



Alexander von Humboldt
Stiftung/Foundation

Stipendiatinnen und Stipendiaten 2011/2012

Internationales Klimaschutzstipendium



Impressum

Herausgeber

Alexander von Humboldt-Stiftung

Übersetzung

Dr. Lynda Lich-Knight/
Michael Gardner

Gestaltung

www.axeptDESIGN.de

Druck

Druckpartner Moser, Rheinbach

Auflage

500

Stand

August 2011

Verantwortlich für den Inhalt

Dr. Judith Schildt und die
Stipendiatinnen und Stipendiaten

Bildnachweise

Titel: Joao Virissimo/Shutterstock
S. 5: Humboldt-Stiftung/Eric Lichtenscheidt
S. 6/8: Mountainpix/Shutterstock
S. 7/9: Tobias Müller/Fotolia
Alle Portaitbilder: Daniela Schmitter

Stipendiatinnen und Stipendiaten 2011/2012

Internationales Klimaschutzstipendium

Preface

Since 2010, the Alexander von Humboldt Foundation has been granting International Climate Protection Fellowships to prospective leaders from non-European threshold and developing countries. This programme initiative complements the Foundation's existing funding programmes: it aims at establishing and maintaining a network in which German and foreign experts cooperate on a long-term basis in order to meet the challenges of climate change and its consequences.

This brochure introduces the second group of International Climate Protection Fellows. The group comprises fourteen fellows from Bolivia, Ecuador, Guinea-Bissau, Indonesia, Laos, Nepal, Nigeria, the Philippines, Sri Lanka, South Africa, Uzbekistan and the People's Republic of China. They represent fields as diverse as general political economy, foreign policy and international relations, agricultural economics, ecology, geodesy, forest protection, agriculture in the tropics and subtropics, phytology, solar energy usage, energy economics, cultural geography and land-use planning. The International Climate Protection Fellows are hosted by universities, non-university research institutions as well as organisations and associations in Germany.

I wish all eight female and six male researchers and their hosts much success in their cooperation and thank everyone supporting them in building academic and personal networks.



Prof. Dr. Helmut Schwarz
President of the Alexander von Humboldt Foundation



Vorwort

Die Alexander von Humboldt-Stiftung verleiht seit 2010 Internationale Klimaschutzstipendien für einen einjährigen Aufenthalt in Deutschland. Die Programminitiative für Nachwuchsführungskräfte aus Schwellen- und Entwicklungsländern ergänzt die bestehenden Förderprogramme der Alexander von Humboldt-Stiftung mit dem Ziel, den Aufbau und die Pflege eines Netzwerks zu unterstützen, in dem deutsche und ausländische Experten langfristig zusammenarbeiten, um den Herausforderungen des Klimawandels und seinen Folgen zu begegnen.

In dieser Broschüre wird Ihnen der zweite Jahrgang der Internationalen Klimaschutzstipendiaten vorgestellt. Die Gruppe umfasst vierzehn Stipendiatinnen und Stipendiaten aus Bolivien, Ecuador, Guinea-Bissau, Indonesien, Laos, Nepal, Nigeria, den Philippinen, Sri Lanka, Südafrika, Usbekistan und der Volksrepublik China. Sie repräsentieren so vielfältige Fachbereiche wie Allgemeine Volkswirtschaftspolitik, Außenpolitik und Internationale Beziehungen, Agrarökonomie, Ökologie, Geodäsie, Forstschutz, Landwirtschaft in den Tropen und Subtropen, Botanik, Sonnenenergienutzung, Energiewirtschaft, Kulturgeographie und Raumplanung. Die Klimaschutzstipendiaten verwirklichen ihre Projektvorhaben an Universitäten, an außeruniversitären Forschungseinrichtungen und bei Vereinen in Deutschland.

Ich wünsche den acht Stipendiatinnen und sechs Stipendiaten und ihren Gastgeberinnen und Gastgebern eine erfolgreiche Zusammenarbeit und danke allen, die sie beim Aufbau fachlicher und persönlicher Netzwerke unterstützen.

Helmut Schwarz

Prof. Dr. Helmut Schwarz
Präsident der Alexander von Humboldt-Stiftung

„Auf das Zusammenwirken der Kräfte, den Einfluss der unbelebten Schöpfung auf die belebte Thier- und Pflanzenwelt, auf die Harmonie sollen stets meine Augen gerichtet sein.“

Alexander von Humboldt (1769–1859)



Das Internationale Klimaschutzstipendienprogramm

Der globalen Herausforderung des Klimawandels kann nur im Rahmen grenzüberschreitender internationaler Kooperation begegnet werden. Hierzu leistet die Alexander von Humboldt-Stiftung mit der Vergabe von jährlich bis zu 20 Internationalen Klimaschutzstipendien einen Beitrag. Gefördert werden Nachwuchsführungskräfte aus außereuropäischen Schwellen- und Entwicklungsländern im Bereich Klima- und Ressourcenschutz. Finanziert werden die Stipendien aus Mitteln der Internationalen Klimaschutzinitiative des Bundesministeriums für Umwelt, Naturschutz und Reaktorsicherheit.

