



Sector: Biodiversity



SDG-NDC Synchronization: Assessment and Recommendations

How can the Climate Change Nationally Determined Contributions and the 2030 Agenda for Sustainable Development complement and support each other towards a sustainable future?

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Assessment and Recommendations for Integration of Sustainable Development Goals within Lebanon's Climate Related Plans

Description and Objectives

The Paris Climate Agreement's Nationally Determined Contribution (NDC) and the Sustainable Development Goals (SDGs) share some mutual goals and a common target year (2030). Many synergies exist between the two agendas, and addressing those linkages from an integrated institutional viewpoint will enhance the implementation, coordination and tracking of the different actions. The aim of this analysis is to assist policymakers in:

- Assessing the sectoral policies that make up the NDC in terms of SDG linkages using the SDG Climate Action Nexus tool (SCAN tool) in order to establish and clarify the linkages;
- Identifying progress indicators of NDC policies to inform SDG progress and vice versa, in order to synchronize reporting;
- Operationalizing the coordination between institutions responsible for the implementation and reporting of both the NDC and SDGs.

Methodology

- The SCAN-tool provides high-level guidance on how climate actions can impact the achievement of the SDGs (http://ambitiontoaction.net/scan_tool/);
- Coupled with local expertise, this analysis:
 - Identifies potential linkages between specific recommendations included in each of Lebanon's climate related plans and policies and the SDGs;
 - Includes the identification of a primary SDG linkage along with other relevant SDG linkages;
 - Identifies potential linkages to all of the SDG targets, and provides further recommendations.
- All climate-relevant and sustainable development plans inherently contribute to SDG 13 (climate action);
- SDG 17 addresses global partnerships and means of implementation, relevant SDG 17 linkages to local plans are also identified in this assessment.

This is not an exhaustive analysis but it provides a sound basis to better understand where and how Lebanon's climate actions impact SDG achievement.

How to use this guide?

Step 1: Review

This guidance recommends certain linkages per SDG which should be reviewed in the context of policy-making.

Step 2: Prioritize

Not all the linkages made have the same relevance to the policy or activity, therefore, the linkages should be prioritized considering magnitude of impact, co-benefits and other criteria depending on the institution and its priorities.

Step 3: Consult

Depending on the prioritized SDGs, stakeholder consultations for policy-drafting should include the lead institutions responsible for implementing the selected SDGs.

Step 4: Synchronize

When implementing the policy, synchronization at the level of tracking between the different institutions, the NDC committee and the SDG committee should be considered.

Sector:	Biodiversity
Sub-sector:	Biodiversity
Source document:	National Biodiversity Strategy and Action Plan (2016)
Ministry:	Ministry of Environment
URL:	https://www.cbd.int/doc/world/lb/lb-nbsap-v2-en.pdf

Plan/ Policy Overview

Climate change adaptation actions in Lebanon include strategies for conserving and protecting Lebanon's biodiversity and fragile ecosystems. The 2016 National Biodiversity Strategy and Action Plan (NBSAP) is broken into thirteen 'priority areas' that collectively provide a comprehensive overview of the current state of ecosystems in Lebanon, challenges Lebanon will likely face, and strategies to protect and conserve biodiversity. The NBSAP identifies a series of strategic actions, institutional, legislative, economic or other policy and institutional actions that advance the achievements of the strategy's targets. The NBSAP acknowledges that the priority areas are aimed at addressing the Sustainable Development Goals, primarily linking to SDG 15: life on land. While other SDG linkages are also evident, it does not include explicit language as to how or where a specific NBSAP targets connect to SDG targets within its narrative. That said, one of the strategy's primary objectives includes, "mainstreaming biodiversity into sectoral and cross-sectoral strategies, plans and programmes". In this vein, the strategy provides some clear linkages to other SDGs including income and poverty, jobs, health and well-being. The plan also places strong emphasis on regulation/legislation, research, capacity building and awareness raising where linkages can be found in targets in SDG 4 (education), SDG 8 (sustainable consumption and production), SDG 16 (peace and justice) and SDG 17 (partnerships for the goals).

Links to Climate Change and Sustainable Development

Conserving biodiversity in light of climate change impacts on ecosystems is an important adaptation measure. Lebanon's Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement lists biodiversity as a priority action with the following target for 2030:

- Overarching objective: By 2030, adaptation plans for ecosystems vulnerable to climate change have been developed and implemented. This will be achieved by:
- Conducting needs assessment and defining pilot national monitoring sites and species. Coastal zones are considered a priority
 - Designing and implementing pilot action plans

To reduce the adverse impacts of climate change on the environmental, economic and social systems, Lebanon promotes climate change adaptation strategies through mainstreaming and building institutional capacity. Climate change has already been mainstreamed into the NBSAP and is identified as one of the priority areas of the plan with an overarching objective of "developing and implementing adaptation plans for ecosystems vulnerable to climate change by 2030".

The following assessment identifies how the specific actions in the NBSAP relate to the SDG targets (Tables 1 and 2). It identifies how ecosystem conservation, for example, can positively or negatively impact SDG targets.

Table 1: Primary SDG Target






Primary SDG	How does the NBSAP contribute to this SDG? (examples)
	<ul style="list-style-type: none"> - Increases conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services - Conservation actions support the protection of threatened species and important ecosystems - Conservation reduces the degradation of natural habitats, halts the loss of biodiversity - Conservation measures reduce the degradation of forests that supports the biodiversity of endemic and economically important species - Physical protection through nature reserves and ecosystem corridors will aid in the conservation and restoration natural habitats, will protect against flooding, storms and erosion, and will support combating desertification and help restore degraded land - Expansion of nature reserves helps to protect against the loss of biodiversity and threatened species - Ecosystem and biodiversity values are integrated into climate change related plans - Increased institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection

Table 2: Highly Relevant SDG Targets

Relevant SDG	How does the NBSAP contribute to this SDG? (examples)
	<ul style="list-style-type: none"> - Conservation of the genetic diversity of important flora and fauna, and the promotion of access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed - Traditional knowledge, uses, and practices of local communities that help to maintain biodiversity and sustainable use of resources are documented, preserved, and shared/ published - Maintain genetic diversity through sharing traditional knowledge and sustainable local community practices
	<ul style="list-style-type: none"> - Improved research on biodiversity will add to the body of knowledge for all learners encouraging environmental protection and the conservation of ecosystems - Better research and the dissemination of information through awareness campaigns on the value of biodiversity and the sustainable use of natural resources can empower people to better respond to climate change and promote sustainable development
	<ul style="list-style-type: none"> - Protection of threatened species and genetic diversity of native flora and fauna preserves and safeguards the country's cultural and natural heritage - Protection of the nation's natural heritage through the establishment of protection areas
	<ul style="list-style-type: none"> - Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation; promotion of nature based and sustainable tourism - Sharing and promoting traditional knowledge, uses, and practices of local communities relevant to biodiversity contributes to the sustainable use of natural resources - Provide relevant information to learners everywhere through sharing and promoting traditional knowledge, uses, and practices of local communities - Increased knowledge base through research on biodiversity and dissemination through a centralized platform promotes learning



- The protection and restoration of marine areas based on research and scientific knowledge can aid in the regeneration of threatened species and ecosystems
- Implementation of the Marine Protected Area Strategy and establishment of marine nature reserves will aid in the protection of marine and coastal ecosystems
- Protected marine nature reserves will increase biodiversity and provide additional livelihood



- Develop research, plans, policies and regulations that support the institutional capacity to implement conservation strategies initiative
- A legislative framework for private sector engagement provides a more effective and transparent institutional framework
- Laws on access to biological and genetic resources and sharing of the benefits arising from their utilization that creates effective, transparent and accountable policy on genetic diversity



- National conservation strategies and regulations support policy coherence
- Private sector engagement in ecosystem protection through sustainable consumption and production plans can greatly expand the scale of intervention

Summary of Recommendations

For biodiversity conservation activities to be comprehensive, to have clear co-benefits and to efficiently implemented, biodiversity strategies, including the NBSAP, should explicitly address linkages to specific SDG targets and the NDC goals. In doing so, there should be a narrative that focuses on the plan's broader societal goals and impact on addressing climate change. As highlighted above, biodiversity conservation positively impacts at least twenty-five highly relevant SDG targets and advances the NDC goals in increasing resilience, and it should therefore be demonstrated in the plan so that common entry points can be better understood within and among Lebanon's sustainable development related plans and policies.

