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# UNEP-IEMP Bulletin

## MISSION

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

## MANDATE

To synthesize science findings for decision-making on ecosystem management and is supported by three inter-related initiatives:

1. Capacity Building and Technology Transfer
2. Making the Case through Assessment and Demonstration
3. Enhancing Science Policy Interface

UNEP-IEMP Bulletin will be issued on a quarterly basis to inform you of our achievements and lessons learned through activities and projects executed. Please feel free to share with us your feedback to further improve our work and the information shared with you. Please forward these directly to [info@unep-iemp.org](mailto:info@unep-iemp.org)

## Ecosystem Management of Productive Landscapes

Development and promotion of the "Landscape Approach" to increase the sustainability of production in the Greater Mekong Sub-region

*By Minjet Loo, Post-Doctoral Research Fellow*

The **landscape approach** integrates sound management of ecosystems with sustainable production of food, fiber and other outputs while ensuring socio-economic objectives. Recently, scientific opinion has coalesced around the need to shift away from management of individual production systems to a landscape approach based on ecosystem principles and involving multiple actors finding synergies and operating in harmony. Productive landscapes embrace multiple land uses such as agriculture, forestry, fisheries, mining, energy production, recreation, conservation and more. The key is that they are managed through an integrated ecosystem approach that recognizes production for multiple sectors.

This new approach demonstrates the realization that the ecological foundations of water, energy and food security are in danger of being undermined. Indeed, the imperative to feed and secure the basic needs of a growing population, while addressing new pressures (especially climate change), is imposing unprecedented stresses on our productive resources. In the need to secure food, water, fuel, fiber and other land-based products, decision-makers face difficult choices about which actions to take: one path has been massive investment in agricultural intensification. Another has been expansion into "marginal" lands.

Both strategies have important consequences for the ecological base of production, as well as for economic development, equity and poverty alleviation. This is where the landscape approach finds its niche. Landscape approaches seek to provide tools and concepts for allocating and managing land and water resources to achieve multiple social, economic and environmental objectives in areas where agriculture, hydropower, mining and other productive land uses compete with environmental and biodiversity goals. The landscape approach embodies the basics of the more familiar...



Map of the Greater Mekong Sub-region countries © Chiangrai Times

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## New Online Knowledge Sharing Platform

The GEF-funded project “*Enhancing capacity, knowledge, and technology support to build climate resilience of vulnerable developing countries*,” launched a new online knowledge sharing platform as part of their inter-regional activities in March 2015. “Ecosystem-based Adaptation through South-South Cooperation” ([www.ebasouth.org](http://www.ebasouth.org)) will build on the expertise and results of successful knowledge sharing initiatives with a focus on climate change adaptation. The purpose of this new platform is twofold. On one hand it aims at becoming an online “hub” for promoting the concepts and principles of Ecosystem-based Adaptation (EBA), for enhancing awareness of the benefits of this approach and for sharing good practice examples of on-the-ground EBA interventions. Secondly, the platform intends to support the creation of an online community of EBA experts and stakeholders “in the South and for the South”, sharing experiences and lessons that are of particular interest to developing countries.



The vision behind this platform was to make information available to assist developing countries plan and implement EBA, offer a user-friendly interface for accessing good-practice EBA information, with the aim to encourage replication of these interventions, and facilitate learning on good practices in adaptation with a focus on an ecosystem management approach. Beyond the duration and scope of the project, the web-platform has the potential to become a long term undertaking for knowledge sharing, with a focus on EBA and in a South-South cooperation perspective. UNEP-IEMP, the first UNEP

initiative in the South and for the South, is particularly well placed to contribute to the development of this platform. The team is already using the platform to share interesting content, including good practices from China. You are welcome to join our team and actively contribute to the building of this platform by sharing your EBA-related stories, knowledge and good practice. [See sample of webpage on next page].