Die Stipendiatinnen und Stipendiaten verfügen zum Zeitpunkt der Bewerbung bereits über erste praktische Erfahrungen im Bereich des Klimaschutzes und zeichnen sich durch außergewöhnliches Führungspotenzial aus. Im Rahmen eines einjährigen Aufenthaltes in Deutschland führen sie in Kooperation mit Fachkollegen an einer deutschen Gastinstitution ein selbst gewähltes forschungsnahes Projektvorhaben durch.

Im Sinne Alexander von Humboldts wird durch wechselseitigen Austausch von Wissen, Methoden

////////////////////

Die Alexander von Humboldt-Stiftung

Die Alexander von Humboldt-Stiftung fördert seit 1953 Wissenschaftskooperationen zwischen ausländischen und deutschen Forscherinnen und Forschern aller Fachgebiete. Nach dem Vorbild Alexander von Humboldts fördert sie den Aufbau eines internationalen Netzwerks der Kooperation und des Vertrauens, in dem hoch qualifizierte Wissenschaftler und Entscheidungsträger aus aller Welt gemeinsam mit deutschen Fachkollegen Antworten auf aktuelle Fragen an den Grenzen des Wissens suchen. Dem Netzwerk der Alexander von Humboldt-Stiftung gehören mehr als 25.000 Geförderte aus über 130 Ländern an – unter ihnen 44 Nobelpreisträger.

Das Programm



und Techniken der Grundstein für ein internationales Netzwerk gelegt, in dem Experten aus verschiedenen Bereichen des Klimaschutzes langfristig international zusammenarbeiten, um dem Klimawandel und seinen globalen Folgen zu begegnen.

Programmveranstaltungen und Kooperationspartner

Ein zentraler Bestandteil des Internationalen Klimaschutzstipendienprogramms sind Veranstaltungen, die die Stipendiaten mit den aktuellen sozialen, politischen, kulturellen, wirtschaftlichen und historischen Dimensionen des Klima- und Ressourcenschutzes in Deutschland vertraut machen und die Vernetzung in der Gruppe sowie mit Multiplikatoren in Deutschland fördern.

Das Einführungsseminar findet im September in verschiedenen Orten in Deutschland statt, das Abschlusstreffen im Sommer des Folgejahres in Berlin. Beide Veranstaltungen werden in Kooperation mit dem Zentrum für Umweltkommunikation der Deutschen Bundesstiftung Umwelt (DBU) durchgeführt.

Im Frühjahr kommen die Stipendiaten zu einer

Fortbildungsveranstaltung zusammen. Diese wird durchgeführt in Kooperation mit dem Centre for International Postgraduate Studies of Environmental Management (CIPSEM) an der Technischen Universität Dresden.

Weitere Kooperationspartner sind der Bundesverband der Deutschen Industrie (BDI), der Deutsche Akademische Austauschdienst (DAAD), die Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) und die Renewables Academy AG (RENAC).

Förderleistungen

Zusätzlich zur finanziellen Förderung des einjährigen Deutschlandaufenthaltes gewährt die Alexander von Humboldt-Stiftung Sprachstipendien, die die Geförderten bereits vor Beginn der Arbeiten zur Durchführung des Projektvorhabens beim Erwerb der deutschen Sprache unterstützen.

Weitere Informationen

Sie möchten sich um ein Stipendium bewerben, Gastgeber werden oder sich umfassender über das Programm informieren? Weiterführende Informationen finden Sie unter:

www.humboldt-foundation.de/IKS

“I will observe the interaction of forces and the influence of the inanimate environment on plant and animal life. My eyes will constantly focus on this harmony.”

Alexander von Humboldt (1769–1859)



The International Climate Protection Fellowship Programme

Climate change poses global challenges that can only be met by cross-border international cooperation. The Alexander von Humboldt Foundation contributes to the establishment of international collaborative networks by granting up to 20 International Climate Protection Fellowships annually. The programme targets prospective leaders in the fields of climate protection and resource conservation from non-European emerging economies and developing countries. The fellowships are funded under the International Climate Initiative by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

All fellows have practical experiences in the field of climate protection and have demonstrated exceptional leadership potential in their applications. During a 12-month stay in Germany, they conduct a research-related project of their own choice in cooperation with specialist colleagues at a German host institution.

In the spirit of Alexander von Humboldt, the sharing of knowledge, methods and techniques helps

////////////////////

The Alexander von Humboldt Foundation

The Alexander von Humboldt Foundation has been promoting academic cooperation between foreign and German researchers of all disciplines since 1953. In the spirit of Alexander von Humboldt, the Foundation promotes an international network of academic cooperation and trust in which highly-qualified academics and decision-makers from around the world work together with specialist colleagues from Germany to seek the answers to the questions at the very frontiers of our knowledge. The Alexander von Humboldt Foundation’s network embraces over 25,000 alumni from more than 130 countries – among them 44 Nobel Prize Winners.

The Programme



lay the foundations for an international network in which experts from different areas of climate protection can pursue long-term international collaboration to meet the challenges of climate change and its global consequences.

Fellowship Events and Cooperation Partners

Activities that familiarise the fellows with the current social, political, cultural, economic, and historical dimensions of climate protection and resource conservation in Germany are one of the essential elements of the International Climate Protection Fellowship Programme. They are also designed to promote networking amongst the group as well as with multipliers in Germany.