- For example, many low-income people depend on the materials produced by ecosystems for income (fishing, farming, tourism etc.). Safeguarding ecosystems "can help to prevent men and women from falling into poverty and can help to lift them out of it by increasing their income and reducing their vulnerability to external economic shocks or environmental disasters" (CBD) and therefore, achieving successes in SDG 1 poverty means protecting biodiversity.

Future iterations of biodiversity strategies, including the NBSAP, should consider the potential impact on SDG targets and in addressing climate change when developing and prioritizing specific implementation strategies. For example, the plan should prioritize measures that are most economically feasible and have largest impact on both the NDC and SDGs. In other words, there are opportunities in portraying biodiversity through a more holistic approach: looking through the lens of the SDGs and NDC might result in a different prioritization of plan strategies.

- For example, looking at biodiversity conservation from a gender perspective might result in new strategies to include women and girls in biodiversity decision making and implementation strategies. Given that women are typically the primary actor in subsistence farming they have an

immense body of knowledge related to biodiversity in agriculture and farming, and should be considered a tremendous resource when it comes to developing ecosystem adaptation strategies.

- Further, NBSAP indicators should be narrowed down and synthesized with other plans and policies, to include a broader assessment of meeting SDG targets and NDC goals. Indicators selection should fully consider data availability, periodicity, reliability, etc.
- The SDG and NDC committees should work collaboratively, alongside the responsible ministries, in the development of joint indicators that can be utilized among all sustainable development related plans and policies to jointly assess both NDC and SDG progress.

Finally, while developing biodiversity strategies, and considering the linkages with non-environment SDGs, stakeholders from other ministries and institutions should be consulted for more comprehensive decision-making (Annex I).

Potential Negative Linkages

The majority of biodiversity measures result in largely positive benefits to the environment however, a few measures can have negative or unintended consequences. The overall impact and potential trade-offs need to be weighed to determine if projects have a net positive impact and/or if potential negative impacts can be avoided. Moreover, some negative linkages may not be detrimental specifically to the environment, but they can have negative consequences on other SDGs such as hunger, poverty, health or jobs. Therefore, it is imperative to understand how certain plan recommendations may negatively impact some SDGs. Table 3 illustrates some examples of the potential negative linkages that the deployment of biodiversity conservation could have on the SDGs that may want to be considered during decision-making processes and policy drafting.

Table 3: Potential Negative Linkages to SDGs

1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Protection of species through conservation can impact population when forest wood or charcoal is used for fuel
2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Expanding protected areas may have trade-offs on agricultural land use, which make affordable food prices harder to achieve
14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Some artificial structures such as sea walls may reduce biodiversity and have ecological impacts to coastal areas
16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	If adaptation action is the protection of critical habitat for vulnerable species through regulatory protection, this creates concerns over property rights and regulatory barriers to regional economic development

Sustainable Development Anchors: what is there and what is missing?

A key word search and review of the NBSAP identifies where the plan explicitly addresses components of sustainable development and climate change. While the SCAN tool identified where linkages exist between plans and the SDG targets, further examination of each plan reveals where these linkages are explicitly stated in each plan. For example, invasive species measures have strong linkages to hunger (SDG 2) but these linkages are not included in full, as part of the NBSAP narrative. Likewise, poverty plays a central role in the NBSAP, however, the narrative does not place it in the context of a priority area. While the NBSAP acknowledges many factors related to the SDGs as contributors to the decline of biodiversity, it focuses less on aligning the cause directly with solutions. For example, wood is a cheap energy source for low-income people, so how can we provide an affordable energy alternative that does not jeopardize the biodiversity of the forest and does not create harmful air pollution?

The following is an assessment of sustainable development and climate change language included the NBSAP and recommendations for creating linkages and estimations of impacts in future iterations of the plan (Table 4). The below recommendations tackle the primary SDG, the other highly relevant SDG linkages, as well as the rest.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p>SDG One: No Poverty</p> <ul style="list-style-type: none"> · Low-income · Poor · Poverty · Disadvantaged · Underprivileged 	<ul style="list-style-type: none"> - Another cause for habitat loss and fragmentation is deforestation which is estimated to occur at a rate of 0.4% per year (MoE, 2012) and is largely attributed to lack of awareness and law enforcement, poverty (cutting trees for fuelwood during winter season due to high fuel prices); - Poverty is a major factor that drives people to behave in an unsustainable manner in order to meet their needs for survival. People in mountainous rural areas illegally cut trees for heating purposes because they cannot afford buying fuel; - Moreover, some people burn forests to gather and sell wood. Poverty rates in Lebanon are high; the population living in poverty is 28.6%. Of these, 20.6 % survive on less than US\$4/day, while 8% are extremely poor and live below the lower poverty line estimated at US\$2.40 per capita per day, and accordingly cannot meet their food and nonfood basic needs (UNDP, 2008); - Mainstreaming might also refer to including biodiversity considerations in poverty reduction plans and national sustainable development plans; - Establish a mechanism to enforce the implementation of environmental measures in national and sectoral strategies and policies such as agriculture, fisheries, forestry, tourism, poverty reduction, sustainable development, land use, water, coastal management, climate change, and disaster risk reduction; - Priority area 4: sustainable management and use of natural ecosystems and resources this priority area requires immediate and major attention given that resources are limited and are still uncontrollably and illegally exploited especially in the poor areas of the country. 	<ul style="list-style-type: none"> - People depend on natural resources supplied by ecosystems for their livelihood such as farming, fishing, tourism and therefore ecosystem health can greatly impact income especially for low-income and vulnerable groups; - Conservation and species protection can create jobs such as in conservation, forestry and tourism; - Job creation potential from the sustainable use of medicinal and aromatic plants, and other economically important species; - Building of seawalls and other artificial structures protects flooding that protect communities and livelihoods; - R&D that enhances understanding of valuable ecosystems can enhance human resiliency through strategic conservation of natural resources, potentially safeguarding income; - Awareness campaigns on the value of biodiversity and the sustainable use of natural resources can help build resilience of the poor.
<p><u>Highly Relevant SDG</u></p> <p>SDG Two: Zero Hunger</p> <ul style="list-style-type: none"> · Hunger · Food access · Food security 	<p>Priority area: Genetic diversity</p> <ul style="list-style-type: none"> - For instance, a decrease in agricultural production where invasive alien species (IAS), when proliferating near agricultural lands, may affect the productive capacity of the land and increase agricultural labor time, affecting human wellbeing by threatening the availability of food; 	<p>In addition to SDG 2 in Table 2:</p> <ul style="list-style-type: none"> - Biodiversity is a key factor for the achievement of food security and improved nutrition. All food systems depend on biodiversity and a broad range of ecosystem services that support agricultural productivity, soil fertility, and water quality and supply (CBD, 2015);

