 1990´s, Latin America and the Caribbean invested an equivalent amount of 15% of the public funds allocated by Europe or the United States to higher education. Costa Rica, however, was the Latin American country that comparatively invested more funds in higher education.

Both the quantitative growth of higher education population and the financial constrains, have sustained the need for evaluation as a way to know about the efficient use of the budget allocated to these institutions and their performance, in terms of meeting the needs of different groups of society, especially of those that impact the economic growth of the countries.

There is a third common trend in Latin America that interrelates with the other two previously mentioned, and it is the one related to the *privatization of higher education*. The proliferation of private institutions at the university level has taken place in the framework of a free market economy, and has help ease up the national burden of a growing population demanding higher education. However, at the same time, it has raised important questions about their quality and lack of rigor. In the case of Costa Rica, the first private university was created in 1975. The second one opened doors in 1985. Eight years later the country had 18 more and in three years, from 1994 to 1997, 26 more institutions were created, adding up to a total of 46 institutions. In the year 2004 it is estimated that the country has about 54 private institutions, of different "degrees" of quality.

The uncontrolled proliferation of private institutions of higher education has strengthen the need to create a system of accreditation of higher educational and, by doing so, the need for a self assessment process has been considered an important way of testing the performance of each institution, under a given set of parameters. In that respect, Costa Rica has developed a national system of accreditation and has dealt with an international one (CEAB)[16] and a regional one headed by CSUCA[17].

One last aspect that influenced the evaluation and accreditation in higher education is the need for the *internationalization of universities*, which means more than stressing academic links for working together among the institutions. The free commerce treaties emphasize the need for professional mobility, which makes it necessary to count with parameters that indicate the similarities of programs and careers. This has also caused a

[16] CEAB: Canadian Engineering Accreditation Board.
[17] CSUCA: "Consejo Superior Universitario Centroamericano" (Central American Superior University Council).

need to create accreditation systems in the countries, and therefore the need to carry out evaluation processes.

All these four situations that were just described, contribute to build up a new panorama in the 1990´s. Also, along with these trends, there was a new way of visualizing the university as an enterprise. There was a set of ideas borrowed form the business world that were incorporated in the "idea of a university". Clients, means of production, maximization of funds, earnings, corporative learning, and useful careers were some of the terms that helped define the university as an organization (Shumar, 1997). In that respect, the "quest for quality" appeared to be an important aspect that crossed the academic life, especially since the decade of 1990. In that respect, accreditation has been promoted under the idea of quality, and therefore it is necessary to clarify the term.

Quality in higher education

The discussion about "quality" shows different *ideas of a university* when applied to higher education, as it can be drawn from the following meanings. Quality can be understood as *something special in relation to basic standards* in which case educational institutions are considered to be of quality if they obtain good results beyond average. Also, quality could be understood as *satisfaction of needs, requirements or desires of clients* and therefore educational institutions are judged to be of quality if they respond adequately to students and market demands. One common definition of quality takes into consideration the degree that the organization complies with its purposes (the *fit for purpose* approach) in which case educational institutions are judged by the way they fulfill their mission and objectives. More on the economic side, quality could be understood in terms of cost-benefit or *value for money,* and therefore the central idea is associated with the accountability of an institution and the relation between allocation of funds and results that can be demonstrated. (Harvey and Green, 1993).

Beyond these definitions of quality, the one that orients the reflexive evaluation is *"quality as transformation"* which aims for a process of constant change between one stage and a better - more valuable - one. Quality as transformation goes beyond the measurement and demonstration of results and does not respond to an atomisation of the different aspects of the academic life, because the main objective of the university is the production, acquisition and dissemination of knowledge, which is a holistic and complex aim. The capacity of a university for its constant improvement in the organization and development of knowledge, is then a main factor for judging its quality and it can only be accomplished by an organization that examines reflexively the various aspects of the academic life in an integrated way, with the wide participation of people, in an effort for constant improvement.

When we talk about "accreditation" we are also talking about evaluation, since generally (not always) it is through a process of evaluation by which we acquire the knowledge to report certain findings in search of obtaining certain credibility regarding a program, an institution, or a career. For the UCR, the understanding of "quality as transformation" has allowed a new orientation of the evaluation process aiming, in some cases accreditation, as a way to establish a self-analysis that would enlighten the own understanding of a given process of situation, in order to provoke the changes and permit the improvement of quality. Change can only take place if people are convinced that things must be done in a different way and so, self-evaluation is a key element when dealing with change.

In that respect, it is important to analyse the meaning of evaluation that sustains processes dealing with self revision of careers and programs at the UCR, by approaching some basic statements about evaluation.

The meaning of evaluation

In the first place, it is important to remember that evaluation has to do with "values". In an evaluative process "someone" chooses something that needs to be valued, some indicators to assess its value, some forms and ways of acquiring and interpreting those indicators, some people that participate in the acts of valuing. Until recently, from a positivistic paradigm, evaluation was considered to be an "objective" process aimed to understand a reality that was considered predictable, accountable, subject to quantification, partialization, and generalization and, above all, value free. This approach lead to the use of parameters, indicators, methods that enhance the distance (in search of "objectivity) between what was being evaluated and the people involved, and it geared towards a deterministic analysis of situations, ignoring the historical development of situations and the context in which they occurred.

New ways of understanding "reality" as something complex, dynamic and diverse (multiple realities) is leading towards the understanding of evaluation as a process where subjectivity is predominant. In that respect, people is put in the center of the evaluation process and the question of "who is in control of the evaluation" and "what form does it take" are becoming key issues that lead us to relate *evaluation* and *power*.

The theory of evaluation is now being reconstructed beyond the positivistic approach and is leading to an understanding of a process that is wide, complex and deep. To explain this turning point of evaluation in traditional terms, we are going from a summative, external evaluation to a formative, internal, more reflective approach. Nowadays, to evaluate means to look back into "the way we do things" and try to understand the history of the process. It is to describe, understand, interpret and reinterpret and judge the own way of doing things, being aware of the errors, difficulties, actions, values, concerns, knowledge, interests, people's potential, difficulties.

Changes can only be made and organizations can only be *learning organisms* if information reaches all people and they recognize the need for changing. By being involved in the analysis and understanding of actual situations and by thinking about future possibilities, people can start individual changes that may lead to collective new approaches and improve the quality of a given situation.

From a technicist approach to a reflexive approach of evaluation

The evaluation, as it was stated, is a process where different kinds of power may intervene, with a given purpose. As mentioned by Barnett (1999), within the array of different forms of evaluation stated as a way to ensure quality, there is a dominant trend that could be called the *technicist approach of evaluation*, aimed to secure higher levels of control and surveillance, by emphasizing the use of performance indicators, which are established usually in tune with the needs of the labor market The academic community, in that case, serves as a valuable source of information to fulfill an established form of evaluation, but the possibility of a reflexivity is then constrained. As Barnett states, there is a difference between, *accountability* and *self-learning* and these two concepts shed light to the importance of self evaluation. The first one is aimed to give an account of the organization's performance to a third party and therefore, the involvement of the actors (in our case, the academia), is mainly as providers of information. A self-learning evaluation considers that learning itself, is internal and a part of the evaluation since through this process it is possible to learn. With that into account, evaluation becomes critical since

> "…the evaluation becomes a reflexive process in which the actors critique their own practices, learn about themselves and see themselves in a new way and so open up for themselves new possibilities for action. Such a form of evaluation would take the form of an ideal speech situation… in which the dialogue is open an undistorted by power relationships." (Barnett 1999:76)

On the other hand, in a process geared towards accountability, the communication is established by unequal power relations and the link between evaluation and learning is external and instrumental, aiming mainly at enriching the third party's knowledge of the organization's status.

When facing evaluation at the university level, the issues of ownership and control become important and so, the questions of *"who is in control"* and *"what form does evaluation takes"* must be considered. The first one goes beyond who is conducting the evaluation and deals more with *who is setting the "rules of the game"* and therefore it is located in the area of power. The second one relates to *the way the evaluation is being conducted,* if it locates on technicist focus or if it permits more critical, self reflexive forms. Under the technicist approach, the process is imposed upon groups and aims at external accountability, the individuals are active participants but as providers of information, there are external rewards and the need to seek the compliance of externally imposed standards. Power remains on an external authority. In the other extreme, the reflexive way of conducting evaluation aims to contribute to the understanding of the institution and also seeks for the self transformation of individual and of the organization.

Evaluation, as a self-reflexive process, enables self understanding and self learning but demands a serious responsibility from the academia, since it needs to cope with external forces and to deal with the actual tendency of complying with external accountability. But the understating of power relations help estimate the contrasting interests and motivations, as well as the counter-modes of evaluation that may be implemented. Evaluation can only improve quality if it is reflexive, allowing the different actors to learn about themselves and, as a result, change and improve the quality of their professional activities and services as a group, to comply with the needs of all groups of society.

Having established the different meanings of quality and evaluation, it is therefore important to understand what we mean by accreditation at the UCR.

The meaning of accreditation

Accreditation deals with the verification of the results of a self analysis carried out by an institution. This verification is done by an external accrediting agency, according to some established criteria, norms and regulations. Accreditation therefore is not a process but an act, dealing with certifying that an institution, program or career does what it is aim to do.

Accordingly, it is important to stress the following aspects with regards to accreditation:

- *The verification of results:* It leads to the need of becoming accountable, to demonstrate the use of resources, to offer certain evidence about the demands imposed on a given career, program or institution.
- *Self Analysis:* The institutions carry out an internal process of evaluation, considering certain aspects, quality criteria, indicators and norms established by the accreditation agency. However, it is important to clarify that the self analysis carried out by a given university can be done from a self reflexive approach or from a technical approach.

- *The accreditation agency:* An institution needs to go through the eyes of an external agency in order to legitimize its performance. An important factor here is the fact that, in some countries, accreditation is imposed while for other, like in Costa Rica, is being established as a voluntary act.

But also, accreditation is done according to certain criteria, norms and regulations already established and, in that respect, there are certain elements already traced for the evaluation process.

Accreditation has also several stages:

- An internal evaluation of an institution of program, according to the criteria, norms and regulations established by the accreditation agency.
- The submission of a report, regarding the findings of the internal evaluation, written by the university according to the guidelines established by the accreditation agency.
- The peer review or visit of colleagues to verify the results of the internal evaluation that are stated in the report
- The action of accrediting, making suggestions prior to accreditation or denying accreditation.
- A self regulation plan in order to improve aspects that are considered deficient and also seeking enrichment of the strengths of the institution.

Accreditation has been an important issue for the Costa Rican institutions of higher education, since the beginning of the 1990-decade, when the country faced the need to accredit careers and programs, mainly to the following reasons:

- *Accountability*. The need to make the institutions of higher education transparent, to inform about the use of resources, to give evidence that the professionals are able to cope with the needs of the society.
- *Search for quality*. The need to establish minimum requirements for the performance of the institutions in order to have, at least basic standards of quality for the development of careers and programs.
- *The Free Trade Agreements and the mobility of professionals*. The FTA clearly establishes the need for accreditation systems in order to deal with mobility and a similar formation of professionals.
- *The proliferation of private universities*. Under the statement that private business must be promoted, there has been an uncontrolled growth in the number private institutions of higher education. This boom has made evident the need to establish some form of social control in which the accreditation of careers or programs may serve as a way to inform which careers fulfill basic standards and may be preferred by different groups of society (students, employees, non governmental organizations).
- *Legitimation*. Accreditation is thought to be a way to obtain credibility, in different sectors of society, about the performance of a given career or program, for different purposes.

All these reasons have proven to be important factors for Costa Rica in the establishment a growth of accreditation through different systems, but in reality, the confluence of the factors has been complicated. Accountability is mainly stressing aspects related to teaching and dos not consider others related to research or community work. The search for quality is mainly established in relation to basic standards, satisfaction of needs and fit for purpose, leaving quality as transformation behind. The Free Trade

Agreements and the mobility of students demand other international actions beyond accreditation. The proliferation of private universities continues as a free market service, without adequate supervision from the government. Legitimation seems to be the only *fairly* good reason for accreditation, as far as the accreditation agency is considered valid and reliable.

Accreditation at the UCR

At the present moment (2004), 9 careers have been accredited or certified, 4 have finished the process of self evaluation and are awaiting their peer review, and 23 careers are at different stages of the process of self evaluation. The institution has been linked to three main agencies related to accreditation or certification[18] of careers.

The UCR, as did the other three public universities of the country, played an important role in the establishment of the National Accreditation System (SINAES) which was started by rectors of all four state universities and other four coming from the private ones. SINAES was established by law in the year 2001, and is part of the National Council of Rectors. It is conformed by a council of eight independent members elected every five years. So far, SINAES has accredited a total of 22 careers from public and private universities.

At the regional level, Costa Rica is part of the Central American System of Evaluation of Higher Education (SICEVAES), and the Regional System of Central American Careers and Postgraduate Degrees (SICAR), both of them under the Superior Council of Central American Universities (CONARE). SICEVAES and SICAR do not act as accreditation agencies but both evaluate the development of careers, programs, and institutions and certify - after a peer review - the validity of the evaluation process carried out by a given university, as a compliance with a set of given aspects established by CSUCA.

In the international level, the UCR has established an important link with the Canadian Engineering Accreditation Board (CEAB) and, with the help of the Professional Association of Engineers, there was a certificate granted to three engineering careers: Civil, Electrical and Industrial Engineering, which were considered to be "substantially equivalent" to the ones accredited by CEAB in Canada.

As it can be understood, the UCR has been working towards accreditation, but above all, the institution is focusing on the process of self evaluation. The meaning of quality as transformation and the emphasis on a reflexive evaluation is being promoted in different ways at the Center for Academic Evaluation, a branch of the vice Presidency of Academic Affairs in charged of orienting different evaluation processes at the institutional level.

There have been two trends at the UCR. One linked to a self reflexive evaluation and the other one oriented to a process of evaluation aiming mainly the acquisition of data and so, for the final part of this presentation, the case of the career of Social Work and the case of the Engineering careers will be considered, as representatives of these trends.

The career of Social Work

The School of Social Work has incorporated evaluation to their own academic life for a long time. The culture of evaluation is strongly evident and, for that reason, their interest in obtaining the accreditation of the career of Social Work gave space for the

[18] The regional or international agencies do not give a "certificate of accreditation" but instead certify the process of evaluation or recognize that the career is "substantially equivalent" to careers certified by the agency in its own country.

development of an evaluation process that was characterized by being participative, interactive, rigorous, and transparent, self regulated and constituted a deep review of different aspects of the career. (Picado, 2004). The process was formative and allowed the participants to learn about themselves, their participation in the career and their involvement at the school and the institution and also to propose ways for improving the development of the career and the school.

The career was accredited in the year 2001 and started the implementation of a self regulation plan. As of now, the school of Social Work has improved considerably in different aspects of its academic life. There is a better organizational climate which is made obvious in the individual growth of teachers and students and the improvement of the group. There has been an evident increase in research and publications and more participation of the academic staff in national and international events. The great majority of students are graduating within the expected period of time, and the *pensum* of the career was reviewed and changed in order to stress competencies and formative procedures that prepare students to deal, as professionals, with more complex social, economical and cultural situations. The school has now a well organized data base that contributes to a better planning of the academic activities and there is also a strong commitment from teachers and administrative staff to comply with the annual plan of the school.

One important aspect is the school's projection, not only in the national level through research and extension projects but in the international level, as part of a network of Latin American universities that are working together towards the establishment of a common basic *pensum* for the careers of social work in the region, which may allow for mobility of students and exchange of faculty members.

The school has experienced visible changes in its administrative and curricular organization and in the development of its teachers and students. The quality of the career has become better and there is a culture of continuous improvement and an interest for change and innovation. Self reflexive evaluation is also now part of the academic life.

The case of Engineering

According to Quirós, Rojas and Arce (2003), the careers of Engineering lived a different experience in evaluation, more oriented towards a technicist approach on their way towards accreditation. In that respect, the people played an important role in gathering information in a responsive way and the analysis and judgment of the different aspects was not done in a participative way.

Despite that approach, the process of evaluation was important for the Schools of Engineering involved (Civil, Electrical and Industrial), in the sense that they recognize now the importance of self review for their academic life. The process also ensured a level of quality, comparable with similar careers in Canada, which has allow for an important institutional and public recognition and has made the way easier for students who are interested in working or studying abroad. This key aspect has improved the motivation of students and teachers who are now proud of being part of the schools involved.

The recognition of the careers being substantially equivalent to the ones in Canada has given the Engineering schools involved an important position in the international level, has improved the image of the university and of those schools, and has permitted the review of engineering competencies which may be needed for the professional life. However, the space was not open for a reflection regarding the future development of the career and, in that respect, some aspects considered as important for Canadian universities, such as the pertinence of a more general program of studies, were not discussed. (Specialization, even in under graduate levels, has proven to be an important factor in our countries, for the local labor market). Changes are evident at the schools involved, but in

fewer aspects and more in relation to the international recognition given by the Canadian accreditation agency.

Conclusions and Perspectives

Accreditation has become a key aspect for the academic life of our universities. However, the UCR is aware that quality has to be considered as transformation in the sense that there should be an interest for constant improvement to orient the different activities of the academic units. Also, the evaluation process that sustains accreditation is considered to be the key factor for change, since it is through a reflexive evaluation where more improvement can be done, despite the fact that important changes are evident even if the evaluation is carried out through a technicist approach.

So far, there is a strong debate at the UCR because the accreditation agencies involved tend to emphasize minimum standards, mainly related to teaching, disregarding the importance of research and social projection which are also main aspects for the academic development at this university. Quality cannot be improved with minimum standards and therefore the question of *what is the need to become accredited* has become a key issue for the debate, although international recognition seems to be a main concern.

Finally, there is an important financial issue. The cost for each career to be accredited is eight thousand dollars, plus the investment in time and resources involved in preparing for accreditation. So far the UCR has paid for the accreditation of 10 careers and the Professional Association of Engineers paid for three more. There is also a need to pay that same amount after four years, for re-accreditation of each career that was accredited. The UCR has more than 200 careers and therefore it is not possible, for the institution, to financially sustain an exponential growth of accreditation and re-accreditation.

The institution is putting in the balance different aspects related to the process of evaluation, the understanding of quality, the costs of accreditation, and the need and reasons to become accredited. The debate is opened and is proving to be one of the most important that has confronted the UCR.

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SELF-EVALUATION AND PLANNING OF ACTIVITIES FROM THE ALUMNI NETWORK RECALL – PROPOSALS AND REFLECTIONS FOR FUTURE TEAMWORK

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Abstract

Last summer in Germany, a meeting was held between the different alumni Networks sponsored by the Consortium of Universities from Marburg, Kassel and Göttingen, and the DAAD. The representive members of ReCALL determined the need and importance to have time set-aside for discussion in order to review all the work done by the Network, and analyze its importance for planning and future perspectives.

Thus, ideas and objectives were printed in a proposal submitted and supported by DAAD to develop a Miniworkshop from ReCALL last September in Costa Rica. The 20 participants from: Chile, Brazil, Bolivia, Guatemala, Nicaragua, Germany and Costa Rica, worked for three days in a participative format. This was done with the help of the facilitators, in the creation of a new concept for ReCALL, and its connection to the Consortium, DAAD and other sponsored Institutions.

Among the mean outcomes of this event is the definition of the main objectives of ReCALL, and its evaluation using the method of C.I.P.P. (Contexts, Inputs, Process and Products). It was possible to collect concrete ideas to build a strategic five-year plan for ReCALL - containing its mission, vision, activities and strategies for the short, middle and long term. This information should be submitted to the knowledge of the ReCALL members, the German Universities Consortium and the DAAD. As a first step, for socialization purposes, this paper will be presented with the results, discussions, conclusions and recommendation of this Miniworkshop.

Introducción

El Taller ”Autoevaluación y Planificación de la Red de Alumnis ReCALL”, celebrado en la ciudad de Heredia, Costa Rica del 12 al 14 de septiembre del 2004, tuvo su origen en la reunión de representantes de Redes de Alumnis denominada: “Excellency in Organisation and Execution of International Alumni Network” en julio del 2004.

Los representantes de la ReCALL en este evento, coincidieron en la necesidad de tener un espacio de discusión con otros miembros de esta red, a fin de reflexionar y planificar los lineamientos para su desarrollo futuro, de cara a las exigencias actuales. El trabajo a desarrollar debería centrarse en evaluar lo actuado hasta ahora en el marco de la ReCALL (Red Científica Alemania-América Latina) y trazar las líneas futuras para su desarrollo y sostenibilidad. Con estos objetivos y luego de una consulta positiva a los personeros del Servicio Alemán de Intercambio Académico (DAAD), se logró el financiamiento necesario para la propuesta elaborada por la autora, para llevar a cabo este Taller.