The introductory seminar takes place in various places in Germany in September; the final meeting during the summer of the following year in Berlin. Both events are organised in cooperation with the Zentrum für Umweltkommunikation at the Deutsche Bundesstiftung Umwelt (DBU).

In spring, the fellows meet for a training course

organised in cooperation with the Centre for International Postgraduate Studies of Environmental Management (CIPSEM) at the Technische Universität Dresden.

Further partners involved in this programme are the Federation of German Industries (BDI), the German Academic Exchange Service (DAAD), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Renewables Academy AG (RENAC).

Sponsorship Provisions

In addition to the financial support of the year-long stay in Germany, the Alexander von Humboldt Foundation awards language fellowships to help fellows acquire German language skills before they begin pursuing their projects.

Additional Information

Are you interested in becoming a fellow or host, or would you like to learn more about the programme? For further information please visit:

www.humboldt-foundation.de/ICF

Projektdarstellung/Project Summary

Laos is one of the countries initiating REDD+ demonstration activities and pilot projects. REDD+ is a new topic in the international climate change discussion and there still remain several uncertainties regarding implementation mechanisms, especially on effective and transparent national funding schemes. While there is a strong commitment by the Laotian Government to support REDD+ activities, demonstration activities have just started and there is no legal framework so far. In this context, Oupakone Alounsavath will focus on identifying an appropriate framework for the proposed international funding system for REDD+ activities and determining the effectiveness and efficiency of national and decentralized REDD+ funding schemes in Laos. The project will make it possible to identify sustainable, effective and cost-efficient REDD+

funding mechanisms for the protection of remaining natural forests and rehabilitation of degraded forests in Laos. The project will draw upon global REDD+ governance and carbon financing experiences and include an analysis of existing legal frameworks, investment and financing schemes and their linkage with the ongoing REDD+ demonstration activities. Possible future bilateral cooperation, especially with Germany, will be taken into account while designing the implementation strategy. The results will provide not only important and useful information for national REDD+ development but also for the international United Nations Framework Convention on Climate Change (UNFCCC) discussion. It will establish the basis for designing an incentive system through a national REDD+ mechanism to be implemented by the Government of Laos in the near future.



Reducing Emission from Deforestation and Forest Degradation (REDD+): Development of an Implementation Strategy for REDD+ Funding Mechanism in Laos

Alounsavath, Oupakone

Hochschulabschluss/Degree: Master of Science | **Fachgebiet/Field:** Forestry | **Heimatinstitution/Home Institution:** Department of Forestry, Ministry of Agriculture and Forestry, Vientiane, Laos

Derzeitige Position/Current Position: Director, Planning and Cooperation Division | **Berufserfahrung/Professional Experience:** Forestry Sectors Development Plan (2005–2011); Development of a national Reduce Emission from Deforestation and forest Degradation (REDD) strategy and REDD implementation framework (2010–2011); Forestry policy development (2004–2008) | **Deutsche Gastinstitution/Host Institution in Germany:** Universität Potsdam, Lehrstuhl für Internationale Politik | **Gastgeber/Host:** Professor Dr. Harald Fuhr

Bobojonov, Ihtiyor

Risk Management under Climate Change in Developing Countries

Hochschulabschluss/Degree: Ph.D. | **Fachgebiet/Field:** Risk Management, Agricultural Insurance | **Heimatinstitution/Home Institution:** International Center for Agricultural Research in the Dry Areas, Aleppo, Syria

Derzeitige Position/Current Position: Consultant for climate change analysis; visiting researcher at Farm Management Group, Humboldt-Universität zu Berlin | **Berufserfahrung/Professional Experience:** Postdoctoral Fellow, Agricultural and Policy Economist, International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria (2009–2010); Senior Researcher, joint project of the Zentrum für Entwicklungsforschung (ZEF) and UNESCO on Economic and Ecological Restructuring of Land and Water Use in the Region Khorezm, Uzbekistan (2009) | **Deutsche Gastinstitution/Host Institution in Germany:** Humboldt-Universität zu Berlin, Institut für Wirtschafts- und Sozialwissenschaften des Landbaus | **Gastgeber/Host:** Professor Dr. Martin Odening

Projektdarstellung/Project Summary

Climate change affects the livelihoods of the rural population and poses challenges for food security and economic development in developing countries. The risk coping options in these countries are limited due to the lack of sufficient financial resources to invest in technological improvements at the farm level as well as at the agricultural sector level. Ihtiyor Bobojonov plans to investigate the possibility of increasing risk coping strategies amongst farmers in Uzbekistan and Syria by investigating the potential of novel insurance products. He will work on this project in the Farm Management Group of the Department of Agricultural Economics at Humboldt-Universität zu Berlin during the fellowship period. He will develop innovative insurance products in cooperation with members of the Farm Management Group. The insurance products developed in the context of his project will help to increase the climate change adaptation capacity of farmers in Uzbekistan and Syria.



