Quick guide to the

Aichi Biodiversity Targets

Ecosystems restored and resilience enhanced

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification

Deforestation, wetland drainage and other types of habitat change and degradation lead to the emission of carbon dioxide, methane and other greenhouse gases. The reversal of these processes, through ecosystem restoration, represents an immense opportunity for both biodiversity restoration and carbon sequestration. In fact, in many countries, degraded landscapes, represent a huge wasted resource. Restored landscapes and seascapes can improve resilience including adaptive capacity of ecosystems and societies, and can contribute to climate change adaptation and generate additional benefits for people, in particular indigenous and local communities and the rural poor. The conservation, restoration and sustainable management of forests, soils (especially peatlands), freshwater and coastal wetlands and other ecosystems are proven, cost-effective, safe and immediately-available means to sequester carbon dioxide and prevent the loss of other greenhouse gases.

Explanation of the Target

This target addresses several different issues:

• **Ecosystem resilience** refers to the ability of an ecosystem to cope with and respond to disturbances and to restore itself. In general, highly resilient ecosystems can respond to natural disturbances, such as fire, flooding and pest outbreaks, more quickly than ecosystems which have low resiliency. Degraded ecosystems tend to have lower resilience and are therefore less able of recovering after a disturbance.

• **Carbon stocks**, in the context of this target, refer to the accumulated stores of carbon found in biomass as well as soils. Major carbon stocks include ecosystems such as tropical forests, many wetlands, peatlands, seagrass beds and mangroves. The degradation of ecosystems in most cases results in the release of carbon while restoration can help to increase carbon sequestration.

• **Restoration** refers to the process of actively managing the recovery of an ecosystem that has been degraded, damaged or destroyed as a means of sustaining ecosystem resilience and conserving biodiversity.

Specifically this target requires:

• **That ecosystem resilience and the contribution of biodiversity to carbon stocks through conservation and restoration be enhanced**–With the growing impacts of climate change, ecosystem resilience will become increasingly important as ecosystems will need to cope with changing environmental conditions and more frequent extreme weather events. A variety of actions can be taken to increase resilience including conservation, the restoration of degraded habitats, the greater use of adaptive resource management and the ecosystem approach. Such actions will also help to conserve existing carbon stocks as well as increase carbon sequestration.

• **Restoration of at least 15 per cent of degraded ecosystems** – The restoration of degraded habitats represent an opportunity to both improve ecosystem resilience and to increase carbon sequestration. In 2010, by some estimates, two thirds of the planet's ecosystems could be considered degraded The global potential for forest landscape restoration alone is estimated to be on the order of 1 billion hectares, or about 25 per cent of the current global forest area. Therefore there is a large potential for the increased use of restoration.

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Implications for setting national targets

Restoration activities, such as forest and wetland landscape restoration, are already underway in many parts of the world and increasingly will be needed to re-establish ecosystem functioning and for the provision of valuable services such as carbon sequestration. Consolidating policy processes and the wider application of these efforts could contribute significantly to the achievement of the objectives of the Convention, and generate significant synergies with the UNFCCC, the UNCCD and the UNFF. However restoration should not be seen as a substitute for conservation. Similarly it should not be used as a justification for allowing intentional destruction or unsustainable use. Rather it should be regarded as the last resort solution for ameliorating degraded ecosystems. Economic analysis shows that ecosystem restoration can give good economic rates of return. However the biodiversity and associated services of restored ecosystems usually remain below the levels of natural ecosystems. This reinforces the argument that, where possible, avoiding degradation through conservation is preferable (and even more cost-effective) than restoration after a disturbance.

Guiding questions for setting national targets

• **What habitats in the country are degraded**? What are the areas of importance for biodiversity, ecosystem services and human wellbeing that could be restored? What areas are important for carbon sequestration? What type of restoration activities are needed for each habitat?

•**What are the opportunities and constraints in enhancing ecosystem resilience/undertaking ecosystem restoration, generally and by habitat?** Consider potential ecological, economic, and social costs and benefits of enhancing resilience or of undertaking restoration in specific habitats. How may these justify higher or lower figures for a national target than for the global target?

•**Who are the stakeholders that may be affected by efforts to enhance resilience?** How can they be involved and their needs addressed? What are the trade-offs to consider?

•**What additional resources (financial, human and technical) will be required to reach the national target that is set?** How can additional funds be raised? What are possible funding sources?

Note that, given the particular national circumstances, national targets may be more specific and more precise than the global target. Further national targets should be ambitious but realistic and be supportive of the Strategic Plan by moving beyond business as usual.

Actions and milestones

The Convention's work on biodiversity and climate change is particularly relevant to this target as are many of the programmes of work. Several articles of the Convention also refer to various aspects of restoration including Articles 8, 9 and 14

Possible indicators

• Status and trends in extent and condition of habitats that provide carbon storage
• Population trends of forest-dependent species in forests under restoration
• Trends in area of degraded ecosystems restored or being restored
• Trends in proportion of degraded/threatened habitats
• Trends in primary productivity
• Trends in proportion of land affected by desertification

Resources

• Programme of work on Climate Change and Biodiversity - www.cbd.int/climate/
• Society for Ecological Restoration - www.ser.org/

• The Global Partnership on Forest Landscape Restoration http://ideastransformlandscapes.org/