Nature-based Solutions

Nature-based solutions (NbS) is one of the 11 key type of interventions that are contributing to building climate resilience for agriculture and food systems. NbS are actions that help 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 (IUCN, 2019). Adopting an ecosystem approach to sustainable management of natural resources and the different factors that can interact, such as biodiversity, habitats, activities of pollinators and soil organisms, is essential for building the resilience of agri-food systems in a changing climate. This is because healthy and diverse (agro-sylvo-patsoral-marine) ecosystems are more climate resilient as they can reduce the adverse impact of climate related hazards and stressors (droughts, floods, storms, change of rainfall patterns, …) as well as provide essential ecosystem services, such as fresh water, clean air, fertile soil, pollination and biodiversity, which contribute to resilient livelihoods, food security and nutrition.

	Global and/or national level indicators	Name of framework /initiative /study	Subnational and local level indicators	Name of framework /initiative /study
Investment in nature based solutions	Trends in number of countries incorporating natural resource, biodiversity, and ecosystem service values into national accounting systems	Aichi biodiversity targets (2016)	[global indicator, but can be disaggregated at national level]	
Status and quality of land	Proportion of land that is degraded over total land area (% hectares or km^2)	**SDG 15.3.1 (2015)**	[global indicator, but can be disaggregated at national level]	
	Trends in land cover (% hectares or km^2)	UNCCD 1.1 (2017)		
	Trends in land productivity or functioning of land (% hectares or km^2)	UNCCD 1.2 (2017)		
	Trends in carbon stocks above and below ground (% hectares or km^2)	UNCCD 4.1 (2017)	Area benefitting from CCA/DRM-related forest/land/ coastal management practices/ plans (i.e. protection/ enhancement/ restoration of biodiversity, tree cover, natural vegetation, etc.)	World Bank (2017)
			Integrated landscape management practices adopted by local communities	Great Green Wall Initiative
			Area of land under sustainable land and water management practices	World Bank (2017)
	Percentage of degraded land/agricultural land (%)	Government of Colombia (2017)	[global indicator, but can be disaggregated at national level]	
	Number of hectares of productive land lost to soil erosion (hectares)	KCCAP KEN (2012)		
Ecosystem health and ecosystems services	Change in the extent of water-related ecosystems over time	**SDG 6.6.1 (2015)**	Area of watershed protected	World Bank (2017)
	Ocean Health Index	Aichi biodiversity targets (2016)	Area of marine environments under improved forms of management related to CCA/DRM	World Bank (2017)
	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type (%)	**SDG 15.1.2 (2015)**	Area benefitting from CCA/DRM-related forest/land/ coastal management practices/ plans (i.e. protection/ enhancement/ restoration of biodiversity, tree cover, natural vegetation, etc.)	World Bank (2017)
	Trends in area of degraded ecosystems restored or being restored (% hectares or km^2)	Aichi biodiversity targets (2016)	Percentage of area of natural terrestrial ecosystems in the county that have been disturbed or damaged (%)	KCCAP KEN (2012)

	Trends in condition and vulnerability of ecosystems (% hectares or km^2)	Aichi biodiversity targets (2016)	Percentage of area of natural terrestrial ecosystems in the county that have been disturbed or damaged (%)	KCCAP KEN (2012)
	Trends in delivery of multiple ecosystem services (% hectares or km^2)	Aichi biodiversity targets (2016)		
Forests coverage	Forest area as a proportion of total land area (% hectares or km^2)	**SDG 15.1.1 (2015)**	Number of arable farmers in the county whose land has been stabilized by tree planting, terracing or supporting structures as a result of government intervention	KCCAP KEN (2012)
	Mountain Green Cover Index [global indicator, but can be disaggregated at national level]	**SDG 15.4.2 (2015)**	Area of slope stabilization through agroforestry/re/afforestation	World Bank (2017)
	Trends in tree cover (% hectares or km^2)	Aichi biodiversity targets (2016)	Afforestation and reforestation initiated at local government and sub-county level	NAP-AG UGA (2017)
			Area with increased tree/vegetation cover (i.e. re/afforested/ restored, etc.)	World Bank (2017)
	Area of forest under sustainable forest management certification (% hectares or km^2)	Aichi biodiversity targets (2016)	Integrated landscape management practices adopted by local communities	Great Green Wall Initiative
	Percentage loss of forest in protected (%)	KCCAP KEN (2012)		