Campal, Vivien Camir Moratou

Hochschulabschluss/Degree: Master of Environment Management | **Fachgebiet/Field:** Remote Sensing | **Heimatinstitution/Home Institution:** Secretariat of State for Environment and Sustainable Development, Bissau, Guinea-Bissau

Derzeitige Position/Current Position: Ph.D. candidate | **Berufserfahrung/Professional Experience:** Executive Focal Point for the Annual Working Plan between the Secretariat of State for Environment and Sustainable Development and the United Nations Development Programme (UNDP), Bissau, Guinea-Bissau (since 2009)

Deutsche Gastinstitution/Host Institution in Germany: Universität Göttingen, Geographisches Institut | **Gastgeber/Host:** Professor Dr. Martin Kappas



Remote Sensing for Monitoring Coastal Erosion, Occupation and Land Planning, and Economic Resources Evaluation in the Bijagos Archipelago in Guinea-Bissau: Case Study of Bubaque Island

Projektdarstellung/Project Summary

Vivien Camir Moratou Campal will analyse sustainable solutions to the issue of climate change in general in Guinea-Bissau with its corollary of coastal erosion and creation of special areas for tourism. The overall objective is to compile scientific and technical literature on this issue and to propose scenarios to address coastal erosion. The specific objective of the project is to develop scenarios to support decision-making by the authorities of Guinea-Bissau for an effective and sustainable solution to coastal erosion on Bubaque Island. Bubaque Island has a huge touristic potential and might become a possible pillar of the economy of Guinea-Bissau. Methods for the project are: technical and scientific literature review, an analysis of strategies deployed by the authorities of Guinea-Bissau, using remote sensing tools and existing indicators as well as the definition of adaptability and mitigation scenarios on Bubaque Island. The anticipated results are: to advise the authorities of Guinea-Bissau on monitoring coastal erosion by scenarios developed through a systematic analysis taking into account all parameters in question, to provide a management document based on scientific results in order to help on decision-making, and to propose an alternative for the management of the coastal zone based on sustainable development. A classification of the species existing on Bubaque Island should also be undertaken in order to facilitate the first resource economic evaluation of Bissau-Guinean protected areas as planned by the authorities.



Projektdarstellung/Project Summary

In the face of climate change, there is a need to reduce man's vulnerability and to increase his capacity to adapt to its impacts. Marian Cruz will conduct a study that aims to establish the general characteristics of a resilient community, particularly for a river city in a developing country. As a case study, Marian Cruz plans to characterise the climate profile of Marikina City in the Philippines. She will examine the resilience of the city against the effects of climate change, particularly to extreme rainfall events such as the tropical storm 'Ketsana' that occurred in 2009, in line with the city's plan to update its long-term Comprehensive Land Use Plan. The study will benefit the city as it guides leaders in allocating services and identifying appropriate sites for built and unbuilt (open and protected) areas, while the methodology can be replicated to benefit other cities and municipalities.

Cruz, Marian

Hochschulabschluss/Degree: Master of Arts | **Fachgebiet/Field:** Urban and Regional Planning | **Heimatinstitution/Home Institution:** Perk Technical Consultants Corporation, Pasig City, Philippines | **Derzeitige Position/Current Position:** Senior Technical and Environmental Staff | **Berufserfahrung/Professional Experience:** Senior Economic Development Specialist, National Economic and Development Authority, Pasig City, Philippines (2003–2009); Technical Assistant, United Nations Development Programme Project, Pasig City, Philippines (2002–2003); Staff Planner, URS Philippines (formerly Woodward Clyde Philippines, Inc.), Mandaluyong City, Philippines (1997–2002)

Deutsche Gastinstitution/Host Institution in Germany: Leibniz-Institut für ökologische Raumentwicklung, Dresden | **Gastgeber/Host:** Professor Dr. Dr. Bernhard Müller

Towards Building a Resilient Community: A Case Study of Marikina City, Philippines

Delgado Aguilar, María Jeaneth

Hochschulabschluss/Degree: Engineer in Geography and Environmental Issues | **Fachgebiet/Field:** Biodiversity Monitoring | **Heimatinstitution/Home Institution:** Ministry of the Environment of Ecuador, Quito, Ecuador

Derzeitige Position/Current Position: Coordinator of Historical Deforestation Map | **Berufserfahrung/Professional Experience:** Coordinator, Ministry of the Environment of Ecuador, Quito, Ecuador (since 2009) | **Deutsche Gastinstitution/Host Institution in Germany:** Universität Freiburg, Institut für Landschaftspflege | **Gastgeber/Host:** Dr. Christine Schmitt

Evaluation of the Monitoring of Biodiversity within the REDD+ Framework of Ecuador

//////

Projektdarstellung/Project Summary

Ecuador is one of the countries with the highest biodiversity per surface area in the world. In order to maintain these resources, the Ministry of the Environment of Ecuador is currently working on the design of the 'Reducing Emissions from Deforestation and Forest Degradation' (REDD+) national strategy. The United Nations Framework Convention on Climate Change (UNFCCC) and REDD+ have their primary focus on carbon, but co-benefits are also recognised. Therefore, the system for the monitoring, reporting and verification (MRV) of carbon stocks should be expanded to develop a system for biodiversity. The objective of this research project is to determine what the initial necessities and possibilities are to implement a monitoring system for biodiversity in the national REDD+ mechanism in Ecuador. Jeaneth Delgado will carry out expert interviews and an analysis of existing databases. Also, the project aims to create a methodology for monitoring and reporting on the state of and changes in biodiversity in areas in Ecuador that are included in the REDD+ mechanism. The information gathered on biodiversity will be analysed by Jeaneth Delgado and additional leading experts in the field in Germany. In this way, it will be possible to recognise how Ecuador can include biodiversity monitoring in REDD+.

