The Ecosystem News is CEM's quarterly newsletter December 2011

Contact us

CEM activities

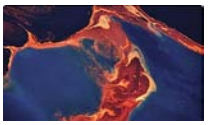
Guide for the implementation and monitoring Ecosystem Approach

Members of the Commission on Ecosystem Management of IUCN (Angela Andrade CI-Colombia, Roberto Vides FCBC-Bolivia and Stanley Arguedas, ELAP, Costa Rica) developed and published the *"Guide for the implementation and monitoring Ecosystem Approach"*. This document represents an effort to provide professionals in ecosystem management, a tool that allows ecosystem evaluation by encouraging the application of this approach. The guide contains a matrix based on standard principles, criteria /attributes and indicators, which allows thorough questioning, to understand how the 12 Principles of the Ecosystem Approach can be applied in projects. This publication was presented at the South American Forum of IUCN Members in Lima, Peru, in June as well as at the UNFCCC CoP in Durban in December. Contact and Click for discussion document and policy briefs in English, Spanish and French

Members' initiatives

Research to reduce disaster risk for cities

The Swedish Civil Contingencies Agency (MSB) has awarded Stockholm Environment Institute (SEI) a research project 'WASH and RESCUE' to build resilience against disasters in cities, with a focus on the role played by water, sanitation and hygiene improvements, aimed at improving human and environmental health. Urban development in low and middle income countries is often increasing disaster risk because of rapid urbanization, maladapted infrastructure, in areas exposed to cyclones, floods, and sea level rise. Upstream planning and management in the catchment of ecosystem services also plays a role, and SEI welcomes input from IUCN members. The research will be engaging in the UNISDR campaign 'Resilient cities'. Also, the research will look at how best to support the capacity of societies to mobilize themselves to learn about and improve their own systems. Contact



Restoring the Ecological Health of the Gulf of Mexico: Attributes, Principles, Recommendations

The 2011 State of the Gulf of Mexico Summit distributed a Briefing Paper developed by CEM-North America & Caribbean that contained recommendations to U.S. environmental policy makers for restoring the long-term health of ecosystems in the Gulf of Mexico. Entitled Restoring the Ecological Health of the Gulf of Mexico: Attributes, Principles and Recommendations**,** the Briefing Paper was an output of the CEM-organized symposium in August 2011 focused on restoring the Gulf of Mexico after the Deep Horizon oil spill. Steve Edwards, regional chair for CEM, helped facilitate a breakout discussion at the Gulf Summit, hosted in Houston, Texas, from 5-8 December by the Harte Research Institute for Gulf of Mexico Studies and attended by 400 leading environmental policy-makers from the U.S. and Mexico. Charlotte Moser, regional deputy chair for CEM, served on the Summit Planning Committee. CEM participation in the Gulf Summit was made possible by a grant from the Walton Family Foundation. Contact

Loggers collaborate in restoring protected forest in Nigeria

In Nigeria, tropical forests are disappearing at a much faster rate than ever imagined. Pressure from illegal logging by loggers has led to high subsistence-driven deforestation. Forest restoration is necessary due to the social and environmental impact on local communities. A positive atmosphere is pervading Gelegele Forest Reserve in Edo State managed by the Nigerian Conservation Foundation under the Biodiversity Action Plan (BAP) project supported by Shell Petroleum Development Company. Efforts by the project in engaging the local forest edge communities in participatory forest conservation and reforestation is yielding results. The local community governance structure led a collaborative effort with loggers in planting over 7,500 seedlings/stumps of indigenous tree species inside the forest reserve. It is known to be the first time in the history of Nigeria's forest conservation efforts that supposed 'foes' of the forest would turn a new leaf to become 'friends and restorers' of the forest. Contact

Youth and Agriculture: Fresh Approach for a New Paradigm

reflects perspectives of young scientist representatives of Young Professionals' Platform on Agricultural Research for Development (YPARD) that was factored in the Science Forum 2011 (held in October 2011 -Beijing, China) under the theme *'The Agriculture-Environment Nexus'*. The event organized by the Independent Science and Partnership Council (ISPC) of the CGIAR (Consultative Group on International Agricultural Research) in cooperation with the Consortium Board of the CGIAR, the Global Forum on Agricultural Research (GFAR) and the Chinese Academy of Agricultural Sciences (CAAS). The spotlight of the event was a keynote address by Jeffrey A. Mc Neely (Advisor to IUCN) highlighting the perspectives of environmental organizations in addressing uncertainty related to critical issues food demand, food prices, hunger, bio-fuels, ecosystems, biodiversity and ecosystems services in context of the agriculture-environment nexus. More