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<ul style="list-style-type: none"> Food affordability Agricultural Productivity 	<ul style="list-style-type: none"> Food security (fish, crops and edible plants, livestock, etc.); Lebanon's biological and genetic resources, and to ensure the fair and equitable sharing of the benefits arising from their utilization. Another important service provided by water courses is the provision of water for irrigation, domestic, and industrial uses. Agriculture is by far the largest consumer of water in Lebanon accounting for more than two-thirds of the total water demand, reaching upwards of 85 % in certain predominantly agricultural regions. 	<ul style="list-style-type: none"> Low-input and ecosystem based approaches to agriculture are particularly adapted to supporting the conservation and sustainable use of biodiversity (CBD, 2015); Genetic diversity in agriculture is one key element of food security. It helps to ensure the evolution of species that can adapt to changing environmental conditions, as well as resistance to particular diseases, pests and parasites (CBD, 2015); Conservation of the genetic diversity of important flora and fauna, and the promotion of access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed; Implementation of the Marine Protected Area Strategy and marine nature reserves help to increase adaptive capacity by increasing biodiversity and increasing fish population; A better understanding of national ecosystems in need of protection, better enforcement of regulation, and protection of natural areas of high ecological and biodiversity values can contribute to a better understanding of more climate resilient and sustainable agricultural practices; Identification and rehabilitation of degraded land can return land to economic productivity; An improved knowledge base on biodiversity can help to improve food security through more sustainable farming techniques and lead to an increase in small-holder profitability; R&D programs to increase understanding of biodiversity can lend knowledge to crop resiliency to climate change, therefore protecting against food insecurity and inflation;

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		<ul style="list-style-type: none"> - Research on biodiversity valorization: conservation, sustainable management, and economic valuation can protect the livelihood and productive capacity of the poor; - Knowledge sharing and spill-overs that support resilient seed proliferation; - Increased knowledge of biodiversity can help to protect ecosystems, threatened flora and fauna, and prevent invasive species thus safeguarding and assuring a proper functioning food commodity market.
SDG Three: Good Health and Well-being <ul style="list-style-type: none"> · Environment · Health · Pollution 	<ul style="list-style-type: none"> - Those threats have various consequences on biodiversity including direct pressures on species and ecosystems (species extinction, reduction in genetic diversity, decrease in ecosystems resilience, etc.) and indirect pressures and consequences on human wellbeing (impacts on health, increase in natural disasters, loss of tourism revenue, etc.); - Health (disturbances to ecosystem functioning can influence in various ways the transmission of diseases to humans); - It also supplies many services, some of which are critical to human health, such as ecosystem resilience, genetic diversity and aesthetic appreciation. 	<ul style="list-style-type: none"> - Healthy ecosystems help to mitigate the spread and impact of pollution by both sequestering and eliminating certain types of air, water and soil pollution (CBD, 2015); - Protection against flooding (through forest conservation) prevent spread and breeding of water-borne diseases; - Identification and rehabilitation of degraded land sites can increase protection against flooding which can prevent the spread and breeding of water-borne diseases.
<u>Highly Relevant SDG</u> SDG Four: Quality Education <ul style="list-style-type: none"> · Education · Awareness raising · Youth 	<p>Priority area: Research and knowledge transfer</p> <ul style="list-style-type: none"> - Education and public awareness are considered to be a priority area, given that all the threats to biodiversity could result from people's lack of awareness and knowledge; - Raising students' awareness towards the importance of biodiversity is a key element in biodiversity conservation; and the term students here encompasses all age ranges from kindergarten to university students; - Conduct awareness campaigns on the need to endorse sustainable strategies (e.g. sustainable consumption targeting consumers etc.); 	<p>In addition to SDG 4 in Table 2:</p> <p>R&D programs to better understand ecosystem valuation can help to quantify the value of ecosystem conservation and increase awareness on the need for protection.</p>

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
	<ul style="list-style-type: none"> - Once knowledge is transferred to the public and between concerned entities (public sector, ministries and NGOs), biodiversity related issues become easier to handle; - These bodies, when established, will be tasked with engaging national media, educators, business, youth and the scientific community, and MoE will seek to coordinate a flow of information to and from these instances in order to achieve change in knowledge, attitude and behavior towards biodiversity conservation. 	
SDG Five: Gender Equality <ul style="list-style-type: none"> · Women · Gender · Vulnerable groups · Rural communities 	Gender is not addressed in the NBSAP.	<ul style="list-style-type: none"> - Biodiversity loss and degraded ecosystems can perpetuate gender inequalities by increasing the time spent by women and children in performing certain tasks, such as collecting valuable resources including fuel, food and water, and reducing time for education and income generating activities (CBD, 2015); - Ensuring equal rights to land, inheritance and natural resources is an important measure in enabling women to promote sustainable agricultural and land management practices, especially as women become increasingly responsible in agriculture due to male emigration in many cases (CBD, 2015).
SDG Six: Clean Water Sanitation <ul style="list-style-type: none"> · Clean water · Drinking water · Wastewater · Water quality 	With an increasing population, the pressure on water use is more and more accentuated which puts the freshwater ecosystem at risk and also depletes groundwater resources.	<ul style="list-style-type: none"> - Conservation of water-related ecosystems protects threatened flora and fauna; - Protection of water-related ecosystems protects threatened flora and fauna; - R&D on ecosystem conservation can improve water quality and supply; - Sustainable ecosystem management will require an integrated water resources management at all levels: including the need for spatial and management plans, improved research, identification of priority areas and awareness raising; - Increasing conservation research knowledge, institutional capacity, and regulatory enforcement, including the identification of priority conservation areas will help protect and restore water-related ecosystems including mountains, forests, wetlands, etc.;

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		<ul style="list-style-type: none"> - Protection of ecosystems will require awareness raising on improving water and sanitation management at all levels.
SDG Seven: Affordable & Clean Energy <ul style="list-style-type: none"> · Energy efficiency · Electricity transmission · Electricity distribution · Reliable energy · Affordable energy · GHG reduction · Mitigation · Energy security 	<ul style="list-style-type: none"> - Wood is the most important single source of renewable energy providing over 9% of the global total primary energy supply for cooking and/or heating, particularly in households in developing countries such as Lebanon (FAO, 2013). It represents the only domestically available and affordable source of energy; - According to an online study 82m³ of wood fuel were produced in Lebanon in 2002 and totally consumed in the country. As per the FAOSTAT, Lebanon's total wood fuel volume produced varied between 37.4m³ in 1961 and 18.8m³ in 2013; - Water courses provide food through fishing activities, potable water and irrigation water and are an important source of renewable energy (e.g. hydroelectricity). 	<p>Bio-energy produced from renewable biomass such as forestry byproducts and agricultural residues, and other forms of renewable energy generated based on ecosystems such as hydropower systems, can provide major opportunities for supplying cleaner and affordable energy (CBD, 2015).</p>
SDG Eight: Decent Work and Economic Growth <ul style="list-style-type: none"> · Jobs · Income · Employment 	<ul style="list-style-type: none"> - Nature reserves have an important role in the protection and sustainable management of natural resources, especially biodiversity. They also constitute a crucial component in local and rural development, through the influx of visitors who contribute, via ecotourism, to the income of local communities living within the area of natural reserves; - Agro-tourism provides income, utilization of existing facilities, natural conservation, and recreation and education of the population in urban and rural areas. Agro-tourism is still a new and limited tourism area in Lebanon, it is mainly linked to winery tours (primarily in Bekaa and recently in Batroun), seasonal fruits picking activities (mainly apple and cherry), and olive oil making tours (from picking to pressing) organized by ecotourism agents; - Most hunters have no regards to the consequences of their actions mainly due to lack of awareness, disrespect and noncompliance of laws and regulations, competition among hunters, and economic profit (income from selling wild animals); 	<ul style="list-style-type: none"> - Marine and terrestrial ecosystems underpin many national and global economic sectors providing employment such as agriculture, forestry, fisheries, energy, tourism, transport and trade. Biodiversity conservation and restoration, by enhancing ecosystems functions and services, can lead to higher productivity and more efficient resource use (CBD, 2015); - Major tourism attractions are closely linked to biodiversity and natural landscapes such as protected areas, mountains and beaches, wildlife and native cultures, as well as eco- and agri-tourism (CBD, 2015); - Natural means to mitigate the negative impacts of sea-level rise and storm surges minimize economic losses due to extreme weather events; and improve livelihood opportunities which increase sustainable economic growth without environmental degradation; - Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress.

