

AFRICA: MINISTER TASKS CONTINENT ON BIORESOURCES DEVELOPMENT

Lagos. The Nigerian Minister of Science and Technology, Dr Alhassan Zaku, has called on Africa to develop its bioresources to harness the continent's abundant natural products for economic development. Zaku, represented by Professor Peter Onwualu, the Director General of the Raw Materials Research and Development Council, made the call recently in Abuja at a three-day herbal and natural products exhibition tagged "HerbFest 2009". HerbFest was organized by the Nigeria Natural Medicine Development Agency (NNMDA) in collaboration with the International Centre for Ethnomedicine and the Drug Development and Bioresources Development and Conservation Programme.

The Minister urged participants at the exhibition to tap Africa's biodiversity to encourage the development of the continent. He said Africa had suffered economic losses through illegal and unauthorized collection and use of its

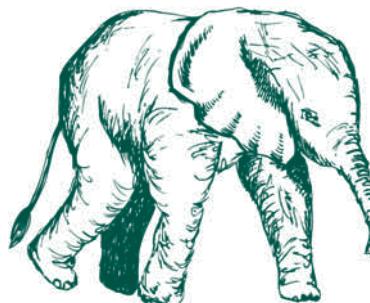
UNEP-WCMC LAUNCH NEW CARBON AND BIODIVERSITY ATLAS

The new *Carbon and Biodiversity Atlas* shows that areas high in both carbon and biodiversity do exist and can be identified by relatively simple mapping tools. Prioritizing such areas could give the double benefit of reducing emissions from land-use change while conserving biodiversity.

The atlas can be downloaded from the United Nations Environment Programme (UNEP) Web site as a screen-friendly version or as a printable version. It is also available as hard copy or as a CD-ROM upon request.

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bioresources. The Minister also said that the loss of biodiversity was accompanied by the loss of indigenous knowledge as the elders, who were the custodians of indigenous knowledge, die without having passed their knowledge on to the younger generation. (Source: *The Daily Champion* [Nigeria], 2 March 2009.)



FOREST ELEPHANTS AND THEIR ROLE IN "PLANTING" TREES IN THE CONGO

A new study finds that forest elephants may be responsible for planting more trees in the Congo than any other species or genus. Conducting a thorough survey of seed dispersal by forest elephants, Dr Stephen Blake, formerly of the Wildlife Conservation Society (WCS) and now of the Max Planck Institute for Ornithology, and his team found that forest elephants consume more than 96 species of plant seeds and can carry the seeds as far as 57 km from their parent tree. (Source: Mongabay.com, 9 April 2009 in *Nature and Faune*, 23[2].

FORESTS MOVE RAIN: STUDY REVOLUTIONIZES METEOROLOGY

A new paper in *Bioscience* by Douglas Sheil and Daniel Murdiyarso reintroduces a revolutionary theory that turns modern meteorology on its head. They posit that forests – and their capacity for condensation – are actually the main driver of winds rather than temperature. While this model has widespread implications for numerous sciences, none of them are larger than the importance of conserving forests, which are shown to be crucial to "pumping" precipitation from one place to another. The theory explains, among other mysteries, why deforestation around coastal regions tends to lead to drying in the interior.

According to Sheil and Murdiyarso's paper, conventional theories not only do not explain the connection between forests and rainfall, but they have yet to explain fully the actual production of rain across regions. If one employs only the conventional theory that "precipitation should decrease exponentially with distance from the oceans", all the continents would look like diminishing green spirals from space, with the landscape turning browner and drier closer to the centre.

The new theory claims that "areas able to maintain high levels of atmospheric condensation draw in air and moisture from elsewhere". What regions maintain high levels of atmospheric condensation? Quite simply the answer is forests, with rain forests maintaining greater quantities than temperate forests, but both are important. (Source: Mongabay.com, 1 April 2009.)

PLANT WORKSHOP WINDS UP WITH RESOLVE TO CREATE A REGIONAL NETWORK

Indigenous San and Nama plant specialists gathered at Dqae Qare San guest farm in the Central Kalahari Desert (4–9 March 2009) to share experiences and needs in relation to sustainable cultivation and conservation of precious plants.

The workshop focused on sharing information and experiences with sustaining both plant biodiversity and the intergenerational transmission of plant knowledge. All delegates expressed a grave concern that indigenous knowledge of plants is not being transmitted to young people, and that regional governments are not empowering local communities to conserve precious natural resources.

The workshop resolved to create a regional network to help educate indigenous people about policies, methods and practices to harvest and conserve plant biodiversity sustainably. Indigenous delegates recognized that they need to be speaking to their governments on a more regular basis in order to develop commitment to ecosystems approaches to governance and conservation. They also felt that there was a lot to learn in terms of access and benefit sharing, intellectual property rights and good harvesting practices. (Source: IPACC [Africa], 10 March 2009.)