Este Taller sobre Autoevaluación y Planificación de la ReCALL contó con el patrocinio de la Vicerrectoría de Investigación de la Universidad Nacional (UNA) y los directivos de la Oficina del DAAD en San José. En él participaron un grupo selecto de

Alumni representantes de Chile, Brasil, Bolivia, Nicaragua, Guatemala y Costa Rica. [19] La conducción del trabajo académico desarrollado estuvo a cargo de la coordinación y dos Alumnis destacados en los temas de autoevaluación y planificación: el Dr.Gilberto Alfaro y la Dra.Claudia Charpentier.

Durante los primeros dos días de trabajo participativo se motivó a los participantes para iniciar el proceso de evaluación, se elaboró un referente para la auto evaluación sobre los Propósitos y Acciones de la ReCALL y se llevó a cabo un ejercico de auto evaluación utilizando el método de CIPP (Conexto, Insumos, Procesos, Productos). Además se tocaron temas de discusión en torno a la Internacionalización de la Universidades, Cooperación y Acreditación. El tercer día del Taller se diseñó una propuesta de Plan Estratégico para la ReCALL, conteniendo su Misión, Visión, Metas, Objetivos y Estrategias de trabajo.

A pesar del poco tiempo con que se contó para extender algunas discusiones, se exponen en este documento algunos lineamientos que sirven como insumo para continuar su elaboración posterior en otras actividades de la red.

Todos estos resultados, fueron consultados posteriormente con representantes del Consorcio GKM (Göttingen, Kassel, Marburg), y se elaboraron algunas recomendaciones del grupo coordinador sobre detalles operativos para el trabajo continuo de la Red a corto, mediano y largo plazo.

Un agradecimiento especial a todos los participantes de la ReCALL al DAAD, a la UNA, al equipo de apoyo local, la Embajada de Alemania, la Fundación pro Arte y Ciencia y todos nuestros colaboradores.

Metodología y resultados

Actualización sobre resultados del encuentro interredes de Alumni

La primera sesión de trabajo tuvo como objetivo informar a todos los presentes sobre los resultados obtenidos el encuentro interredes Alumni, celebrado en Witzenhausen en julio del 2004. La Dra. Maricela Cascante, coordinadora del este Taller y representante de ReCALL en el evento antes citado, realizó una presentación con especial atención en los resultados del Análisis de FODA de las Redes de Alumnis, la propuesta de estructura organizativa general para el Consorcio, las Redes de Alumnis y el DAAD y el análisis de la Red de Alumnis ReCALL. Este último se llevó a cabo mediante la valoración de: su Organización, Relación con los Alumnis, Participación y Concepción y Ruta futura, en términos de sus Hechos Históricos Relevantes, Problemas y Conflictos, Soluciones y Lecciones Aprendidas para cada uno de los casos.

También se hizo referencia a las presentaciones hechas por personeros del DAAD sobre las tendencias de cooperación para Alumni.

Entre los acuerdos más importantes logrados se resolvió: apoyar la estructura organizativa presentada para las redes Alumni y el Consorcio de Universidades GKM (Göttingen, Kassel, Marburg), y específicamente para la ReCALL. Ésta estaría conformada, como hasta ahora, por las oficinas de países y regiones. El representante de la Red ante el Consorcio y DAAD, sería la persona responsable de organizar el Simposio anual del período vigente. Lo anterior, con el propósito de dar estabilidad y seguimiento al trabajo emprendido.

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19 Dr. Michael Huhn, Sr. Moritz Wilms, Dra. Edvania Torres-Aguiar Gomez, M.Sc. Rodrigo Pérez, Dr. José Díaz Osorio, M.Sc. José Luis Llanos, Dr. Carlos Camey, M.Sc. Leonel Carrillo, Dra. Fátima Bolaños, Dra. Alicia Vargas, Dipl. Sallamy Ugalde, Lic. Allan Monge, Dr. Gilberto Alfaro, Dra. Claudia Charpentier, Dipl. Ana Sanabria, Dr. Pedro Hernández, M.Sc. Hannia Francheski y Dra. Maricela Cascante.

Este espacio fue de mucho valor ya que permitió identificar concordancias y diferencias entre las diferentes redes de Alumnis que coordina el Consorcio GKM y crear un marco referencial y objetivos claros para el trabajo futuro de estos tres días.

Sesión de Auto evaluación: referente de la ReCALL

Para dar inicio al proceso de autoevaluación, se propuso como primer paso sensibilizar a los participantes sobre la misión que tendrían al evaluar el papel de la ReCALL. Con este fin se llevó a cabo una lluvia de ideas y se elaboraron algunas pautas sobre la reacción que normalmente se experimenta frente a la evaluación. Cada participante debió escribir tres ideas al respecto sobre tarjetas, las cuales fueron reagrupadas en dos grupos, presentadas y discutidas en plenario.

Los resultados obtenidos permitieron abrir una discusión sobre tópicos relacionados con la evaluación y su percepción, tales como el temor, la aversión, la falta de información, el sistema de creencias personales, así como la necesidad de considerar un marco de valores, rescatar el valor de la evaluación para mejorar, etc.

A fin de ofrecer a los participantes una base teórica introductoria para realizar la auto evaluación de la ReCALL, se procedió a continuación con la exposición por parte del Dr. Gilberto Alfaro de dos presentaciones sobre: "Teoría y práctica de la Auto-evaluación" y "Modelos y herramientas para la Autoevaluación".

Como paso siguiente para la autoevaluación del trabajo de esta Red se realizó una construcción colectiva de sus propósitos actuales, los cuales servirán como referente para la evaluación posterior. (Antes de definir estos propósitos, el grupo de participantes discutió sobre el papel de esta labor respecto al resto de miembros de la Red, la validez de estos resultados, su socialización y de las sugerencias que surgieran a partir de este trabajo. Quedó clara la posición del grupo como "grupo de consulta" que plantearía los resultados de esta actividad a manera de propuesta y recomendación, ante los demás miembros de ReCALL, el Consorcio GKM y DAAD). La evaluación se basó en la experiencia de cada uno de los participantes dentro de la ReCALL y en su vida profesional.

Se resaltó la falta de espacios de discusión en los eventos anuales, pero que aún así se han recogido algunas inquietudes y comentarios en pequeños grupos o conversaciones informales, cuya experiencia se tomó como insumo en esta oportunidad. Otros elementos a considerar a lo largo de esta labor fueron la información sobre la Red contenida en los brochures y posters, en la página WEB, etc.

Mediante una dinámica de trabajo en grupos, los participantes elaboraron la siguiente información como marco referencial de la ReCALL en términos de lo que deben ser al presente sus propósitos y acciones principales:

- ¿Cuál es el propósito fundamental de ReCALL?
  - ReCALL es una red científica, académica y profesional constituida por personas y entidades que han participado en actividades conjuntas con universidades alemanas. Sus propósitos fundamentales son:
    - Fortalecer en los países de América Latina y el Caribe las iniciativas y producciones técnico, científico, académicas, desarrolladas por personas y grupos que tengan relación con instituciones europeas, particularmente alemanas.
    - Servir de punto de contacto, encuentro e intercambio para generar y materializar vínculos, ideas concretas e información, traducidas en acciones específicas en los campos de intereses de sus miembros para un beneficio mutuo.

Autoevaluación de la ReCALL

El segundo día de trabajo se inició con un conversatorio sobre el proceso de mejoramiento de la Educación Superior, dado el interés de los participantes y la importancia del sector académico dentro de los miembros de ReCALL presentes en este Taller. Se obtuvo información y alguna documentación sobre la **Conferencia Mundial de la UNESCO** y la Gestión de la Calidad Universitaria [20], los cuales se consideraron de importancia primordial en cualquier acción de cooperación vinculada a las universidades.

Tomando en cuenta la información generada sobre el análisis FODA y los demás resultados obtenidos para la ReCALL en julio pasado en Witzenhausen, se procedió a realizar la autoevaluación de utilizando el método Contexto, Insumo, Procesos, Producto (CIPP). El modelo de evaluación CIPP (Contexto, Insumos, Procesos, Productos), consiste en analizar en primer lugar el **contexto** de operación de la red. En el caso de la RECALL éste podría ser el contexto universitario, el contexto del desarrollo universal mediante sus vínculos con diferentes partes del mundo, entre otros: "Se debe evidenciar que nuestros planteamientos están relacionadas con diversos contextos conforme a la situación actual. En este sentido, la Red juega un papel importante en el fortalecimiento y en el desarrollo académico de las universidades y también en el desarrollo de nuestros países".

El segundo elemento a analizar es el de los **insumos** con los que se cuenta para poder hacer frente al desarrollo de una red de esta naturaleza. Entre ellos, se consideran la capacidad instalada de las universidades, el personal formado y ubicado en diferentes lugares del mundo y el mantener ese contacto principalmente entre los países de Latinoamérica, etc. Por ejemplo: se ha mencionado la importancia que tiene el hecho de que un profesor de una universidad esté trabajando en una red, ya que éste se convierte en un insumo para que la red funcione. Solo el hecho de que exista un escritorio en una universidad destinado para esto, es un insumo valioso y existe por lo tanto la voluntad para poner esfuerzos a trabajar.

Como tercer elemento a considerar dentro de la evaluación se propone identificar los **procesos**, los cuales son aquellas formas de interacción que se han desarrollado en torno a la Red, así como la valoración de su efectividad en términos de alcanzar el propósito que se ha desarrollado con anterioridad.

De este modo se obtiene una valoración de cuánto realmente se ha logrado de acuerdo a los procesos desarrollados y respecto al logro de los propósitos de la RECALL. De igual manera deben analizarse los **productos (**o beneficios) obtenidos hasta la fecha y aquellos otros productos que serían necesarios a futuro, considerando también el nivel de satisfacción. A sugerencia de los participantes se acordó analizar los contextos a nivel local, regional, continental (América Latina y el Caribe) y mundial en relación con el quehacer de la ReCALL.

Los resultados obtenidos por los dos grupos de trabajo se presentan de manera conjunta en el Cuadro 1.

Internacionalización y acreditación

El propósito principal de esta sesión de trabajo fue concienciar sobre la relevancia actual de estos tópicos, discutir algunas experiencias y repensar la importancia que podría tener la Red dentro de estos procesos, especialmente desde la perspectiva académico-universitaria. Luego de realizada una dinámica de grupo, en la cual cada participante ilustró con la ayuda de un mapa mundi e hilos de colores, las diferentes cooperaciones que

[20] UNESCO, 1998. La educación superior en el siglo XXI. París. 72 p.
Wasmuth, W. 2003. La gestión de calidad como instrumento para mejorar la contribución de la educación superior al desarrollo sostenible. GTZ-CSUCA-DAAD. Programa UNICAMBIO. Módulo II.

mantenía su institución con otras de otros países, se solicitó a los participantes enfocar sus comentarios hacia las posibles ventajas de estas cooperaciones, sus desventajas y las oportunidades derivadas de su trabajo conjunto.

Cuadro 1. Autoevaluación de la ReCALL

	Escala local: universidad	**Escala regional: país**	**Escala Latinoamericana y Caribe**	**Escala internacional: interredes, Comunidad Europea**
Contexto	➢ Exbecarios de diferente formación. ➢ Respaldo institucional. ➢ Facilitar proyectos de investigación. ➢ Articulación con otras redes. ➢ Crisis de financiamiento para universidades públicas. ➢ Reforma universitaria. ➢ Existencia de otras redes. ➢ Prestigio de la universidad. ➢ Banco de datos de alumni.	➢ Articulación con otras redes. ➢ Reforma universitaria acreditación, Internacionalización) ➢ Existencia de otras instituciones con perspectivas afines (ONG´s). ➢ Intercambio con representaciones de instituciones alemanas en el país. ➢ Banco de datos de alumni. ➢ Inventario de proyectos de investigación. ➢ Divulgación de actividades y funciones de representante por país de la ReCALL. ➢ Organizaciones locales Alumnis.	➢ Articulación con otras redes. ➢ Reforma universitaria (acreditación, internacionalización). ➢ Contacto permanente con instituciones / per-sonas en la subregión. ➢ Normar funcionamiento de red. ➢ Creación, consolidación y ampliación de oficinas donde no hay. ➢ Workshops temáticos. ➢ Proyectos e investigaciones comunes ➢ Autogestión de la red.	➢ Articulación con otras redes ➢ Reforma universitaria (acreditación, internacionalización) . ➢ Relación con el consorcio. ➢ Redefinición de prioridades de inversión. ➢ Fortalecimiento inter-redes. ➢ Ampliación de posibilidades de financiamiento . ➢ Relación con otras universidades.

	Escala local: universidad	**Escala regional: país**	**Escala Latinoamericana y Caribe**	**Escala internacional: interredes, Comunidad Europea**
Insumo	➢ Recursos humanos o Horas de trabajo para la red. o Movilización de estudiantes (futuros alumni). o Divulgación de la red. ➢ Infraestructura o Oficinas mantenimiento o Equipamiento. o Acceso a internet.	➢ Apoyo de embajada, consulados, DAAD. ➢ Cooperación con empresas, industria y cámara de comercio. ➢ Apoyo de Inwent. ➢ Creación de links oficiales e inoficiales. ➢ Representación en actos oficiales (visitas académicas, políticas) ➢ Colaboración entre ReCALL y organización local de alumni .	➢ Recursos humanos o Potencial técnico y científico en diferentes áreas. o Diferentes tipos de instituciones o Involucrar otras instituciones. o Experiencia acumulada.	➢ Ampliación de miembros (redefinición del concepto alumni)
Procesos	➢ Comunicación esporádica de alumnis. ➢ Participación en asociaciones nacionales de exbecarios.	➢ Comunicación entre universidades nacionales. ➢ Intercambio de servicios profesionales y académicos.	➢ Establecimientos de lazos. ➢ Intercambio académico y científico	➢ Organización de encuentros anuales
Beneficios	➢ Cooperación e Inter. Institucional.	➢ Relaciones interinstitucionales.	➢ Apoyo interinstitucional. ➢ Cooperación científica y	➢ Establecimiento de contactos.

	Escala local: universidad	**Escala regional: país**	**Escala Latinoamericana y Caribe**	**Escala internacional: interredes, Comunidad Europea**
	➢ Se ha hecho difusión de la red.	➢ Trabajo en conjunto en temas de interés común.	académica. Mejoramiento de la competitividad y de la calidad académica-científica. ➢ Diálogo intercultural.	➢ Búsqueda de soluciones a problemas de la red. ➢ Difusión científica. ➢ Difusión de programas.

Los temas resultados de la discusión durante esta sesión fueron los siguientes:

- La mayoría de los nexos son con Europa, solamente uno con África y ninguno con Asia. Conflicto ideológico;
- ReCALL como red de internacionalización;
- El rol del idioma en las relaciones de cooperación internacional;
- El bagaje cultural tras el idioma alemán y su rol en las negociaciones;
- Cambios actuales dentro de la cooperación: no solo N-S, sino también S-N y S-S;
- Ventajas de la cooperación S-S en estudios tropicales, vivencias en diversas realidades para los estudiantes;
- Casos: Nicaragua-Méjico-Cuba-Perú-Alemania, Caso: Bolivia-África-Holanda, Caso: Chile-Argentina, Caso: Costa Rica-Sudáfrica;
- Nuevo impulso y apoyo de Europa hacia relaciones S-S como mediadores;
- Presión sobre universidades del mundo global y la competitividad. A mayores beneficios mayor número de estudiantes;
- La necesidad de acreditación versus crisis de recursos públicos;
- Programa de intercambio docente S-S. Caso de Centroamérica DAAD;
- Se requiere de menos recursos en la cooperación S-S. Hay mejor entendimiento de sus realidades;
- Necesidad de recursos propios para apoyo al intercambio docente;
- En trabamientos burocráticos para la movilización de profesores extranjeros S-S: pago de honorarios, permisos de trabajo y residencia, visa, etc.;
- Elaborar nuevas alternativas y categorías de nombramientos y reglamentaciones que apoyen estos procesos. Apoyo jurídico;
- Cambio en la cultura universitaria debido a la internacionalización: intercambio de carreras, estudiantes, profesores, etc.;
- Creación de una red de redes que amplíe las oportunidades;
- Conocimiento de realidades más lejanas. Aporte de UNISTAFF; y
- Política exterior gubernamental.

Algunas conclusiones importantes del grupo en este sentido son:

- Fortalecer e introducir algunas de estas acciones dentro de ReCALL;
- El tema de la cooperación, internacionalización de las universidades y acreditación debería discutirse con mayor profundidad en la ReCALL; y
- Cada uno de los puntos anteriores permita una amplia discusión.

Elaboración de la Visión y Misión de la ReCALL

El tercer día de taller se dedicó por completo a la elaboración del Plan estratégico de la ReCALL, en primer lugar se procedió a trabajar la visión proponiendo dar respuesta a las preguntas:

- ¿Cómo deseamos que sea ReCALL en un plazo de 5 años?;
- ¿Hacia dónde debe ir la ReCALL?;
- ¿A qué cosas podrían comprometerse los miembros de ReCALL?;
- ¿Qué características o rasgos tendrá la ReCALL?;
- ¿Qué queremos para ReCALL?;
- ¿Qué cosas buenas deseamos hacer en la ReCALL?

Los participantes trabajaron en dos grupos dando respuesta a estas interrogantes y elaboraron juntos la visión que aparece a continuación:

Visión de ReCALL

La ReCALL es referente científico - académico a nivel nacional y regional y es reconocida por el DAAD. Esta red definió su rol en su plan estratégico así como su articulación con el Consorcio de Universidades (GKM).

Es una red participativa, en el proceso de toma de decisiones, que promueve la ampliación de la membresía y una mayor participación de sus integrantes.

Se caracteriza por la flexibilidad para articularse con otras redes, la puesta en marcha de una agenda común de oportunidades para los grupos meta con prioridades específicas y tendiendo a dar sus primeros pasos hacia su autogestión.

Entre los principales logros están la definición de una estructura orgánica, la consolidación de grupos de trabajo en áreas temáticas específicas y el trabajo para el mejoramiento del desarrollo regional con soluciones propias.

De modo similar se construyó la misión dando respuesta a las preguntas:

- ¿Qué valores caracterizan la cultura de ReCALL?;
- ¿Para quiénes trabajamos en ReCALL?;
- ¿Qué vamos a producir?;
- ¿Cuál sería la función principal de ReCALL?;
- ¿Qué contribuciones debe proveer ReCALL a sus miembros, la región y el Consorcio GKM?;
- ¿Qué distingue a ReCALL de otras redes?

La visión y misión elaboradas, así como otros detalles aparecen a continuación:

Misión de ReCALL

ReCALL es una red científica, académica y profesional que establece y mantiene lazos entre sus miembros para generar un trabajo conjunto, que une y articula América Latina, el Caribe, Alemania y la Comunidad Europea. Reconoce los beneficios de la cooperación y el mejoramiento de la educación superior, del intercambio de experiencias y de la difusión de resultados de la investigación.

La generación y desarrollo de programas y proyectos académicos, técnicos y científicos conjuntos, permiten acercar a los miembros y contar con una plataforma de cooperación.

Para poner esta misión en práctica la ReCALL realiza las siguientes acciones:

- Fomenta la comunicación entre los alumni, contraparte Alemana y europea, universidades locales, ONG, ministerios, estudiantes de Pre y Posgrado, docentes e investigadores, empresas privadas, donantes, comunidades científicas, profesionales sector público y privado y comunidades locales;
- Se caracteriza por los siguientes valores: conciencia ambiental, solidaridad, tolerancia, equidad, solidaridad, respeto y compromiso con la red y con la sociedad;
- Promueve el contacto y encuentros de exbecarios y la realización de eventos científicos;
- Favorece y facilita la articulación con otras redes; y
- Contribuye al reconocimiento científico de los integrantes de la red.

Plan Estratégico de ReCALL

El plan estratégico de ReCALL define primeramente algunas características respecto a su función organizativa, los productos o beneficios que desean obtenerse de la Red y los fines hacia los cuales los miembros de ReCALL deseamos ir. Estas reflexiones permitieron entrar en un análisis más concreto de las metas que deben plantearse dentro del trabajo de la red, sus objetivos y posteriormente las estrategias que serían necesarias para llevar a cabo cada uno de estos objetivos.

Los resultados con la lista completa de estrategias citadas por los participantes y agrupadas por su naturaleza, se detallan a continuación:

Meta 1: Consolidación de la red a nivel de los países latinoamericanos y del Caribe que contribuya a unir las redes.

Objetivo 1. Intensificar la autogestión de la red para hacerla más sostenible.

Estrategias sobre Membresía y participación:

- Redefinición del concepto de alumni;
- Fomento de la membresía de ReCALL al mayor número posible de países en Latinoamérica y el Caribe, a fin de garantizar su sostenibilidad;
- Establecimiento de estrategias para hacer atractiva la participación en ReCALL;
- Creación de mecanismos de participación real a distancia;
- Hacer más atractivas las comunicaciones permanentes;
- Realización de eventos de acercamiento y divulgación;
- Exploración de otros miembros en países no presentes;
- Promoción del apoyo mutuo entre organizaciones utilizando las fortalezas de sus miembros para asesorar áreas específicas; y
- Búsqueda de alternativas para la utilización de internet en casos de problemas.