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**Landscape approaches seek to provide tools and concepts for allocating and managing land and water resources to achieve multiple social, economic and environmental objectives in areas where agriculture, hydropower, mining and other productive land uses compete with environmental and biodiversity goals.**

integrated ecosystem approach, but recognizes the complexity of land management systems and the need to consider human-environmental interactions across sectors and scales. This approach is recognized and supported by a growing number of institutions and mechanisms, including the GEF, CIFOR, the World Bank, FAO and IFAD. Thus, under UNEP-DEPI project: Ecosystem Management of Productive Landscapes, UNEP-IEMP will work on the Greater Mekong Sub-region with projects in regions such as in Africa and Latin America with an aim of promoting a shift towards ecosystem management in productive landscapes at global level.

This project seeks to catalyze the adoption of landscape approaches to promote sustainable agriculture production in Africa, Asia Pacific and Latin America. The project objective is to increase the level of awareness and professional capacity of countries to adopt a landscape approach as a basis for planning which looks at the needs of multiple sectors and the long-term functioning of ecosystems, combining production (including energy) with conservation. The project will build capacity among decision-makers and other stakeholders to understand trade-offs, identifying synergies and choices to be

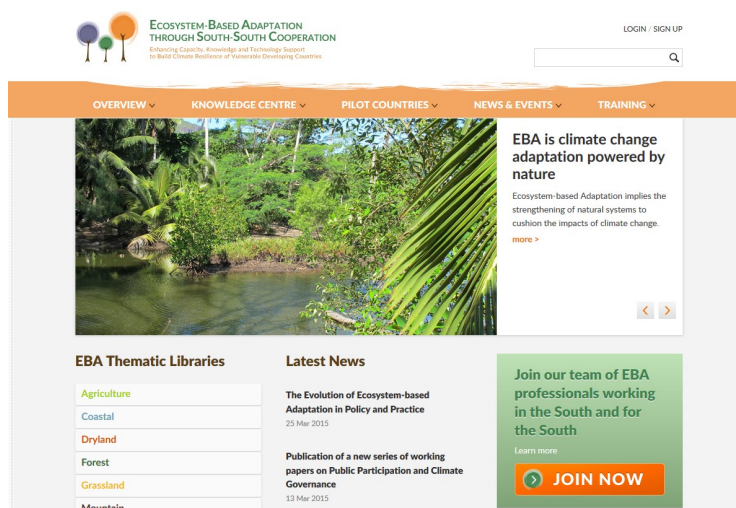
made in designing more sustainable food production and water-energy management systems, and to strengthen the ecological basis of production. It will assist GMS countries to integrate traditional sector-based production systems within a landscape approach.

The implementation of this project is divided into three stages:

1. Kick-off with an inception workshop to provide a capacity building platform for all stakeholders to meet, share experiences, learn tools/methods and build future networks with an aim to manage GMS cooperatively. This will produce methods/tools for integration of ecosystem approach into national planning & increased preparedness for application of ecosystem approach in national policy-setting and planning process
2. Identifying capacity needs and supplies for ecosystem management in GMS via comprehensive assessments
3. Developing regional strategic framework of capacity building for integration of ecosystem management into basin-wide development strategies

The expected outcome of the proposed project is enhanced basin-wide institutional capacity for ecosystem management to integrate landscape approach into national plans and regional cooperation strategies through identifying and prioritizing capacity needs of key stakeholders of the Greater Mekong Sub-region.

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Snippet of the homepage of the ebasouth.org website.

“Knowledge...how it is gathered, used, and shared will be an integral part of how we will gain resilience to the problems we face...Underscoring the importance of knowledge, our challenge is now how to manage the existing knowledge we have, and to connect it to those who need it, and in the way they need it.”

