

International Ecosystem Management Partnership 国际生态系统管理伙伴计划





ANNUAL REPORT 2012

The mission of the UNEP-International Ecosystem Management Partnership is to provide science, policy and capacity support to developing countries to integrate ecosystem management approaches into national policies and development plans to enhance the delivery of ecosystem services for human well-being.

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A UNEP Collaborating Center



UNEP-IEMP needs to be a true global centre in the South and for the South providing technical and policy support to developing countries and a platform for promoting ecological civilization.

Prof. Chunli Bai, President, CAS



UNEP-IEMP is a foundational pillar of UNEP's South-South cooperation initiative to enable UNEP to deliver environmental capacity building and technology support to regions of the South.

Mr. Achim Steiner. Executive
Director, UNEP



The Ministry of Environmental Protection will support the host Chinese organization, the Chinese Academy of Sciences, for the establishment of UNEP-IEMP.

H.E. Shengxian Zhou,
Minister, Ministry of
Environmental Protection

In 2010, principals of both UNEP and the Chinese Academy of Sciences (CAS) agreed on the need to establish a collaboration centre, UNEP-International Ecosystem Management Partnership (UNEP-IEMP) that will strengthen South-South Cooperation and also enhance ecosystem management in developing countries and support the science-policy interface.

In 2011, the Ministry of Environmental Protection (MEP) of the Peoples Republic of China, the designated focal point authorized for official contacts with UNEP extended its support to the establishment of UNEP-IEMP. Later that year, in November 2011, UNEP-IEMP was officially launched.

In December 2012, UN Under-Secretary-General and UNEP Executive Director Mr. Achim Steiner and the President of the Chinese Academy of Sciences, Professor Chunli Bai signed an agreement that marked the establishment of UNEP-IEMP as a UNEP Collaborating Centre on ecosystem management. In accordance with the agreement, UNEP-IEMP has been mandated to support UNEP's Ecosystem Management and Climate Change sub-programmes, promote a green economy through an ecosystem management approach and support South-South Cooperation.

A Message from the Director



It was a historic moment in June 2012 when world leaders along with thousands of representatives from governments. NGO's, civil societies and other groups came together in an effort to shape the Future We Want. It was clear that we needed to move away from a business-as-usual pathway and chart a more sustainable alternative to harmonize man and nature relationships. It is now time for us to endeavor to turn the commitments made in Rio + 20 into actions.

The Year 2012 was a landmark year for UNEP-IEMP too, not only because it marked our first anniversary since official inception, but more importantly it witnessed the transformation from an international programme into a UNEP Collaborating Center, the very first one in the south and for the south focusing on ecosystem management in all developing countries. This move came at an opportune time when the importance of ecosystem management and South-South cooperation were reiterated in the Rio+ 20 deliberations. As we strive to make positive contributions and effectively support UNEP's Ecosystem Management and Climate Change sub-programmes, and China's South-South Cooperation Programme, we have been able to acquire provisional funds to kick-off major project activities in pilot countries of Africa and Asia-Pacific, namely, Mauritania, Nepal, Rwanda and Seychelles. We are working in close collaboration with governments in these countries to provide science, policy and capacity support to address environmental challenges.

I would like to extend my appreciation for support from UNEP, in particular to Mr. Achim Steiner, the Executive Director, Ms. Amina Mohamed, the Deputy Executive Director and the Director and Deputy Director of DEPI, Mr. Ibrahim Thiaw and Mrs. Elizabeth Mrema respectively. I would also like to thank the Government of China, in particular, Prof. Chunli Bai, the President of CAS, Minister Shengxian Zhou and General Engineer Qinghua Xu from MEP. President Yiyu Chen of NSFC, Director General Su Wei of NDRC, and Assistant Minister Ming Zhang of MOFA and last but not least, to the Director General Yi Liu of IGSNRR-CAS to mention but a few.

We look forward to another promising year full of new opportunities as we continue our journey towards the Future We Want.