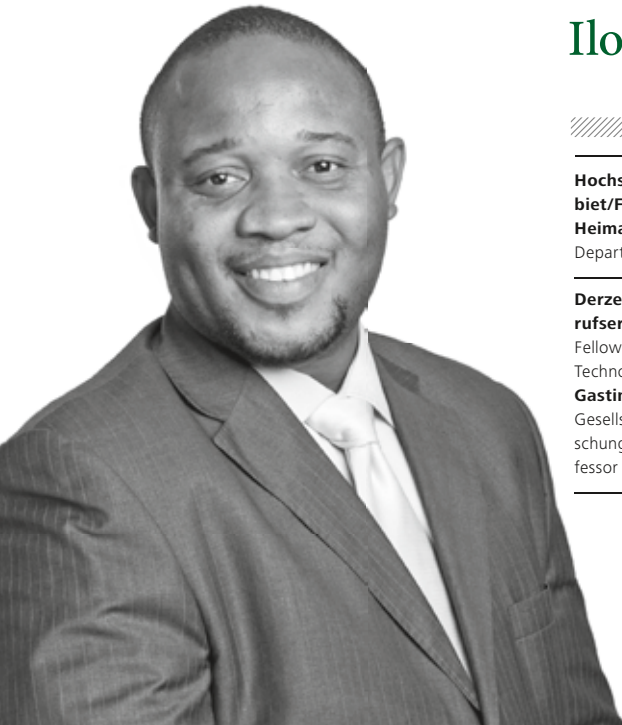


Assessing Genetic Diversity and Divergence within and among Populations of the Threatened Plant *Chasmanthera dependens* (Menispermaceae) in West Africa

Projektdarstellung/Project Summary

Climate change on global and regional scales is predicted to alter species distributions, life histories, community composition, and ecosystem function. In particular, plant population losses caused by climate change threaten both species diversity and the delivery of critical ecosystem services. The knowledge about genetic diversity and population genetic structure of threatened biodiversity species forms a good baseline for predicting the effects of climate change. It is important to understand the genetic variation within and between populations as this will help in the establishment of effective and efficient conservation practices for rare species. Andrew Iloh plans to assess the effects of climate change on biodiversity loss

using the genus *Chasmanthera* (Menispermaceae) as a model system. The Menispermaceae are a cosmopolitan family of climbing plants and are morphologically diverse but poorly known. In West Africa, there is only one species of *Chasmanthera* (*C. dependens*) which has high ethno-medical and economic values. However, the plant is wild, poorly known and there is a risk of genetic erosion due to over-exploitation. This risk has recently increased due to climate change, the latter resulting in a decline of populations. Applying molecular methods, Andrew Iloh also hopes to understand the genetic variation of populations in West Africa which will be essential for the establishment of effective and efficient conservation practices, especially in our changing environment.



Iloh, Andrew Chibuzor

Hochschulabschluss/Degree: Master of Science | **Fachgebiet/Field:** Molecular Systematics, Biodiversity Conservation | **Heimatinstitution/Home Institution:** University of Lagos, Department of Botany, Lagos, Nigeria

Derzeitige Position/Current Position: Ph.D. candidate | **Berufserfahrung/Professional Experience:** Assistant Research Fellow, Biotechnology Advanced Laboratory, Sheda Science and Technology Complex, Abuja, Nigeria (since 2008) | **Deutsche Gastinstitution/Host Institution in Germany:** Senckenberg Gesellschaft für Naturforschung, Biodiversität und Klima Forschungszentrum, Frankfurt am Main | **Gastgeber/Host:** Professor Dr. Alexandra N. Muellner

Jooste, Meagan

Hochschulabschluss/Degree: Master of Social Science | **Fachgebiet/Field:** Economics | **Heimatinstitution/Home Institution:** Trade and Industrial Policy Strategies (TIPS), Pretoria, South Africa



Derzeitige Position/Current Position: Junior Economist | **Berufserfahrung/Professional Experience:** Assistant Research Officer, Energy Research Centre, University of Cape Town, Cape Town, South Africa (2009–2010); Research Assistant, Southern African Labour and Development Unit, University of Cape Town, Cape Town, South Africa (2003–2009) | **Deutsche Gastinstitution/Host Institution in Germany:** Climate Policy Initiative (CPI), Deutsches Institut für Wirtschaftsforschung (DIW), Berlin | **Gastgeber/Host:** Dr. Karsten Neuhoff

Securing Sustainable Growth: Comparing Experiences of Environmental Fiscal Reform in South Africa and Germany

Projektdarstellung/Project Summary

South Africa and Germany have implemented Environmental Fiscal Reform (EFR) policy measures to change consumer behaviours away from the purchase of emissions-intensive vehicles and enact the ‘polluter pays’ principle. Both countries have implemented an emissions intensity labelling system for new passenger vehicles. In 2009, Germany introduced annual ownership taxes based on carbon dioxide (CO₂) emissions and engine displacement on passenger vehicles, and in 2010, South Africa’s National Treasury enforced an ad valorem CO₂ tax on passenger vehicles. Through this study Meagan Jooste plans to employ a stakeholder engagement process and conduct vehicle sales trend analysis in both countries to ascertain the environmental effectiveness, efficiency and equity of these two instruments (an information and market-based intervention). The dual objectives of her study are thus to outline key lessons for South Africa from Germany’s experience and enhance stakeholder engagement between the countries to support the further development of EFR in South Africa.