Estrategias sobre Organización y operación:

- Fortalecimiento de la estructura organizativa de la red; y
- Generación de una normativa orientada sobre funciones y responsabilidades de miembros, etc.

Estrategias de Sostenibilidad y autogestión:

- Aumento de esfuerzos en la identificación de mecanismos de autogestión;
- Maximización de las posibilidades de ampliación y sustentabilidad de las redes en América Latina y el Caribe;
- Creación de vínculos permanentes en otras redes equivalentes;
- Fortalecer mecanismos de vinculación entre las organizaciones a las que pertenecen las personas miembros de la red para posicionarla en el ámbito regional, ofreciendo información actualizada en la página web de la red;
- Mejoras en la comunicación entre los miembros de la red y otros miembros para que la red siga existiendo;
- Utilización de la estructura de las diversas organizaciones para aprovechar posibilidades de apoyo profesional; y
- Normalización de las posibilidades para aportar materiales suplementarios al DAAD.

Estrategias de Financiamiento:

- Lograr recursos necesarios para ampliar el número de representaciones por país;
- Elaboración de proyectos técnicos, académicos y científicos captadores de recursos;
- Establecimiento de convenios con instituciones públicas y privadas; y
- Sensibilización de industrias, empresas y ONG´ s para apoyo.

Meta 2: Potencialización y universalización de los conocimientos disciplinarios, inter- y transdisciplinarios.

*Objetivo 2***.** Intercambiar experiencias sobre lineamientos y formulación de proyectos internacionales.

Estrategias sobre Base de datos y sitio WEB:

- Divulgación de la información necesaria para facilitar el trabajo conjunto de los miembros de la ReCALL;
- Construcción y mantenimiento de una base de datos;
- Mejoramiento de la página web en cuanto a contenido, participación y administración;
- Convocatoria a foros para miembros ReCALL por medio de la página WEB;
- Inserción de los resultados en el sitio WEB; y
- Divulgación de los resultados de trabajos conjuntos en el ámbito académico, científico y de desarrollo, para difundir los resultados alcanzados.

Estrategias sobre Publicaciones:

- Creación de una publicación con forma de journal (nivel).

Estrategias sobre Grupos por especialidad, actividades y reuniones:

- Conformación de grupos temáticos;
- Generación de la información requerida para facilitar la concreción de ideas de trabajo conjunto;
- Realización de mini talleres con objetivos y temática específica; y
- Realización de simposios anuales.

Meta 3. Fomento de actividades que consolida ReCALL como referente reconocido a nivel local, regional e interregional.

*Objetivo 3***.** Difundir las actividades de la red, para ser reconocido por contrapartes académicos, gubernamentales, ONG, etc.

Estrategias sobre Banco de datos y página WEB:

- Elaboración de un banco de datos con antecedentes de sus miembros (currículo mínimo actualizado, proyectos y publicaciones por temas de trabajo y/o investigación);
- Elaboración de un banco de universidades, instituciones y respectivas potenciales contraparte;
- Elaboración de un banco de organizaciones gubernamentales y ONGs de interés para los miembros de ReCALL;

- Generación de sitio WEB;
- Creación de grupos temáticos para favorecer el desarrollo de la comunidad científica regional (Latinoamérica) y supraregión; y
- Mayor difusión del trabajo y resultados de la red para lograr un establecimiento y reconocimiento en el ámbito internacional.

Estrategias de Vinculación.

- Definir una agenda de trabajo y difusión;
- Ampliar las redes de contactos;
- Contacto permanente con instituciones y/o organizaciones alemanas presentes en la región y/o en cada país; y
- Apoyo a procesos de selección de candidatos.

Objetivo 4. Crear espacios de diálogos científicos para el intercambio de experiencias y conocimiento del trabajo de los alumnis.

Estrategias sobre Formación contínua:

- Desarrollo de:
  - Seminarios regionales, subregionales;
  - Seminarios de actualización / capacitación; y
  - Cursos de especialización, acordes con las necesidades de ReCALL.
- Búsqueda de espacios de discusión sobre Pedagogía, Gestión de proyectos, etc.;
- Mini talleres/ talleres temáticos y talleres meta-plan; y
- Seminarios de difusión.

Objetivo 5. Fomentar la generación conjunta entre los miembros y/o con las contrapartes alemanas/ UE de proyectos de cooperación, académicos y científicos.

Estrategias sobre Videoconferencias y pasantías:

- Realización de videoconferencias o foros para enlazar a científicos alemanes (europeos) y latinoamericanos; y
- Aumento de pasantías de científicos alemanes (europeos) en Latinoamérica y viceversa.

Estrategias de Financiamiento:

- Identificación de necesidades de financiamiento en general, para operación de la Red;
- Intercambio de información de fuentes de financiamiento;
- Establecimiento de Convenios de cooperación; y
- Establecimiento de una Bolsa de proyectos a divulgar en ambas direcciones.

Recomendaciones del grupo y consulta a miembros del Consorcio GKM

Durante la evaluación general del evento los participantes se mostraron muy complacidos con el nivel de trabajo logrado durante las arduas sesiones de trabajo. Respecto a los resultados obtenidos se concluyó que:

1- Es necesario socializar y validar esta información a los demás miembros de ReCALL, el Consorio GKM y el DAAD; y
2- Dada la temática establecida para el Simposio anual en Talca, Chile, se consideró la posibilidad de incluir este tema dentro del Programa en sesión plenaria.

Esta consulta así como una recomendación metodológica para su análisis, se planteó a miembros del Consorcio GKM en el mes de octubre, justificada en la relevancia de estos temas con respecto a la operacionalidad de ReCALL y a que los mismos no pudieron ser abordados con la profundidad requerida. Los representantes del Consorcio propusieron analizar y discutir con sus especialistas sobre el tema.

Recomendaciones finales del equipo coordinador

Con base en las observaciones recibidas del Dr. Uwe Muuss, representante del Consorcio GKM, y tomando en consideración la necesidad de continuar trabajando en estrategias concretas, a continuación se presenta una recomendación para la puesta en marcha de acciones a corto, mediano y largo plazo:

Estrategias de Corto plazo

1. Consolidación de la estructura organizativa de ReCALL: oficinas por región, país y sus funciones;
2. Definición de la articulación ReCALL-Consorcio GKM;
3. Formalización del respaldo institucional a los representantes de ReCALL;
4. Contactos con organizaciones alemanas por país (Embajada, cámara de comercio alemana, etc.);
5. Redefinición del concepto Alumni para ReCALL;
6. Banco de datos de Alumnis;
7. Sitio WEB de ReCALL: autogestión;
8. Elaboración de la propuesta de continuación para DAAD; yOrganización de próximo evento y Miniworkshops para elaborar temas de acción inmediata: normativa, sitio WEB, etc.

Estrategias de mediano plazo

1. Aumento del número de miembros por país en ReCALL;
2. Establecer una estrategia para la atracción de nuevos miembros;
3. Elaboración de una publicación científica de ReCALL;
4. Elaboración de una estrategia de financiamiento a largo plazo;
5. Elaboración de un Banco de datos de contrapartes (universidades, instituciones, ONG, etc.);
6. Articulación con otras redes y asociaciones de Alumnis;
7. Realización de eventos sobre: Internacionalización y Acreditación y Reforma Universitaria, Pedagogía, Gestión de Proyectos;
8. Realización de Workshops temáticos;
9. Establecer una estrategia de comunicación activa a distancia;
10. Estrategia de operación y mantenimiento de la Base de Datos de Alumnis; y
11. Estrategia de mantenimiento y actualización del sitio WEB.

Estrategias de largo plazo

1. Sostenibilidad financiera de la Red;
2. Intercambio académico y científico entre miembros;
3. Intercambio y cooperación con organizaciones alemanas/europeas;
4. Definición de canales para la difusión científica;
5. Establecimiento de proyectos de cooperación conjunta SS, NS;

6. Diseño de una Bolsa de proyectos;
7. Conformación de grupos de asesores técnicos;
8. Retroalimentación y autogestión del sitio WEB; y
9. Realización de eventos periódicos por especialidad, seminarios de actualización, etc.

Estos resultados y recomendaciones fueron presentados en el Simposio llevado a cabo en la Universidad de Talca, a fin de obtener conclusiones de todos los miembros de ReCALL presentes.

En esa oportunidad fueron ratificadas sin observaciones la Visión y Misión de ReCALL aquí presentadas y se espera analizar los otros puntos en reuniones posteriores.

A fin de garantizar la sostenibilidad de la red, se concluye que es urgente conformar grupos de trabajo que se responsabilicen de planificar y ejecutar las acciones de corto plazo y programar a futuro las siguientes.

INTERNACIONALIZACIÓN DE LA UNIVERSIDAD DE TALCA: PROGRAMA DE MOVILIDAD ESTUDIANTIL

María Fernanda Contreras[1]

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Abstract

La Dirección de Relaciones Internacionales de la Universidad de Talca entrega apoyo a las unidades académicas y a la institución en general, en materias de relaciones y cooperación internacional y gestiona la comunicación con sus homólogos de otros países, con agencias de cooperación internacional y con instituciones extranjeras de educación superior de interés para ella. El Plan Estratégico Visión 2010 de la Universidad, señala como uno de sus estrategias la internacionalización de las actividades docentes siendo uno de los objetivos la promoción de experiencias académicas internacionales en el estudiante de pregrado. De esta manera, el Programa de Movilidad Estudiantil, ha llegado a ser uno de los programas internacionales más exitosos que la Universidad posee; este programa es coordinado y gestionado completamente en la Dirección de Relaciones Internacionales. La Universidad destina recursos económicos importantes que permiten que sus estudiantes destacados académicamente y de ingresos económicos bajos, puedan realizar estudios en prestigiosas universidades extranjeras con las cuales se mantienen convenios de colaboración. De la misma manera, estos convenios permiten a la Universidad recibir a estudiantes extranjeros.

Keywords: Movilidad Estudiantil, Internacionalización, Universidades Extranjeras

Introduction

Cooperación Internacional: La Universidad de Talca y Universidades Extranjeras

Esta dirección es la encargada de gestionar y coordinar acciones orientadas a la internacionalización de nuestra Universidad, en todos los ámbitos de su funcionamiento. Actualmente la Universidad mantiene convenios de colaboración académica y científica con prestigiosas Universidades en América, Asia, Europa y Oceanía.

Programas de Intercambio con Universidades Extranjeras

La Universidad de Talca, consciente de la importancia que sus alumnos de pregrado adquieran experiencia académica internacional, ha creado un espacio para que los estudiantes de la universidad hagan realidad el sueño de viajar y estudiar en una universidad extranjera. De esta manera, a través de la Dirección de Relaciones Internacionales se realiza la movilidad estudiantil, entregando información sobre las distintas Universidades Extranjeras y los programas de intercambio existentes, además de asesorar a los estudiantes durante el proceso de postulación y preparación de su viaje y estadía en el extranjero.

Movilidad Estudiantil: programas y experiencias

Objetivos del Programa

1. Permitir a los estudiantes de la UTAL realizar una estadía académica en universidades extranjeras de América, Asia, Europa y Oceanía.
2. Recibir estudiantes extranjeros que deseen cursar un período académico en UTAL.

Programas de Movilidad Estudiantil

Contamos con tres Programas:

1. ABATE MOLINA:
   - Universidades de América, Asia, Europa y Oceanía
   - 20 becas UTAL (pasajes y US$500).

2. CINDA (Centro Interuniversitario de Desarrollo)
   - Universidades Latinoamericanas y Europeas

3. DAAD-UTAL
   -Universidades Alemanas
   -Alumnos de Ingeniería
   -20 becas de pasajes (UTAL) y 20 de manutención DAAD

Funcionamiento del Programa

Dependiendo de las características especificas de cada convenio firmado por UTAL y la Universidad extranjera, tanto los estudiantes nuestros que salen como los extranjeros que recibimos, pueden optar por realizar alguna de las siguientes alternativas:

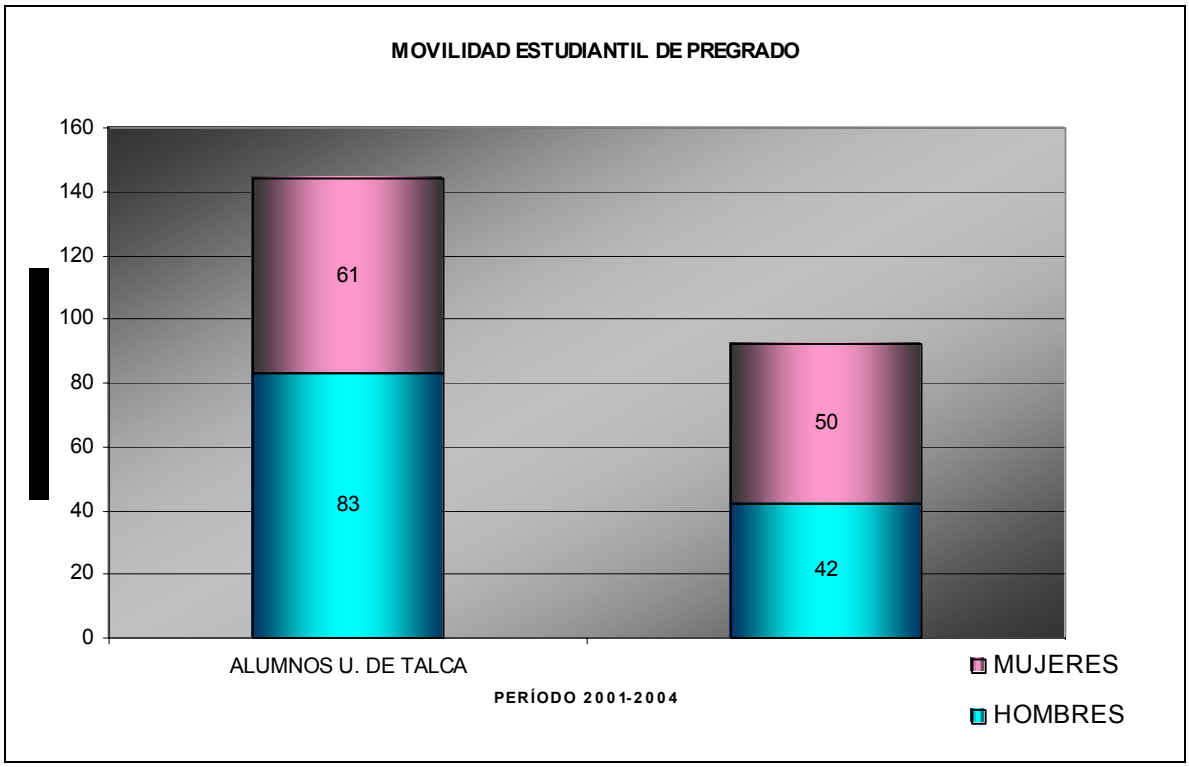
- Un semestre académico, cursando asignaturas que pueden ser o no homologadas en la universidad de origen.
- Estadías de investigación, con un tutor guía en la universidad de destino, pero sin cursar asignaturas.
- Prácticas profesionales: proyectos a realizar en la universidad de destino o en la industria local.

Financiamiento del Programa

- Los estudiantes que se encuentren en Movilidad, estarán exentos del pago de arancel en a U. de destino, al existir un convenio que lo especifique entre ambas universidades.
- Los alumnos extranjeros en Movilidad en la UTAL, dependiendo del convenio pagarán su alojamiento o recibirán este beneficio por parte de nuestra Universidad.

Resultados del programa

Se adjuntan los siguientes gráficos (3):


MOVILIDAD ESTUDIANTIL DE PREGRADO
160
140
120
100
80
60
40
20
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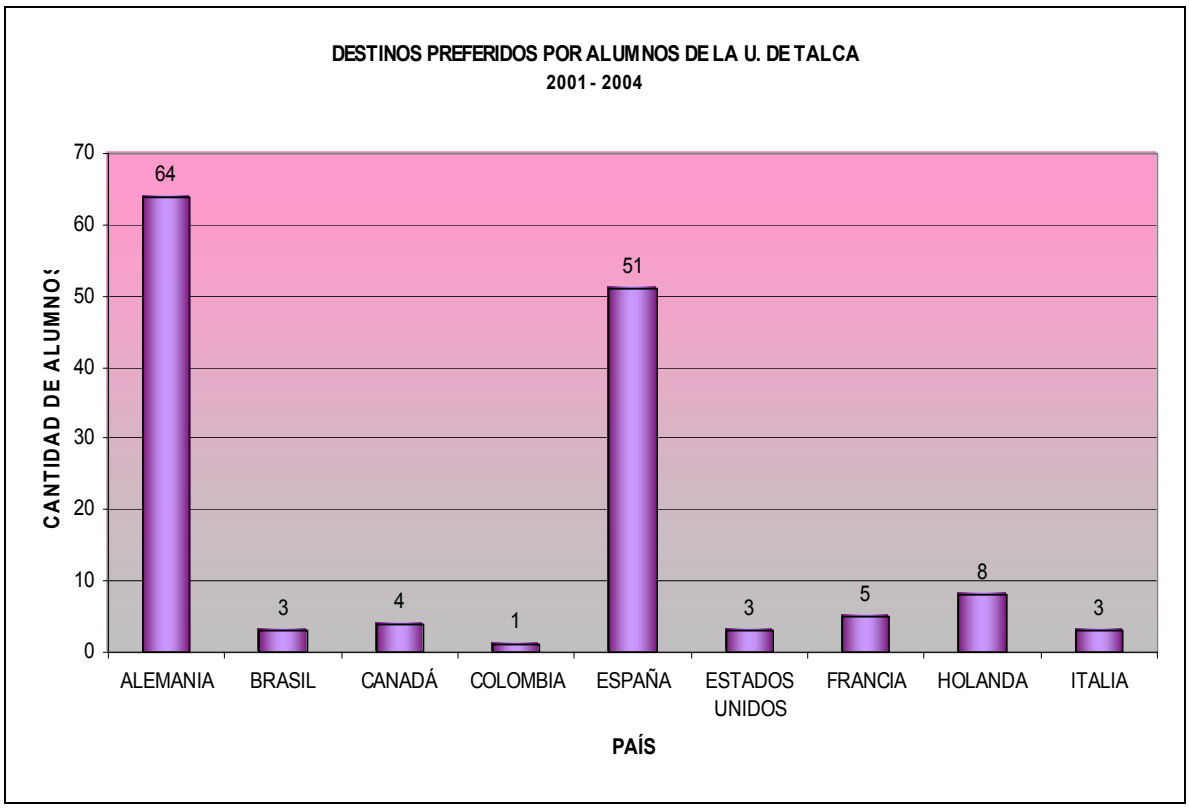
61
83
50
42
ALUMNOS U. DE TALCA
PERÍODO 2001-2004
MUJERES
HOMBRES


DESTINOS PREFERIDOS POR ALUMNOS DE LA U. DE TALCA
2001 - 2004
CANTIDAD DE ALUMNOS
70
60
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20
10
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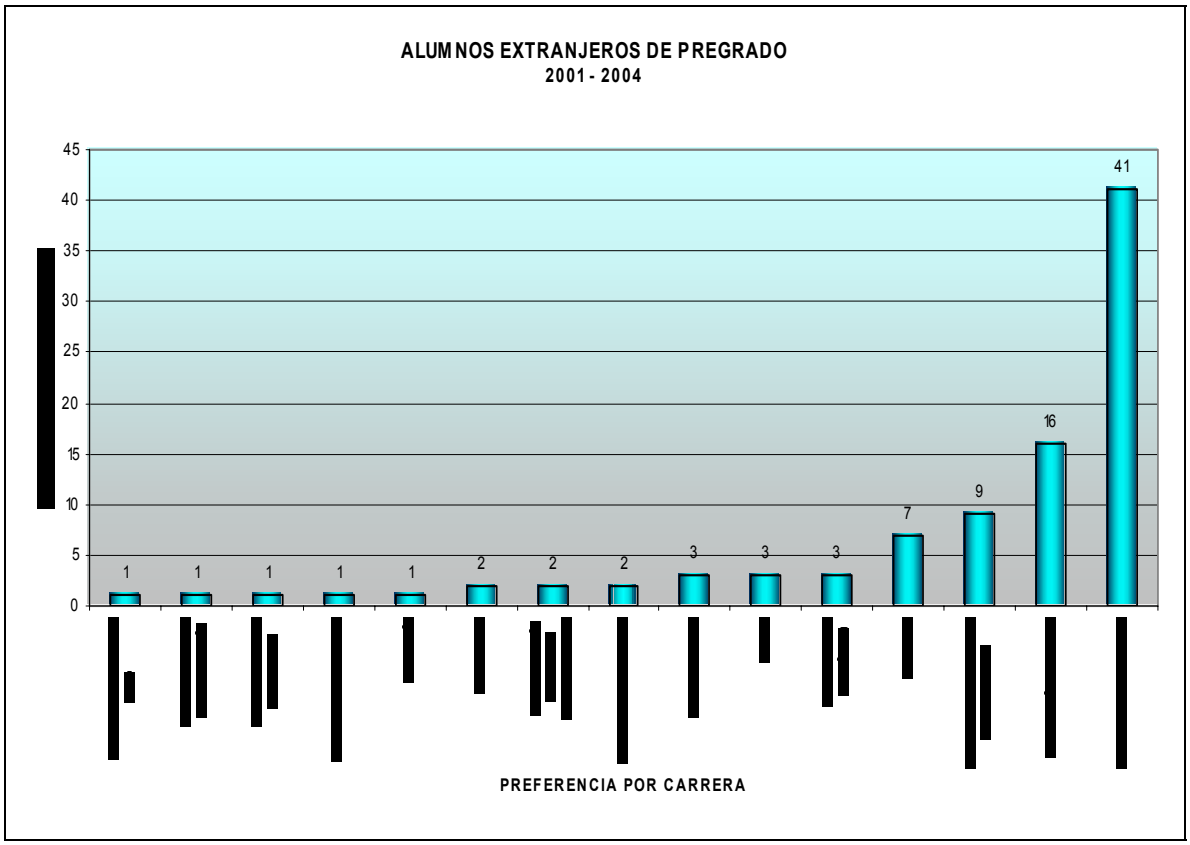
64
3
4
1
51
3
5
8
3
ALEMANIA
BRASIL
CANADÁ
COLOMBIA
ESPAÑA
ESTADOS UNIDOS
FRANCIA
HOLANDA
ITALIA
PAÍS



Proyección del Programa año 2010

Esperamos contar para el año 2010 con una Movilidad Estudiantil de 100 estudiantes de la UTAL en el extranjero.