Dr. Jian Liu UNEP-IEMP Director

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OFFICIAL LAUNCH OF UNEP-IEMP

UNEP-IEMP, a joint programme for promoting ecosystem management in developing countries was launched in November, 2011 by the United Nations Environment Programme (UNEP) and the Chinese Academy of Sciences (CAS). The launch occurred on the sidelines of the High-Level Forum on

Ecosystem Management and Green Economy that aimed to contribute to the success of Rio+ 20 by highlighting the pivotal role of ecosystem management in the development of a green economy in China and other developing countries. In the long-term, sustainable management of ecosystems and biodiversity helps





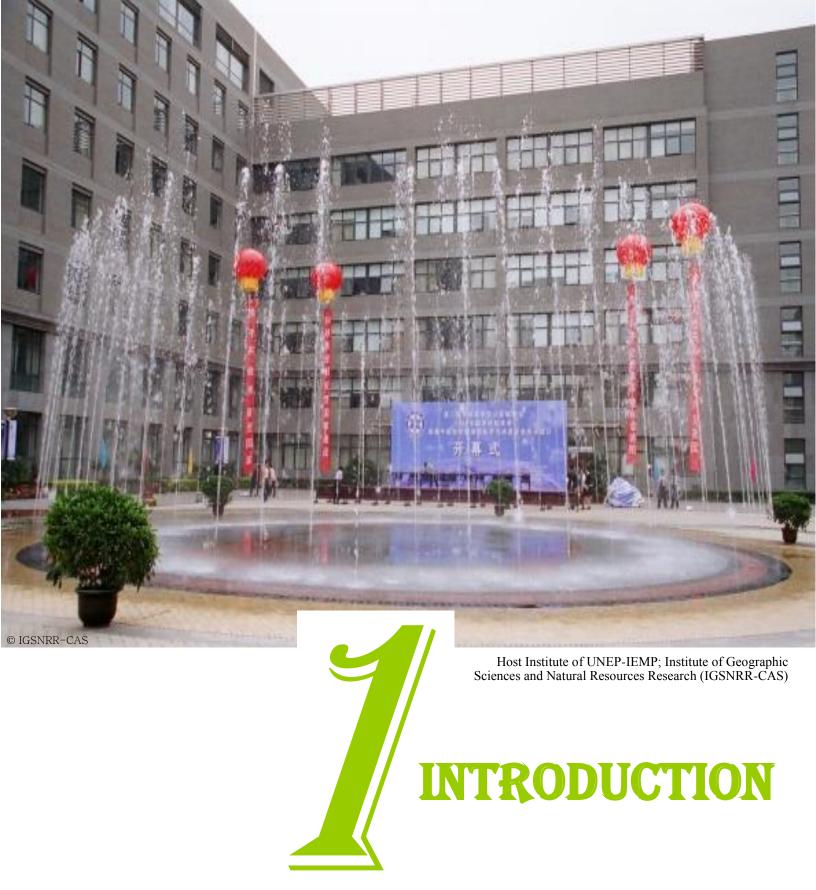
improve the natural capital base for achieving the goal of green economy.

UNEP is the global leader in environmental protection, promoting ecosystem management and integration of ecosystems into strategies for a green economy. The Chinese Academy of Sciences possesses a wealth of experience, expertise, knowledge and technologies in the field of ecosystem monitoring and management.

The unique approach of integrating monitoring and research with national policy setting is central for decision making for ecosystem management and helps to link science with policy.

Through this UNEP-CAS collaboration, the combined knowledge, experiences and capacity in ecosystem management can be shared between China and other developing countries.





Who We Are

"UNEP-IEMP is the first UNEP Initiative in the South and for the South mobilizing science to support policy setting for sustainable ecosystem management in developing countries.

> Achim Steiner Executive Director, UNEP

Our mission

To provide science, policy and capacity support to developing countries in order to integrate ecosystem management into their national policies to enhance the delivery of ecosystem services for human well-being.

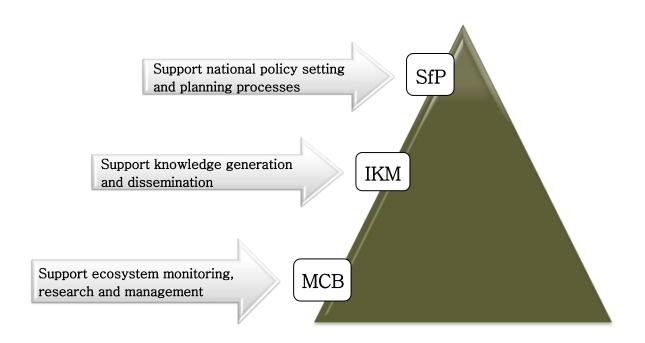
Our vision

To enhance the role of ecosystem management as a vital approach to working with nature for a world with a green economy.

