

NATURE-BASED SOLUTIONS

Key results and lessons learned from IFAD Adaptation for Smallholder Agriculture Program (ASAP)

ASAP contact group meeting

14 Oct 2020



NbS definition

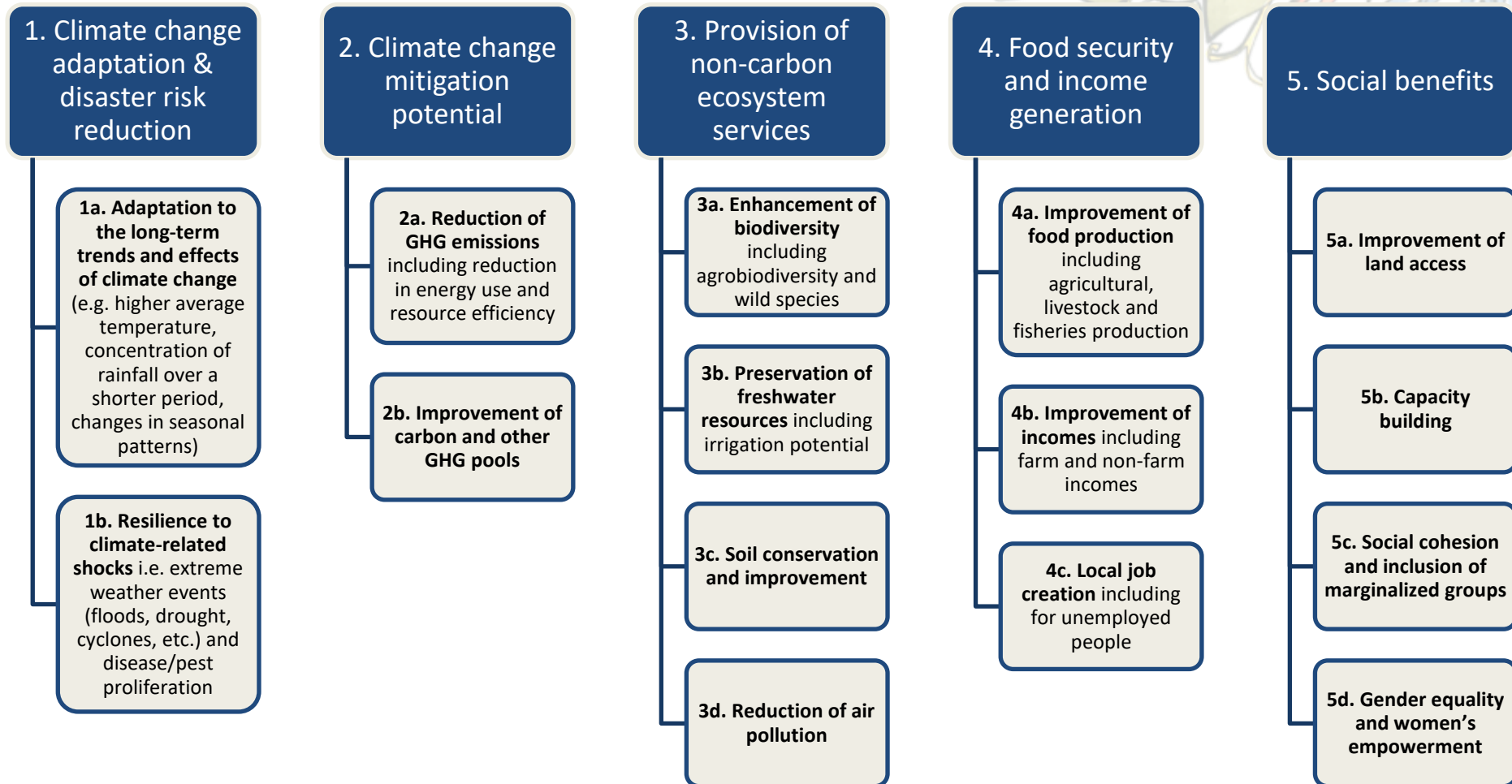


- Concept derived from Ecosystem-based Adaptation (EbA)
- Several NbS definitions
- IUCN definition:

