



3.18 Enhanced restoration monitoring and data to guide investment

2.1 What, in brief, is the solution?

We propose an enhanced systematic monitoring system to track progress of restoration actions and outcomes. This solution is integral to achieving ambitious global restoration targets set by the Bonn Challenge, NYDF and other global restoration commitments, whilst tracking the contributions from ongoing country actions through the Rio conventions and other Multilateral environmental agreements. Access to improved and open data, innovative tools and technologies, new high resolution satellite imagery, and inclusive capacity development – all of which are contributions of the fourth industrial revolution [1] can be seen as innovative levers of change to help to validate and improve FLR actions. This solution will help to test underlying assumptions of restoration implementation and help to cultivate the badly needed business case to spur increased investments. An estimate puts the current finance gap to achieve biodiversity protection at between 598-824 billion [2]. This solution offer the potential to increase efficiency from current conservation expenditure, whilst promoting the tools needed for adaptive management and to help identify further opportunities for targeted financial investments.

2.2 What was/were the source(s) from which this solution emerged?

This solution has emerged from collaboration of many organizations involved with the Task force on Monitoring in support of the UN Decade on Ecosystem Restoration. The task force was launched in March of 2020 and brings together 219 technical experts from 82 organizations . Member affiliations extend to international organizations and all restoration stakeholders including NGOs, governmental agencies, academia and organizations implementing restoration initiatives across all ecosystems. Each member has an equal opportunity and responsibility to engage in the discussion ([Briefing note](#)).

2.3 What problem is it trying to address within food systems?

Restoring the productivity of degraded land areas can help address the triple challenge of our time; climate stability, food security and space for nature [3]. There has been steady momentum for FLR, with commitments by countries close to 1 billion hectares integrated into national plans in 2020 [4]. Restoration ambition is a real, yet tangible results have been lacking, and there remains a gap in reporting of concrete economic, ecological and social impacts. Compared to monitoring of deforestation events, FLR monitoring requires a more nuanced approach, higher resolution imagery, longer temporal scales, as well as blending human annotated data with remote sensing [5]. Practitioners and governments have further resource constraints and prioritize affordable cost effective indicators, and may have limited data availability, capacity, technical knowledge and political support. These barriers restrict conservation financing from Official Development Assistance (ODA), public sector and from for-profit endeavors which more commonly invest in other land uses that are more profitable in the short term but lead to massive destruction in the long term.

2.4 Why is addressing that problem important for achieving the goal of your ACAI?

Although we have witnessed an increase in global restoration commitments we still lack a strong evidence base to support further action and to attract large private sector investments required to move restoration the scale required. This solution aims to increase efficiency and application of existing restoration funds by tracking restoration through holistic monitoring system that moves beyond restoration actions to restoration outcomes, as well as to test the underlying assumptions of restoration interventions. Fundamentally the solution will aim to enhance country capacity and access to data,



propose new solutions and tools and provide targeted capacity workshops and trainings to improve biodiversity outcomes, climate mitigation, food security and overall economic and social impacts.

2.5 How can this solution address that problem?

This solution proposes the development of a holistic monitoring system and geospatial platform to complement existing international, regional and national reporting processes under one common umbrella. Providing access to methodological guidance and tools to monitor and plan ecosystem restoration. The solution can also enable knowledge and technology transfer and to develop capacity of people, communities, rural institutions and countries to monitor and report their own restoration progress, supporting the creation of information by those who are undertaking restoration. Locally relevant information builds ownership and trust in restoration actions, enables participatory monitoring and the reporting of quality information on restoration progress. Further, the development of complementary restoration monitoring and planning tools will elucidate the benefits and costs of restoration to reduce the complexity that is comprised within restoration planning, and bolster private sector investments ([Holistic monitoring](#)).

2.6 Why does this solution align to the definition and criteria for a ‘game changing solution’ developed by the Summit?

Answered above

2.7 What is the existing evidence supporting the argument that this solution will work, or at least that it will achieve the initial outcomes described above?

Progress on National Forest Monitoring Systems and REDD+ reporting (Forest Reference Levels and REDD+ technical annexes) has provided many lessons on catalyzing country progress on monitoring. For example, of 65 UN-REDD Programme countries, 46 have submitted one or more Forest Reference Level to the UNFCCC, representing a significant proportion of tropical forests. This represents a critical step forward in forest monitoring capacity that, in turn, contributes to monitoring efforts under the UN Decade on Ecosystem Restoration [6]. Further the Capacity Building for Increased transparency (CBIT- Forests), a GEF funded project, provides concrete evidence of the importance of strengthening national and institutional capacities on monitoring and compliance, which can lead to increased transparency around commitments and create a culture accountability for increased climate action [7]. To date FLR commitments are a relatively new phenomena and therefore restoration monitoring is a relatively new field. No single approach or tool can capture all the nuances of FLR, but the path forward will rely on combining data tools to create a composite approach [5].

2.8 What is the current and/or likely political support for this idea?

2.9 Are there certain contexts for which this solution is particularly well suited, or, conversely, contexts for which it is not well-suited at all?

This solution is well suited to terrestrial landscapes (grasslands, forests) where the collective strengths of the restoration monitoring community currently lie, and are strongly building off existing efforts for monitoring deforestation and early warning systems. It is less well suited to the aquatic ecosystems where area based indicators, fish stock harvest and ecosystems health are harder to track and less effective through remote sensing and satellite monitoring.

2.10 Who are the key stakeholders to be further involved in the process of developing and refining the solution idea?



Development of holistic monitoring systems, partnerships and accompanying elements will support national ownership of data, will engage available resources and capacity existing within agencies, building on existing structures and monitoring systems. Further, it aims to develop capacity of people, communities, rural institutions and countries to monitor and report their own restoration progress, supporting the creation of information by those who are undertaking restoration. Key stakeholders include academia, governments, national agencies, NGOs, CSOs, and private sector investors.

2.11 Other remarks/comments to be reflected in AT3's report out on 'game changing' solutions

This solution is highly complementary with others solutions proposed on Landscape partnerships and Integrated landscape finance.

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