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	<ul style="list-style-type: none"> - Agriculture constitutes the main source of income for an average of 30 to 40% of the population in Lebanon; - Disseminate the results of the studies related to the economic value of biodiversity to decision makers. Provide recommendations on appropriate policy responses. 	
SDG 9: Industry, Innovation, Infrastructure <ul style="list-style-type: none"> · Industry · Innovation · Infrastructure · Research and development 	<ul style="list-style-type: none"> - Update the national Science Technology and Innovation Policy (STIP) to include biodiversity as a priority and define the areas where research is needed within the biodiversity sector; - The main sources of pollution in terrestrial ecosystems are: <ul style="list-style-type: none"> - The improper solid waste disposal (municipal, industrial, healthcare and agricultural) due to lack of proper infrastructure, poor law enforcement and economic reasons. - Agro-industries that use excessive quantities of pesticides, fertilizers and agrochemicals. 	<p>Industry can play a large role in reducing environmental impact and protecting ecosystems (solid waste disposal, GHG emission, use of harmful chemicals, soil & water contamination).</p>
SDG 10: Reduced Inequalities <ul style="list-style-type: none"> · Equity · Inclusion 	<ul style="list-style-type: none"> - Strategy vision: By 2030, Lebanon's biodiversity is valued and sustainably managed for the preservation and conservation of its ecosystems and habitats and the species they harbor, in order to adequately respond to anthropogenic and natural pressures, and to ensure Lebanese citizens equal access to ecosystem goods and services; - In order to improve biodiversity conservation and human livelihoods, empower local people and enhance ecosystem productivity, ecosystem restoration must be carried out. Ecosystem restoration consists of renewing and restoring degraded, damaged, or destroyed ecosystems and habitats such as quarries and burned forests. 	<ul style="list-style-type: none"> - Recognizing rights to sustainable management of natural resources, enhancing values of biodiversity and related knowledge, and building an environment for equitable benefit-sharing has the potential to improve socioeconomic and political inequality among social groups (CBD, 2015); - Reducing the impact of extreme weather damages means less disproportional impact on the poor and vulnerable, particularly women, children, elderly; - Developing rural livelihood resilience and enhancing connectivity to prevent excessive rural to urban migration.
<u>Highly Relevant SDG</u> SDG 11: Sustainable Cities and Communities <ul style="list-style-type: none"> · Cities · Communities · Urban · Urbanization · Fuel efficient vehicles · Modal share shift 	<ul style="list-style-type: none"> - Guiding Principle: Biodiversity is a key component of our cultural heritage; - Guiding Principle: Development programs should be ecologically sound and their impact on the environment and biodiversity very closely examined; - The causes behind extensive and unsustainable quarrying are the lack of awareness amongst quarry owners, the lack of law enforcement, 	<p>In addition to SDG 11 in Table 2:</p> <ul style="list-style-type: none"> - Protection of threatened species preserves and safeguards the country's cultural and natural heritage; - Conservation of genetic diversity of native flora and fauna protects and safeguards natural heritage;

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<ul style="list-style-type: none"> Public transportation Accessibility Mobility 	<p>urbanization that requires rocks from quarries to build houses, and socio-economic factors (income from rock selling).</p>	<ul style="list-style-type: none"> Reducing urban heat island effect through more trees and vegetation; reduces likelihood of flooding due to water flowing from high to low lying areas; Integration of climate change impacts to development planning.
<p><u>Highly Relevant SDG</u></p> <p>SDG 12: Sustainable Consumption and Production</p> <ul style="list-style-type: none"> Consumption Production Output Productivity Efficiency 	<p>Priority area: Communication, education and public awareness</p> <ul style="list-style-type: none"> Nevertheless, the inequality in consumption patterns indicates that a large number of inhabitants fail to meet basic food, shelter, health and sanitation needs. For the purpose of achieving livelihood improvements, a larger number of Lebanon's population must have greater access to natural resources through a significant improvement of resource efficiency and expansion of biocapacity without resource intensive production; Raise the awareness of decision makers on the importance of biodiversity and its conservation, sustainable management, and promoting related education (Deputies, Ministers, Directors Generals, Heads of Departments and Heads of Services). 	<p>In addition to SDG 12 in Table 2:</p> <ul style="list-style-type: none"> Promote the sustainable management and efficient use of natural resources through protection of ecosystems; A better understanding of the gap between the ecological footprint and biocapacity can lead to a better understanding of more efficient uses of natural resources; Private sector engagement in sustainable consumption and production can greatly support ecosystem protection; Incentives and legislation can support the private sector in adopting more environmentally friendly practices to support biodiversity actions; Through effective awareness campaigns the private sectors can adopt more sustainable consumption strategies.
<p>SDG 13: Climate Change</p> <ul style="list-style-type: none"> Climate Change GHG emissions Resilience Mitigation Adaptation Nationally Determined Contribution (NDC) 	<p>Priority area: Climate change</p> <p>Lebanon's high altitudes, which provide refuge for many specialized species and niche ecosystems, will undoubtedly witness distribution shifts and in some cases disappearance of species due to climate change.</p>	<ul style="list-style-type: none"> Climate change is mainstreamed in NBSAP; Demonstrate how biodiversity adaptation measures directly increase resilience.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p><u>Highly Relevant SDG</u></p> <p>SDG 14: Life Below Water</p> <ul style="list-style-type: none"> · Water · Sea · Lakes · Streams · Rivers · Mediterranean · Marine life · Run-off · Water pollution · Coastal 	<ul style="list-style-type: none"> - Marine species are being harmed by overfishing activities and illegal practices including the use of dynamites, small mesh size trawling nets and the massive collection of mollusks; - Pollution from various sources particularly affects the terrestrial, marine and coastal, and freshwater ecosystems; - Moreover, wetlands in Lebanon are important for sustaining people livelihoods, mainly: agriculture, fisheries, and drinking water supply. 	<p>In addition to SDG 14 in Table 2:</p> <ul style="list-style-type: none"> - Biodiversity research will increase scientific knowledge of marine biodiversity and improve ocean health; - R&D and demonstrations on sustainable fishing and water tourism can help protect biodiversity under water.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p>Primary SDG</p> <p>SDG 15: Life on Land</p> <ul style="list-style-type: none"> · Ecosystems · Biodiversity · Forests · Reforestation/ afforestation · Seed bank · Genetic 	<p>Priority areas:</p> <ul style="list-style-type: none"> - threatened species - protected areas - sustainable management and use of natural ecosystems and resources - ecosystem restoration - access and benefit sharing - invasive alien species - mainstreaming biodiversity into national and sub-national policies and plans <ul style="list-style-type: none"> - Threatened species is seen as priority area for the country; - Guiding Principle: Biodiversity conservation is a moral responsibility that should be nourished to flourish with individuals, institutions, and public authorities; - By 2030, effective measures are in place to control the introduction and diffusion of Invasive Alien Species (IAS) into the environment; - Mainstreaming biodiversity means integrating biodiversity into decision making through including actions related to its conservation and sustainable use into sectoral strategies, plans and programmes. 	<p>In addition to SDG 15 in Table 1:</p> <ul style="list-style-type: none"> - Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection; - Ecosystem valuation and biocapacity research can support effective initiatives aimed at the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems; - Ecosystem valuation and biocapacity research can support the knowledge base needed for sustainable forest protection and management; - Incentives can encourage private sector adoption of sustainable production and consumption practices; - Rehabilitation of degraded land can support the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems; - Established measures to control the introduction and diffusion of invasive alien species can protect land and water ecosystems; - Implement a robust resources mobilization strategy from all sources to finance biodiversity initiatives.
<p>Highly Relevant SDG</p> <p>SDG 16: Peace, Justice & Strong institutions</p> <ul style="list-style-type: none"> · Capacity · Legislation · Regulation · Legal framework · Policy · Participatory · Inclusive (decision-making) 	<p>Priority area: Institutional and legal framework</p> <ul style="list-style-type: none"> - Finalization of the MoE draft law on Access to Lebanese biological and genetic resources and sharing of the benefits; - Development of legal monitoring and compliance procedures with defined roles and responsibilities. 	<p>In addition to SDG 16 in Table 2:</p> <ul style="list-style-type: none"> - Species-specific conservation legislation and conservation action plans support more effective institutional capacity to protect threatened species; - Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection;