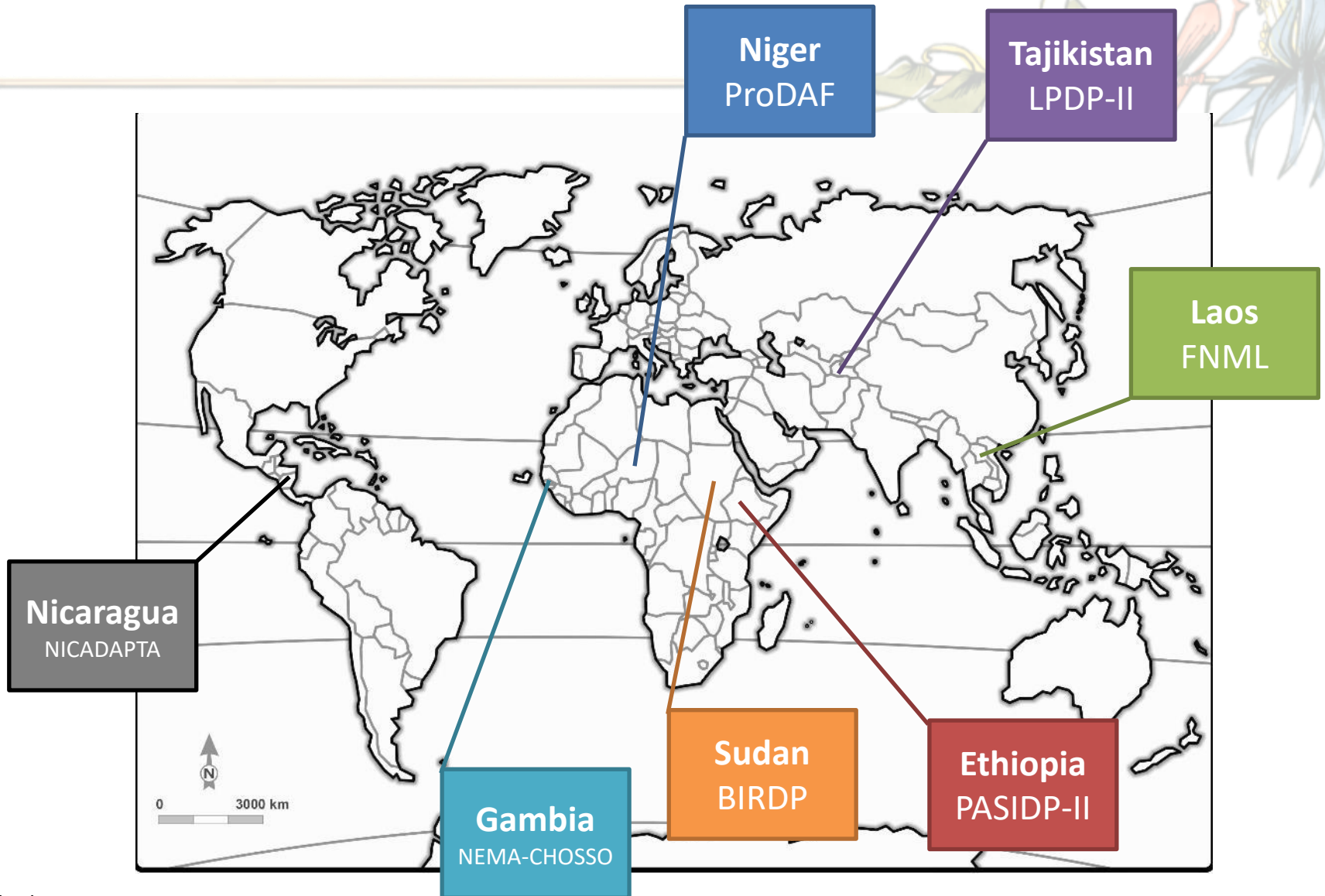
*actions to **protect**, sustainably **manage** and **restore** natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits*

(Cohen-Shacham & al., 2016)