Asimismo, recibir igual cantidad de extranjeros.

ALUMNI NETWORK

TRUST AND SCIENTIFIC CO-OPERATION IN INTERNATIONAL NETWORKS

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Abstract

This paper focuses mainly on social aspects concerning trust and network in relation to international scientific co-operation. Trust plays a crucial role as social capital and is an important factor of social order, especially in countries in transition. The paper deals with the hypothesis that low trust is the major problem of effective international scientific co-operation at personal and institutional level. Trust is also abused as soon as it is placed instead of being honored in low-trust environments. Furthermore scientific cooperation with developing countries is only fruitful if differences in employment systems as well as the role of universities become clear: Research and Knowledge Management. Different strategies to avoid the abuse of trust like control by contracts etc. are not useful instruments. Whether networks help to increase trust is discussed briefly.

Trust in scientific World

Trust has been discussed in different disciplines, like in economics (Williamson, 93, Ganesan, 97 and Sako, 92), Political science (Hardin, 01) and sociology (Parsons, 37, Luhmann, 88) as well as in other disciplines in different ways. Sociologically trust appears as the reduction of complexity and due to this as the reduction of uncertainty. Finally trust is for avoiding opportunistic behavior. There are two different ways to deal with trust. To analyze trust with a set of complex methodologies in a certain environment (conceptual framework) or to use trust as individual's tool for scientific cooperation (practical approach). In the second way the distinction between personal trust (limitation to non commercial relations) and institutional trust which characterizes more or less commercial transactions in social, cultural and political settings. We discuss both issues separately and try to use trust as an instrument for individual's attempts for research co-operation in the so called low-trust environments.

Research on trust is difficult and concerns the exact definition of the determinants of trust. The difficulty is the agreement upon the determinants by different scientists. We use the determinants of confidence, control, learning, communication and networking as determinants for trust taking Luhmann's complexity and autopoiesis as framework.

Trust as a social capital

Trust has become an emerging issue in the post-modern complex societies. It is argued that trust has been experienced as a central element of the social capital.

Historically, the trust has been playing a role in political systems of hierarchy where the security of individuals has been regulated centrally and almost no or only quite simple networks are existing. The anthropological impact of such systems is based upon a negative image of man. The placed trust by the political systems goes almost against zero. Trust is placed rarely because of the belief of abusing trust by trustees.

In opposition to that in radical liberal systems of societies where the freedom of individuals is the predominant factor, trust is affected by the growing complexity of the society itself or by the complexity of the networks. The extremely high disorder in an egalitarian system based upon a positive image of man does not allow measuring the impacts of trust (chaos system). In these societies the trust is placed, but it is not secure whether trust is abused or honored (high degree of uncertainty).

The societies based mainly upon the security or/and autonomy are historically balanced by the regulation through the law. The regulation of the extreme lines is guaranteed by social contracts and a rigid frame of behaviors with no or small change possibilities.

Social capital & social order

In the post modern societies the complexities have grown in almost all areas of life. The social order itself is a subject to high complexity. The trust has originally much to do with the social order. It is argued that trust plays an integrative function in the gestalt of social order (Misztal, 96, Parsons, 37). Parsons considers system-level trust in normative system as the main source of social order which is the result of norms prescribing trustful and trustworthy behavior. He rejects more individualistic explanations of trust according to which rational self-interest might be considered to be a basis for trust. Luhmann, 88 takes the trust as the reduction of complexity without which a communication cannot be organized easily. He argues that actors increasingly need trust because of the growing complexity of modern society and because the consequences of decisions are becoming more uncertain. Both arguments neglect to explain why trust emerges in individual cases, and what reasons individuals have for trusting each other. Arrow, 74 and Buiskens, 02 consider trust as a lubricant for cooperation between individuals and institutions in a society. It is assumed that trust is only possible if, for the trustor, the expected outcome of placing trust is preferred over the outcome of not placing trust.

The extent to which a truster is willing to take the risk of trust being abused by the trustee is the trustor's trustfullness. Trust cannot be defined easily, because of the elements hope, belief, expectation, assumption and emotion.

The indicators for complexity in modern societies are discussed mainly in terms of functions and structures, human images, degree of freedom and security, participation, change qualities and quantities and finally the causalities.

In the theories of social systems the above mentioned indicators are discussed in deterministic theories (pre-domination of structure against function) and the self-referential systems as introduced by Luhmann.

This paper focuses on trust from the non-deterministic theories putting emphasis on functions than the structure, dissensus rather than consensus, disequilibrium instead of adaptation, uncertainty rather than perfect society …

Trust as a social capital is an indicator for the development potentials of societies as well as individuals in a modern society. This means that the lack of trust hinders personal and institutional development. The process which leads to the lack of trust in a system is the risk of abusing the trust. In this case the necessary changes for parties involved in a trust situation who may obtain mutually a kind of pay-off is affected. The stagnation or change at a very low level is the result.

Trust however includes the possibility of acceptance to be depended from alters action. In modern societies (high-trust environments), this kind of dependency is organized rationally by mutual obtaining pay-off between individuals who, in the majority of cases, do not know each other. In the traditional societies the dependency is only accepted within the ingroups, clans, extended families, who are organized in traditional networks with an

exhausted number of information inside the group and isolation against the outside world. Luhmann talks about closed real systems with little or no need for energetic couple to outside world. Raiser, 99 identifies trust based on processes, based on kin-ship relations and extended or generalized trust, which allows us to enter into relations with unknown partners. From this, it can be assumed that there are differences between the security and trust. In the traditional societies the trust is a subject to security without any notion of uncertainty, forseeability or risk. It is simply based upon the norms of the traditional society, the individual's experiences and acceptance. The difference occurs only in the case of the acceptance of the risk outside the existing norms and in contact with outsiders from whom the behavior is unknown. In the societies where an individual is secure that a system is functional without risk, there is no need for him/her to place trust. Trust is inherent within the system itself. Trust is however necessary as soon as a system is open in its structures and within which according to the uncertainty and complexity, structural changes can take place due to the strong functional activities. The possibility of abusing trust is part of the game in this kind of the system.

We have been discussing the trust in modern systems in an abstract way. We have excluded the context in which the trust can be organized in terms of minimizing the risk and abuse of trust by developing certain tools, like networks and improving confidence, developing effective contracts, subcontracts and increasing honor trust, the trustfulness and trustworthiness in action with alters.

Trust & confidence

Trust has of course much to do with confidence. Although we have been mentioning the importance of the acceptance of being depended from alter in case of trust, we must assume that the quality of dependency goes hand in hand with the confidence of individuals in ones self-questioning, one's own autonomy and one's own qualification independent of any kind of time table and controls imposed by supervision either in a traditional system dominated by norms of the clan, ingroups and extended families or by doing scientific work in depended systems of higher education in public sector, especially focusing on staff in public universities. Confidence also refers to decide, who are the beneficiaries, what are the outcomes and how is the scientific work technically executed. Confidence means also understanding the risk and uncertainty and finally, what is much more important, the responsibility in terms of pay-off.

Placing trust

In his model Colemann assumes that placing trust in an uncertain situation is crucial for the trustor as well as for the trustee. However, placing trust by a trustor allows the trustees to honor or abuse trust. The expected outcome is that trust is honored by the trustee. The trustor regrets placing trust if trust is abused, but benefits like the trustee from honored trust. In the case of placing trust, the trustor voluntarily places resources in the hands of trustee without formal safeguard. This needs time to meet the action of trustee. Fig. 1 shows the system of placing trust.

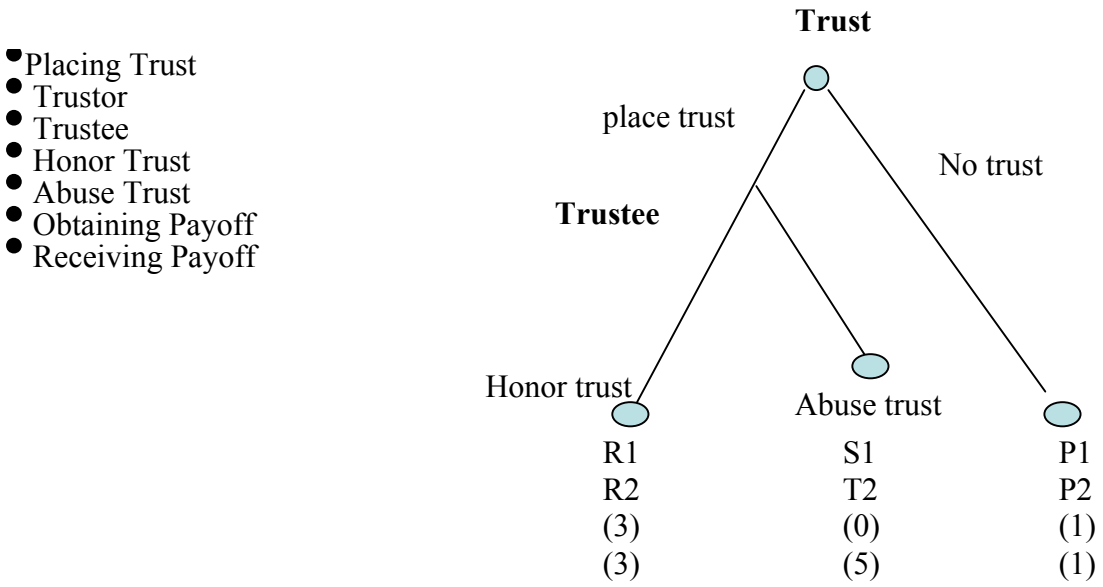

Fig.1: Trust Situation by Colemann, 90 (after Buskens)

In this model placing trust by trustor can be honored. In this case the obtained and received pay-off is 3 for each, trustor and trustee. In the case that trust is abused, the trustee receives a pay-off of 5 and the trustor zero. The trustor puts all resources in hand of trustee. He regrets however placing trust. He/she stops to place trust. The system goes back to a situation where the benefits for both parties go down to 1 each. A low situation of trust is the case. Risk and uncertainty are removed. Security at a low level of performance is the case. The difference between R1 and P1 and R2 and P2 as well as S1 P1 and T2 and P2 make the situation quite clear.

Increasing trust

Lack of trust has been identified as one the major restrictions to transfer of knowledge (Davenport, 92), especially in cooperation between industrialized and developing countries. Research is somehow an integrated part of the higher education employment and functional system in industrialized countries. This is necessarily and practically not the case in developing countries. The low rate of income of the staff does not allow the staff members to define research activities integrated in their daily activities as long as the research is not a complementary income source. Research management in this case must be replaced by the so-called knowledge management in order to understand research as a business at the university. This kind of transition is not an easy task since learning entrepreneurship and management is not part of the education in general. Very often the awareness is missing of how much knowledge potential is existing in the universities in these countries which is not used and cannot be used.

We want to discuss some issues of trust in relation to co-operation in scientific work. Since the risk of placing trust can be high in terms of abusing trust, in research co-operation tools are used to minimize the risk. These tools are: Contract, Communication and Network.

Contract & control

If a scientist wants to do a research work in co-operation a formal contract is necessary to overcome the lack of trust. Contract is assumed to decrease incentives of trustee to abuse and compensates at the same time the partner for the loss due to abused trust. Contracts increases furthermore the trustors opportunity for sanctioning the scientist and adjust the his/her beliefs about the trustworthiness of the partner. Contracts and subcontracts seem to be effective instruments of minimizing the risk of abused trust. However, in a long-term observation, the probability of arranging relationship with a formal contract decreases with the number of years. Lyon, 94 assumes that "subcontractors have been trading with their most important partners". In many cases the contracts are seen as instruments for control. Trustfullness and trustworthiness are forced by contracts. These effects that learning about changing expectation are neglected and the control does not allow to influence behavior and make the conditional dynamic cooperation possible. The larger the dynamics of incentives, the smaller is the probability for honor. As a matter of fact control effects, in principle, only explain the emerge of trust, but do not reduce distrust. The effectiveness of the control is very much depending upon the pattern of communication.

Social network & trust

Social networks are necessary settings in complex social systems. To improve learning (social aspect) and controlling (economical aspect) the network plays a great role. Social network is a "social resource" or "social capital" for reducing distrust (Colemann, 90). Effective control in social networks in case of force majeure as well as in case of opportunistic pattern of communication is much higher than outside organized networks. Control effects work particularly well if trustor can convincingly inform other trustors about the decits. As a matter of fact trustors who are embedded in social networks will generally learn faster from other trustors and are in a better position to control trustee smoothly because they receive simply more information and transmit information faster through the network.

As far as the confidence is concerned, in the case that trustor is confident about her/his relation to trustee; she/he would not follow the claims of other trustors within a network. Once a trustee asks for forgiveness after abusing the trust, the reaction depends on the experiences made before and introduced by others within the network (deceived or not deceived).

Social network analysis shows however that networks with different densities, centralized positions (outdegree, indegree variances and outdegree-indegree-covariances) transitivities and the network sizes have different impacts on the effectiveness of trust and control as well as distrust. For example, in dens networks trust and distrust may occur with the same density. Individual network parameters are properties of a trustee within a network. They can explain why one trustor in a network can place more trust in a trustee than another trustor in the same network. It can be expected that trustors in networks with fewer ties, and that trustors with more ties themselves trust a trustee (SEAG) more than trustors with fewer ties (RECALL & GEAR). It can be assumed that learning effects and control effects differ not only between networks but also within networks (Buskens, 02).

In order to summerize the empirical evidence for networking and in terms of co-operation, we refer to Buskens, 02.

Experiments with acteurs show that dense networks were extreme opinion about trustworthiness. This is a subject to learning through networks about others' experiences (Kollock, 94). Gulati, 95 assumes that interorganization ties between advertizing agencies and their clients have smaller probability of being dissolved. This is due to network properties and experiences in alliances. Uzzi, 96/7 found out that failure rates are lower the stronger the partners are integrated in networks. This seems to be the comparative advantage of trust in strong relationships in networks. Larson, 92 remarks that increasing trust after a trial period is easier in networks. He also remarks that relation between firms starts with small transactions in order to increase trust after trial period.

At a higher level of operation, the relation between organizations, the so called "network governance" (a group of firms that engage in exchange relationship), the trust increases even higher. This can be the case because in such network governances the "structural holes" are higher than in dense networks and the absence of a tie between two actors who are connected to a focal actor, leads to more information and promotion than dense networks.

Conclusively: Dens information in networks do not necessarily lead to more trust, but the content of the information; dens network improves trust, but distrust is often disregarded; network increases the control of behavior of trustees due to experiences and risks shared.

Network, University & scientific co-operation

The above mentioned issues play a great role in the restructuring universities in the next future. These are moving towards the political and what is much more important towards the financial autonomy. The basic idea is to combine university activities with extra-mural activities in order to generate income and make the scientific activities with the outside world possible. From my point of view, the problem of the staff is the lack of trust and confidence to start activities benefit to them and to the society. Especially in countries with low income of staff members at the university, there are good experiences for extra-mural activities. However, many of these experiences of the staff are based upon low trust and low confidence and the lack of a functional network. The majority is self-employed with the aspect of withdrawal from common activities. For these groups even a high degree of trust leads to establish only small scale enterprises avoiding risks and in some cases small scale networking. Staff with high confidence but low trust tends to become classical entrepreneurs with a tangible portion of individual's need for achievement and opportunism in cooperation.

Staff members however with a high degree of confidence and a high degree of trust are missing. The personal beliefs and values, contracts and organizational cultures are reflected in individual economic behavior such as strategy formulation, regulation of inter- and intrafirm relationships, recruitment practices or networking behavior as well as in the general patterns of consumer, saving and investment behavior in different cultures and societies (Bachmann, 01). We call them the real networkers (Ruuskanen, 03) committing to common activities and sharing risk among the members of the network. The reason for this specific situation is in many cases probably the inconvenient system of network (if any) and the probability of abusing trust.

The only activity which brings the staff closer to entrepreneurship is research. However, research at the universities in developing countries is a minor activity and less trustworthy than any other activity. In case of research trust is abused permanently after starting research, collecting data, analyzing data etc. But the final result is missed in the

majority of cases, especially in the case of cliental research. Experiences however show that good researchers, especially those who have cliental research projects at universities are good entrepreneurs. Research activity at the university goes sometimes beyond the requirements for entrepreneurship activities. With other words, improving research activities is simultaneously improving the entrepreneurship. But we are not talking about governmental general support of research, but about cliental research, especially from enterprises and the society at large in terms of research and development.

Trust and research quality

According to evolutionary theory of epistemology (Popper, Campbell), RESEARCH develops through a process of critical selection from among variants. There is no need to debate on this since we are aware that none of the scientific activities is as public as the research work and its outcome. The evolutionary principle refers to the fact that the tangible outcomes of scientific work are human made according to the philosophical term "Contingency" (something which is neither necessary nor impossible). With other words it is something that has happened beyond all other possibilities. It is simply the case that we are facing with. This sounds at first quite fatalistic, but it is part of the evolutionary process of scientific work which has been developed through a number of scientific debates more or less beyond the ethical aspects and value judgments within the scientific community and the consensual agreements and acceptance in the society.

This makes the definition of quality almost impossible if we don not analyze the process of selection in scientific work and network.

Quality however is the nature of a phenomenon and epistemologically does not refer to the impression or intensity of the attribute of a phenomenon (quantity). However, we understand the quality in close connection with something better. And this makes the quality so difficult. A better quality is a matter of consensus, and is a question which is subject to value judgment among a group. As we know value judgment has much to do with the interests and goals, visions and mission. The consensus itself is a dynamic process within the scientific community which tries to identify the indicators for a quality.

Trust in achieving quality

The major question here is how the selection is taking place and how the decisions have been made and finally who makes the decisions. To come closer to an answer it seems to be necessary to identify those groups who at least are responsible for the contingency. These are the so called "Gatekeepers of scientific work" (Crane, 67). It is the scientific community. These are the "Peer reviewers". Polanyi, (66) regards peer review as embodying the principle of mutual control, foresting the formulation of judgment with respect to novelty, accuracy, and relevance of research results. Proponents of the system argue that it is more effective than any other known instrument for self-regulation in promoting the critical selection that is crucial to the evolution of scientific understanding (Atkinson & Blanpied, 85, National Research Council, 87). No need to clarify the role of trust and network.

Values behind the Selection

Reliability

Theoretically, the peer reviewers examine the scientific work carefully from a professional point of view, and then recommend that they be accepted or rejected, say of

good quality or not. In the case of scientific journals and papers published in famous periodicals with a high rate of competition and strong selection Marsh & Balll (89) summarized that in the case of psychological journals the extend of agreement between reviewers, measured on a scale from -1.0 (entirely contradictory recommendations) to +1.0 (complete agreement, corresponded to an average of 0.27 (intra-class-correlation coefficient).

The following table gives other examples for the ICC-Coefficient of few other journals concerning peer reviewers judgments and the **reliability**.

