**SUPPLEMENTARY MATERIAL 3**

Literature review codebook

**CODEBOOK – HOW WE ORGANISED TEXTUAL CODING**

1. **Text Characteristics**

**[YEAR OF PUBLICATION]**

[1997]

[1998]

[1999]

[2000]

[2001]

[2002]

[2003]

[2004]

[2005]

[2006]

[2007]

[2008]

[2009]

[2010]

[2011]

[2012]

[2013]

[2014]

[2015]

[2016]

[2017]

**[LITERATURE SOURCE]**

[Scientific Literature]

[Metodological Approach]

[Case Study]

[Projects Review]

[Theoretical Review]

[Organisation’s Documents]

[Document Type]

[Book]

[Brochure]

[Report]

[Policy Briefs]

[Leaflets]

[Metodological Approach]

[Case Study]

[Projects Review]

[Theoretical Review]

**[LOCATION – PUBLICATION / STUDYCASE]**

[Name of the Country/region]

**2) Concepts or definitions**

**[RESTORATION]** *How different authors define restoration according to FLR approach*

[Recovery of degraded ecosystem – SER]

[Reference Ecosystem]

[Functions and Biodiversity] “All of the key ecological processes and functions are re-established and all of the original biodiversity is re-established.” (Glossary definitions IUCN)

[Social Benefits]

**[LANDSCAPE]** *How different authors define landscape according to FLR approach*

[Geographical Mosaic] “A geographical mosaic composed of interacting ecosystems resulting from the influence of geological, topographical, soil, climatic, biotic and human interactions in a given area” (Glossary definitions IUCN)

**[SCALE]**

[Scale - Definition]

[Scale - Variations]

**[FOREST LANDSCAPE]** *How different authors define forest landscape according to FLR approach*

[Forest Landscape] e.g. “A landscape that is naturally capable of supporting forests, woodlands, or tree canopy cover of 10 percent or more. At one end of the spectrum, the landscape has 100 percent tree canopy cover; at the other end, the landscape has 10 percent tree canopy cover and the rest is composed of grasses and/or shrubs.” (Hanson et al. 2015a).

**[FLR]**

[FLR - Definition] *How different authors define FLR approach*

[Process] e.g. “’a process that aims to regain ecological integrity and enhance human well-being in deforested or degraded forest landscape”. The definition implies that FLR is a considered process and not simply a series of ad hoc treatments that eventually cover large areas”.

“it is about a “process” because it typically takes a long time for a forest landscape to recover, although some of the ecological functions and human benefits provided by restoration may appear early on”. Hanson, C., Buckingham, K., DeWitt, S., & Laestadius, L. (2015). The restoration diagnostic. Washington, DC: WRI.

[Ecological functionality]

[Ecological Integrity] e.g. “maintaining the diversity and quality of ecosystems, and enhancing their capacity to adapt to change and provide for the needs of future generations” (Mansourian and Vallauri 2005)

[Human well-being]

[FLR - Term] *How different authors name the FLR approach*

[Forest AND landscape restoration]

[Forest landscape restoration]

[FLR – Challenges and Obstacles]

[Conceptual challenges] Subjective judgement of criteria; Misconception or Limited approach; knowledge gaps;

[Technical challenges] Lack of involvement and monitoring; Economic constraints; Ecological constraints; and Social constraints;

[Governance challenges] Unclear process; Non-continuity of projects; Lack of incetives; and Lack of trust;

[Practice challenges]

**3) Principles, Criteria and Indicators**

**[IMPORTANCE]**

[Conflict resolution] *for different land uses*

[Social benefits]

[Economic benefits]

[Ecological benefits]

[International agreements] *Governments*

[Social responsibility] *Companies*

**[CHARACTERISTICS]** *Based on the main FLR characteristics, we will identify principles and criteria, according to our definition*

[ECOLOGICAL OUTCOMES]

[Landscape attributes]

[P - Landscape Configuration and Changes]

[C – Composition] i.e. quality: species diversity, endemic species, habitats

[I - Assessment of changes in vegetation diversity]

[I - Assessment of changes in fauna diversity]