Biodiversity, Infectious Diseases and Ecosystem Management

A workshop on 'biodiversity and infectious diseases' was organized at the Senckenberg Institute's Biodiversity and Climate Research Facility (BiK-F) in Frankfurt/Germany, from 28-29 November 2011, with support by DIVERSITAS and the German government (BMBF), by CEM member Stefan Klose. Around fifty experts and young scientists discussed the current state of research, scientific progress achieved and future perspectives. In particular, novel and emerging zoonotic diseases, species-barrier crossings, effects of fragmentation and ecosystem decline on vectors and dynamics of host-parasite interactions received attention. Gaps in knowledge at the interface of ecology and medicine were identified, in particular the need for studying in more depth the dynamics of disease in wildlife. This could greatly improve the ability to predict sources of future epidemics, contain them more effectively and it could highlight the role of biodiversity in preventing species-barrier crossings. A policy advice paper is being prepared for release in early 2012. Contact

Landscapes and Policy Research Hub

New research collaboration has just started, based at the University of Tasmania, Australia, that focuses on the challenge of integrating science for biodiversity planning and conservation at regional scale. The Landscapes & Policy Research Hub is supported by the Australian Government's National Environmental Research Program. The hub involves leading researchers from the University of Tasmania (UTAS), Australian National University (ANU), Griffith University, Murdoch University and the Antarctic Climate & Ecosystems Cooperative Research Centre (ACE CRC). The research hub will develop tools, techniques and policy pathways to integrate biodiversity into regional planning. It will do this by examining the likely implications of different scenarios of climate change, land use change, land management change, demographic change, infrastructure development and other human and natural influences on ecosystem services and habitat suitability for selected species of mammals, reptiles, birds, amphibians and plant taxa with a particular focus on species and communities listed as Matters of National Environmental Significance (MNES) under Australia's primary conservation legislation: the Environmental Protection and Biodiversity Conservation Act 1999. Contact

Carbon cap on Indian Sundarban mangroves

The mangrove soil of Indian Sundarbans is a unique sink of carbon. Compared to the global average estuarine soil carbon, the concentration in this mangrove ecosystem is higher. The Indian part of Sundarbans, at the apex of the Bay of Bengal sustains 34 true mangrove species and some 64 mangrove associate floral species, which are the major sources of organic carbon in the intertidal mudflats encircling 102 islands in the deltaic complex. The silt contributed by the mighty River Ganga is another major source of organic carbon. A pilot programme conducted by the researchers of the Department of Marine Science, University of Calcutta (India) estimated carbon storage in the dominant mangroves of Indian Sundarbans [*Forest Ecology and Management, 261 (7): 1325 – 1335*] and an increase of mangrove soil carbon of the

order 0.69 t/ha/yr. The relatively large size of Sundarban Biosphere Reserve (9630 sq. km) and long residence time of the carbon pool (~1200 yr) justify the potentiality of Indian Sundarbans as sink of carbon released through burning of fossil fuels, intense industrialization and rapid urbanization. Afforestation in the intertidal mudflats of Sundarbans is an effective low cost approach to reduce local level carbon dioxide. Contact

Implementation of Environmental Flows

The flows of the world's rivers are increasingly being modified through impoundments such as dams and weirs, abstractions for agriculture and urban water supply, drainage return flows, maintenance of flows for navigation, and structures for flood control. These interventions have caused significant alteration of flow regimes mainly by reducing the total flow and affecting the variability and seasonality of flows. Environmental Flows (eFlows) refer to the water provided within a river, wetland or coastal zone to maintain ecosystems and the benefits they provide to people (www.eflownet.org). Thru ecosystem services, the cost of ecosystem degradation is typically borne by the rural poor, who often depend on natures' services directly for their livelihoods. The ability to implement legislation that reconciles the interests of traditionally powerful water users with those of less powerful sectors is therefore crucial. However, institutional strengthening in river basin planning and management is equally essential to develop the capacity, legitimacy, experience and confidence in applying eFlows. Contact