Authors	Journal	ICC-Coefficient	Range
Marsh & Ball, 89	Psychological Journals	0.27	-1.0 to + 1.0
McPhail & Simon, 87	American Sociological Review	0.16	-1.0 to + 1.0
Hargens & Herting, 90	American Sociological Journal	0.28	-1.0 to + 1.0
Lampert/ Hargens & Herting, 90	Law & Society Review	0.17	-1.0 to + 1.0
Ciccetti, 91	England Journal of Medicine	0.26	-1.0 to + 1.0

The above research findings show that even in the case of scientific journals, the reliability of reviews is relatively low which means that there is not quite clear agreement upon the quality of research work.

Fairness

This has very much to do with the ***"Fairness"*** of the selected reviewers. Cole, Cole and Simon (81) argue that "the fate of a particular grant application is roughly half determined by the characteristics of the proposal and the principle investigator, and about half by apparently random elements which might be characterized as "the luck of reviewer draw".

Validity

Another important issue as far as the research work quality is concerned is the **"validity"**. The question is whether there exists a generally accepted criterion for research quality. Unfortunately, it is very difficult to establish consensus on this point. The criterion must be developed from case to case from discipline to discipline. One of the major difficulties is that there are only a few analyses about the rejected proposals, manuscripts and concepts. In the Australian Case (Fiona Q. Wood, 91) the ceiling of research funds available through the supporting agencies had led to a decline in the proportion of overall proposals that could be supported by those agencies due to the insufficiency of the selection of the peer reviewers. For this reason the suggestion was that the universities develop an overall research management plan and the appointment within many universities a pro-vice chancellor for research, the functions of the research grant office are receiving greater scrutiny.

Role of the alumni-network

Alumni-networks are strong instruments for increasing the objectivity of cooperation and peer reviewers trustworthiness. The stronger a network the less the possibility of free will and individual's decision.

Since 1999, the consortium of the universities Göttingen, Kassel and Marburg with her local partners in South East Asia, Latin America, Egypt-Arab Region and Iran has organized and carried out 15 Alumni-meetings with different topics One of the most interesting issues to the Alumni-networking is the presentation of about 600 different scientific papers and posters in 11 Alumni-meetings since 1999. These are preceded in five publications and 12 reports. About 1000 Alumni (incl. opening ceremonies) have been participating in these 12 meetings from more than 80 Universities in the regions of activities. About 25% of the participating alumni have not been supported by any German institutions before. This demonstrates the effect of the gaining new members and interested groups for the alumni. 9 regional offices at the local level have been established in this time and are in function. 20 newsletters have been edited and put onto internet and are existent as hard copies.

From these figures, we can easily imagine the effects of the Alumni-networking as far as the interactions, dialogues and exchange of ideas and experiences are concerned. One of the major effects of these alumni-meetings is that the alumni has developed strong communication between them and has developed a very good interaction between the alumni and their host universities as well as their supporting institutions.

Establishing the Alumni-networks in different regions requires a minimum trust which goes beyond the short term interests of the alumni for attending an international conference annually. The minimum trust allows to organize and carry out symposia and workshops. However, the tacit knowledge about the alumni is to build up a basic of trust as social capital in order to offer the resources in the hand of trustees and make the cooperation possible. Without the alumni network, this symposium would not be possible to talk about the aspects of cooperation and look for strategies to strengthen and intensify it. Based upon dialogue and communication during the fifteen alumni-networks, the partners could develop a world-wide network which can improve the cooperation for the future. However, the evaluations show that the alumni-network regions have different characteristics as much as the indegree and outdegree parameters of the alumni-networks are concerned.

In order to be able to answer this question, the Summer School developed another discussion level: The different alumni network groups GEAR, GIAN, ReCALL and SEAG got the task to introduce the highlights and success stories as well as the conflicts and the experienced solutions and finally the lesson they had learned from their experiences. The results of this kind of analysis should be used to develop the optimal organization of the Alumni-Network in future.

The following table is a rough analysis of some determinants based upon the results of some workshops and experiences of our 15 different conferences and workshops. The table does not focus on some qualities compared between the alumni-networks, but is an indicator for improving the network with different weight for different networks: In case of GEAR emphasis has to be put on strengthening the social context and involving a larger number of the alumni in alumni-network activities and reducing the conflict potentials. In case of GIAN much has to be done in strengthening the cooperation and the information system in the alumni-network and to reduce the hidden conflicts between the alumni. ReCALL is suffering under problems of social context, participation, individualism and low trust, especially in relation to German universities and consortium. Finally SEAG

should work more on confidence in expanding the number of participants looking for local complementary funds.

Alumni-network				
	GEAR	GIAN	ReCALL	SEAG
Social context	low	low	low	high
Participation	low	middle	low	high
Information	low	low	low	high
Trust	low	middle	very low	middle
Conflicts	high	middle	middle	low
Scientific Exch	high	high	high	high
cooperation	high	low	high	middle
Individualism	high	high	high	middle
Mini-workshop	very low	high	middle	high
Network indegree	very low	very low	low	high
Network outdegree	low	low	low	middle
Network density	low	low	low	middle

No need to say that the scientific exchange activities are at a very high level in all alumni-networks.

Conflict management within the alumni networks have been analyzed and discussed during the summer school 2004 in Germany in terms of organization, relation to alumni at large, participation and carry out conflicts. The group results which can indicate the characteristics of the networks are summarized as follows:

GEAR

- Ineffective steering committee;
- Some members have no access to the Internet;
- Larger number of members can not be accommodated as symposia participants;
- Larger number of new comers plus the budget restrictions.

GIAN

- Lack of information;
- Lack of contribution;
- Gaining enough financial support.

ReCALL

- Lack of institutional support;
- Budget restriction;
- Lack of information;
- Paticipation and coordination;
- One-man-team;
- Weak local structure.

SEAG

- Needs complete structure of organizing committee;
- Good planning during workshops, but only some are followed up;

- Professional jealousy, e.g. between junior and senior staff;
- Rejection of abstracts submitted for SEAG symposium caused some alumni to lose interest in participating forthcoming activities;
- The participation of regional reviewer was excluded.

What can be learned through the alumni-networks by the consortium and what are the effects of learning related to individual and global parameters of the alumni-network, especially in terms of scientific cooperation in low-trust environments?

What are the effects of control through alumni-networks and how are these effects on individual and global parameters of the alumni-network (trust), especially in terms of effective cooperation?

How important are individual parameters compared to alumni-network parameters for the description of various network effects on trust, especially in terms of improvement of the staff and joint venture projects?

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RECALL EN CAMINO HACIA EL CAMBIO? IMPLICACIONES DE LA EVALUACIÓN AL TERMINAR LA FASE DE CONSOLIDACIÓN[A)]

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Contexto

La evaluación presentada a continuación, la cúal fué realizada en el encuentro alumni-network en Talca/Chile se enfoca en el reslutado de mutuos esfuerzos de los alumni y del Consorcio para el establecimiento y mantenimiento de un **trabajo** efectivo **de red** en América Central y América del Sur. La red fué establecida para mejorar el intercambio científico y el intercambio de experiencia entre alumni y sus universidades de estudio en Alemania, conforme a los objetivos del Ministerio Federal de Cooperación Económica, BMZ y el Servicio Alemán de Intercambio Académico, DAAD.

Durante los encuentros en San José, Lima, Monterrey, Recife y recienmente en Talca, llegó a ser cada vez más evidente que el establecimiento de una red en esta región ha podido alcanzar un progreso efectivo en posibilitar encuentros científicos en el área, pero al mismo tiempo ha tenido que enfrentar algunos problemás básicos. En ninguna de las redes establecidas por el Consorcio en otras regiones como Asia Sur-Este, Región Egypto-Arabia y en Iran los problemás se presentan del mismo modo. El objetivo principal del presente estudio es él de identificar la situación específica de ReCALL. Apunta a los cambios estructurales y funcionales que tendrán que occurir, en caso que las actividades alumni continuen.

Observaciones básicas

Desde el punto de vista evaluador, ReCALL tiene que ser identificado como un ambiente de deficiente confianza, lo cúal afecta la estabilidad, la sostenibildad y el seguimiento de una red eficiente y efectiva. Ambientes de baja confianza pueden ser caracterizados como ambientes en los cúales el flujo de información, los patrones de control y comunicación son afectados por desconfianza y comportamiento suspicaz de los afiliados. Confianza y hasta cierto punto confiabilidad están faltando. El problema mayor es que la red empieza a derribar en grupos pequeños, que persiguen objetivos específicos del subgrupo, más allá de la red existente, independiente de si el subgrupo alcanza eficientemente su meta específica o no. El resultado es que ciertos grupos de los alumni, asi como miembros del Consorcio, son considerados como intrusos hacia los cúales no se busca estrechar la relación. Sin embargo, esta situación requiere la definición nueva de todo el programa del trabajo de alumni y la verificación de la conformidad con los objetivos de las instituciones de apoyo así como del Consorcio. La identificación del ambiente de deficiente confianza se basa en los resultados de previas evaluaciones, observaciones y discusiones abiertas durante los encuentros, considerando indicadores decisivos como comunicación, coeficientes de grado interior y exterior, seminarios, participación, información y conflictos existentes, etc. Partiendo de estos resultados, la evaluación reciente fué extendida para examinar los indicadores de confianza a través del desarrollo de un cuestionario adicional (ver anexo) desde el punto de vista de los alumni.

En otras palabras, esta hipótesis es probada por la examinación de las actitudes de los alumni, su comportamiento y sus reacciones verbales.

Metodología de evaluación

La evaluación en Talca ha sido ejecutada en tres diferentes direcciones:

1. Como el simposio ha estado siguiendo dos objetivos interrelacionados estrechamente, es decir el intercambio científico y el trabajo de red, ha sido de gran importancia probar si los objetivos del simposio han sido claros para los participantes, y en caso que sí, si las metas fueron alcanzadas al final del simposio y si los resultados fueron satisfactorios. Además fué relevante preguntar acerca de las percepciones de los participantes en relación a los contenidos del encuentro científico y del encuentro de trabajo de red. Finalmente la organización, el plan, el esquema de comunicación y el ambiente del simposio fueron sujetos de la evaluación. Tres preguntas abiertas fueron colocadas al fin de esta parte del cuestionario para llegar a saber que fué especialmente apreciado, que hizo falta a los participantes y cúales han sido sus recomendaciones para el simposio a realizarse más en adelante.
2. En el análisis de valoración, se preguntó acerca del grado de participación de los alumni asi como acerca de su motivación para participar, sus funciones específicas dentro del trabajo de la red, los artículos científicos y posters que han presentado. Además quisimos saber si acerca de la participación en la red fué entregado un informe al sitio o institución de trabajo de los individuos, y en caso que sí, como han sido las reflecciones referente a este informe; y finalmente, si los alumni creen que su participación ha sido reconocida en su sitio de trabajo como base para la planificación de carrera profesional. En el caso que los simposios han sido valiosos desde el punto de vista de los alumni, quisimos saber, si ellos han tenido o sentido algún efecto tangible en las instituciones correspondientes y en caso afirmativo, que tipos de cambio se han realizado. Y por último nos interesó tener conocimiento acerca del contacto entre los alumni mismos y entre alumni y su universidad de estudio en Alemania.
3. En el análisis de impacto de la red, quisimos saber como es la calidad y la cantidad de información entre los alumni, los alumni y el Consorcio y el DAAD. Además se quizó examinar de que manera clasifican los alumni a la cooperación científica dentro de su sitio de trabajo, y como valoran la cooperación con sus colegas y finalmente la cooperación con sus contrapartes y compañeros alemanes. Además, parecia importante evaluarle a la red en términos de comunicación, confianza, intercambio científico, proyectos, participación y como organización en proceso de aprendizaje. Otros temás fueron la gestión del conocimiento y de la investigación. Algunas pocas preguntas abiertas fueron usadas para preguntar también acerca de los "embotellamientos" de la cooperación y recomendaciones para mejorar.

Resultados de la evaluación

Evaluación del encuentro en Talca

Los resultados de los tres diferentes aspectos será discutido de la siguiente manera. Los resultados de la 1^{era} y de la 2^{nda} parte considerarán los resultados de las previas evaluaciones, mientras que los dos primeros descubrimientos son resumidos en el 3er aspecto sobre la base de la efectividad de la red.

Aquí uno de los mayores descubrimientos es que después de cuatro años de actividades alumni los objetivos del encuentro no han sido muy claros para los participantes *(n=28*). El valor de 1.75 de una escala de cuatro perfiles se encuentra junto al 2, el cúal representa el punto de transición hacia el área negativa indicada en la figura (área coloreada).

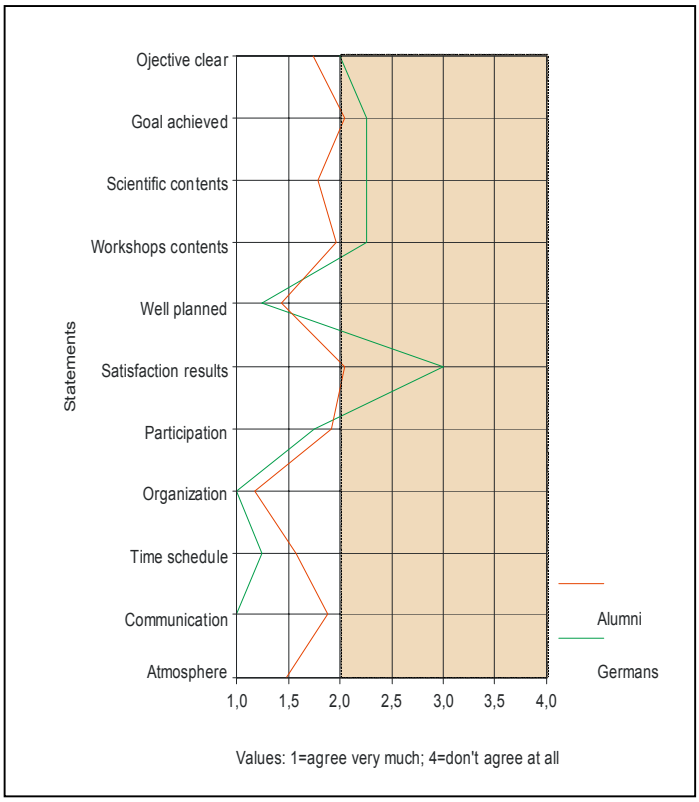
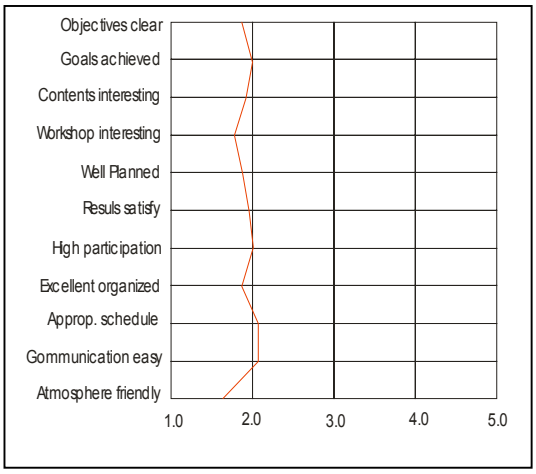
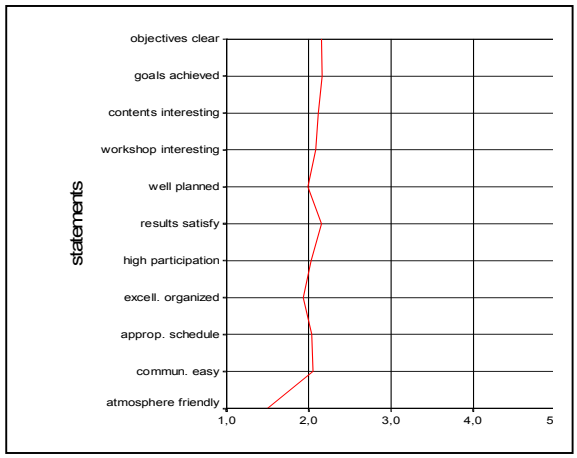


Fig.1: Opiniones de los participantes acerca del encuentro en Talca/Chile 2004

Un aspecto interesante es que los cooperantes alemanes (n=5) sienten más necesidad para recibir aclaraciones acerca de los objetivos que los participantes (valor promedio=2.0).

Los resultados de los encuentros previos son similares (Fig. 2). Sin embargo, no se puede descubrir la razón por la cúal los objetivos de los encuentros no han sido claros o no se han venido aclarando. Los representantes del DAAD y del Consorcio han tratado de clarificar los objetivos del trabajo de red –alumni para los alumni. Es posible que los alumni se enfocan en sus propios objetivos individualistas, los cúales no parecen entrar en conformidad con las metas del trabajo de la red. Este hecho se puede definir como indicador principal de desconfianza en organizaciones de apoyo.





Monterrey Recife

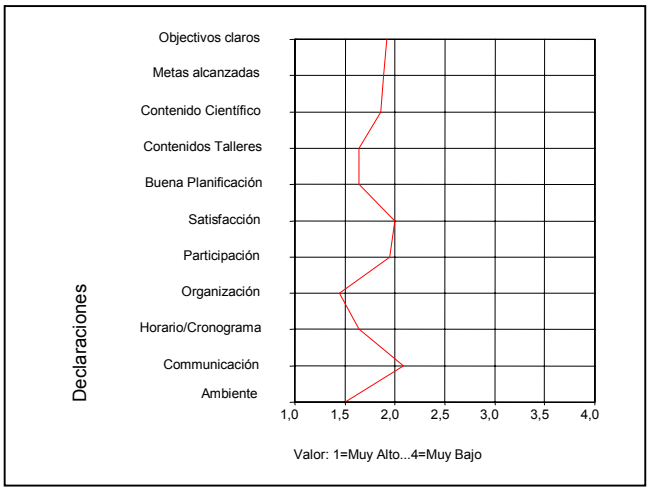


Fig. 2: Resultados de evaluación en encuentros alumni previos

Lima

Se hace evidente que en todos los eventos previos el alcanze de los objetivos tampoco se encuentra en un nivel satisfactorio. El bajo grado de satisfacción de los participantes durante los encuentros es otro indicador para la desconfianza. En Talca, el grado de satisfacción se encuentra en el área negativa, sobre todo en los participantes alemanes. En todos los demás encuentros (excepción Monterrey) los resultados se muestran similares. La comunicación como indicador para una interacción interactiva ha sido valorada negativamente en Talca, como en los demás encuentros. Este hecho está estrechamente relacionado con el deseo de los participantes de ejecutar el simposio y publicar en idioma español. El intento de los miembros del Consorcio de tener a los idiomas inglés y alemán como idioma común no ha sido exitoso. Sin embargo, la comunicación en todos los encuentros de alumni se ha dado parcialmente en español, sobre todo en los grupos de trabajo. Es probable que la introducción del español como idioma oral e inglés/alemán como idiomas escritos ha limitado el ambiente de confianza. Esta situación ha hecho casi imposible la interrelación entre ReCALL y otras redes alumni,

GEAR, SEAG y GIAN y ReCALL se ha vuelto a ser una red regional específica dentro de Latino América.

La organización y el ambiente de los simposios han sido valorados muy altamente en todos los eventos desde el año 2000 y también en Talca, como se puede observar en las figuras. Esto se debe a los esfuerzos de los comités de organización a nivel local. Especialmente en Talca, los eventos culturales, la alimentación y el alojamiento han sido organizados de manera excelente.

Fig. 3 muestra la distribución de la valoración en términos de organización y contenido del simposio. La distribución representa otro indicador para la opinión específica individualista de los alumni, para su desacuerdo y para una red disfuncional. Especialmente los contenidos del simposio han sido evaluados a un nivel más bajo en comparación a los anteriores encuentros de la red-alumni.

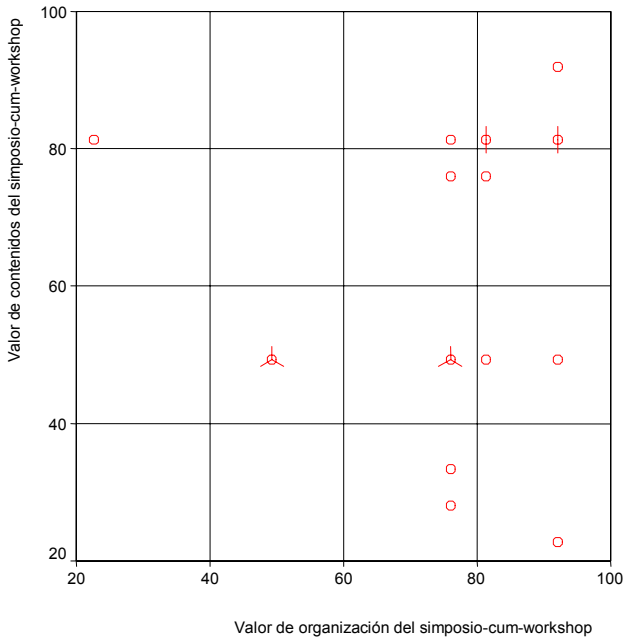


Fig. 3: Valoración contenidos y organización del simposio en Talca 2004 (n=28). Radiaciones muestran el número de casos

La razón para este resultado se encuentra en la estructura del encuentro. El tema para el simposio fué "International Scientific Co-operation in Higher Education – Participation, Partnership and Perspectives". Para poder tratar este tema tan importante es necesario contar con un conocimiento teórico sobre la cooperación científica internacional. Sin embargo, o no existe una base teórica acerca de la cooperación científica, o bien ha hecho falta esta base durante el taller. El intercambio científico y las discusiones dentro de los grupos científicos han sido, naturalmente con excepciones, de un nivel bajo y se han enfocado en los informes individuales de los participantes con poco o nada de generalización fundamental para un ambiente de aprendizaje y una comunidad aprendiendo.

