



**Brussels Rural Development Briefings**  
**A series of meetings on ACP-EU development issues**

**Briefing session n° 17**

**Biodiversity and rural development in ACP countries**

**Wednesday 10<sup>th</sup> March January 2010 – 8h30 – 13h00**  
**European Commission, Building Borschette, - Rue Froissart, 36, Room 2A**  
<http://brusselsbriefings.net>

**Building on a commitment to biodiversity**

Biodiversity is a common contraction of 'biological diversity'<sup>1</sup>. According to the Convention on Biological Diversity, 'Biological diversity' means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. Biodiversity is generally recognised on three levels<sup>2</sup>: (i) genetic diversity - the variety of genetic building blocks found among individual representatives of a species; (ii) species diversity – the variety of living organisms found in a particular place; and (iii) ecosystem diversity - the variety of species and ecological functions and processes, both their kind and number, that occur in different physical settings.

The official instruments

In 1983, FAO Conference adopts the International Undertaking on Plant Genetic Resources as the first international agreement on plant genetic resources for food and agriculture; in 1992, the Convention on Biological Diversity (CBD) is established at the Earth Summit in Rio de Janeiro; in 2000, the Millennium Development Goals recognize "land area protected to maintain biological diversity" as a core measure to achieve Goal 7 on environmental sustainability, and towards all eight goals aimed at reducing poverty and improving sustainable development; in 2002, the Sixth Conference of the Parties of the CBD formalizes a target to significantly reduce the rate of biodiversity loss by 2010 and the World Summit on Sustainable Development held in Johannesburg that year affirms this target; in 2002, the United Nations includes biodiversity as one of five priority issues for sustainable development ("WEHAB" Water, Energy, Health, Agriculture and Biodiversity); in 2004 the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) enters into force and sees the establishment of the Global Crop Diversity Trust to ensure ex situ crop conservation in perpetuity. The Treaty on Plant Genetic Resources for Food and Agriculture allows governments, farmers, research institutes and agro-industries to work together by pooling their genetic resources and sharing the benefits from their use. In today's world, the pressure is on to improve agricultural production by developing food crops that can adapt to environmental changes and meet the growing food demands of an increasing population.

2010: International Year of Biodiversity: The Conference of the Parties to the Convention on Biological Diversity will be held in Nagoya Japan in October 2010. Even if all objectives will not be achieved, 2010 offers an opportunity for scientific, policy and strategy in the protection of biodiversity.

**Biodiversity: values and threats**

1.5 million species have been named and described; at least three times this and possibly many more await discovery (Novotny *et al.* 2002). This biodiversity provides incalculable benefits such as medicines (provide the primary healthcare needs for up to 80 per cent of people in developing countries), foods and fibers, wild resources and non-timber forest products provide rural household incomes. Moreover, the ecosystems yield services of substantial economic value, although most of these remain significantly undervalued. Over the millennia, humans have relied on more than 10 000 different plant species for food. Yet, today, we have barely 150 species under cultivation. Of those, only 12 species provide 80 percent of all of our food needs and just four of those – rice, wheat, maize and potatoes – provide more than half of our energy requirements<sup>3</sup>. Risk-status data indicate a serious ongoing threat to livestock biodiversity. Almost one breed extinction per month was reported between 2000 and 2006. In the last 300 years, the global forest area has shrunk by approximately 40%. Forests have completely disappeared in 25 countries, and

<sup>1</sup> [http://www.europarl.europa.eu/comparl/envi/pdf/externalexpertise/easac/biodiversity\\_indicators.pdf](http://www.europarl.europa.eu/comparl/envi/pdf/externalexpertise/easac/biodiversity_indicators.pdf)

<sup>2</sup> [http://ec.europa.eu/agriculture/envir/biodiv/162\\_en.pdf](http://ec.europa.eu/agriculture/envir/biodiv/162_en.pdf)

<sup>3</sup> [FAO-ftp://ftp.fao.org/docrep/fao/010/i0112e/i0112e.pdf](http://ftp.fao.org/docrep/fao/010/i0112e/i0112e.pdf)

another 29 countries have lost more than 90% of their forest cover (FAO 2001; 2006). Since 1900, the world has lost about 50% of its wetlands. Some 30% of coral reefs – which frequently have even higher levels of biodiversity than tropical forests – have been seriously damaged through fishing, pollution, disease and coral bleaching (Wilkinson 2004). In the past two decades, 35% of mangroves have disappeared. Some countries have lost up to 80% through conversion for aquaculture, overexploitation and storms<sup>4</sup>. The human-caused rate of species extinction is estimated to be 1,000 times more rapid than the “natural” rate of extinction typical of Earth’s long-term history<sup>5</sup>. The effect of trends such as these is that approximately 60% of the Earth’s ecosystem services that have been examined have been degraded in the last 50 years, with human impacts being the root cause<sup>6</sup>. Further declines are projected over the coming decades because of factors such as population growth, changing land use and expanding agriculture, industry and urbanization, economic expansion and global climate change. There are various underlying factors which give rise to the conditions that encourage or allow the direct loss of biodiversity: human population growth, distribution and migration patterns are the most significant factors in environmental degradation.