[C – Structure] quantity: connectivity, fragments size and shape

[I - Assessment of changes in forest connectivity]

[I - Assessment of changes forest cover area]

[C – Heterogeneity] forest, agriculture, remain ecosystems

[I – Assessment of changes in land uses]

[C - Landscape functions] Flow of species and elements (energy, disturbance), connectivity, permeability

[C - Landscape Multifunctionality] e.g. “Landscapes and their components have multiple uses and purposes, each of which is valued in different ways by different stakeholders” http://www.wri.org/our-work/project/african-restoration-100/10-principles-landscape-approach

[P - Biodiversity Conservation]

[C – Use of Native Species]

[C – Use of Exotic Species]

[C – Control of Superabundant and Invasive Species]

[C – Ecosystem and Habitat maintenance]

[C – Protect threatened and endangered species]

[C – Genetic diversity of trees]

[C – Species Interections]

[C – Resilience]

[P - Improvement of Physical aspects]

[C - Climate Change]

[I - Changes in pollution levels]

[C - Reducing Erosion]

[I - Changes in soil structure]

[C – Nutrient Cycling]

[I – Use of nitrogen fixing plants]

[I – Composting of organic materials]

[I – Biodegradation technics]

[C – Fire Control]

[P - Ecosystem Services]

[C - Carbon stock]

[C – Pollination]

[C – Natural Pest Control]

[C – Ecotourism]

[C – Increase of Water Resources]

[I – Plans to maintain water quality]

[I – Changes in water resources]

[HUMAN DIMENSIONS AND CAPITAL OUTCOMES]

[Institutional Capital]

[P - Legal Compliance]

[C - Labour rights]

[C - Property rights]

[C - Environmental legislation]

[I - Demonstration of commitment to legal compliance]

[Human and Social Capital]

[P - Participation or engagement]

[C - Participatory process: top-down]

[C - Participatory process: bottom-up]

[C - Participatory process: consultative]

[C - Participatory process: deliberative]

[C - Traditional Knowledge]

[C - Conflict resolution]

[C - Social cohesion]

[Economic and financial Capital]

[P - General and Subjective well-being]

[C - Non-material Benefits] e.g. cultural, recreational, religious, tourism, pride

[I - Self-perception about well-being level]

[I - Recreational opportunities]

[C - Equity] i.e. equitable access or benefits from resources

[C - Food and Health Security]

[P - Economic Diversification]

[C - Income - monetary] i.e. access to monetary income from wood, non-timber forest products, fish, wild meat

[I - Assessment of changes in Income Level]

[C - Income – non-monetary] i.e. access to consumption of wood, non-timber forest products, fish, wild meat

[I - Assessment of changes in Income Level]

[C - Access to credit and to infrastructure]

[I – Assessment of changes in the level of access to credit]

[P – Capacitation]

[C – Training, Capacitation and Access to information]

[I - Documentation of training and capacitation]

[C - Employment Conditions]

[I - Access to employment]

**[INTERVENTIONS]**

[P - Interventions - Planning]

[C - Management Planning]

[C - Landscape Delimitation]

[C - Geographically]

[C - Multiple Land Uses]

[C - Land Tenure]

[C - Forest Model - GIS]

[C - LANDIS Model]

[C - Interventions – Location]

[C - Priority Locations - Ecological]

[C - Priority Locations – Socioeconomic]

[P – Interventions – Implementation]

[C - Conservation]

[C - Natural regeneration]

[C - Agrosilvopastoral system]

[C - Agroforestry system]

[C - Restoration Planting]

[C - Planting enrichment]

[C - Monoculture plantation of exotic species]

[C - Monoculture plantation of native species]

[C - Mixed-species plantation: with exotic and native species]

[C - Mixed-native species plantation]

[C - Sustainable agriculture]

[C - Seedling Nurseries]

[P – Interventions - Monitoring]

[C - Monitoring – human effects or outcomes]

[I - Documented conversations and meetings with the local community]

[I - Forums and discussions on the activities carried out]

[C - Monitoring – Processes] e.g. planting, development of the project, others

[I - Forest Inventory]

[I - Analyses through geoprocessing software]

[I - Documentation of forest practices]