El hecho que las experiencias individuales han sido discutidas en grupos pequeños de trabajo, ha dado claridad que un tema como este no es apropiado para grupos de trabajo con una estrecha orientación disciplinaria y no es de mucha ayuda para fortalecer la idea del trabajo de red y del intercambio científico en una comunidad científica orientada hacia la interdisciplinaridad. Desde el punto de vista del evaluador, el proceso ha llevado a la

apariencia de redes pequeñas, las cúales - dentro de su estructura – enfocan más en los intereses y objetivos de los miembros de este subgrupo: existiendo muchos grupos pequeños con poca o ninguna relación entre ellos.

Si este camino hace sentido para el trabajo de red de alumni y si ofrece conformidad con los objetivos de las organizaciones de apoyo, y finalmente si puede ser organizado más allá de la red-alumni y dentro de los programas de apoyo, será discutido más en adelante.

Durante el Simposio-cum-Workshop, los alumni apreciaron en un grado muy alto tres ejes principales del encuentro. El primer eje se enfoca en la organización, contexto cultural, alimentación, alojamiento y ambiente del simposio (mayoría de opiniones). El segundo bloque se enfoca en las discusiones en grupos pequeños e intercambio de ideas. El tercer grupo de opiniones (solamente dos) se refiere a los contenidos científicos:

1. Ambiente; ofertas culturales excelentes; alojamiento y alimentación excelente; atención; hospitabildad del equipo Talca; anfitrión fué amable; hotel culturalmente interesante; ambiente inspirador; ambiente abierto; ambiente abierto amable; anfitrión excelente; trabajo de red personal; muy bien organizado; facilidades excelentes; organización, hotel, etc.; organización; actividades culturales bien organizadas;
2. Encuentro de colegas; grupos pequeños y discusiones intensivas; discusión abierta e intercambio entre participantes; oportunidad para discutir tópicos del futuro en español; oportunidad para discutir las metas futuras de ReCALL; intercambio de ideas;
3. Presentaciones interesantes de ponencias; presentación científica en grupo; ayuda y apoyo por el CGKM.

A los alumni les ha hecho falta una base científica concreta y una estrategia para el futuro (1er grupo de opiniones), discusiones y alternativas de re-estructuración (2^{ndo} grupo de opiniones) y otros aspectos (3er grupo de opiniones):

1. Pasos más concretos (operacional) para el futuro; más discusión concreta de los objetivos de la red y DAAD; algunos se encontraron preocupados por si mismos y no respondieron a los intereses de los grupos; materiales escritos; perfiles de participantes; tópicos concretos del simposio; más información antes del evento; más input antes del encuentro; más participación de alemanes en key-notes; temás científicos en sesiones; lecciones, conceptos, estrategias;
2. Mejor organización del alcanze de metas; intereses más específicos; discusión de proyectos reales entre participantes; discusión; re-estructuración; ejemplos de problemás sociales de Chile;
3. Tiempo libre para visitar Talca; asuntos personales; no hubo tiempo para visitar Talca; participación de estudiantes; personas del taller anterior.

Para el futuro, los alumni desean proponer:

1. Más sesiones científicas; discusiones estratégicas pre-definidas; ponencias completas a ser enviadas con anticipación; ponencias completas antes de iniciar el simposio; relación más fuerte hacia los objetivos; intercambio de experiencia profesional; más apertura para participación; intereses particulares de la región;
2. Lugar de estadía y conferencia deben estar cerca uno del otro; organizar taller un año antes; organizar por lo menos 4 mini-talleres; más interacción dentro de la organización local; mejor planificación de la moderación para las discusiones en

grupo; solamente tres dias de trabajo y un día de visita; mejor preparación de lo que los alumni desean alcanzar durante la conferencia; ser más estricto en lo que se refiere a fechas limites (deadlines); alojamiento y facilidades a un nivel más bajo y no tan lujoso; relaciones más amables, sobre todo entre latinos;

3. Concentración del trabajo en las necesidades de la red; discutiendo proyectos reales entre los participantes; mejorando la comunicación entre las contrapartes; discusión más específica dentro de la red; punto desde el cúal muere o sobrevive (crece), hagamoslo crecer; re-pensar y re-estructurar la función de la red.

Para la así llamada "Fase de consolidación", el Consorcio ha entregado una propuesta en la cúal la necesidad de continuación de las actividades de red ha sido dirigida al DAAD, pero ha sido rechazada por la revisión de pares. Gracias al DAAD y conforme a la importancia de la cooperación científica entre Talca y la Universidad de Göttingen, el encuentro alumni tuvo lugar.

Con el fin de entender la situación de la red-alumni en Latino América y la necesidad para continuar el trabajo en la región, un análisis de impacto fué realizado en Talca en el año 2004. Se supuso que el impacto del encuentro alumni en una mejor organización del sitio de trabajo del alumni y/o en sus sctividades específicas en el sector privado o público o en instituciones de la educación superior sea estrechamente relacionado con su motivación para futuras actividades, en cúanto se trate del mantenimiento de la red-alumni.

En este análisis de valoración, preguntamos acerca del grado de participación de los alumni, así como de su motivación para participar, a más de otros puntos mencionados anteriormente.

Los resultados del análisis de valoración se resumen de la siguiente manera:

Impactos indirectos

Los alumni le evaluan a la red-alumni en Sudamérica como indicado en la tabla 1. Las valoraciones comparativamente muy altas y altas decrecen desde un 73% en Recife a un 66.6% en Talca. Al mismo tiempo, la indiferencia y la valoración baja suben de un 18.9% en Recife a un 33.33%. Eso representa un desarrollo negativo de la valoración global del trabajo de red-alumni dentro de un año.

Tab. 1: Valoración global del trabajo de red-alumni en Recife (2003) y Talca (2004)

		Recife	%	Talca	%
Válido	Muy alto	4	10,8	9	33,3
	Alto	23	62,2	9	33,3
	Indiferente	6	16,2	8	29,6
	Bajo	1	2,7	1	3,7
	Subtotal	34	91,9	27	100.0
Faltante	Sistema	3	8,1	0	0.0
Total		37	100,0	27	100,0

La razón, o las razones, para este desarrollo será discutido en el resumén y las conclusiones de la presente evaluación.

Tab. 2: Aspectos motivacionales para asistir al encuentro red-alumni en Recife y Talca

Aspecto Motivacional	Recife						Talca					
	Muy importante		Importante		Para nada importante		Muy importante		Importante		Para nada importante	
	n	%	n	%	n	%	n	%	n	%	n	%
Asistencia a una Conferencia Internacional	25	69,7	8	22,1	3	8,2	10	40,0	15	60,0	-	0,0
Encontrar Colegas y Amigos	21	58,3	15	41,7	-	0,0	16	64,0	9	36,0	-	0,0
Encontrar Colegas Alemanes	17	48,6	17	48,6	1	2,8	13	48,1	10	37,1	4	14,8
Tema de la Conferencia	19	52,8	15	41,7	2	5,5	6	23,0	17	65,4	3	11,5
Cooperación Científica	26	74,3	72	20,0	2	7,7	17	68,0	8	32,0	-	0,0
Oportunidad de Viaje (Turismo)	6	17,1	17	48,6	12	34,3	2	8,0	10	40,0	13	52,0
Actividad Específica Alumni	21	60,0	11	31,4	3	9,6	7	28,0	15	60,0	3	12,0
Planificación de Carrera Profesional	12	34,3	19	54,3	4	11,6	16	64,0	9	36,0	-	0,0
Desarrollo Personal	21	61,7	11	32,4	2	5,9	10	40,0	12	48,0	3	12,0
Otros: cultural, sinergia, colegas cooperantes	-		1		1		-		1		-	

La tabla muestra tendencias similares en Recife y en Talca. Valoración alta de la motivación referente a la cooperación científica, el tema de la conferencia, así como el encontrar colegas y asistir a una conferencia internacional en ambos encuentros. Lo que es diferente, aunque estadístamente no significante, es que las valoraciones han sido movidas en muchos casos desde muy importante a importante, como en el caso del tema del simposio, cooperación científica y asistencia a conferencias internacionales. En el caso del encontrar a colegas alemanes y del tema de la conferencia la "no-importancia" se encuentra en mayor porcentaje.

Para alcanzar un mejor resultado, preguntamos acerca del valor de los encuentros científicos de los alumni. Es evidente que el objetivo principal del trabajo de red-alumni es el establecimiento y el mantenimiento de las redes alumni y no necesariamente la conferencia científica. Los temas de las ponencias en los encuentros de alumni son interdisciplinarios e interculturales. Los científicos tratan temas ubicados en un rincón de su limitada orientación por disciplina, o incluso discuten preguntas en el contexto de su ciencia específica. Quisimos saber como los alumni evalúan la calidad de los simposios con sus caracteres específicos. En la tabla 3 se muestra la clasificación del valor científico de los encuentros en comparación a Recife.

Table 3: Clasificación del valor científico del Simposio en Recife y Talca

		Recife %	Talca %
Válido	Muy alto	18,1	11,1
	Alto	43,8	33,3
	Mediano	32,4	51,9
	Bajo	3,8	3,7
	Subtotal	98,1	100,0
Faltante	Sistema	1,9	-
Total		100,0	100,0

El valor científico del encuentro en Recife es estimado más alto que en Talca. Esto se debe al tema de los simposios en los dos sitios. La especificación de los alumni en Talca se encuentra en los alumni invitados, que de alguna manera están involucrados en la cooperación científica, mientras que en Recife el tópico del simposio fué de caracter científico interdisciplinario: " Globalisation and Poverty - The Role of Science". El hecho que fueron presentadas pocas o ningunas contribuciones teóricas en Talca es una razón para esta distribución en la valoración.

Cinco participantes de los que han estado presentes en Talca han atendido todos los encuentros en Costa Rica, Perú, México y Recife. Diez de los presentes en Talca han asistido en Recife, 13 en Monterrey, 14 en Lima, 11 en Costa Rica. 11 han participado solamente en uno de los anteriores eventos, 5 en 2 simposios y 2 en 3 simposios. Excluyendo Costa Rica como un encuentro atípico de alumni (no fué de trabajo de red) la siguiente figura muestra la distribución descrita.

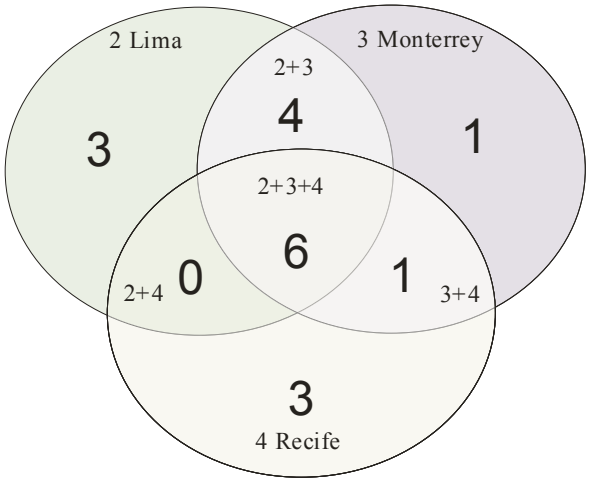


Fig. 3: Intersección del número de participantes en diferentes encuentros de alumni en Talca

La figura muestra que está faltando un núcleo que esté continuamente sosteniendo la red. Esto lleva al hecho que concepciones y decisiones establecidas por participantes de un encuentro no son seguidas por los participantes en el próximo encuentro. Concepciones, intentos de re-estructuración y planes son revisados y corregidos de encuentro a encuentro. Eso naturalmente representa una influencia negativa en la sostenibilidad de la red en ReCALL. En la mayoría de casos, las decisiones ya tomadas en un encuentro anterior son discutidas y revisadas nuevamente y se plantea otro inicio nuevo. En Talca, los participantes discutieron este aspecto en una situación un poco conflictiva y establecieron nuevas fechas limite, nuevos objetivos y una nueva concepción para el futuro de ReCALL en base a la sobrevivencia de la red. Este punto será discutido en las conlusiones, y los efectos del nuevo concepto desarrollado en Talca: un sujeto para confianza y desconfianza mutua como capital social indispensable para actividades de red.

Para poder identificar el impacto de las actividades de alumni en el sitio de trabajo, los alumni han informado a su institución, jefe o sitio de trabajo de una u otra manera. El informe fué de manera escrita, oral o en forma de presentación (tabla 3). Las retro-alimentaciones referente a estos informes han sido muy positivos o positivos en 20 (8 y 12) casos y ninguna retro-alimentación hubo en 3 casos.

Tab. 3: Informe acerca de las actividades alumni al sitio de trabajo en Talca 2004

		Caso	%
Válido	1. Informe escrito	9	33,3
	2. Presentación	3	11,1
	3. Informe oral	12	44,4
	Otros	1	3,7
	1,2,3	1	3,7
	1,2	1	3,7
	Total	27	100,0

Además, el trabajo de red-alumni ha sido identificado como muy importante (4 casos) y importante (9 casos) y mediano (4 casos) para la planificación de la carrera profesional de los alumni.

Tab. 5: Alguna información obtenida durante el simposio ha sido útil para su investigación, enseñanza, actividades administrativas de su trabajo?

		Caso	%
Válido	Sí, bastante	8	29,6
	Sí, en parte	13	48,1
	Sí, Medianamente	4	14,8
	No	2	7,4
	Total	27	100,0

El valor de la información se muestra en los siguientes comentarios de los alumni:

„Análisis de mis propios problemas; contactos; información; cooperación en programas de la educación superior; experiencia en el área de la educación internacional y la gestión de la investigación; intercambio alemán; llegar a conocer los caminos de cooperación en el sector público y privado; cooperación con colegas; ideas para proyectos y programas para aplicaciones; identificación de esquemas potenciales nuevos; transferencia de información y de visiones; aprendido de la organización y la coordinación entre personas; encontrar colegas; ideas nuevas; ideas nuevas para la investigación y contactos nuevos para el futuro; organización y contactos del trabajo de red; investigación y enseñanza; presentación científica en Recife; las formas diferentes de generar un proyecto (cooperación); el simposio me dió algunas ideas para presentar proyectos nuevos“.

El impacto del encuentro alumni en mejorar las habilidades personales se indican en la tabla 6.

Tab. 6: El impacto del trabajo de red-alumni en las habilidades personales (n= 23)

Area de impacto	Caso	%
Calificación adicional	7	30,43
Reconocimiento dentro de la institución y el sitio de trabajo	11	47,83
Contribución al curriculum vitae	12	52,17
Cambio de actitud hacia la investigación	14	60,86
Cambio de actitud hacia la enseñanza	10	43,47
Cambio de actitud hacia la administración	8	34,78
Habilidades organizacionales	11	47,83
Confianza	7	30,43

El impacto mayor se encuentra en el cambio de actitud de los alumni hacia la investigación en un 60,86% y en la contribución al curriculum vitae (52,17%). Todos los demás aspectos conciernen menos del 50% de los participantes. Se pueden constatar porcentajes muy bajos para la calificación adicional y la confianza. Aqui van los resultados en correlación a la satisfacción general de los participantes en Talca.

Los alumni especifican el impacto en las siguientes observaciones:

„Contactos; formando cooperación; facilitación de encuentro con colegas de la disciplina; ideas; intercambio de experiencia; profundizaje científico; me hizo tener confianza en abrirme a mi mismo hacia la opinión de otros colegas; nuevas posibilidades para la cooperación institucional; útil para otras cooperaciones; podríamos alcanzar una buena relación, pero tenemos que trabajar en eso.“

Adicionalmente, se han presentado oportunidades para incidir en cambios en los sitios de trabajo de los alumni. En dos casos incluso han sido muchos cambios. En 13 casos se han dado algunos cambios pequeños, y en 8 casos no se ha dado ningún cambio.

Los cambios han sido los siguientes:

„Actuando como coordinador para nuevas propuestas; ejecutando programas de estudio; desarrollo de curriculum para M.Sc.; intercambio de conocimiento; desarrollo de estructura de investigación y evaluación; formación de cooperación en el sitio de trabajo; cooperación más interactiva en proyectos de investigación; mi instituto podría brindar apoyo para el próximo taller; nuevos aprendizajes y contactos; nueva cultura; posibilidad de atender otras conferencias; apoyo por mi sitio de trabajo; reconocimiento; trabajo académico; proyectos para reducir la pobreza; algunas actitudes adicionales hacia una cooperación con alemanes; fortalecimiento de mi institución; apoyo para ReCALL.“

Los talleres han sido evaluados como un instrumento efectivo de los encuentros de la red-alumni. Las valoraciones de los alumni acerca de los talleres se presentan en la tabla 7.

Tab. 7: Efectividad de los talleres en el trabajo de red-alumni

		Caso	*%*
Válido	Muy efectivo	7	25,9
	Efectivo	17	63,0
	Nada efectivo	3	11,1
	Total	27	100,0

Los contactos entre dos encuentros con el comité de organización han sido evaluados por los alumni. Han sido muy intensivos en 2 casos, intensivos en 5 casos, medianos en 9 casos y no dados o faltando totalmente en 6 casos. Las razones para contactos insuficientes son formulados por los alumni de la siguiente manera:

„Atención a los miembros activos; Comité de organización ocupado; falta de información; falta de comunicación interna; mensajes no contestados por el comité local; ninguna iniciativa; no he sido útil para el comité; otros estuvieron disponibles; responsabilidad no fué deseada; la única posibilidad de contacto; las personas usaron la última lista de participantes en vez de todos los Recaller.“

Para eso, pocos alumnis solamente toman la responsabilidad:

„Todos de nosotros; comité local; yo mismo/a; ninguna idea; facilidades de contacto regional; todos nosotros; quien sea que esté organizando.“

La búsqueda de soluciones lleva a los siguientes comentarios:

„Cambiar las maneras de hacer las cosas en la red; comunicación importante; mejorar la comunicación cambiante; asegurar el uso de la lista de ReCALL; dar más con los intereses personales; mensajes a ser enviados a los alumni desde el comité local; más trabajo e involucramiento para aquellos que hasta ahora no han trabajado; oportunidad para crear actividades futuras; tenemos que trabajar duro para la red.“

Por último, preguntamos por el mensaje principal de los alumni para la red y recibimos las respuestas citadas a continuación:

„Cooperación acerca del intercambio de conocimiento; apoyar el trabajo de cada uno/a y cooperación; todo tipo de contactos (científico, personal, académico etc.); tengo el sentimiento que a partir de ahora tendremos éxito; hemos dado un paso grande; solamente necesitamos mantener los contactos; necesidad para cambiar; trabajemos; más dinamismo de los alumni; por favor trabaje; cooperación científica; solidaridad de diferentes maneras; trabajo de red exitoso requiere de la fuerza emprendedora de la parte alemana; dejar alumni a la región; la necesidad de la organización de mejorar las relaciones; la posibilidad de realizar cosas estupendas; falta de comunicación; llegar a tener una idea acerca del trabajo científico de los colegas; aprender acerca de la acción científica; usando herramientas disponibles; necesitamos más comunicaicón y responsabilidad; necesitamos demostrar nuestros intereses en la red y trabajar para una participación activa.“

Confianza y confidencia

Debido a la situación de la red ReCALL, el consorcio desarrolló un nuevo instrumento para encontrar los indicadores principales de relevancia para el funcionamiento sostenible de una red. Los indicadores tomados de la literatura actual sobre confianza y red serán discutidos como marcó teórico y serán analizados con los descubrimientos basados en los puntos de vista de los alumni.

La confianza juega un rol decisivo como capital social y representa un factor importante de orden social, especialmente en países en proceso de transición. El documento se basa en la hipótesis que un nivel bajo de confianza es el problema más

grande del entrepreneurship, tanto a nivel personal como institucional. En un ambiente de baja confianza, la confianza incluso puede ser abusada en el momento que aparezca, en lugar de ser apreciada.