Young-Woo Park  
Former Regional Director, UNEP Regional Office  
for Asia and the Pacific (ROAP)

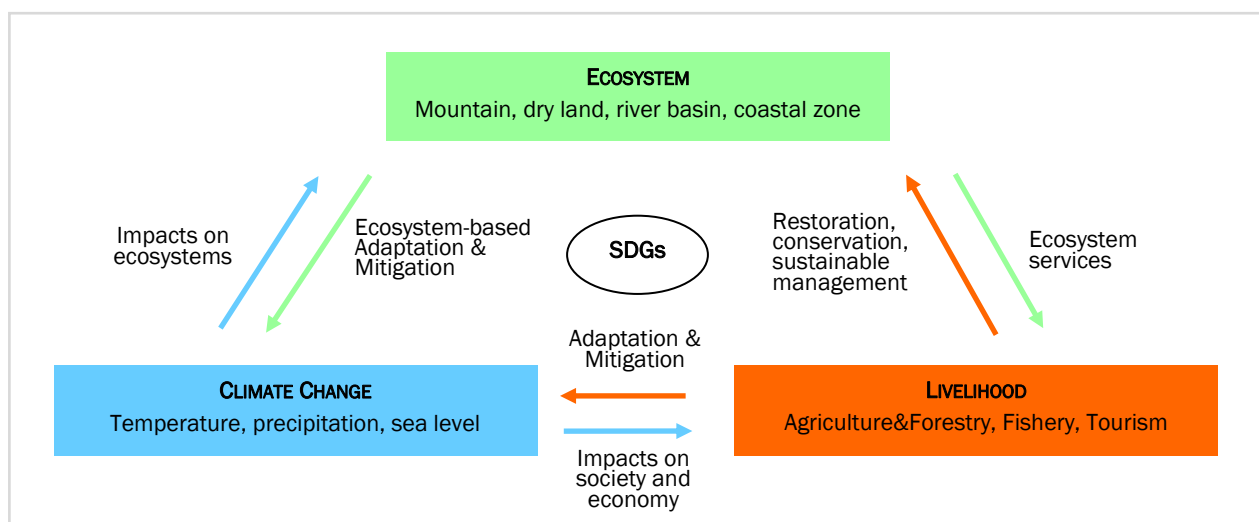
## A concept note of a Flagship Programme on Ecosystem, Climate and Livelihood (ECL)

By Chao Fu, Research Fellow

This year, the international community is coming to an agreement on the post-2015 development agenda and a new global agreement on climate change, both of which will stress out the role of ecosystems and their services in addressing the impacts of climate change and improving people's livelihoods. Nonetheless, ecosystems have been profoundly degraded over the last several decades, and multiple stressors, such as population growth, over exploration of natural resources, and climate change, continue unabated. Many people in developing countries, especially the poor, now depend on what have become degraded ecosystems to sustain their livelihoods. They face major challenges such as knowledge, capacity and technology constraints when undertaking ecosystem restoration. In this respect, South-South Cooperation is assuming an increasingly important role in tapping the full potential of ecosystem restoration in developing countries. China possesses a wealth of experiences, good practices, knowledge, and technology in

the domain of ecosystem management that can be shared with other developing countries. To this end, UNEP-IEMP is well positioned to initiate with partners such a flagship programme on ecosystem, climate and livelihood to fill the gaps between science, policy and practice of sustainable development in the context of South-South cooperation.

A conceptual framework has been drafted for the flagship programme to be submitted to the UNEP-IEMP Science Advisory Group for review and thereafter to the 3<sup>rd</sup> Steering Committee Meeting for approval this June. The goal of the proposed programme is to restore and conserve ecosystems, address the impacts of climate change, and improve livelihoods for sustainable development in developing countries by providing knowledge, capacity, technology and policy support.



Conceptual Framework of the Flagship Programme on Ecosystem Restoration, Conservation and Livelihood © UNEP-IEMP

The framework is based on inter-relationships among ecosystems and their services, climate change impacts and vulnerability, and human livelihoods. Thematic issues under the framework include: (1) ecosystem services and ecosystem restoration, conservation and sustainable management; (2) impacts of climate change on ecosystems and ecosystem-based adaptation and mitigation; and (3) impacts of climate change on society and economy and community-based adaptation and mitigation.