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
		<ul style="list-style-type: none"> - Legal framework and government policies are reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use of resources.
<p><u>Highly Relevant SDG</u></p> <p>SDG 17: Partnerships for the Goals</p> <ul style="list-style-type: none"> · Resource · Financing mechanism · Public-Private Partnerships 	<p>Priority area: Resource mobilization</p> <ul style="list-style-type: none"> - Create incentives and establish a legislative framework for the private sector's engagement in biodiversity actions; - Secure funding, internally or from international donors, to enable the rehabilitation of priority sites. 	<p>In addition to SDG 17 in Table 2:</p> <ul style="list-style-type: none"> - Efforts to integrate biodiversity and ecosystems into national, subnational and sectoral development policies through NBSAPs and the contribution of NBSAPs into implementation of the SDGs, help enhance policy coherence (CBD, 2015); - Genetic diversity laws and regulation results in improved policy coherence; - Engage private sector to mobilize resources to finance biodiversity initiatives.

Annex I: Lead Institution per SDG in Lebanon

Theme: People		Leading Institution: Ministry of Education and Higher Education			
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	10 REDUCED INEQUALITIES
					
Theme: Planet		Leading Institution: Ministry of Environment			
6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND
					
Theme: Prosperity		Leading Institution: Ministry of Economy and Trade			
8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES			
					
Theme: Peace		Leading Institution: Office of the Minister of State for Administrative Reform			
16 PEACE, JUSTICE AND STRONG INSTITUTIONS					
					
Theme: Data and Statistics		Leading Institution: Central Administration of Statistics			
Cross-cutting theme:					
17 PARTNERSHIPS FOR THE GOALS					
					

Annex II: Indicators

A cohesive and integrated indicator framework that synchronizes SDG and NDC progress is essential for coordinated implementation and joint progress assessment.

Lebanon has yet to nationalize the SDG indicators which provides an opportunity to include climate focused indicators into the nationalized approach so that both agendas can be assessed through a mutual set of indicators.

The absence of nationalized SDG indicators withstanding, a robust database of national level data can be found through the SDG API database. The database provides data from global sources at the national level that correspond to the Global SDG Indicator Framework, making comparisons of SDG progress across countries easily accessible and consistent.

In addition to utilization of the SDG global indicator framework, additional indicators are needed to effectively and cohesively monitor both agendas. As part of this research, identification of the targets, goals, data points and/or indicators within the NDC, Third National Communication and within specific plans and policies that comprise Lebanon's NDC were identified to further provide a basis for developing an integrated indicator framework. The final product should be a combined list of indicators that incorporates the SDG global framework complemented by additional indicators that are climate focused, and germane to the goals of the specific plan/policy. These are identified in Table XX 'other potential indicators' for the SDG targets that are relevant to climate change.

The NBSAP identifies multiple indicators for each of the eighteen national targets. This set of indicators are a good starting point at considering the integration of biodiversity indicators with the SDG indicator framework. It is important to note that many of the indicators included in the NBSAP may be too granular or qualitative for inclusion in a final SDG/NDC indicator framework, therefore, only high-level indicators are suggested as potential indicators to be added to the SDG framework (Annex II).

Annex II: NBSAP Indicator alignment with SDG Global Framework Indicators			
National Target	NBSAP Impact Indicator	SDG Framework Indicator	Strength of relation
Target 1: By 2030, the status of 75% of known flora and fauna species is identified and conservation actions are implemented on 50% of threatened species RELEVANT SDG- 15.5 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	1. Number of species (fauna and flora) listed in the IUCN Red List and national red list	15.5.1: Red List Index	Strong – both indicators incorporate the red list index Select NBSAP Target 1 indicators could be incorporated into a SDG/ NDC nationalized framework
	2. Number of data points/records in the national inventory of species		
	3. Number of species in the seed and gene banks databases		
	4. Number of related legislation and laws		
	5. Percent of known flora identified and conservation status assessed		
	6. Percent of known fauna identified and conservation status assessed		
	7. Percent of threatened species with conservation actions implemented		
Target 2: By 2030, the genetic diversity of 50% of important native fauna and flora is conserved in-situ and ex-situ RELEVANT SDG- 2.5 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	1. Number of species in the seed and gene bank databases	2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities	Strong- both aim to quantify genetic resources Select NBSAP Target 2 indicators could be incorporated into a SDG/ NDC nationalized framework
	2. Quantity of local species sold in local markets		
	3. Number of revised policies and laws related to conservation of endemic and economically important species		
	4. Percent of economically important fauna with conservation of their genetic diversity ensured (through in-situ and ex-situ measures)		
	5. Percent of economically important flora with conservation of their genetic diversity ensured (through in-situ and ex-situ measures)		
	6. Percent of endemic fauna with conservation of their genetic diversity ensured (through in-situ and ex-situ measures)		
	7. Percent of endemic flora with conservation of their genetic diversity ensured (through in-situ and ex-situ measures)		