NbS analysis framework for ASAP



ASAP case studies : sample

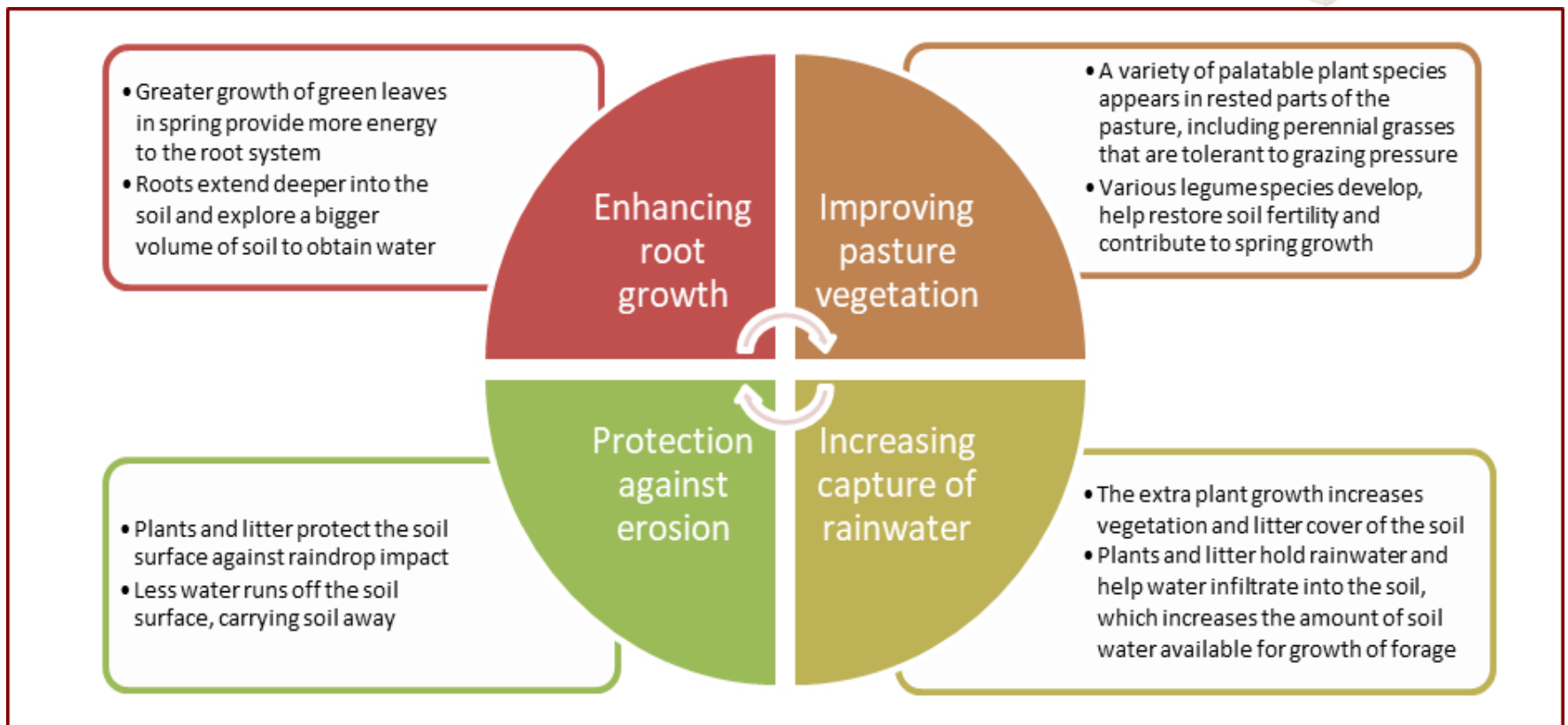


ASAP case studies: overview

	ASAP project / Country	NbS	NbS category
Tajikistan LPDP-II	Livestock and Pasture Development Project (LPDP) / TADJIKISTAN	Pasture rotation (or rotational grazing)	Grassland management / optimal grazing intensity
Sudan BIRDP	Butana Integrated Rural Development Project (BIRDP) / SUDAN	Natural Resource Governance Framework	Grassland and natural forest management
Gambia NEMA-CHOSSO	National Agricultural Land and Water Management Development Project (NEMA-CHOSSO) / GAMBIA	Mangroves restoration	Coastal wetland restoration
Nicaragua NICADAPTA	Adapting to Markets and Climate Change Project (NICADAPTA) / Nicaragua	Shade trees in diversified croplands	Trees in cropland
Laos FNML	Southern Laos Food and Nutrition Security and Market Linkages Programme (FNML) / LAOS	Effective Micro-organisms	Soil fertility and pest management
Ethiopia PASIDP-II	Participatory Small-Scale Irrigation Development Programme phase II (PASIDP II) / ETHIOPIA	Watershed management	Watershed management
Niger ProDAF	Family Farming Development in Maradi, Tahoua and Zinder Regions (ProDAF) / NIGER	Land restoration	Cropland and grassland restoration

Tajikistan LPDP-II: restoring pasture ecosystems through rotational grazing

Tajikistan
LPDP-II



Nicaragua NICADAPTA: shade trees in croplands, a cross-cutting NbS

Nicaragua
NICADAPTA

Temporary (musaceous) and/or permanent **shade** (fruit & timber) for coffee/cocoa trees, thus maintaining **temperature** at decent levels

Crop **diversification** by the introduction of fruit or timber varieties, either enforcing HH food security or contributing to fuel needs

Carbon capture (2.7 tons of CO₂e sequestered/ha/year for the whole project)

Promotion and conservation of **local biodiversity** through the plantation of native species



Other **ecosystem services** such as soil conservation and organic matter renewal

Niger ProDAF: land management to enhance productive capacities and improve resilience of smallholder farmers

Niger
ProDAF

- **Land Management** combines:
 - **Mechanical treatments** through water and soil conservation techniques (e.g. *zai*, stones lines, filter diguettes, living fences)
 - **Removal of invasive plants** (such as *Sida Cordifolia*) through cash for assets
 - **Plantation** of grasses and trees for dunes fixation and for the restoration of pastoral rangelands and corridors (planting of grasses of forage interest)