Khujanov, Ravshanjon

Hochschulabschluss/Degree: Master of Science | **Fachgebiet/Field:** Solar Energy | **Heimatinstitution/Home Institution:** Institut für Energie- und Automatisierungstechnik der Usbekischen Akademie der Wissenschaften, Taschkent, Usbekistan

Derzeitige Position/Current Position: Wissenschaftlicher Mitarbeiter und Ph.D. Student | **Berufserfahrung/Professional Experience:** Koordinator, Projekt „Internationale Zusammenarbeit in Bildung und Forschung“ (Förderprogramm des Bundesministeriums für Bildung und Forschung) mit Usbekistan Projekt UZB 09/A01, Taschkent, Usbekistan und Gießen, Deutschland (2009–2010); Wissenschaftlicher Mitarbeiter, Technische Hochschule Mittelhessen, Gießen, Deutschland (2007–2008) | **Deutsche Gastinstitution/Host Institution in Germany:** Technische Universität Dresden, Institut für Energietechnik | **Gastgeber/Host:** Professor Dr.-Ing. Uwe Gampe

Reduzierung von Kohlendioxid-Emissionen durch Solarwärmeeinspeisung in bestehende fossile Kraftwerke



Projektdarstellung/Project Summary

Usbekistan ist ein Solarenergie Land, dessen Energieversorgung gegenwärtig jedoch auf fossilen Energieträgern, insbesondere auf Erdgas basiert. Neben solarthermischen Kraftwerk-Neubauten könnte auch die solarthermische Nach- bzw. Umrüstung im Rahmen der Modernisierung eine interessante Option auf dem Weg zu einer nachhaltigen, emissionsarmen Energieversorgung darstellen. Bisher gibt es weltweit nur wenige Beispiele einer derartigen Umrüstung fossiler Kraftwerke. Ziel der wissenschaftlichen Arbeit von Ravshanjon Khujanov ist es, eine Methode und Kriterien zu entwickeln, auf deren Grundlage zu modernisierende fossile Kraftwerke in Bezug auf ihre Potenziale für eine solarthermische Nach- bzw. Umrüstung untersucht werden können, und diese auf die Bedingungen Usbekistans anzuwenden. Usbekistan betreibt 42 thermische Kraftwerksblöcke mit jeweils 160 Megawatt (MW) bis 300 MW Blockleistung, davon sind 19 älter als 30 Jahre. Das Projekt soll aber auch die deutsch-usbekische Zusammenarbeit auf dem zukunftssträchtigen Gebiet der solaren Kraftwerkstechnik fördern. In diesem Zusammenhang soll eine noch stärkere wissenschaftliche Vernetzung ausgehend von der Technischen Universität Dresden und der Technischen Hochschule Mittelhessen auf deutscher Seite sowie den usbekischen Partnerinstituten der Technischen Universität Taschkent und der Akademie der Wissenschaften Usbekistans erfolgen.

Lama, Anu Kumari

Hochschulabschluss/Degree: Master of Parks, Recreation and Tourism Management | **Fachgebiet/Field:** Natural Protected Areas, Human Geography | **Heimatinstitution/Home Institution:** International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal

Derzeitige Position/Current Position: Research Scholar | **Berufserfahrung/Professional Experience:** Tourism Officer, National Trust for Nature Conservation-Annapurna Conservation Area Project (NTNC-ACAP), Pokhara, Nepal (2003–2008) | **Deutsche Gastinstitution/Host Institution in Germany:** Universität Würzburg, Lehrstuhl für Geographie und Regionalforschung | **Gastgeber/Host:** Professor Dr. Hubert Job

Projektdarstellung/Project Summary

The rationale for this project is an unprecedented rate of transformations occurring in the Mustang region of the Annapurna Conservation Area (ACA) – mainly in relation to socio-economic change (road development, tourism) and political change. Climate change has been identified as an important additional pressure to this system, with the potential to undermine the conservation and development processes within the ACA. The overarching aim of this project is to increase our understanding of climate change adaptation necessary for the local stakeholders of the Mustang region and to implement research findings. The proposed project relies on multiple sources of evidence and uses both qualitative and quantitative methods. In Nepal, field work will be conducted in the Mustang region and data will be collected through in-depth interviews, direct observation and various participatory research tools. The research in Germany involves the assessment of climate change vulnerability and adaptation framework development. At the University of Würzburg, Anu Kumari Lama will simulate current and future climate change in the ACA by means of high resolution regional climate models. This would be a new quantitative benchmark for a changing climate boundary condition for Nepal in general and ACA specifically. This scientific data will be synthesized with the stakeholders' knowledge on and their responses to climate change impacts and their adaptive capacity will be assessed, creating the foundation for a community based adaptation framework for the Mustang region. This project is designed to fit into a larger research collaboration between the National Trust for Nature Conservation's Annapurna Conservation Area Project (Nepal), the University of Würzburg (Germany) and Lincoln University (New Zealand).