<p>Target 3: By 2030, the Implementation mechanism of the Cartagena Protocol on Biosafety is operational</p> <p>.....</p> <p>RELEVANT SDG- N/A</p>	1. Number of implemented decisions and procedures related to the Decree on “National Measures on Biosafety” issued	NO SDG INDICATOR	Weak- there are no SDG indicators that link to biosafety
	2. Number of applications related to the import and use of LMOs submitted		
	3. Number of approval related to the import and use of LMOs issued		
	4. Number of trained staff in place to administer the national biosafety system		
	5. Number of adequately equipped and certified laboratories		
	6. Number of “risk assessment” conducted		
	7. Ratio of risk assessment summary reports as against number of decisions on LMOs		
	8. Number of submissions to the Biosafety Clearing House (BCH)		
<p>Target 4: By 2030, at least 20% of natural terrestrial and marine ecosystems are protected and all types of ecosystems are represented in the PA network</p> <p>.....</p> <p>RELEVANT SDG- 14.2 & 14.5 & 15.1 & 15.4</p> <p>14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans</p> <p>14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and</p>	1. Percent area coverage of protected natural ecosystems	14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches	Medium- both indicator sets aim to examine the extent of protected areas as a proportion of ecosystem type however, the SDG framework breaks it down by each ecosystem type more specifically. Further, the NBSAP includes an indicator on management plans which could be incorporated into a combined indicator set.
	2. Percent of all types of Lebanon’s ecosystems represented in the protected area (PA) network	14.5.1: Coverage of protected areas in relation to marine areas (Exclusive Economic Zones) (percent)	
	3. Number of management plans for different protected areas (Pas)	14.5.1: Average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas (percent)	
		14.5.1: Protected marine area (Exclusive Economic Zones) (square kilometers)	
		15.1.1: Forest area as a proportion of total land area (percent)	

<p>international law and based on the best available scientific information</p> <p>RELEVANT SDG 15.1 & 15.4</p> <p>15.1.2 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements</p> <p>15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development</p>		15.1.1: Forest area (thousands of hectares)	
		15.1.2: Average proportion of Terrestrial Key Biodiversity Areas (KBAs) covered by protected areas (percent)	
		15.1.2: Average proportion of Terrestrial Key Biodiversity Areas (KBAs) covered by protected areas (percent)	
		15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	
		15.4.1: Average proportion of Mountain Key Biodiversity Areas (KBAs) covered by protected areas (percent)	
		15.4.2: Mountain Green Cover Index	
		15.4.2: Mountain area (square kilometers)	
<p>Target 5:</p> <p>By 2030, the total percent coverage of nature reserves is increased to reach at least 5% of Lebanon's area</p> <p>.....</p> <p>RELEVANT SDG 15.1.1 & 15.4</p> <p>15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains</p>	1. Percent coverage of Lebanon's area by Nature Reserves	See above	Medium- Nature reserves are not differentiated from protected areas in the SDG framework- therefore these are not included in the SDG framework but could be incorporated with SDG indicator 15.1
	2. Number of new laws establishing new nature reserves issued		

and drylands, in line with obligations under international agreements			Clarification between nature reserves and protected areas is needed
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development			
Target 6: By 2030, 50% of all natural ecosystems are sustainably managed and properly considered in spatial planning implementation RELEVANT SDG 15.2 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	1. Number of EIAs and SEAs that account for impacts on biodiversity and ecosystem services	15.2.1: Proportion of forest area with a long-term management plan (percent)	Medium- there is little overlap between the NBSAP and SDG indicators however, they both aim to get a better understanding of sustainable management. While the SDGs are just aimed at forested areas only, the NBSAP focuses on all ecosystems. An integrated framework could prioritize and combine indicators from both lists.
	2. Number of Management Plans issued for the natural areas of high biodiversity values (other than the sites classified as “Protected Areas”)	15.2.1: Proportion of forest area within legally established protected areas (percent)	
	3. Change in land use/land cover towards sustainable management over time	15.2.1: Forest area net change rate (percent)	
	4. Number of times biodiversity is mentioned in national plans across all sectors	15.2.1: Above-ground biomass in forest per hectare (tonnes per hectare)	
	5. Number of and surface area of quarries and share of total quarries with biodiversity management/offset plans	15.2.1: Forest area certified under an independently verified certification scheme (thousands of hectares)	
	6. Amount of funds allocated for sustainable management		
	7. Number of Master Plans addressing biodiversity and ecosystems		
	8. Percent area of all natural ecosystems under sustainable management		
	9. Percent of terrestrial spatial plans that include natural ecosystems		
	10. Percent of marine spatial plans that include natural ecosystems		
Target 7: By 2030, the gap between Lebanon’s ecological footprint and biocapacity is alleviated to reach an equal state	1. Change in Lebanon’s footprint network	See above	Weak- there are no SDGs indicators related to Eco footprints or biocapacity
	2. Number and extent of Pas		
	3. The gap between Lebanon's ecological footprint and biocapacity		

<div>.....</div> <div>RELEVANT SDG 15.2</div> <div>15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species</div> <div>*** there is no direct alignment with an SDG but the NSAP indicators could be added to 15.2</div>			but these indicators could be added to SDG 15.2.
<div>Target 8:</div> <div>By 2030, the private sector has taken steps to implement plans for sustainable production and consumption to mitigate or prevent negative impacts on ecosystems from the use of natural resources</div> <div>.....</div> <div>RELEVANT SDG 15.1</div> <div>12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries</div> <div>*NBSAP indicators</div>	<div>1. Number of businesses that have plans for sustainable production and consumption to mitigate or prevent negative impacts on ecosystem from the use of natural resources</div> <div>2. Number of private establishments implementing sustainable production / consumption strategies</div> <div>3. Percentage of the plans that are being implemented</div> <div>4. Number of private sector establishments developing and/or implementing EIAs</div> <div>5. Number of ISO 14000 accredited establishments</div>	<div>12.1.1 Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies</div> <div>12.1.1: Countries with policy instrument for sustainable consumption and production (1 = YES; 0 = NO)</div> <div>12.1.1: Countries with coordination mechanism for sustainable consumption and production (1 = YES; 0 = NO)</div> <div>12.1.1: Countries with macro policy for sustainable consumption and production (1 = YES; 0 = NO)</div>	<div>Strong – both indicators sets utilize Sustainable Consumption and Production plans.</div> <div>Select NBSAP Target 8 indicators could be serve as a way to nationalize these indicators into a combined SDG/ NDC indicator framework by including looking at business level data</div>
<div>Target 9:</div> <div>By 2030, rehabilitation plans are implemented in at least 20% of degraded sites so that they can safeguard the sustained delivery of ecosystem services</div> <div>.....</div> <div>RELEVANT SDG 15.3</div>	<div>1.Amount of funds allocated for rehabilitation plans</div> <div>2. Percent of degraded sites with implemented rehabilitation plans</div> <div>3. Total number of sites requiring rehabilitation</div>	<div>15.3.1: Proportion of land that is degraded over total land area (percent)</div>	<div>Medium - both indicator sets look at degraded land however, the SDG indicator might be the best metric to determine degraded land overtime as proportion.</div>

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world			Select NBSAP Target 9 indicators could be integrated could be combined
Target 10: By 2030, the national law on access and benefit sharing related to is endorsed, operational and enforced RELEVANT SDG 15.6 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	1. National law on access and benefit sharing of biological and genetic resources is adopted	2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities	Medium- Sharing of benefits are included in the SDG indicators and NBSAP however, the SDG provides additional indicators that overlap with NBSAP Target 2 dealing with genetic resource inventories. These two sets of indicators can be prioritized and combined accordingly
	2. Number of applications for ABS submitted	2.5.2 Proportion of local breeds classified as being at risk, not at risk or at unknown level of risk of extinction	
	3. Number of prior informed consent (PIC) issued by Lebanon related to ABS		
	4. Number of signed ABS agreements for exchange of biological resources		
	5. Number of infringements	15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits	
Target 11: By 2030, effective measures are in place to control the introduction and diffusion of IAS into the environment RELEVANT SDG 15.8 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	1. Number of revised policies and laws and legal texts issued that cover IAS	15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species	Medium- Invasive species are included in both SDG and NBSAP indicators sets, however, the NBSAP has a more extensive set of indicators that could be the basis for a nationalized and integrated set of indicators
	2. Number of measures in place to control the introduction and diffusion of IAS into the environment		
	3. Trends in number of invasive species		
	4. Number of trainings and capacity building seminars related to IAS		
	5. Number of awareness, press, events, media releases, Google trends in Lebanon, related to the topic		
Target 12: By 2030, 100% of school and university students and at least 60% of the public are aware of the	1. Number of students enrolled in higher education courses related to biodiversity and environment	4.7.1 & 12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change	Weak - both indicator deal with education however, the NBSAP established indicators specifically related to ecosystems.
	2. Number of visitors to Nature Reserves (in particular schools/		