TRANSBOUNDARY RAIN FOREST PARK IN WEST AFRICA: A SYMBOL OF PEACE AND STABILITY

The Presidents of Sierra Leone and Liberia today met in the Gola Forest, Sierra Leone, to announce the establishment of a new Transboundary Peace Park, to protect one of the largest remaining blocks of intact forest in the Upper Guinea area of West Africa. The Peace Park unites the Gola Forest Reserve in Sierra Leone (75 000 ha) and the Lofa and Foya Forest Reserves in Liberia (80 000 and 100 000 ha, respectively), with additional forest to provide corridors for the movement of wildlife between them.

The local communities in Sierra Leone, through their traditional chiefs and Members of Parliament, have expressed both their support for the conservation of the Gola Forest and its designation as a national park.

The Upper Guinea forest ecosystem, which extends from Guinea to Togo, is one of the world's most biodiversity-rich ecosystems. However, centuries of human activities have led to the loss of more than 70 percent of the overall forest cover, which was initially estimated at 420 000 km². The remaining forest is highly fragmented, restricting habitats to isolated patches and threatening the unique flora and fauna.

The forests provide very important ecological services locally, nationally and regionally, including wood and NTFPs, medicinal plants, continuous provision of water, protection against soil erosion, climatic conditions conducive to agricultural production and climate change mitigation. They are also internationally important for carbon sequestration. Both governments have expressed interest in carbon trading and in the REDD (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) process. The Peace Park will provide the potential to raise tens of millions of dollars over forthcoming decades, ensuring sustained funding for protected area management and community development.

The establishment of the Peace Park will ensure that the long-term conservation of the forests, their biodiversity and global carbon storage benefits are secured through national and international partnerships for improved forest governance across the Sierra Leone-Liberia border. (Source: BirdLife International, 15 May 2009.)

WILD FOOD BIODIVERSITY

Wild food biodiversity can reduce risk and mitigate impacts of natural disasters and long-term environmental change. Many adaptive responses to environmental change draw on the huge pool of biodiversity available. At the local level, food providers and their organizations harness diversity within and between species to adapt to environmental change in their fields, forests, wetlands, rangelands and landscapes. Many different types of agricultural biodiversity ("cultivated", "reared" or "wild") are used by different people at different times and in different places. The resilience of food systems depends on such creative use of biological diversity by local organizations of producers to minimize risk and realize new opportunities created by dynamic change.

For example, indigenous farming communities in the Andes have domesticated over 70 species of cultivated crops and generated a huge diversity of genetically distinct landraces within these crop species. Their *chacras* (fields marked off for cultivation) exist in an environment characterized by criteria used as indicators to decide which crop varieties to sow in different soil microenvironments in the risk-prone drylands.

Many other examples show that small-scale producers and their institutions continuously adapt to their dynamic environments by deploying a mosaic of plant and animal genetic diversity, both within microenvironments and across landscapes. Moreover, many rural people, regardless of their type of land use (pastoral, swidden or continuous cropping), deliberately incorporate wild resources into their livelihood strategies in order to adapt to environmental change.

In northeast Thailand, for example, 50 percent of all foods consumed are wild foods from paddy fields, including fish, snakes, insects, mushrooms, fruit and nutritious vegetables that are available in different seasons and diverse microenvironments. Up to 24 percent of the Scottish (United Kingdom) population collect NTFPs for household use on a regular basis. Some Aboriginal groups in central Australia and the James Bay Cree in Canada are foraging more for wild foods today than they did 20 years ago.

Much of the harvest of wild plants and animals significantly contributes to local

food and livelihood security in southern Africa where the value of day-to-day wild resource consumption is around US\$800 million per year, according to the recent Millennium Ecosystem Assessment. In Zimbabwe, some poor households rely on wild fruit species as an alternative to cultivated grain for a quarter of all dry season meals. In Botswana, the agropastoral Tswana use 126 plant species and 100 animal species as sources of food by adaptively responding to the availability of different types of wild foods across the landscape.

Diverse portfolios of activities based on the contributions of agricultural biodiversity (e.g. crop cultivation, harvest of wild plant species, herding, fishing, hunting, whole ecosystem management) help sustain rural livelihoods because they improve their long-term resilience in the face of environmental change, adverse trends or shocks. In general, increased diversity promotes more flexibility because it allows greater possibilities for substitution between opportunities that are in decline and those that are increasing. In this context, local organizations play a key role in coordinating such community-based adaptive responses to change. (Source: Michel Pimbert. 2009. *Towards food sovereignty: reclaiming autonomous food systems*. London, United Kingdom, IIED.)

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