Adapting the Human Environment System to a Changing Climate: A Case Study of the Mustang Region in the Annapurna Conservation Area, Nepal



Impact of Climate and Socio-Economic Factors on Dengue Epidemics in Sri Lanka

Projektdarstellung/Project Summary

Dengue has become a deadly disease in Sri Lanka. The number of reported dengue patients has rapidly increased during the past few years on the island, particularly due to socio-economic and environmental factors. There were more than 35,000 reported patients and over 340 mortalities in 2009 and 34,105 patients and 246 mortalities in 2010. Dengue outbreaks in Sri Lanka are associated with periods of rainfall. Currently, various factors have been identified for the rapid increase of dengue incidences. In addition to entomological and medical aspects of the disease, it is necessary to focus on the environmental and socio-economic factors that are contributing to vector breeding and the spread of the virus. This is the aim of Maduni Pavithra Madanayake's study. The stay in Germany will allow her to access essential resources by connecting her to leading scholars of statistical and Geographical Information System (GIS) technology. Statistical models are being prepared to identify the patterns and the trends relating the spread of dengue to climate and socio-economic factors. This will lead to the creation of a Dengue Risk Map (DRM) by integrating GIS technology for specific geographic regions in Sri Lanka. The DRM identifies potentially vulnerable areas within the urban localities where dengue outbreaks are likely to occur. These areas would be targeted by the healthcare systems at village level to create awareness and implement preventive measures to arrest the spread of the dengue mosquito.



Madanayake, Maduni Pavithra

Hochschulabschluss/Degree: Master of Science | **Fachgebiet/Field:** Geographic Information Systems, Epidemics | **Heimatinstitution/Home Institution:** Institute of Fundamental Studies, Kandy, Sri Lanka

Derzeitige Position/Current Position: Research Assistant | **Berufserfahrung/Professional Experience:** Research Assistant, Institute of Fundamental Studies, Kandy, Sri Lanka (since 2009) | **Deutsche Gastinstitution/Host Institution in Germany:** Universität Heidelberg, Institut für Public Health and Humboldt-Universität zu Berlin, Geographisches Institut | **Gastgeber/Host:** Professor Dr. Rainer Sauerborn and Professor Dr. Tobia Lakes

Satyanti, Annisa



Hochschulabschluss/Degree: Master of Science | **Fachgebiet/Field:** Forestry, Nature Conservation and Plant Ecology | **Heimatinstitution/Home Institution:** Research Center for Plant Conservation, Bogor Botanical Gardens, Indonesian Institute of Sciences, Bogor, Indonesia

Derzeitige Position/Current Position: Researcher | **Berufserfahrung/Professional Experience:** Planning, Monitoring and Evaluation, Wahana Lingkungan Hidup/Friends of the Earth Indonesia, Indonesia (2007–2008); Scientific Assistant, Seed Source and Nursery Center Rumpin, Korea International Cooperation Agency, Rumpin, Indonesia (2007); Lecturer's Assistant Agroforestry, Faculty of Forestry, Bogor Agricultural University, Bogor, Indonesia (2004); Lecturer's Assistant Dendrology, Faculty of Forestry, Bogor Agricultural University, Bogor, Indonesia (2003–2004); Research Assistant, Project "Management of Mixed Mountain Forest in the Bavarian Alps", Chair of Silviculture and Forest Planning, Department of Ecosystem and Landscape Management, Technische Universität München (2003) | **Deutsche Gastinstitution/Host Institution in Germany:** Universität Regensburg, Institut für Botanik | **Gastgeber/Host:** Professor Dr. Peter Poschlod



In Search of Indonesian Non-Palm Oilseed Species and Studies for their Germination under Changing Climate and Varied Soil Regimes

Projektdarstellung/Project Summary

The ecologically destructive practices in palm oil production have led the European Union to recommend a total ban on palm oil imports until sustainable production is introduced. At the same time, a 10%-goal of biofuel blends in all new vehicles by 2020 has been set. If palm oil import is banned, a huge market for other biofuel feedstocks would exist. However, with the projected world population it is inconceivable that land presently fit for agricultural use will be transformed into biofuel land – a problem the Food and Agriculture Organisation of the United Nations (FAO) is already deeply concerned about. A limited answer may perhaps lie in using the land that is unfit for food production. Replacing oil palms with other oilseed species means searching for suitable native oilseed species that are suited to the wide variety of (non arable) lands in the tropics. Therefore, Annisa Satyanti wants to conduct inventories of potential plant species in a literature study. This list will describe their biological and ecological characteristics, including oil production, invasiveness, site specification and resistance to drought. Subsequently, germination experiments and juvenile growth observations will be done for selected species. Annisa Satyanti will also study two seed (gene) bank projects (Wildpflanzen für Ernährung und Landwirtschaft – WEL and Bayern Arche) running at the host institute, which it is hoped will offer new perspectives and provide transferable knowledge transfer in the field of ex-situ plant conservation.