UNEP-IEMP is a China-based global center promoting science for policy on ecosystem management in all developing countries. It is a UNEP collaborating center in the South and for the South and support UNEP's sub-programmes on Ecosystem Management and Climate Change.

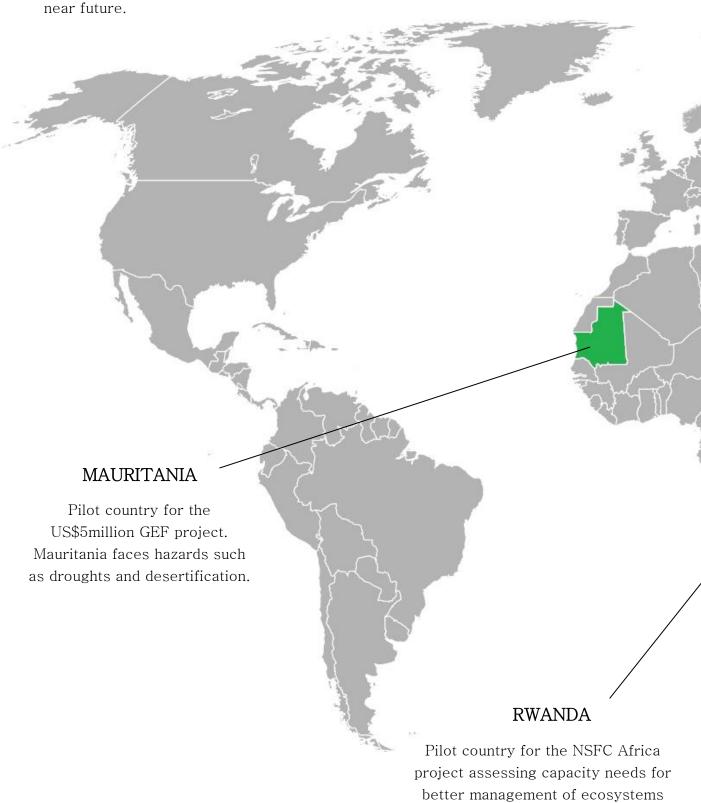
Our mandate...

is to synthesize science findings for decision making on ecosystem management in all developing countries. It is supported by three interrelated initiatives: Science for Policy (SfP), Integrated Knowledge Management (IKM), and Monitoring and Capacity Building (MCB).



Where We Work

This map shows countries where we are currently undertaking our projects. Our aim is to further expand our work to more developing countries in the near future



Pilot country for the US\$5million GEF project. Nepal faces climate change hazards such as floods, droughts and landslides.

Promoting and supporting China's South-South Cooperation Programme





A side event on "Why is Ecosystem Management key to securing a Green Economy?" was organized on the margins of UNEP's 12th Special Session of the Governing Council in Nairobi. The event helped strengthen the role of UNEP in its leadership role of integrating ecosystem management into green economy development.

24 FEBRUARY

Consultation meeting on "Ecosystem Management and Climate Change in Africa" was held at the UNEP in Nairobi as a learning process to Sino-Africa Cooperation in the domain of ecosystem management and climate change.

2 APRIL

President of the Chinese Academy of Sciences, Prof. Chunli Bai visited UNEP Headquarters in Nairobi. During his visit, he reiterated his continued support to UNEP-IEMP and its developments.

20 JULY

A Special Session of the China Ecological Forum "Rio+20 and South-South Cooperation" was organized to discuss new opportunities and challenges for South-South cooperation in a post Rio+20 era and present China's vision of collaboration with other developing countries.



11-12 AUGUST

A workshop was organized to launch the development of a full proposal for the GEF-SCCF project "Enhancing capacity, knowledge and technology support to build climate resilience of vulnerable developing countries."

6 SEPTEMBER

High-Level annual event "Xiamen Forum on Ecosystem Management and Green Economy" was organized in Xiamen, China. The event contributed to the implementation of green economy policies through promoting the central role of ecosystem management.

UNEP-IEMP facilitated the signing of an MOU between the Institute of Geographic Sciences and Natural Resources Research (IGSNRR-CAS) and the Rwanda Environment Management Authority (REMA). The MOU aims to provide a framework of cooperation and understanding with regards to sustainable use and management of natural resources and ecosystem services.