<p>importance of biodiversity, its values, and the need for its conservation and sustainable use</p> <p>.....</p> <p>RELEVANT SDG 4.7 & 12.8</p> <p>**NBSAP Target is narrower in its scope than the Sustainable Development Targets as it focuses specifically on biodiversity but it can be linked to:</p> <p>SDG 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development</p> <p>SDG 12.8 By 2030, ensure that people everywhere have the relevant reflected in the Sustainable Development Target. information and awareness for sustainable development and lifestyles in harmony with nature</p>	universities)	education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	However, some of the NBSAP indicators could be combined with SDG 4.7.1 & 12.8.1 for an integrated SDG/NDC framework
	3. Number of environmental clubs in schools and universities, and number of club members		
	4. Percent of school and university students and the public who are aware of the importance of biodiversity, its values, and the need for its conservation and sustainable use		
	5. Number of visitors to biodiversity related websites and CHM website		
	6. Number of publications and media posts related to biodiversity (example: MEA to include awareness about Lebanon's biodiversity and nature reserves in its in-flight advertisements)		
<p>Target 13:</p> <p>By 2030, government entities mainstream biodiversity priorities (conservation, benefits sharing, pressure alleviation, sustainable management, sustainable use of natural resources) into</p>	7. Number of shows/documentaries about biodiversity and the environment	15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020	High- both indicator sets seek to understand the extent to which biodiversity is addressed in national and local planning. These indicators
	1. Number of SEAs completed and approved by MoE		
	2. Number of sectoral policies, plans and strategies addressing biodiversity		
	3. Number of staff dedicated to environmental management in sectoral ministries		

<p>their policy making processes and their implementation</p> <p>.....</p> <p>RELEVANT SDG 15.9</p> <p>15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts</p>	<p>4. Number of government entities which have included biodiversity priorities into their policy making processes</p>	<p>(Target 2 - By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems)</p>	<p>can be prioritized and combined to form and integrated set of indicators</p>
<p>Target 14: By 2030, vulnerable ecosystems to climate change are identified and adaptation plans are developed and implemented</p> <p>.....</p> <p>RELEVANT SDG 13.2</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>	<p>1. Percent of ecosystem types assessed for vulnerability to climate change</p> <p>2. Percent of ecosystems vulnerable to climate change with adaptation plans being implemented</p> <p>3. Percent of national plans and strategies that consider climate change adaptation</p> <p>4. Number of sectoral plans addressing climate change</p>	<p>13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)</p>	<p>Medium - both sets of indicators aim to determine the extent to which adaptations have been developed and the extent to which climate change is addressed. However, the SDG framework looks at it from just a national perspective. Therefore these indicators could easily be prioritized and combined to provide an integrated and nationalized set of indicators for SDG & NDC, M&E</p>
<p>Target 15: By 2030, research on biodiversity is improved in Lebanon, and research outputs and biodiversity related reports are shared through a centralized platform (from both public and private institutions), which is updated and made accessible to the public (CHM)</p>	<p>1. Number of publications related to biodiversity by type of publication: scientific publications, textbooks, general interest, children's books, etc.</p> <p>2. Number of visitors to the CHM created platform</p> <p>3. Number of contributors to the CHM, posting biodiversity related research and publications</p>	<p>No SDG indicator alignment</p>	<p>Weak - there is no indicator alignment with the SDGs specifically for biodiversity research and these indicators may be too granular for an integrated bigger picture</p>

<p>.....</p> <p>RELEVANT SDG</p> <p>No direct alignment with an SDG target</p>	<p>4. Number of biodiversity related research, studies and publications posted in the CHM</p> <p>5. Number of relevant posts/tweets/etc. on social media</p> <p>6. Number of publications mentioned in local media</p> <p>7. Amount of budget allocated for related research</p> <p>8. Number of projects allocated for related research</p> <p>9. Amount of budget allocated for scholarships and grants related to research studies (Number of announcements/ Number of grants etc.)</p> <p>10. Number of downloads of the publications and various documents from the CHM</p>		<p>SDG & NDC indicator framework</p>
<p>Target 16:</p> <p>By 2030, traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/published</p> <p>.....</p> <p>RELEVANT SDG 2.5</p> <p>2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed</p>	<p>1. Number of actions taken to preserve traditional knowledge, uses, and practices of local communities</p> <p>2. Number of documents (articles/ books) published on traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources</p> <p>3. Number of public conferences and number of documented public events on traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources</p> <p>4. Number of documentaries relevant to traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources</p> <p>5. Amount of budget allocated for research on traditional knowledge, uses, and practices of</p>	<p>2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities</p> <p>2.5.2 Proportion of local breeds classified as being at risk, not at risk or at unknown level of risk of extinction</p>	<p>Medium - See Target 2 which provides a clearer alignment of indicators centered on plant and genetic species. The SDG framework does not include indicators for determining the extent to which traditional knowledge sharing happens, which is included in this NBSAP target 16. Therefore, a combined SDG/NDC indicator framework could include some of the indicators from target 16 pertaining to traditional knowledge</p>

	local communities relevant to biodiversity and sustainable use of resources		
Target 17: By 2030, the relevant institutional and legal framework and government policies are reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use Relevant SDG 13.3 13.3.2 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	1. Number of environmental infractions related to the sectoral plans leading to court-cases	13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions	Medium- The NBSAP Target is narrower in its scope than the Sustainable Development Targets as it focuses specifically on biodiversity but it can be linked SDG 13.2. Both sets of indicators seek to determine institutional capacity but they diverge in scope and content. These indicators could be prioritized and refined to cohesively address the extent to which institutional and regulatory frameworks are in place
	2. Number of relevant laws reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use		
	3. Number of government policies reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use		
Target 18: Target 18: By 2030, Lebanon has developed and is implementing a robust resource mobilization strategy with a sustainable mechanism to finance biodiversity initiatives Relevant SDG 15.a & 15.b 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems 15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to	1. MoE budget dedicated to NBSAP	15.a.1 & 15.b.1: Total official development assistance for biodiversity, by donor countries (millions of constant 2017 United States dollars)	Medium - both sets of indicators seek to determine resource mobilization but the NBSAP looks at both internal resources as well as international resources. Therefore, these indicators could be prioritized and combined to provide an integrated SDG
	2. Budget of other ministries for the implementation of the NBSAP	15.a.1 & 15.b.1: Total official development assistance for biodiversity, by recipient countries (millions of constant 2017 United States dollars)	
	3. Municipal budgets related to biodiversity conservation and sustainable use		
	4. Budget allocated to the NEF and to the NBSAP		
	5. Financial contributions from international sources for the implementation of the NBSAP		
	6. Financing of biodiversity initiatives by the private sector		
	7. Percent increase in financial resources for biodiversity initiatives from 2015 baseline		


developing countries to advance such management, including for conservation and reforestation			
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Annex III: SDG List

