Short Term Action Plan on Ecosystem Restoration
Group of activities B: Improving the institutional enabling environment for ecosystem restoration

Biodiversity considerations in the context of restoration science and practice

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Development of institutional frameworks that allow for scaling up of ecosystem restoration worldwide is needed, as both funding and institutional capacity is insufficient to meet current and future needs. The following considerations can be useful:

Provide a clear and stable legal basis for restoration [B1, B2]

Funding required to meet the goals of the Bonn Challenge and the New York Declaration on Forests is estimated at USD 360 and 830 billion, respectively[1]. A wide range of funding and other resources will be needed, including markets to leverage investment in ecosystem restoration[1-4]. Governance for restoration is critical, and without inscribing restoration actions within a clear governance framework, short-term restoration efforts are less likely to succeed. Because successful restoration may take years or decades, accountable institutions should oversee projects for the period of time required to achieve success[5,6]. Institutional goals and approaches to restoration range from active interventions to more passive approaches such as natural regeneration[7,8]. Legal frameworks that mandate biodiversity offsets, payments for ecosystem services, and agricultural-environmental schemes are all enabling policy mechanisms for restoration.

Legal frameworks at the international (e.g., the European Union) and national levels can take advantage of existing and emerging law to facilitate ecosystem restoration[9]. Incorporation of terms important to biodiversity conservation (e.g., extinction debt) into legal language is important so that lawyers and policy makers understand the underlying ecological concepts[10]. Addressing land-tenure issues and securing land tenure, especially for local stakeholders, is seen as key to obtaining investments in FLR[5,11]. Legal instruments to promote and implement both voluntary and mandatory restoration exist in many countries (e.g., Brazil, China, Japan, South Africa, United States)[12], and in some cases laws have been refined based on experience to improve both project assessments and outputs (e.g., São Paulo State, Brazil)[13,14]

Make biodiversity and climate benefits an explicit objective of restoration projects [B6]

Explicit incorporation of biodiversity into restoration projects is low. A review of published studies on restoration from 1990-2015 found that biodiversity was considered less than 10% of the time, and that the increase of consideration of biodiversity over that time was slight[15]. Most studies considered biodiversity as a response to restoration rather than incorporating it in the restoration design. Thus, policies are needed that promote the inclusion of biodiversity in restoration design, enhance

the survival of restored organisms, and maximize the ecosystem functions and services they provide.

Moreover, public policies should recognize the role that ecosystem restoration and conservation can play to attain ecosystem-based adaptation to climate change, as well as in increasing the resilience of local society to future climate change scenarios. In Brazil for example, the protection and restoration of native Atlantic forests is an explicit part of the government's objective to reduce society's vulnerability to climate change[16].

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