Vidaurre de la Riva, Marolyn

Contribution of Traditional Knowledge to Climate Change Adaptation Measures – Apolobamba Region of Bolivia

Hochschulabschluss/Degree: Master of Science | **Fachgebiet/Field:** Ecology and Conservation, Environmental Planning | **Heimatinstitution/Home Institution:** Instituto de Ecología, Universidad Mayor de San Andrés (UMSA), La Paz, Bolivia

Derzeitige Position/Current Position: Institutional Coordinator of the Bioculture National Program | **Berufserfahrung/Professional Experience:** Director, Escuela de Cultura Ambiental y Sostenibilidad, UMSA, La Paz, Bolivia (since 2010); University lecturer and Associate Researcher, Centro de Postgrado en Ecología y Conservación, UMSA, La Paz, Bolivia (since 2010); Assistant of coordination and ecotourist guide, La Paz a Pie, La Paz, Bolivia (2005–2006); University lecturer, Universidad Real, La Paz, Bolivia (2006) | **Deutsche Gastinstitution/Host Institution in Germany:** Technische Universität Dresden, Institut für Internationale Forst- und Holzwirtschaft | **Gastgeber/Host:** Professor Dr. Jürgen Pretzsch



Projektdarstellung/Project Summary

Quality of life in the Andes is highly sensitive to climate variability and change, especially when climate changes challenge the adaptive capacity of local communities and their traditional relationships with the ecosystem. Therefore, understanding and dissemination of the information on livelihood strategies is key to developing adaptive capabilities. Marolyn Vidaurre's research project aims to contribute to adaptation measures to climate change by identifying local knowledge in the Andean culture of Bolivia, and integrating this knowledge into extension packages for researchers and local communities. It will seek to play an integral role in the International Network on Climate Change (INCA). The proposed method is based on: diagnosis, integrated analysis of scientific and local knowledge, and elaboration of extension packets. The research will principally generate a learning space. It will be a combination of scientific and local knowledge regarding Andean technologies and ancient traditions. This learning space will indirectly contribute to adaptation measures to climate change in rural communities.

Zhang, Shuwei

Hochschulabschluss/Degree: Ph.D. | **Fachgebiet/Field:** Energy System Analysis, Climate Change | **Heimatinstitution/Home Institution:** State Grid Energy Research Institute, Beijing, China

Derzeitige Position/Current Position: Research scholar | **Berufserfahrung/Professional Experience:** (Part-time) Senior Consultant, GoldChina Consultancy International, Beijing, China (2008–2010); Research Assistant, Tsinghua University, Beijing, China (2004–2007) | **Deutsche Gastinstitution/Host Institution in Germany:** Potsdam-Institut für Klimafolgenforschung, Bereich Nachhaltige Lösungsstrategien | **Gastgeber/Host:** Professor Dr. Ottmar Edenhofer



Projektdarstellung/Project Summary

Climate change and its impact is the defining issue of our era. China's mitigation has been put on the agenda. Establishing a better understanding of China's mitigation potential and the corresponding costs in the context of the global climate effort will be the target of this project. Zhang Shuwei plans to adopt the hybrid model, REMIND-R, specifically for this purpose. He will outline future emission dynamics in China and update scenarios upon different technology assumptions and policy portfolios, with an emphasis on the role of transport and power. The findings originating from this project will be disseminated via a number of channels including journals as well as networking of the applicant, the Chinese partners and the Potsdam-Institut für Klimafolgenforschung. This project work will broaden Zhang Shuwei's research capabilities and network, increase his scientific knowledge and management experience, and finally promote mutual understanding between energy and climate research scholars in China, Germany, and other countries.

**Assessment of the
Economics of Climate
Change Mitigation in
China**

Projektdarstellung/Project Summary

Design cannot change the climate or help resource protection directly, but it can broadcast ideas about climate and resource protection through original and creative methods. As the viewer of the city landscape, the resident behaves passively and simply relation-oriented to the city ecology. The aim of Zhong Zhen's green cell project is to build a new interactive landscape, which leads to the symbiotic interactive relationship among people, plants and urban space as an important influencing factor of environmental evaluation. The green cell will help the landscape

element blend into the citizen's daily life, and largely improve the utilisation ratio of plant resources in cities. It can also be widely applied in the cities through combined modes. Two cities' materials and information on resources, climate and urban cultures from China and Germany will be analysed. The final report will summarise the design achievements. The result will be widely used in future landscape design, which will promote the interaction between human-beings and the landscape, in order to coordinate urban area microclimates.

The Green Cell-Interactive Landscape Design

Zhong, Zhen

Hochschulabschluss/Degree: Master of Arts | **Fachgebiet/Field:** Landscape Design, Nature Science | **Heimatinstitution/Home Institution:** Art College of Xiamen University, Xiamen, China

Derzeitige Position/Current Position: Chief of Environment Design Art Research Office, Art College of Xiamen University | **Berufserfahrung/Professional Experience:** Visitor course at Princeton University, Princeton, New Jersey, USA (2007); Assistant Professor, Xiamen University, Xiamen, China (since 2006); Visiting Master's student, Zürcher Hochschule der Künste, Zürich, Schweiz (2005) | **Deutsche Gastinstitution/Host Institution in Germany:** Hochschule Osnabrück, Fakultät für Ingenieurwissenschaften und Informatik | **Gastgeber/Host:** Professor Dr. Thomas Hofmann





Alexander von Humboldt
Stiftung/Foundation

Jean-Paul-Str. 12
53173 Bonn

Tel.: +49 (0)228.833-0
Fax: +49 (0)228.833-199

E-Mail: info@avh.de
www.humboldt-foundation.de

Gefördert durch:



Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

aufgrund eines Beschlusses
des Deutschen Bundestages