31 DECEMBER

An agreement was signed between UNEP and CAS to establish UNEP-IEMP as a UNEP Collaborating Center mobilizing science to support policy setting for sustainable ecosystem management in developing countries.



Ecosystem Management and Green Economy



As a follow-up to the High Level Forum on Ecosystem Management and Green Economy and in the run up to the Rio+20 conference, this side event was held on the margins of the UNEP's 12th Special Session of the Governing

Council/ Global Ministerial Environment Forum in February 2012. Attended by approximately 100 delegates, the forum provided a platform for discussions and conveyed key messages to the ministers and delegates of the UNEP Governing Council on issues of ecosystem management and green economy. It also enhanced UNEP's leadership role to integrate Ecosystem Management and Green Economy into national development plans and to encourage policy makers to mainstream scientific recommendations in policy making.

Rio+20 and South-South Cooperation

We must ensure that activities in South-South cooperation improve, not degrade our ecosystems, which are the foundation of our sustainability.

> Ms. Amina Mohamed Deputy Executive Director. UNEP



Ms. Amina Mohamed Deputy Executive Director **UNEP**

The Rio+20 Outcome Document "Future We Want" emphasized the need to move towards a sustainable future through a transformation to a green economy. It recognized that people are at the center of sustainable development and in this regard, we strive for a world which is just, equitable and inclusive. These points were reiterated by Ms. Amina Mohamed, Deputy Executive Director of UNEP during her keynote speech at the Special Session of the China Ecological Forum "Rio+20 and South-South Cooperation" organized by UNEP-IEMP on July 20, 2012.

Bringing together approximately 150 participants, the forum discussed new opportunities and challenges for South-South cooperation in a post Rio+20 era and presented ways in which China would collaborate with other developing countries.

A Call for Action in a Post Rio+20 Era

Ecosystem management provides a foundation for green economy...How to strengthen this foundation will help determine what kind of future we want.

H.E. Zukang Sha Secretary General, United Nations Conference on Sustainable Development



Implementing green economy policies in a post Rio+ 20 era needs champions, especially those from developing countries where a complex challenges exist. In recognizing the important role that ecosystem management plays in advancing national development, UNEP, CAS and the Municipal Government of Xiamen with support from UNEP-IEMP, co-organized the "Xiamen Forum on Ecosystem Management and Green Economy."

Attended by over 200 people from around the world, the forum contributed to the implementation of green economy policies through promoting the role of ecosystem management, called for by the Rio+ 20 Conference. Participants discussed and called for action on a number of key issues committed by Rio+ 20, thought to be important for a paradigm shift from balancing to integrating the three dimensions of sustainable development.

CALL FOR ACTION:

- 1. Priority to be given to the over-arching framework of integrating the three dimensions of sustainable development.
- 2. Strengthen the environmental pillar by upgrading UNEP with universal membership.
- 3. Enhance synergies in pursuing global sustainability through Ecosystem Management and Green Economy.
- 4. Scale-up investments in ecosystem conservation and restoration.
- 5. Promote eco-cities to address the growing environmental challenges of urbanization.
- 6. Strengthen South-South Cooperation for implementing green economy policies.
- 7. Enhance promotion of science and technology as a source of innovation for global sustainability.



Ecosystem Assessment and Monitoring in Africa

NSFC-Rwanda Project

In an effort to assist African countries to better manage their ecosystems, the Natural Science Foundation of China (NSFC) through the Chinese Academy of Sciences (CAS), funded a new project titled "Assessment on Capacities of Ecosystem Monitoring, Research and Management in Africa." This is the first collaborative project between NSFC and UNEP. Facilitated by UNEP-IEMP, the overall goal of the project is to understand and learn from Rwanda (selected pilot country) the capacity needs for better management of their ecosystems and improvement of livelihoods. More specifically, the Aknayaru Watershed was selected as an integrated soil and water conservation research site for cooperation.

Under this project, two young Rwandese professionals (Erasme Mbanzamihigo and Eugene Maridadi) underwent an intensive three month training course at CAS in China on ecosystem monitoring and research to be able to assist the project on the ground.