### **Loss of Biodiversity: Impacts on the poor**

A striking aspect of the consequences of biodiversity loss is their disproportionate but unrecognized impact on the poor. The consequences of biodiversity loss and ecosystem service degradation – from water to food to fish – are not being shared equitably across the world. The areas of richest biodiversity and ecosystem services are in developing countries where they are relied upon by billions of people to meet their basic needs. Yet subsistence farmers, fishermen, the rural poor and traditional societies face the most serious risks from degradation. Estimates of the global environmental costs in six major categories, from climate change to overfishing, show that the costs arise overwhelmingly in high- and middle-income countries and are borne by low-income countries (Srinivasan et al. 2007). If no actions are taken, some of the consequences could be devastating for the most vulnerable (Braat, ten Brink et al. 2008); land currently under extensive (low-impact) forms of agriculture, which often provides important biodiversity benefits, will be increasingly converted to intensive agricultural use, with further biodiversity losses and with damage to the environment; 60% of coral reefs could be lost by 2030 through fishing damage, pollution, disease, invasive alien species and coral bleaching, which is becoming more common with climate change (Hughes et al. 2003); valuable mangrove areas are likely to be converted to use for private gain, often to the detriment of local populations; as global trade and mobility increase, so do the risks from invasive alien species for food and timber production.

### **Agricultural biodiversity needed to reach food security**

Rural people are often entirely dependent on the environment for daily living and food security and any change in biodiversity patterns will affect their survival. Since rural dwellers are often among the world’s most poor and vulnerable groups, preserving agricultural biodiversity is a necessary component of sustainable rural development, food security, and poverty alleviation. Agricultural biodiversity – a subset of biodiversity, is essential to satisfy basic human needs for food security and includes indigenous knowledge and culture as integral parts of its management.

#### *The interdependence between Agriculture and Biodiversity*

Biodiversity for food and agriculture will be affected by climate change, but will also be an important element in the development of production strategies to meet the challenges of climate change. It is also very likely that climate change will affect the ecosystem services provided by agricultural biodiversity. Global warming will create new climates, changing where, how, and what crops farmers will be able to cultivate. To face these challenges farmers will have to rely on adapted genetic resources, and need technological, political and information support to reinforce and improve their ability to select, maintain, and exchange genetic resources that will be adapted and adaptable to new climatic conditions and guarantee sustainability of the world’s food, fibre and energy production.

Two major changes in agricultural practices have, however, upset the equilibrium between agriculture and biodiversity in certain situations, namely the intensification of production and the under-utilisation of land. There is evidence that, for at least the last five decades, important agricultural changes have dramatically affected land use and farm structures that led directly or indirectly to significant declines and losses in biodiversity features. Some causes to biodiversity deterioration that can be related to inappropriate agricultural farming are: (i) the reduction in the number of utilised species/races/varieties, including monoculture, constitutes a threat to an invaluable (animal and plant) genetic potential; (ii) the use of herbicides and insecticides affects the microfauna ;( iii) the effects on habitats and ecosystems.

On the other hand, the gradual marginalisation and abandonment of farmland, particularly in certain areas where farming conditions are particularly arduous, leads to an impoverishment of ecosystems that are highly dependent on the continuation of such agricultural activities. Under-utilisation of land may lead to the

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<sup>4</sup> Millennium Ecosystem Assessment 2005a

<sup>5</sup> Millennium Ecosystem Assessment 2005b

<sup>6</sup> Millennium Ecosystem Assessment 2005c

progressive disappearance of the abundant flora. Furthermore, pollution (resulting from excessive application of nutrients, agrochemicals) from agricultural sources has fundamental indirect effects on all the above.

A more innovative and sustainable approach is to incorporate biodiversity conservation into food production practices, a strategy that is increasingly referred to as 'ecoagriculture'. This refers to the many different ways in which land can be used to produce food, while also supporting the maintenance of biodiversity and other critical ecosystem services. There is a range of methods for promoting such 'dual-use' of land, from reducing the amount of chemicals used, to providing more wildlife breeding sites on farms.

The essential role of indigenous knowledge: The traditional knowledge held by indigenous and other peoples in agriculture can be considered as "storage" of knowledge, including on best practices for sustainable agriculture. This knowledge has always been essential in adapting to environmental conditions as rural communities have accumulated specialized information about biological variation and management, allowing to protect themselves against crop failure, animal loss, soil infertility, climate shifts, and other threatening factors. Indeed, men and women farmers are both users and custodians of biodiversity.