New hope for Lake Naivasha, Kenya

Lake Naivasha has been in the international news in the past decade due to its deteriorating ecological quality and reduced water levels. The horticultural industry, Kenya's leading economic success, is held responsible for this, however unregulated activities of several actors - industry (geothermal power), domestic (water supply to urban users) and agriculture (catchment smallholders) contribute to the situation. The Lake Naivasha Growers Group, an association of horticulturalists formed 1997 to raise standards for the industry, initiated a project on paying upland small-holders to implement anti-erosion on steep land, as a Payment for Ecosystem Services initiative. The Kenyan Prime Minister, supported by The Prince of Wales, has established 'Imarisha Naivasha', an overarching body to coordinate research and conservation initiatives. Three European retailers who sell FairTrade roses are leading this initiative based on the ecosystem approach and IWRM principles of UNESCO HELP, which Naivasha joined in 2004. Contact

The Deepor Beel in Assam: a Ramsar wetland in crisis

Deepor Beel in Assam, India, was declared a Ramsar site in August 2002. It has an outstanding stock of biodiversity and acts as a critical receptacle for urban storm-water. It also provides livelihood support to the fishermen living in the 10 villages around the lake, generating an income flow of more than $8 million per year. Approximately one third of the Beel land is distributed to outsiders, a large chunk of which is allotted by the authorities as a garbage dumping site. The elephant corridor to Deepor Beel from the forest has been cleared for the newly laid railway line. Elephants feed upon the wetland plants in the Deepor Beel and that is crucial for the ecosystem balance of the Beel. Awareness raising and educating the local communities of Guwahati about the well-being of such an outstanding wetland is urgently required. Contact

IUCN

IUCN Regional Fora Wrap-Up

The last Regional Conservation Forums were held in the Dominican Republic and Morocco in early October. In total 11 forums have been run across the world – a first for IUCN. All have brought together Members, Commissions and staff to discuss the proposed 2013-16 Programme, regional programme and commission plans, IUCN's policy work, and the upcoming Jeju Congress. All staff involved, particularly from regional offices, should be congratulated for the tremendous effort in making this happen. More

COP17/CMP7
UNITED NATIONS
CLIMATE CHANGE CONFERENCE 2011
DURBAN, SOUTH AFRICA

Solving the climate change crisis naturally – IUCN at UNFCCC, Durban

While the world bemoans the lack of political commitment to tackle climate change, IUCN experts are working day and night to ensure that natural solutions are part of the international response to this growing threat. While some countries and communities around the world are making progress in reducing their greenhouse gas emissions and adapting to the effects of climate change, we need to make far greater use of the solutions that nature offers us. Sustainably managing ecosystems such as forests, wetlands and coastal areas can simultaneously reduce carbon emissions and help people adapt to the impacts that are

being felt across the world. Our experts promoted these natural solutions at the **Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC**) which took place in Durban, South Africa from 28 November to 9 December. More

Announcements

IUCN Membership applications for consideration at February 2012 Council meeting
Click here to access the descriptions of the organisations and institutions to be considered by the IUCN Council at its 13-15 February 2012 meeting. If you have any feedback regarding any of the applicants please email membership@iucn.org. N.B. The list has been circulated to IUCN Members who had until 30 November 2011 to object to an application.

Publications

Abhilash, P.C., Srivastava, S., Jafri, A.,Singh, N. (2011) Influence of rhizospheric microbial inoculation and tolerant plant species on the rhizoremediation of lindane. *Environmental & Experimental Botany* 74 127-130

Abhilash, P.C., Srivastava, S., Singh, N. (2011) Comparative bioremediation potential of four microbial species against lindane. *Chemosphere* 82 56-63

Vijgen, J., Abhilash, P.C., Li, Y.F., Lal, R., Forter, M., Torres, J., Singh., Yunus, M., Tian, C., Schäffer, A., Weber, R. (2011) HCH isomers as new Stockholm Convention POPs – A global perspectives on the management of Lindane and its waste isomers. *Environmental Science and Pollution Research* 18 152-162

Abhilash, P.C., Yunus, M. (2011) Can we use biomass produced from phytoremediation? *Biomass & Bioenergy* 35 1371-1372

Abhilash, P.C., Srivastava, P., Jamil, S., Singh, N. (2011) Revisited Jatropha curcas L. as an oil plant of multiple benefits: Knowledge gap and critical research need. *Environmental Science and Pollution Research* 18 127-131

R. Osaliya, F. Kansiime, H. Oryem-Origa, E. Kateyo (2011). *The potential use of storm water and effluent from a constructed wetland for re-vegetating a degraded pyrite trail in Queen Elizabeth National Park, Uganda*. Physics and Chemistry of the Earth, Parts A/B/C Volume 36, Issues 14-15, 2011, Pages 842-852.

IUCN – Off the Shelf
The October edition of IUCN's publications newsletter, *Off the Shelf,* is available online - click here to view

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