Mr. Mbanzamihigo [C] and Mr. Maridadi [R] in the field with Prof. Li Fadong of UNEP-IEMP [L] during their training course.

Proposed activities under the project are (i) development of an ecosystem research and monitoring platform to serve as a training centre (ii) assessing capacity needs for ecosystem management in East Africa, (iii) assessing linkages between human activities and ecosystem services, and (iv) developing a conceptual framework for an African Ecosystem Research Network.



UNEP-IEMP team mounting a flux tower for installation of weather instruments in Nyungwe Forest National Park in Kigali Rwanda during an in-country mission in November 2012.

The Chinese Ecosystem Research Network (CERN) will be valuable to this project as its approach in integrating ecosystem monitoring, research, demonstration and policy support into one system provides an enhanced uniqueness of its network which can be applied to other developing countries.

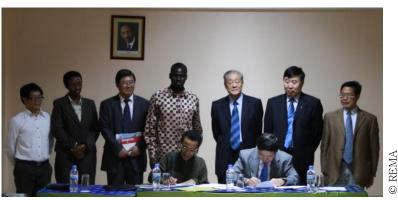
Nile River Basin Project

As part of UNEP-IEMP's Monitoring and Capacity Building initiative, this project focuses on the upper reaches of the Nile River. The goals are (i) understanding the ecological effects of different land use patterns, (ii) assessing ecosystem services provided by the upper reaches

of the Nile River to the lower reaches including Lake Victoria, and (iii) promoting knowledge transfer from the Chinese Ecosystem Research Network to the region. This project aims to build on and support activities of the NSFC project.

Rwanda-China Partnership

In order to provide a framework for cooperation to enhance the shared understanding on capacities for ecosystem research, monitoring and management, IGSNRR-CAS and REMA signed an MOU in November 2012. The MOU serves as an umbrella under which the institutions will collaborate on the sustainable use and management of natural resources and ecosystem services.



Dr. Rose Mukankomeje, Director General, REMA [L] and Prof. Guirui Yu, Deputy Director General of IGSNRR-CAS [R] signing the MOU

China's Action Plan on South-South Cooperation

China's 12th Five-Year Plan for National Economic and Social Development (2011-2015) states "efforts will be made to enhance international exchange and strategic policy dialogue on climate change... and provide support and assistance for other developing countries in addressing climate change." In this regard, there is an urgent need to develop an action plan on the South-South Cooperation on climate change and build the supporting policy system through survey and research. Funded by China's Clean Development Mechanism (CDM) Fund and implemented by IGSNRR-CAS and UNEP-IEMP, NDRC's Department of Climate Change commissioned a project that aims to provide policy support for China to develop and implement the action plan on South-South Cooperation on addressing climate change. The main objectives of the project are to provide short-term and long-term plans for South-South Cooperation on climate change. The project has successfully passed its mid-term review.

GEF Project on Ecosystem-Based Adaptation

The impacts of climate change are being experienced by local communities within a wide range of economic sectors in developing countries across Africa and Asia-Pacific. Climate change poses a great threat to economic development and the livelihoods of the vulnerable communities in particular, because communities rely heavily on ecosystems for their survival.

These effects are further compounded by the inadequate capacity of local communities to adapt to the impacts of climate change, in large part by insufficient financial resources. The overwhelming need for immediate effective action to adapt to climate change is paramount. It has been recognized that substantial investments are required to safeguard livelihoods in the face of a changing climate. Efforts to reduce vulnerability to the effects of climate change should integrate ecosystem management approaches for restoring ecosystem services and enhancing human well-being.

To address the climate change challenge, the Global Environment Facility (GEF) CEO has approved a full-sized US\$5million project titled "Enhancing Capacity, Knowledge and Technology Support to Build Climate Resilience of Vulnerable Developing Countries" that will be funded through the Special Climate Change Fund (SCCF).

The project will be implemented by UNEP and executed by NDRC through IGSNRR-CAS. UNEP-IEMP will provide technical support and function as the Project Management Unit. The project will be complementing ongoing initiatives of China's South-South Cooperation Programme.

The main objective of the project is to build capacity for resilience to the effects of climate in developing countries in Africa and Asia-Pacific. This will be undertaken via Ecosystem-Based Adaptation (EBA) mechanisms that involve capacity building, knowledge support and concrete on-the-ground interventions.



