



Policy Brief to the United Nations General Assembly **Cost effective solutions for climate change mitigation, adaptation and long-term sustainability: the Ecosystems Approach.¹**

Facts:

1. Ecosystems and the services they provide (e.g. climate regulation, food security, freshwater supply, disaster risk reduction) are the fundamental units of life support on Earth. Without these services Human society cannot survive.
2. Ecosystems play an unequivocal and increasingly vital role in both mitigation (carbon sequestration and storage) and adaptation (i.e. societal adaptation to climate change impacts).
3. Terrestrial and oceanic ecosystems currently absorb about half of the current anthropogenic CO₂ emissions, but this absorption capacity is being reduced by 1% per decade, whilst human driven emissions are accelerating.
4. Increasing emissions and declining absorption capacity coupled with positive feedbacks from ecosystems will result in climate destabilisation.
5. **An Ecosystems approach is a cost effective 'Win-Win-Win' link between mitigation, adaptation and long-term sustainability, by increasing absorption of greenhouse gas, reducing natural sources whilst providing life support in a changing world.**

Benefits to the economy: Appropriate protection and management of ecosystems provides a clearly cost effective method to achieve multiple goals: climate regulation, ecosystem services provision, poverty alleviation, disaster risk reduction and many more. The cost of abatement in many ecosystems is considerably lower than mitigation in other sectors, whilst also providing the key services we rely on. Ecosystems and their services are the foundation for resilient, sustainable and successful economies. Better environmental management provides countless opportunities of job creation and livelihood protection. It is the poor of the world who will benefit most.

Action required: Investment in capacity building for ecosystem management and protection; develop full environmental valuation and accounting mechanisms.

Climate stabilisation - the need for balance: To achieve stabilisation there is need to balance three components: the global capacity to absorb GHGs; manage emissions from ecosystems; and crucially, to reduce emissions due to human activity. If emissions due to human activity increase as they are, then emissions from ecosystems will increase as well (due to positive feedback mechanisms), whilst the capacity of ecosystems to absorb emissions decreases. Such an imbalance will lead to irreversible climate destabilisation. Ecosystems function in two of the three components of the stabilisation balance. The danger of not fully recognising and accounting for the role ecosystems play in climate regulation (and as life support systems) during the CoP 15 negotiations, and looking solely at human based emissions risks addressing only one side of the three way balance.

Action required: Develop global level capacity to understand and manage ecosystems based on local needs for sustainable livelihoods.

Ecosystems as the basis for a new 'Green Economy'

The sustainable utilisation of resources from resilient ecosystems forms the foundation for building a new 'green economy' – where natural resource use matches ecosystem supply capacity, is based on renewable energy and has a low carbon footprint.

Imperative: UNEP recognises the greatest challenge for governments and global leaders is to adjust national and international economies in line with mitigation and adaptation efforts whilst maintaining financial stability. Use of the climate regulation capacity and other life support services of ecosystems will help economies, financial institutions and societal behaviour to make those adjustments in progress towards a green low carbon economy. Fundamentally, ecosystems form the foundation of life support and hence require appropriate protection and management. **It is vital therefore that the issue of ecosystem management be integrated with other measures to address climate change. The United Nations Environmental Programme recommends that the Ecosystems approach becomes central to national, regional and international level planning and policy making.**

¹ Note – This Policy brief is supported by a number of UNEP initiatives and publications. See: <http://www.unep.org/> for details.