Confianza en el mundo científico

La confianza ha sido discutida en diferentes disciplinas, como en la economía (Williamson, 93, Ganesan, 97 y Sako, 92), ciencias de política (Hardin, 01) y sociología (Parsons, 37, Luhmann, 88) así como de diferentes maneras en varias disciplinas. Desde el punto de vista sociológico, la confianza aparece como la reducción de la complejidad y debido a esto como la reducción de la incertidumbre. Finalmente la confianza evita el comportamiento oportunístico. Existen dos diferentes maneras de tratar de la confianza. Analizar la confianza a través de un conjunto de metodologías complejas en un cierto ambiente (marco conceptual) o de usar la confianza como una herramienta de un individuo para el entrepreneurshio (aproximación práctica). En el segundo caso se hace la diferenciación entre confianza personal (limitación a relaciones no comerciales) y confianza institucional que caracteriza transacciones comerciales en marcos sociales, culturales o políticos. La investigación sobre la confianza es difícil y requiere de la definición exacta de las determinantes de la confianza. La dificultad es el acuerdo acerca de las determinantes por diferentes científicos. Nosotros usamos las determinantes de confianza basandose en el concepto de Luhmann, tomando como marco su complejidad y autopoiesis.

Confianza como capital social

La confianza se ha vuelto un asunto urgente en las sociedades complejas post-modernas. Se sostiene la idea que la confianza ha sido sentida como un elemento central del capital social. Históricamente, la confianza ha estado jugando un rol en sistemas políticos de jerarquía en los cúales la seguridad individual ha sido regulada centralmente y casi ninguna red o solamente pocas redes existen. El impacto antropológico de dichos sistemas se basa en una imagen negativa del humano. La confianza puesta por los sistemas políticos va casi al cero. La confianza es colocada raramente, ya que se cree que la confianza sería abusada por las personas. En oposición a la situación anteriormente descrita, en sistemas liberales radicales de sociedades donde el factor pre-dominante es la libertad de los individuos, la confianza es afectada por la creciente complejidad de la sociedad misma o por la complejidad de las redes. El desórden extremo en un sistema egalitario basado en una imágen positiva del humano no permite medir los impactos de la confianza (sistema chaos). En estas sociedades la confianza es puesta, pero no es seguro si la confianza es abusada o reconocida (alto grado de incertidumbre).

Las sociedades basadas principalmente en la seguridad o/y autonomía históricamente han sido balanceadas por la regulación a través de la ley. La regulación de líneas extremas es garantizada por contratos sociales y por un marco rígido de comportamientos con pocas posibilidades o ninguna de cambio.

Capital social y orden social

En las sociedades post-modernas, las complejidades han crecido en casi todas las áreas de la vida. La orden social misma es un sujeto de alta complejidad. La confianza originalmente ha tenido mucho que ver con el orden social. Se disputa que la confianza juega una función integrativa en la formación del orden social (Misztal, 96, Parsons, 37). Parsons considera a la confianza a nivel de sistema dentro de un sistema normativo como

la fuente principal del orden social, lo cúal es el resultado de las normas que prescriben un comportamiento confiado y confiable. El rechaza explicaciones más individualísticas de confianza dependiendo de que el auto-interés racional puede ser considerado como una base para la confianza. Luhmann, 88 considera la confianza como una reducción de la complejidad sin la cúal una comunicación no puede ser organizada de manera fácil. Argumenta que actores necesitan cada vez más confianza por la complejidad creciente de las sociedades modernas y por qué las consecuencias de las decisiones vuelven a ser cada vez más dudosas. Ambos argumentos se olvidan de explicar porque la confianza surge en casos individuales, y que motivos tienen estos individuos para confiarse mutuamente. Arrow, 74 y Buiskens, 02 consideran la confianza como un lubricante para la cooperación entre individuos e instituciones en una sociedad. Se supone que la confianza solamente es posible si, para el que confía, el resultado esperado de invertir confianza tiene preferencia en comparación al resultado esperado sin mostrar confianza. Varia la amplitud hasta la cúal la persona que confía está dispuesta a exponerse de que su confianza sea abusada por la contraparte. A causa de los elementos esperanza, fé, expectativa, suposición y emoción, la confianza no puede ser definida facilmente.

La confianza como un capital social es un indicador para el desarrollo de las sociedades así como de los individuos en redes modernas. Esto significa que la falta de confianza obstaculiza el desarrollo de las comunidades. El proceso que lleva a la falta de confianza en un sistema es el riesgo del abuso de la confianza. En este caso los cambios necesarios para las partes involucradas en una situación de confianza, que mutualmente pueden obtener una especie de colmo, son afectados. El estancamiento o el cambio a un nivel muy bajo son el resultado.

Sin embargo, la confianza incluye la posibilidad de acceptar que el ser dependiente de alguien puede alterar la acción. En las sociedades modernas (ambientes con niveles altos de confianza), este tipo de dependencia es organizado racionalmente a través de acuerdos mutuos entre individuos que, en la mayoría de casos, no se conocen uno al otro. En las sociedades tradicionales, la dependencia es acceptada solamente en los grupos internos, los clanes, familias amplias, que son organizados en redes tradicionales con una enorme cantidad de información dentro del grupo y con un aislamiento hacia el mundo de afuera. Raiser, 99 identifica a la confianza basada en procesos, basada en relaciones familiares y a la confianza extendida o generalizada, lo que nos permite entrar en relaciones con cooperantes o socios desconocidos. De ahí se puede suponer que existen diferencias entre la seguridad y la confianza. En las sociedades tradicionales la confianza es un sujeto de seguridad sin ninguna noción de incertidumbre, imprevisión o riesgo. Simplemente se encuentra basada en las normas de la sociedad tradicional, en las experiencias de los individuos y la aceptación. La diferencia ocurre solamente en el caso de la aceptación del riesgo fuera de las normas existentes y en contacto con intrusos cuyo comportamiento se desconoce. En las sociedades donde un individuo está seguro que un sistema es funcional sin riesgo, no hay ninguna necesidad para el/ella de ponerle confianza. La confianza se encuentra inherente dentro del sistema mismo. La confianza viene a ser necesaria en cuanto una sociedad sea abierta en sus estructuras y dentro de las cúales – de acuerdo a la incertidumbre y la complejidad – los cambios estructurales puedan darse debido a las fuertes actividades funcionales. La posibilidad de abusarse de la confianza forma parte del juego en este tipo de sociedad.

Hemos estado discutiendo el tema de la confianza en sociedades modernas de una manera abstracta. Hemos excluído el contexto dentro del cúal la confianza puede ser organizada en términos de minimizar el riesgo y el abuso de la confianza a través del desarrollo de ciertas herramientas, como redes y mejoramiento de la confidencia, desarrollando contratos y subcontratos efectivos, así como incrementando la confianza de honor, veracidad y confiabilidad en una acción que cambia.

Confianza y confidencia

Desde luego, la confianza tiene que ver mucho con la confidencia. A pesar de que hemos estado mencionando la importancia de la aceptancia de ser dependiente del cambio en el caso de la confianza, tenemos que suponer que la calidad de la dependencia va cuerpo a cuerpo con la confidencia de los individuos al comprar la autonomía de uno mismo, llegando a ser el maestro de uno mismo y siendo independiente de cúalquier tipo de cronograma y controles impuestos por supervisión, o en una sociedad tradicional dominada por normas y clanes, grupos internos y familias amplias, o al ejercer negocio en sistemas dependientes de empresas y en el sector público, especialmente enfocando en el personal en universidades públicas. Confidencia se refiere también a tomar decisiones, quienes son los clientes, qué son los productos y como la producción es ejecutada técnicamente. Confidencia significa además entender el riesgo y la incertidumbre, y finalmente, lo que es mucho más importante, la entrada o el resultado irregular.

Incremento de la confianza

Ya que el riesgo de poner confianza puede ser alto en términos del posible abuso de la confianza, se usan herramientas para minimizar el riesgo. Estas herramientas son: Contrato, Red y Comunicación.

Red social y confianza

Redes sociales son marcos necesarios en sistemas sociales complejos. Para mejorar el aprendizaje (aspecto social) y el control (aspecto económico) la red juega un rol grande. La red social es un "recurso social" o un "capital social" para reducir la desconfianza (Colemann, 90). Por otra parte, el establecimiento de redes requiere de un mínimo de confianza como capital social. El control efectivo en redes sociales, tanto en el caso de fuerza mayor así como en el caso de esquemas de comunicación oportunista es mucho más alto que en redes organizados externamente. El efecto de control trabaja particularmente bien si una persona involucrada en la red puede informar de manera convincente a otros miembros sobre los hechos. En realidad, miembros que están empotrados en redes sociales generalmente aprenderán más rápido de otros miembros y se encuentran en una mejor posición para controlar suavemente a la contraparte, ya que simplemente reciben más información y transmiten la información más rápidamente por la red.

En lo que se refiere a la confidencia, en el caso de que el miembro esté confidente en lo que se refiere a su relación con la contraparte, no seguiría las peticiones de otros miembros dentro de una red. Una vez que un miembro pida perdón por haber abusado de la confianza, la reacción depende de las experiencias anteriores e introducidas por otros dentro de la red (defraudado o no defraudado).

Sin embargo, el análisis de red social muestra que las redes con sus diferentes densidades, posiciones centralizadas (variación grado interior y covariaciones-grado exterior-grado interior), su transición y los tamaños de las redes tienen impactos varios sobre la efectividad de la confianza y el control así como sobre la desconfianza. Por ejemplo en redes densas, la confianza y la desconfianza pueden ocurrir con la misma densidad (un ejemplo importante son las transacciones de basar en Tehran, donde milliones de Tumans son entregados a personas sin ningún salvaguardia, a causa de una red densa con sanciones graves en el caso de desconfiabilidad). Los parámetros individuales de red son propiedades de un miembro dentro de una red. Ellos pueden explicar porque un miembro dentro de una red puede poner más confianza en la contraparte que otro miembro

dentro de la misma red. Se puede esperar que los miembros en redes con menos vínculos, y que los miembros con más propios vínculos confían más a la contraparte que los miembros con menos vínculos. Se puede suponer que los efectos de aprendizaje y los efectos de control varían no solamente entre redes sino también dentro de las redes.

Con el fin de resumir la evidencia empírica para el trabajo de red, se ha desarrollado el instrumento adjunto para ReCALL.

A un nivel más alto de operación, la relación entre organizaciones, la así llamada "gobernación de red" (un grupo de empresas que se dedican al intercambio de relaciones), la confianza incluso incrementa más. Este caso se puede dar porque en estas gobernaciones de red las "cavidades estructurales" son más altas que en redes densas y la ausencia de un vínculo entre dos actores que están conectados a un actor focal, lleva a más información y promoción que en redes densas.

Categorias de Confianza y Confidencia Confidence

CONFIDENCIA	CONFIANZA: Alto	CONFIANZA: Bajo
Alto	**I. Miembros de Red** Compromiso para actividades en común Compartir riesgo entre miembros de la red	**II. Entrepreneur Clásico** Necesidad del individuo de logro Opportunismo en la cooperación
Bajo	**III. Empresario en pequeña Escala** Evitar riesgos Red en pequeña escala	**IV. Auto-Ocupado** Retiro de actividades en común

Fig.4: Categorias de Confianza y Confidencia según Ruuskanen

En nuestras redes, los miembros se juntan más para el intercambio de conocimiento a través de la actividad de la investigación. Sin embargo, la investigación en las universidades en países en vía de desarrollo es una actividad de menor índole y menos confiable que cúalquier otra actividad. En el caso de la investigación, muchas veces se abusa la confianza luego de haber iniciado la investigación, la colección de datos, el análisis de datos, etc. Pero el resultado final falla en la mayoría de casos, especialmente en la investigación de clientela. A pesar de todo, las experiencias muestran que buenos investigadores, especialmente aquellos que llevan proyectos de investigación de clientela en universidades, son buenos entrepreneurs. Las actividades de investigación en la universidad muchas veces van más allá de los requerimientos para actividades de entrepreneurship. En otras palabras, el mejorar las actividades de investigación simultáneamente mejora el entrepreneurship. No estamos hablando del apoyo gubernamental general a la investigación, sino de la investigación de clientela,

especialmente de empresas y de la sociedad en general en términos de investigación y desarrollo.

La tabla siguiente es un análisis aproximado de algunas determinantes basado en los resultados de algunos talleres y experiencias de nuestras 15 diferentes conferencias y talleres. La tabla no enfoca en algunas calidades comparadas entre las redes alumni, sino más bien es un indicador para el mejoramiento de la red con diferente peso para las diferentes redes: En el caso de GEAR hay que ponerle énfasis en el reforzamiento del contexto social y en involucrar un número más grande de alumni en las actividades de la red-alumni y en reducir el potencial conflictivo. En el caso de GIAN, queda mucho por hacer en lo que se refiere al reforzamiento de la cooperación y el sistema de información en la red-alumni y hay que reducir los conflictos escondidos entre los alumni. ReCALL sufre de problemas de contexto social, participación, individualismo y bajo nivel de confianza, especialmente en relación a las universidades alemanas y al Consorcio. Finalmente, SEAG debería trabajar más referente a la confidencia en expander el número de participantes que busquen fondos complementarios locales.

Red-alumni				
Indicadores	*GEAR*	*GIAN*	*ReCALL*	*SEAG*
Contexto social	bajo	bajo	bajo	alto
Participación	bajo	mediano	bajo	alto
Información	bajo	bajo	bajo	alto
Confianza	bajo	mediano	muy bajo	mediano
Conflictos	alto	mediano	mediano	bajo
Intercambio científ.	alto	alto	alto	alto
Cooperación	alto	bajo	alto	mediano
Individualismo	alto	alto	alto	mediano
Talleres	muy bajo	alto	mediano	alto
Grado interior red	muy bajo	muy bajo	bajo	alto
Grado exterior red	bajo	bajo	bajo	mediano
Densidad red	bajo	bajo	bajo	mediano

No hace falta mencionar que el nivel de las actividades de intercambio científico es muy alto en todas las redes-alumni.

La gestión de conflictos dentro de las redes alumni ha sido analizada y discutida durante el curso de verano 2004 en Alemania, en términos de la organización, relación a alumni en general, participación y arreglo de conflictos. Los resultados de grupo que pueden indicar las características de las redes se resumen de la siguiente manera:

GEAR

Comité directivo inefectivo; algunos miembros no tienen acceso a internet; no se puede acomodar un número más elevado de participantes en un simposio; número más grande de nuevos miembros más las restricciones monetarias.

GIAN

Falta de información; falta de contribución; ganar suficiente apoyo financiero.

ReCALL

Falta de apoyo institucional; restricción de fondos; falta de información; participación y coordinación; equipo de uno solo; estructura local débil.

SEAG

Necesita estructura completa del comité de organización; buena planificación durante talleres, pero solamente algunas planificaciones son llevadas a cabo; envidia profesional, por ejemplo entre personal junior y senior; el rechazo de ponencias entregadas para el simposio de SEAG han causado que algunos alumni han perdido el interés en actividades próximas; la participación de revisores regionales fué excluída.

Qué puede aprender el Consorcio a través de las redes-alumni y cúales son los efectos de aprendizaje en relación a parámetros individuales y globales de la red-alumni, especialmente en términos de la cooperación científica en ambientes de niveles bajos de confianza?

Cúales son los efectos de control a través de las redes-alumni y como influyen estos efectos en los parámetros individuales y globales de la red-alumni (confianza), sobre todo en términos de una cooperación efectiva?

Cúan importante son los parámetros individuales en comparación a los parámetros de la red-alumni para la descripción de varios efectos de la red en la confianza, especialmente en términos del mejoramiento del personal y de los proyectos conjuntos?

Evidencia empírica

Para identificar la densidad y la calidad de la red en términos del flujo de información, preguntamos acerca de las actitudes de los alumni. Preguntamos acerca del flujo de información dentro de la red-alumni, entre alumni y CGKM y DAAD. Los resultados se muestran en la figura 5 como valores promedios agregados en una escala de opiniones de siete niveles.

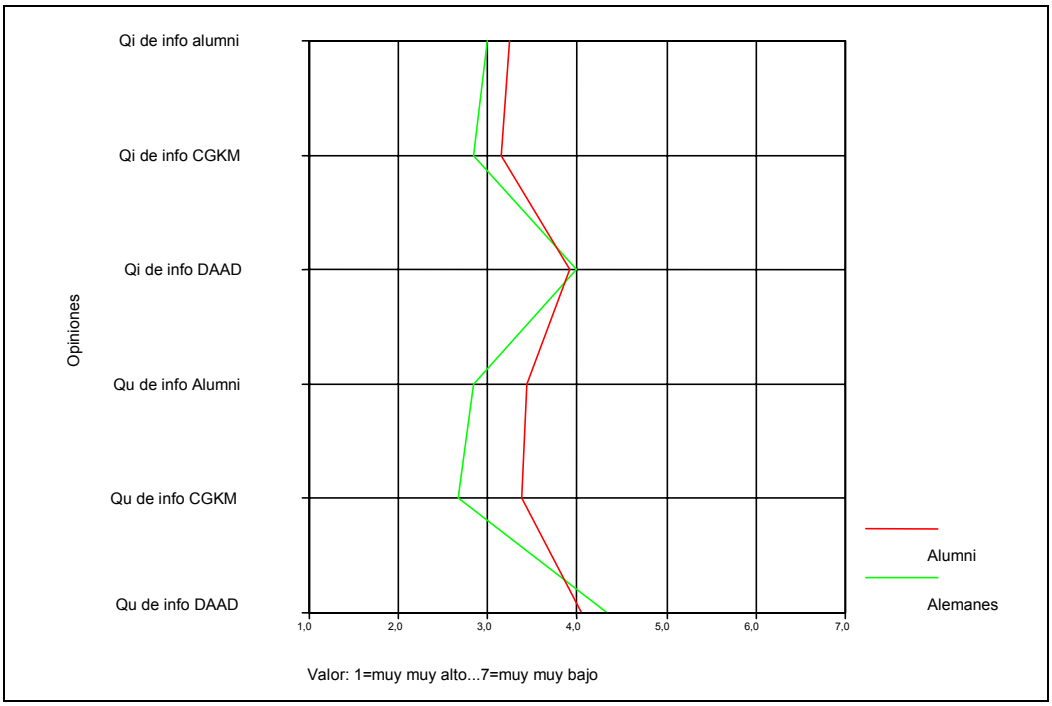


Fig. 5: Opiniones de los alumni referiéndose a cantidad (Qi) y calidad (Qu) del flujo de información en las organizaciones involucradas en la red-alumni, Talca 2004

Aunque los alumni reclaman generalmente en la plenaria y en discusiones abiertas la falta de información de los comités de organización, del CGKM y DAAD, las actitudes

no emparejan muy bien. A pesar de todo, después de cuatro años de red-alumni y luego de cinco encuentros, las expectativas no están cumplidas. La cantidad y la calidad de información proveniente del DAAD están valoradas a un nivel bajo. Los alumni valoran el flujo de información desde el CGKM más alto que entre los alumni mismo. Los valores están, no obstante, muy cerca a la zona indiferente. La razón para esto se encuentra nuevamente en la fluctuación fuerte de los participantes en los diferentes encuentros, como ya se explicó anteriormente. El encuentro de alumni en Talca fué principalmente enfocado a los intereses individuales de los alumni para mejorar la cooperación científica a un nivel de disciplina. Debido a este hecho, el encuentro no puso mucho cuidado en el rol del trabajo de la red para fomentar y fortalecer la red, pero en favorecer los contactos individuales que ya existían. Los participantes invitados fueron seleccionados de acuerdo a sus ponencias e informes basados en su cooperación científica. Esto significaría que los resultados no se deben generalizar para encuentros anteriores y para el grupo entero de ReCALL.

Para aprender más acerca de la cooperación científica de los alumni en Talca, preguntamos además como clasifican los alumni su cooperación científica dentro de su ambiente local en base a la confianza. Los resultados se muestran en la figura 6, nuevamente como perfil promedio agregado en un instrumento de escala de opiniones de siete.