Participants at the Inception Workshop in Beijing, China © Liang Wu

The three pilot countries selected include Nepal, Mauritania and Seychelles in Asia-Pacific, West Africa and Small Island Developing States (SIDs) respectively.

In order to launch the development of the full project proposal, an inception workshop was conducted in August 2012. Participants reached an agreement on the project's objectives, design and expected outputs and established a roadmap for development of a full proposal for the project as well as its implementation.



During the in-country mission to Nepal: Exchanges with local communities on usage of improved stoves

The project comprises of three components to be implemented over the next four years (2013–2017), namely: i) inter-regional coordination and capacity building for African and Asia-Pacific developing countries to plan and implement EBA; ii) inter-regional online EBA knowledge support; and iii) the transfer of EBA technologies to pilot countries supported by national and local level capacity building and knowledge support.



During the in-country mission to Seychelles; Alain De Comarmond of the Climate Affairs Adaptation & Info Unit, Seychelles [R], explaining successful examples of soft approaches to coastal buffering.

In September 2012, in-country missions were conducted in each pilot country. The missions aimed to identify potential baseline projects upon which this project could build. Information was gathered through consultations with various stakeholders, including government and UN agencies, NGOs and community groups.

Implementation of this project is expected to begin in early May 2013.



A site of the OUBAME project on combating poverty and desertification – one of the baseline projects identified in Mauritania.



UNEP-IEMP and UNEP Beijing office teams during a group retreat in Dongying, Shandong Province, China

WORKING AT UNEP-IEMP

UNEP-IEMP Team

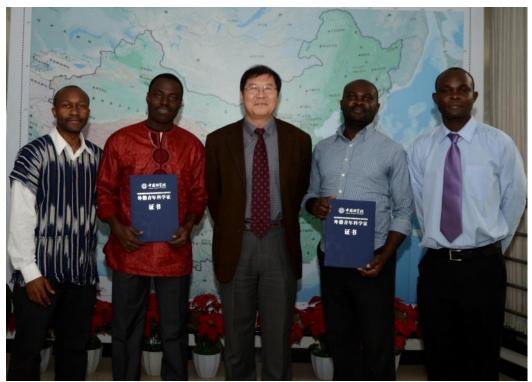
At UNEP-IEMP, our team is the driving force behind our success. We are pleased to work with a pool of talented professionals in their own fields, with a wide range of skills working tirelessly to ensure the success of our programme. The team is kept small enough to be agile but large enough to carry out our core functions.

This year we have made significant strides to increase our team to allow us to effectively carry out our core activities outlined in the Strategic Plan 2011-2013. In this regard, we received 10 new additions to the UNEP-IEMP family.

We extend our appreciation to all the Programme Coordinators working as in-kind support from the Chinese Academy of Sciences for their guidance and expertise to the team members.

Visiting Professorship and Fellowship Programmes

As part of CAS's Visiting Professorship for International Senior Scientists and Fellowships for International Young Scientists, we are pleased to have Prof. Pak Sum Low, a visiting professor from Malaysia working with us this year. We also have four International Young Scientists; (i) Dr. Ahmed Khan from Sierra Leone/Canada, (ii) Dr. Belarmain Fandohan from Benin, (iii) Dr. Innocent Abbas from Nigeria and (iv) Dr. Ayub Oduor from Kenya.



Liang Wu

UNEP-IEMP International Young Scientists (holding their fellowship awards) with the Director. Left to Right: Dr. Ahmed Khan, Dr. Belarmain Fandohan, Dr. Jian Liu, Dr. Innocent Abbas and Dr. Ayub Oduor.

The fellowship programme is a great opportunity to work in a multi-disciplinary team to tackle environmental problems that our society faces today. The program is uniquely designed to bridge scientific findings with policy setting. What can be more rewarding than employing science to real-world problems?

Dr. Ayub Oduor CAS International Young Scientist

Senior Scientist programme seeks to enhance the work of CAS by working with accomplished international researchers from well known universities. The Young Scientist programme aims to promote academic exchange and foster talented scientists through undertaking cooperative research at CAS institutes.

These programmes provide the scientists with professional opportunities and career growth as well as providing their expertise to UNEP-IEMP.



Senior Scientist, Pak Sum Low [L] posing for a photo with the Director General of IGSNRR-CAS, Prof. Yi Liu.