 - **Vegetation regeneration** by (i) digging pastoral half moons (acting as reservoir for planted trees and enhancing grass regeneration) and (ii) protecting naturally-growing multipurpose trees for soil improvement (e.g. *Acacia albida*), protection against insects (*Piliostigma reticulatum* in millet fields), windbreaks
 - **Social and organisational skills training** of village committees to ensure the sustainability of all activities



Filter diguettes



Pastoral half-moons



Dunes fixation by planting trees

Lessons learnt



- NbS often simultaneously meet **several of the 5 criteria**
- NbS are particularly **relevant to ASAP objectives** and vice-versa ASAP is an interesting portfolio to promote NbS
- NbS may contribute to **wider environmental projects**, such as the Great Green Wall for the Sahara and Sahel Initiative (on which IFAD is currently engaged)
- The active involvement of **local communities and authorities** is critical for the success of the NbS, and must be promoted through **intensive mobilization and trainings**
- NbS are often **combined** with other activities that more directly support **livelihood assets** at individual, households and/or community levels. Related inputs and skills training need to be available at local level

Lessons learnt



- **Labour-intensive** NbS require significant external financial resources & specific approaches (e.g. cash for work)
- NbS often promote a **wide diversity of local plants/trees**, which are grown in nurseries (creating jobs for vulnerable women & young people) and ensure that various households needs are met (timber, firewood, food, etc.)
- NbS may require **long time** to develop as they can include multiple and complex activities
- Stronger evidence of NbS results and impacts are required to know which benefits can **specifically be attributed to NbS**
- Wider **geographical coverage** would also allow NbS to be tested in different contexts and facilitate subsequent scaling up

Recommendations



1. Give **wider emphasis** to NbS at IFAD strategic and operational levels
2. Ensure sufficient **expertise** is available to design, implement and monitor NbS
3. Implement NbS in **different contexts** and expand their geographical coverage
4. Ensure NbS are systematically set up in collaboration with **communities and authorities**
5. Produce **NbS-specific data**