#### Biodiversity and nutrition

The quality of food, especially in terms of supplying essential vitamins and other nutrients, is central to achieving food security and avoiding nutritional diseases. Although staple crops provide most protein and energy requirements, they are often deficient in other nutrients. Many of needed nutrients are supplied by foods gathered from wildlands and fallows, upon which millions of people rely.

#### **A range of responses needed**

We are consuming the world's biodiversity and ecosystems at an unsustainable rate and this is already starting to have serious socio-economic impacts. If we are to find solutions to the problems we face, we need to understand what is happening to biodiversity and ecosystems and how these changes affect the goods and services they provide. To address this crisis, we require a range of policy responses and long-term policy frameworks to address sustainable development, issues of governance, poverty and equality. Central to this process of policy development and capacity building is to try and ensure that the true costs and benefits of all levels of biodiversity need to be shared equitably. This needs to be achieved through promoting decentralisation, securing access or tenure of land/resource for communities dependent on them, and defining intellectual property and other rights, and capacity building to allow effective participation and negotiation between stakeholders. Without secure rights over use of the land and its resources, poor people have no incentive to invest in sustainable harvesting practices. Policies should allow environmental costs to be priced into economic activities to make green technologies cost-competitive and provide business with the incentives to innovate. Well-targeted government support for basic Research and Development for eco-innovation where justified, including enhanced government-business partnerships. Macroeconomic policies and trade practices have a major impact on biodiversity in developing countries and should favor sustainability of genetic resources. Subsidies for agriculture development, livestock rearing and other intensive production systems have resulted in unsustainable development programmes and large losses of biodiversity.

#### **Objectives of the Briefing**

In order to improve information sharing and promote networking, CTA, the EC-DG Development and EuropeAid, the ACP Secretariat, Euforic, Concord and IPS organise bimonthly briefings on key issues and challenges for rural development in the context of EU/ACP cooperation. The briefing on 10<sup>th</sup> March 2010 will discuss Biodiversity and Development and will aim at: (i) raising awareness on existing and emerging key challenges; (ii) promoting exchange of information and expertise; (iii) feeding in the debate various perspectives on the policy options.

#### **Target group**

More than 100 ACP-EU policy makers, representatives of EU Member States, civil society groups, research networks and development practitioners, international organisations based in Brussels.

#### **Available material**

Input and comments before, during and after the meetings will be included in the Briefings blog: <http://brusselsbriefings.net/>. A short report and a Reader in printed and electronic format are produced shortly after the meeting. Articles by European and ACP media share widely the results of the discussions.



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8h00-8h30      Registration  
 8h30-8h45      Welcome remarks by the organisers

**8h45-10h30    Panel 1 –Biodiversity and ACP Rural Development: challenges and opportunities**

This panel will review the major challenges and opportunities of Biodiversity and Development and the links between biodiversity, agriculture and poverty reduction. We will discuss the strong links between biodiversity, food security (nutrition and health), traditional knowledge and intellectual property rights and the role of adaptive and resilient biodiverse agriculture in the fight against climate change.

Panellists:

- Overview of global biodiversity challenges  
*Dr Damon Stanwell-Smith, Senior Programme Officer, UNEP-World Conservation Monitoring Centre*
- The key relationship between biodiversity and agriculture  
*Dr Emile Frison, Director General, Bioversity International, Italy*
- Tropical forests and the impact of forest certification on biodiversity  
*Prof René Boot, Director, Tropenbos International and Utrecht University, The Netherlands*
- Biodiverse agriculture for a changing climate  
*Dr Jonathan Ensor, Practical Action, United Kingdom*

*Discussant: Joseph Kalders, Attache engineer, Ministry of Foreign Affairs, DGCD, Belgium*

10h30-10h45    Coffee break

**10h45-13h00    Panel 2 – Policy responses to include Biodiversity in development strategies**

This panel will review the needed policies, strategies and actions looking at policy options as to include Biodiversity and strengthen its link to agriculture and rural development in the development strategies and to the post 2010 instruments.

Panellists:

- The alliances between community management and national policies to protect biodiversity  
*Hon Blondeau Tatalata, Député National, Coordonnateur UNGC/REPADER, Cameroun*
- Awareness, public education key to environmental sustainability  
*Fay A. Best, ACP Civil Society Forum, Barbados*
- EC development cooperation and biodiversity commitments  
*Simon Le Grand, Expert, DG Development, European Commission*
- Biodiversity target in development cooperation: key future challenges  
*Jean-Claude Jacques, Special Advisor on EU Development Cooperation and the Francophonie / Head IUCN Representation to the EU*

*Discussant: Sally Nicholson, Senior Policy Officer, WWF European Policy Office, Belgium*

Conclusions

13h00-14h00    Networking Buffet Lunch