Research Highlights of our International Young Scientists



Dr. Oduor is part of the Rwanda project team focusing on monitoring and surveying of ecosystems in the source region of Nile River. He is also undertaking research on effects of climate change on invasive plant species in East Africa. He's co-authored papers with UNEP-IEMP colleagues.

Dr. Khan is part of the Rwanda project team focusing his research on ecosystem services and livelihood linkages. As a follow-up to the Xiamen Forum, he's co-authored papers on eco-investments and green economy. He is also the UNEP-IEMP focal point for the GEF Project for Seychelles.





Dr. Fandohan's research focuses on the impacts of climate change on cultivation and conservation of indigenous fruit tree species in West Africa. In addition to being the UNEP-IEMP focal point for the GEF Project for Mauritania, he has also co-authored papers with UNEP-IEMP colleagues.

Dr. Abbas is undertaking his research on land use change in Africa and the effects on livelihoods and economic development on the continent. He is also researching on the feasibility of establishing an African Ecosystem Research Network (AERN).



Meet the Team



Jian Liu UNEP-IEMP Director



Xiubo Yu Coordinator Monitoring and Capacity Building Programme



Linxiu Zhang Coordinator Science for Policy Programme



Bingfang Wu Coordinator Integrated Knowledge Management Programme



Pak Sum Low International Senior Scientist



Yutian Zhang Senior Policy Advisor



Catherine McMullen Senior Consultant



Fadong Li Coordinator Rwanda Project



Ahmed Khan International Young Scientist



Ayub Oduor International Young Scientist



Belarmain Fandohan International Young Scientist



Chao Fu Post-Doctoral Research Fellow



Innocent Abbas International Young Scientist



Liang Wu Post-Doctoral Research Fellow



Hongmei Yi Research Fellow



Xiaosong Li Research Fellow



Yu Ma Research Fellow



Denise Loga Research Associate



Dhanush Dinesh Research Associate



Kirti Avishek Research Associate



Guoqin Wang Assistant to the Director



Karen Mrema Communication Officer



Xigui Huang Finance Officer



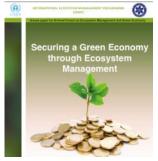
Jialin He PhD Candidate



Shaoxia Xia PhD Candidate



Publications



Securing a Green Economy through Ecosystem Management Implementing Green Economy Policies through Ecosystem Management: A Call for Action in a post -Rio+20 era

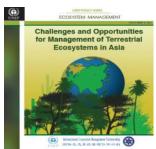




60 years of paradigm shift in China, change of policies and practices on Ecosystem Management

China and UN-REDD Programme, what they can do together to move to REDD+ agenda forward?





Challenges and Opportunities for Management of Terrestrial Ecosystems in Asia

Restoring the natural foundation to sustain a Green Economy



Putting Ecosystem Management in the Vision of Africa's Development

Towards a sustainable Green Ecosomy

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Putting Ecosystem Management in the Vision of Africa's Development Promoting upstreamdownstream linkages through integrated Ecosystem Management in the Greater Mekong sub-region





Bulletin - Issue 1

Bulletin - Issue 2

All these publications are available online at http://www.unep.org/ecosystemmanagement/IEMP/Policypapers/tabid/55732/Default.aspx

GLOSSARY - LIST OF ACRONYMS

CAS Chinese Academy of Sciences

CERN Chinese Ecosystem Research Network

DEPI Division of Environmental Policy Implementation, UNEP

GEF Global Environment Facility

IGSNRR Institute of Geographic Sciences and Natural Resources Research, CAS

IKM Integrated Knowledge Management

MEP Ministry of Environmental Protection, China

MCB Monitoring and Capacity Building

MOFA Ministry of Foreign Affairs, China

NDRC National Development and Reform Commission of China

NSFC National Natural Science Foundation of China

REMA Rwanda Environment Management Authority

SfP Science for Policy

UNEP United Nations Environment Programme



International Ecosystem Management Partnership

United Nations Environment Programme
C/o Institute of Geographic Sciences and Natural Resources Research 11A Datun Road, Beijing, 100101, China

Tel: +86 10 64889031, Email: <u>info@unep-iemp.org</u>
Website: <u>http://www.unep.org/ecosystemmanagement/IEMP/tabid/55731/Default.aspx</u>