In response to each thematic issue, the programme will be delivered through four overarching components: (1) monitoring and assessment, (2) capacity building, (3) technology and demonstration, and (4) science for policy. The programme will be implemented in three phases over the next 10 years, including inception (2016), development (2017-2020) and scaling up (2021-2025). It will be the main pillar of UNEP-IEMP's 10year strategy

(2016-2025) and of the long-term cooperation between China and UNEP. It will also help support the implementation of post 2015 Sustainable Development Goals, inform policy debates of the three Rio conventions; CBD, UNCCD, and UNFCCC, and assist counties to integrate ecosystem-based approaches into their national plans. The programme directly contributes to and complements the UNEP MTS, in particular its sub-programmes of ecosystem management, climate change, and environment under review, and the IPBES and IPCC assessments. It is an interdisciplinary programme that brings together knowledge of biophysical and social sciences, and economics, which will contribute to the Future Earth processes. It is expected that the programme will both champion South-South Cooperation, and promote North-South, and Triangular Cooperation.

## Identification of sand and dust storm source areas in Iran

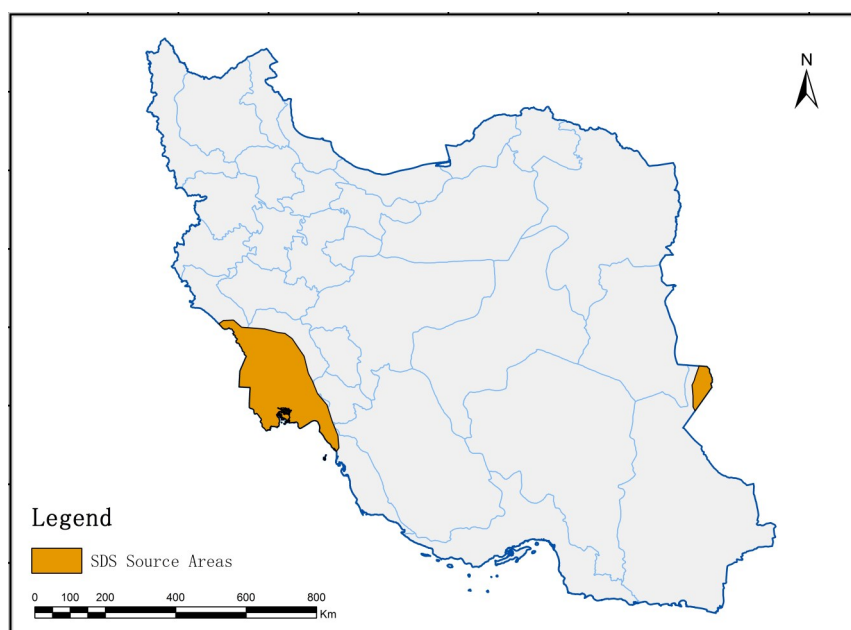
*By Cao Hui, PhD Candidate*

For the past two years, UNEP-IEMP has been collaborating with the UNEP-Regional Office for West Asia on a project to support countries to take actions at the regional and national levels with regards to sand and dust storm (SDS) monitoring, early warning and combating. To explore the relationship between dust activities and environmental or socio-economic indicators, UNEP-IEMP team applied a new method into the research of dust storm source areas in Iran, aiming at finding solutions to identify and monitoring dust storms in West Asia. Iran is exposed to various environmental and social factors which accelerate desertification and land degradation and more than half of the provinces are suffering from critical wind erosion. In recent years, dust storm frequencies and intensities have increased significantly in Iran. Sand and dust storms have brought huge impacts on the economy, environment and livelihoods of Iranian civilians.

Multi datasets of SDS source indicators for Iran were collected and allocated a weight to each dataset with unique weight allocation criteria. With these processes, a synthetic potential map for SDS source can be developed by accumulating the weighted datasets, and final SDS source clusters generated consequently. Indicators applied in the research include drought events, temperature, precipitation, soil situation, dust storm frequency, rain use efficiency, etc. As a result, two prominent SDS source areas in Iran were identified: Al-Hawizeh/Al-Azim marshes and Sistan Basin. The Al-Hawizeh/Al-Azim marshes, located in Khuzestan Province are suffering rapid land degradation caused by natural and human induced factors, and might vanish soon in the future. Without immediate action and protection, this area could generate more areas of SDS sources.