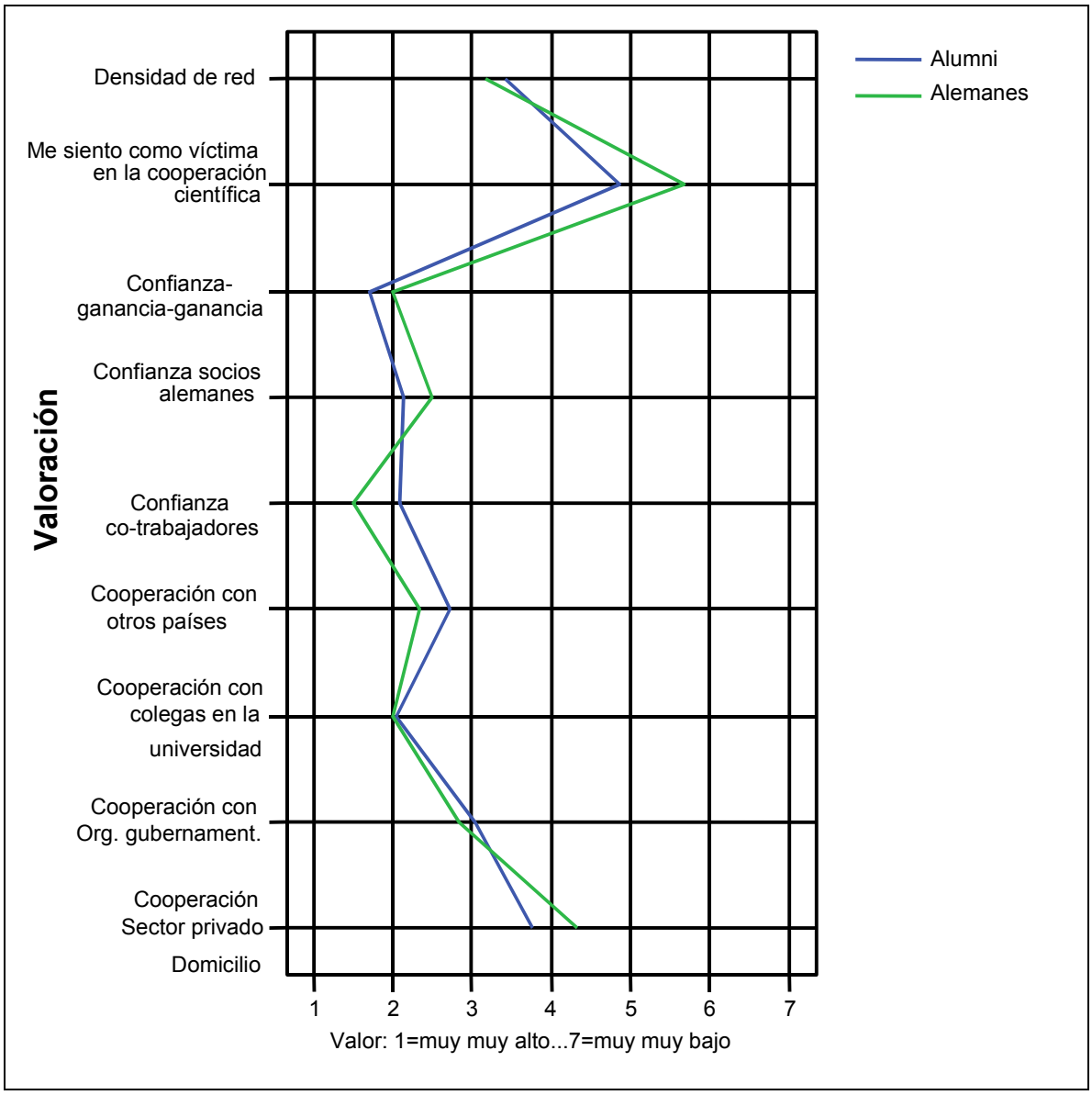


Fig. 6: Valoración de la cooperación científica y confianza en socios, colegas y co-trabajadores.

La figura 6 muestra que la cooperación con el sector privado en el sitio de trabajo está valorado a un nivel bajo y corresponde a la densidad de red en el sitio de trabajo. La taza más alta se presenta en la cooperación científica con colegas en la universidad. La cooperación de los alumni con organizaciones gubernamentales, con los cooperantes alemanes así como la cooperación con otros países se encuentran a un nivel mediano. Los alumni creen en una situación ganancia-ganancia en lo que se refiere a la cooperación científica y no se sienten como víctimas en el caso de la cooperación científica. Los alumni confian altamente en sus co-trabajadores.

Quisimos saber como los alumni evalúan la red ReCALL en términos de comunicación, confianza, intercambio científico, planificación de la carrera, participación, etc. Las actitudes se presentan en la figura 7.

La figura 7 indica bajos niveles de confianza y comunicación en la red ReCALL y valores moderados de ReCALL como base para el intercambio científico y cooperación, talleres y participación y también como organización aprendiendo. Bajos niveles se encuentran para el rol de ReCALL en favorecer la planificación de carrera y de proyectos

aplicados. El encuentro de colegas es evaluado a un nivel alto. Aqui los resultados nuevamente indican que la hipótesis de un ambiente de baja confianza puede ser verificado incluso por las actitudes de los participantes.

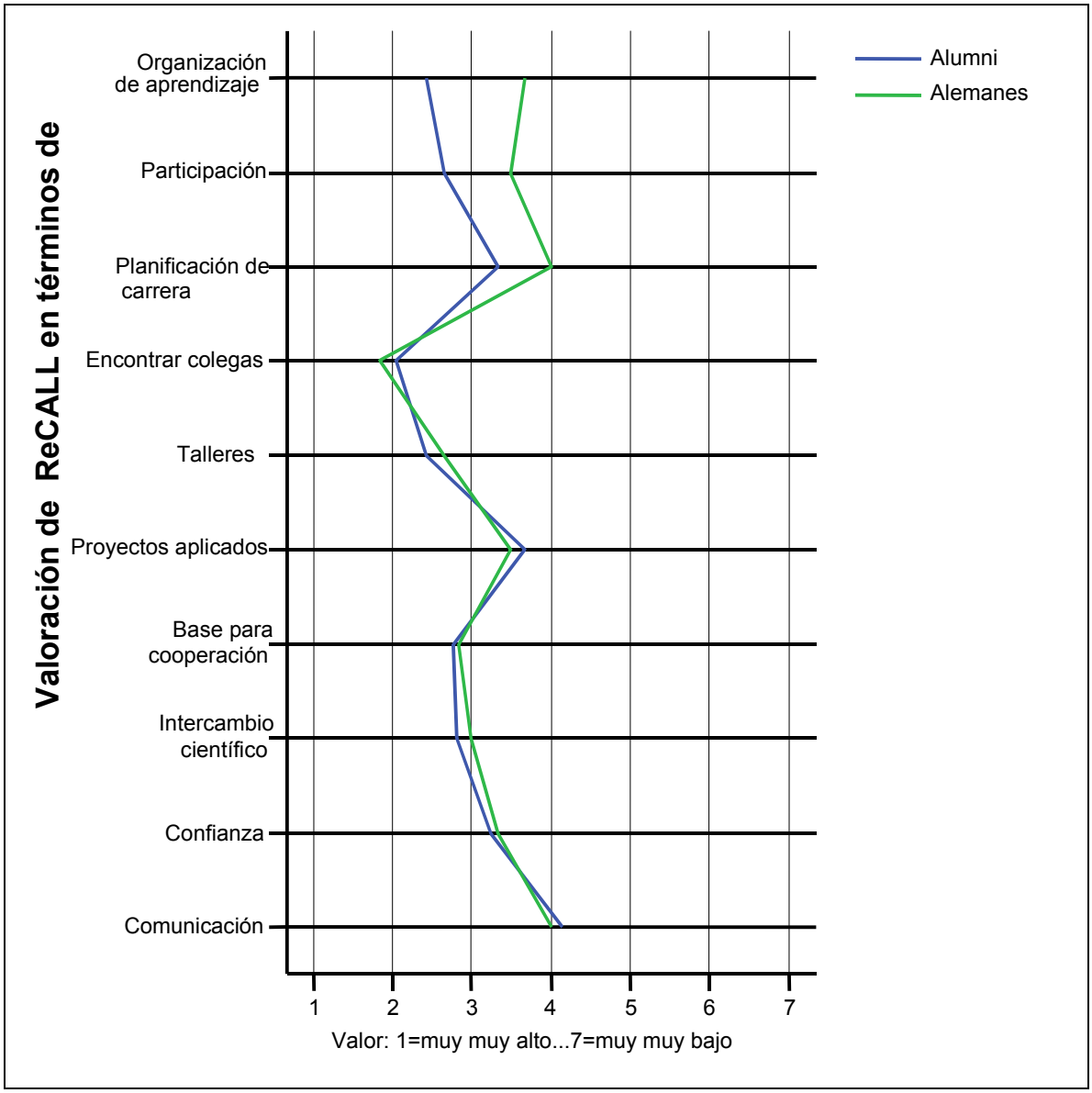


Fig.7: Valoración de ReCALL en términos de … Talca 2004

Para saber más acerca de los impactos de la cooperación, preguntamos a los alumni como califican su cooperación en términos de recibimiento y aprendizaje, uso, control, sustento, aprecio y despojo (Bukowitz, 2000). Los indicadores se usan para la identificación de la gestión del conocimiento en organizaciones científicas, y se basan en los puntos de vista del personal. La figura 8 muestra los resultados detallados. La gestión del conocimiento enfoca en la manera como una organización (o sistema de la educación superior o sector privado) identifica, crea, capta, adquiere, comparte e influye sobre el conocimiento.

Los valores se encuentran a un nivel moderado. El uso de la información es valorado más bajo que los otros parámetros.

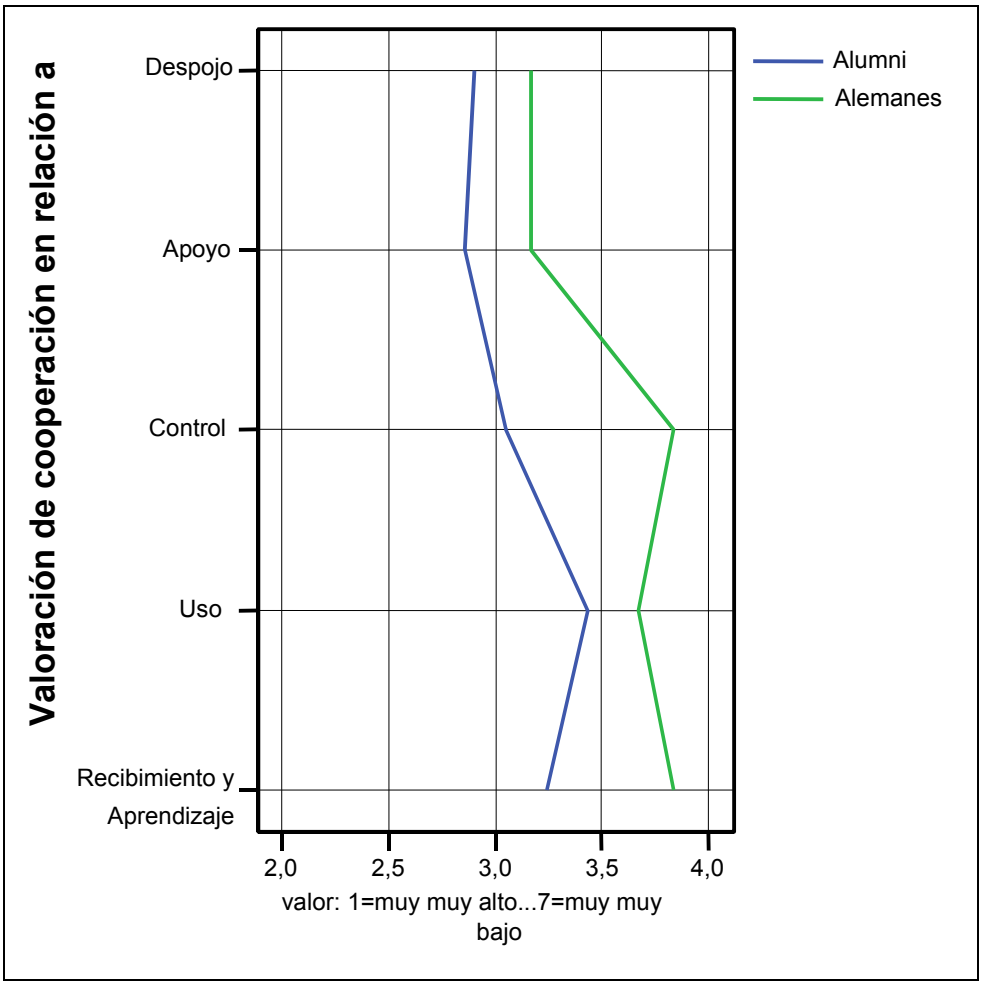


Fig. 8: Valoración de la coopración en términos de …. Talca 2004

De forma abierta se preguntó por los principales embotellamientos en la cooperación científica internacional. Los alumni expresaron:

- financiamiento del fondo; financiamiento; creciente demanda administrativa y cecientes condiciones de marco por el donante y recorte de fondos; falta de fondos; no somos considerados lo "suficientemente pobres" para ser elegidos; corte de dinero;
- comunicación, información, falta de información útil; falta de comunicación; falta de información;
- no existe confianza; confianza; relación de confianza entre miembros y coordinadores; falta de confianza debido a voluntad insuficiente;
- falta la participación activa de los alumni en la región; no entendí las presentaciones de otras culturas; personas heterogéneas; falta de aplicación; demasiado académico; falta de proyectos concretos entre científicos en el sector público y privado;
- la cooperación juega a veces un rol secundario; redacción extensiva de propuestas; los objetivos de diferentes instituciones y países varían; cooperación teorética y práctica; inversión en tiempo; necesitamos tópicos básicos.

Sugerencias principales por los alumni para mejorar la cooperación científica internacional:

- „coordinación y calidad apropiada; frecuencia y actualidad de comunicación; actitudes de cambio; cooperación para proyectos conjuntos; la cooperación debería considerar el

impacto de un proyecto y el grado de responsabilidad mostrado en el pasado; desarrollar mejores relaciones; involucramiento; función de redes específicas; ir por programas conjuntos y proyectos de investigación; mejorar la comunicación y la confianza para equilibrar los intereses; intensificar y construir confianza; uso del internet; mecanismo para construir confianza entre norte-sur y sur-sur; más transparencia de la evaluación; más talleres; abrir el aspecto para una discusión oral y escrita; estratégias orientadas a la solución de problemas; reducir el individualismo y la auto-orientación y compartir información entre los cooperantes; búsqueda por la demanda y solución de problemas; cooperación orientada; seleccionar miembros proactivos; evitar personas de conflicto; proceso de aprendizaje paso a paso; transformación de las factibilidades."

Finalmente, preguntamos acerca de como la red-alumni ReCALL podría ayudar a mejorar la cooperación científica internacional:

„Siendo activo; formando grupos orientados a ciertos tópicos; aplicar para fondos de investigación; construyendo experiencias conjuntas; aprender de casos exitosos; en apoyar las actividades de cada uno; sujetos claramente definidos; contactos; intercambio de ideas, favorecer grupos especializados de trabajo; establecer proyectos de cooperación; intercambio de información; marco dado para desarrollar proyectos; búsqueda de fondos; facilidades de información; realizar sesiones de discusión en la web; realizar propuestas de proyectos para que se ejecuten; muchas oportunidades para competir en la cooperación científica dentro de ReCALL; más información de los alumni; abrir nuevas oportunidades; participación; soluciones particulares para problemas particulares en los países; intercambio científico; compartir contactos; reforzando la comunicación activa y benéfica; grupos temáticos más fuertes; información en el internet; promover la propia habilidad y combinar mejor redes temáticas para demandas internacionales de investigación; trabajo; búsqueda por la cooperación."

		Involucrado en cooperación científica internacional		Involucrado en proyectos internacionales de desarrollo	
		Caso	%	Caso	%
Válido	Sí	19	70,4	15	55,6
	No	8	29,6	12	44,4
	Total	27	100,0	27	100,0

Conclusión

La identificación de la red ReCALL como un ambiente de nivel bajo de confianza fué basada en experiencias de los encuentros anteriores en América Central y América del Sur. Esta evaluación fué realizada para identificar las razones detrás de la desconfianza dentro del trabajo de la red-alumni y para buscar posibilidades de incrementar la confianza y el capital social en favor de la cooperación científica internacional. El encuentro en Talca representó una formidable oportunidad para confrontar los alumni con este problema y pedir su opinión acerca de esta situación, simplemente porque el encuentro de Talca fué apoyado por el DAAD en un marco de transición hacia la segunda fase del trabajo de red de ReCALL. Con el fin de asegurar la sobrevivencia de la red, los alumni se encontraron nuevamente preocupados por el desarrollo de nuevas ideas, concepciones y una estructura nueva. Este tipo de discusión no ha sido nuevo en Talca. Los alumni discutieron este tema en casi todos los encuentros. Acuerdos, conceptos y deseos de reestructuración han sido

articulados durante todos los eventos y todos – o no han sido realizados o han sido revisados por el próximo encuentro.

Buscando las razones para la situación, los siguientes aspectos deberían ser mencionados brevemente, debido a los descrubimientos en este informe:

1. Los alumni en América Central y América del Sur muestran una resistencia clara a la introducción del idioma inglés como idioma científico común. Existe una desconfianza general debido a la comunicación en idioma inglés. Introduciendo el español como idioma oral e inglés/alemán como idioma escrito, se logró hacer crecer la confianza solamente hasta cierto punto y muestra solamente un éxito parcial.
2. Debido a este hecho, la ReCALL permanece una red regional con poca o ninguna relación con otras redes internacionales en general, y tiende a venir a ser una red de miembros internos, en relación a otros indicadores adicionales de desconfianza. Las interacciones entre los alumni llevan a la apariencia de subgrupos dentro de la red, los cúales tratan de su estrecho acceso científico y a la apariencia de individuos que tratan de empujar sus propios intereses usando el foro de la red, sin el respeto necesario hacia intereses, objetivos o visiones comunes.
3. Un sistema fuerte de control mueve a ReCALL hacia una dirección "hacia adentro del grupo" y rechaza a aquellos que principalmente buscan un entendimiento común, ganancia de nuevos alumni y nuevas ideas.
4. La fluctuación de los miembros participantes en diferentes encuentros llevan a descubrir la rueda otra y otra vez. La continuidad y la sostenibilidad sufren de discusiones interminables, parcialmente llevadas en situaciones conflictivas.
5. Los alumni suponen un perjuro detrás de la red-alumni basado en la cultura y la historia, especialmente en términos de "dependencia". La red parece ser una situación oportuna y un foro bueno para discutir este aspecto mirando a los cooperantes internacionales (alemanes) como responsables de su situación específica. Algo muy comprensible, pero no relevante. Uno de los participantes inclusivemente expresa que no necesitarían cooperantes para organizar y ejecutar redes alumni. Ellos quisieran realizar estas actividades sin ninguna ayuda desde afuera, en caso que los fondos estén asegurados.
6. Incluso los miembros internos de la red no confian en los demás, y culpan a aquellos que organizan y ejecutan talleres sin su participación directa. Este comportamiento frena la actividad de cierto grupo que intenta fuertemente mejorar la red como oportunidad de logro y ganancia recíproco. A pesar de todo, una organización necesita compañeros activos que realizan el trabajo para los demás, que buscan la realización de objetivos y alcances comunes. Falta la confianza, y ningún cambio es el resultado de la situación descrita.
7. La falta de un capital social adecuado y de una confianza en la red obstaculiza el emprender actividades de entrepreneurship con el fin de volver a la gestión de la investigación en el lugar de trabajo en "gestión del conocimiento" a un nivel institucional e internacional, y para extender la red hacia el sector privado o hacia organizaciones gubernamentales.
8. Ponencias y publicaciones causan una serie de problemas referiéndose a internacionalidad, calidad, y vuelven a ser un simple informe. Incluso contribuciones de alta calidad en español no son editados y revisados por un grupo de expertos de entre los alumni mismo.
9. Esto lleva al hecho que los alumni no confían en un grupo de miembros que asumen actividades de gestión en búsqueda de fondos adicionales, para preparar propuestas, para organizar y ejecutar la red-alumni por un cierto período de tiempo

y se preocupan por el flujo de información, para estabilizar a la red y finalmente se preocupan por la sostenibilidad.

10. Finalmente, falta la confianza en el CGKM y el DAAD para buscar la forma de un foro dentro del cúal la red-alumni podría crecer aún en el caso que, debido a la falta de fondos y al tamaño de la región, la participación no se pueda dar para todos los encuentros.

Ya que la evaluación no comprueba sino mejora, tenemos que mencionar que tanto los participantes como el CGKM y el DAAD han dado grandes pasos para superar estos problemas y la primera parte de la evaluación es un indicador para este esfuerzo. Sin embargo, para mejorar la red ReCALL algunos pasos importantes son necesarios:

- Un encuentro especial de alumni es necesario para intercambiar experiencias científicas referentes a los temas capital social, confianza, importancia del trabajo de red, entrepreneurship, combinado con una serie de sesiones de entrenamiento para incrementar la situación de confianza y un esquema organizacional de la red-alumni ReCALL a largo plazo.
- Combinar este tipo de encuentro científico con grupos de talleres científicos específicos (los así llamados mini-talleres) para alcanzar las metas de los individuos y de los pequeños grupos que han decidido organizar mini-talleres en diferentes partes de la región. Desde el punto de vista del evaluador, estos mini-talleres son de importancia extra-ordinaria, pero no soportan el trabajo de red, ya que solamente un número limitado de alumni puede participar en ellos. La recomendación sería organizar todos los mini-talleres planificados en Talca durante el simposio anteriormente mencionado y al mismo tiempo facilitar una participación y un trabajo de red de un índole mayor.

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