With a series of land degradation phenomena including the completely dry Hamoun lakes, reduction in soil moisture and vegetation cover, reservoir dam and irrigation projects upstream on the river catchment, Sistan Basin always undergoes significant wind erosion and might contribute to extreme or super dust storms in summer. This research could help to assess the impacts of socioeconomic and environmental consequences, and find effective strategies in controlling and combating sand and dust storms in West Asia. Further research will focus on the attempt for SDS source monitoring and forecasting.

Currently, the team are preparing a guide for utilization of ecosystem-based approaches to combating sand and dust storms in West Asia, using examples and best practices from China and around the globe.



Map of Iran showing the two sources of sand and dust storm areas; Al-Hawizeh/Al-Azim marshes (West) and Sistan Basin (East). © Cao Hui, 2015





Bamboo plant

### Meeting with the International Network for Bamboo and Rattan (INBAR)

Following the successful Forum in Lima, UNEP-IEMP team met with INBAR to discuss possible collaboration on the proposed Flagship Programme on Ecosystem Restoration, Conservation and Livelihoods, bringing in the role that bamboo can play in providing untapped development resources to

countries and millions of rural communities, to improve livelihoods and combat the negative effects of climate change. Both institutions are working extensively in the East Africa region, and will continue to explore ways to build synergies in their efforts.

### Visit from the UNEP Regional Support Office

The Director of UNEP Regional Support Office, Mr. Munyadyazi Chenge, and Vice-president of UNEP-Tongji Institute of Environment for Sustainable Development, Prof. Jiang WU made a visit to UNEP-IEMP. The team gave a presentation on the past and future undertakings of the Centre and explored ways to better strengthen collaboration especially on South-South Cooperation.

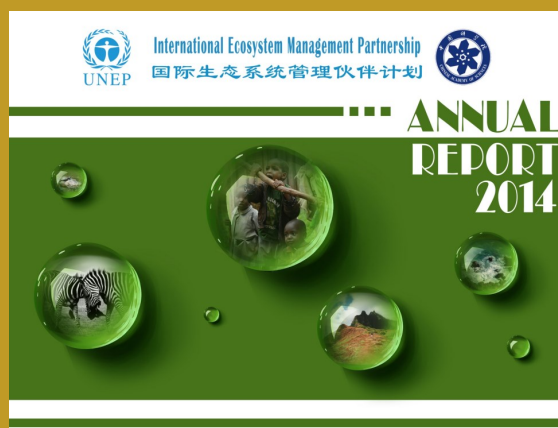
### Upcoming Events

1. **April 22-24 (Nairobi, Kenya)** - Greater Mekong Sub-region (GMS) project inception meeting at UNEP HQ
2. **June 3 (Beijing, China)** - First meeting of the UNEP-IEMP Science Advisory Group
3. **June 4 (Beijing, China)** - 3rd meeting of the UNEP-IEMP Steering Committee
4. **June 17-19 (Kathmandu, Nepal)** - UNEP-NDRC project Steering Committee meeting
5. **June 25-26 (TBC)** - Inception Workshop for the South-South Capacity Building for Ecosystem Management in the Greater Mekong Sub-region (GMS) project

### New Publication

#### ANNUAL REPORT 2014

UNEP-IEMP has made significant achievements over the last year in our work to supporting ecosystem management in developing countries, enhancing the science-policy interface, and promoting South-South Cooperation. This Annual Report highlights a few of these achievements and is available in electronic format at [www.unep-iemp.org/publications](http://www.unep-iemp.org/publications).



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South of Vietnam, at the Mekong Delta you can experience many facets of the river Mekong

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