PEOPLE	 <p>Goal 1. End poverty in all its forms everywhere</p>	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
		1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
		1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
		1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
		1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
		1.a Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions
		1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions
PEOPLE	 <p>Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
		2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons
		2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
		2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
		2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed
		2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries
		2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
		2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

PEOPLE	<div>3 GOOD HEALTH AND WELL-BEING</div>  <div>Goal 3. Ensure healthy lives and promote well-being for all at all ages</div>	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
		3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
		3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
		3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
		3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
		3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents
		3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
		3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
		3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
		3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate
		3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all
		3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States
		3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks
PEOPLE	<div>4 QUALITY EDUCATION</div>  <div>Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</div>	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
		4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
		4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
		4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
		4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
		4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
		4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
		4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
		4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
		4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

PEOPLE	<div>5 GENDER EQUALITY</div>  <div>Goal 5. Achieve gender equality and empower all women and girls</div>	5.1 End all forms of discrimination against all women and girls everywhere
		5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
		5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
		5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
		5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
		5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
		5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
		5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women
		5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels
PEOPLE	<div>10 REDUCED INEQUALITIES</div>  <div>Goal 10. Reduce inequality within and among countries</div>	10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average of the population at a rate higher than the national average
		10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
		10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard
		10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality
		10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations
		10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions
		10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies
		10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements
		10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes
		10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent

PLANET	<div> <div>6</div> <div>CLEAN WATER AND SANITATION</div> <div>  </div> </div> <div> Goal 6. Ensure availability and sustainable management of water and sanitation for all </div>	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all
		6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
		6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
		6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
		6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
		6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
		6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
		6.b Support and strengthen the participation of local communities in improving water and sanitation management
PLANET	<div> <div>7</div> <div>AFFORDABLE AND CLEAN ENERGY</div> <div>  </div> </div> <div> Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all </div>	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
		7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
		7.3 By 2030, double the global rate of improvement in energy efficiency
		7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
		7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

PLANET	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>  <p>Goal 12. Ensure sustainable consumption and production patterns</p>	12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
		12.2 By 2030, achieve the sustainable management and efficient use of natural resources
		12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
		12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
		12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
		12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
		12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities
		12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
		12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production
		12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products
		12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities
PLANET	<p>13 CLIMATE ACTION</p>  <p>Goal 13. Take urgent action to combat climate change and its impacts</p>	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
		13.2 Integrate climate change measures into national policies, strategies and planning
		13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
		13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible
		13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

PLANET	 <p>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
		14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
		14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
		14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
		14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
		14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation
		14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
		14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries
		14.b Provide access for small-scale artisanal fishers to marine resources and markets
		14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want
PLANET	 <p>Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
		15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
		15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
		15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development
		15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
		15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed
		15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products
		15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species
		15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
		15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
		15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation
		15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

PROSPERITY	<p>8 DECENT WORK AND ECONOMIC GROWTH</p>  <p>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
		8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors
		8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services
		8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead
		8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
		8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training
		8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms
		8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment
		8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products
		8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all
		8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries
		8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization
PROSPERITY	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>  <p>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
		9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries
		9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets
		9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
		9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
		9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States
		9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities
		9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

PROSPERITY	<div>11 SUSTAINABLE CITIES AND COMMUNITIES</div>  <div> Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable </div>	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
		11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
		11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
		11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage
		11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
		11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
		11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
		11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
		11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels
		11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials
PEACE	<div>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</div>  <div> Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels </div>	16.1 Significantly reduce all forms of violence and related death rates everywhere
		16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children
		16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all
		16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime
		16.5 Substantially reduce corruption and bribery in all their forms
		16.6 Develop effective, accountable and transparent institutions at all levels
		16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels
		16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance
		16.9 By 2030, provide legal identity for all, including birth registration
		16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
		16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence & combat terrorism & crime
		16.b Promote and enforce non-discriminatory laws and policies for sustainable development

17 PARTNERSHIPS FOR THE GOALS



Goal 17.
Strengthen the means of implementation and revitalize the global partnership for sustainable development

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection
17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries
17.3 Mobilize additional financial resources for developing countries from multiple sources
17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress
17.5 Adopt and implement investment promotion regimes for least developed countries
17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism
17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed
17.8 Fully operationalize the technology bank and science, technology and innovation capacity building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology
17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation
17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda
17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020
17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access
17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence
17.14 Enhance policy coherence for sustainable development
17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development
17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries
17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Annex IV: The National Biodiversity Strategy and Action Plan

Recommendation/ Intervention	CLIMATE RELATED?	Primary SDG Targets	SCAN Tab	SDG	SDG Target (blue = primary target alignment)	SCAN Category	Adaptation Action	Link +/-	Description of Link	Primary Source	SCAN Source
PRIORITY AREA 1: THREATENED SPECIES NATIONAL TARGET 1: By 2030, the status of 75% of known flora and fauna species is identified and conservation actions are implemented on 50% of threatened species 1.1: Update the 1996 biodiversity national inventory (BCS) prepared by the MoA based o field surveys of fauna and flora. 1.2: Develop criteria for the evaluation of conservation status for identified flora and fauna and evaluate the status of the species in the updated inventory. 1.3: Initiate a program for mapping and monitoring threatened species in key/ selected ecosystems. 1.4: Include threatened species in national conservation strategies and regulations; namely in-situ and ex-situ conservation programs. 1.5: Develop species-specific conservation legislation and conservation action plans to ensure conservation of important species, particularly endemic threatened species.	YES	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Forestry	1.1	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Changing activity	Sustainable forest management		Protection of species through conservation can impact population when forest wood or charcoal is used for fuel	LOCAL EXPERT	
		11.4 Strengthen efforts to protect and safeguard the world’s cultural and natural heritage	Forestry	1.2	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Changing activity	Sustainable forest management		Conservation and speicies protection can create jobs such as in conservation, forestry and tourism	LOCAL EXPERT	
		14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Forestry	1.4	By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Changing activity	Sustainable forest management		Increainng land coverage for species protection may restrict land access for other landuses	LOCAL EXPERT	
		15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Forestry	2.1	By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Changing activity	Sustainable forest management		Increasing protected land for nature reserves will help to protect endangered species but can restrict land access for other land uses (ie food)	LOCAL EXPERT	
		15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	Forestry	2.3	By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	Changing activity	Sustainable forest management		Increainng land coverage for species protection may restrict land access for other landuses	LOCAL EXPERT	
		15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Forestry	2.4	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Changing activity	Sustainable forest management		Ecosystems and habitat conservation (sustainable agriculture and management of natural areas) Adaptation measures (improved ecosystems)	SCAN	
		15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts									
		17.14 Enhance policy coherence for sustainable development	Forestry	3.4	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	Changing activity	Sustainable forest management		Improved mental health and well-being (conservation, restoration and sustainable management of natural areas)	MODIFIED	
			Forestry	6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Changing activity	Sustainable forest management		Conservation of water-related ecosystems protects threatened flora and fauna	LOCAL EXPERT	
			Forestry	8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	Changing activity	Sustainable forest management		Forest management can create jobs but also negatively impact livelihood from informal income or consumption related to forest products - -especially if threated flora and fauna are involved in income generation	LOCAL EXPERT	
			Forestry	8.4	Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	Changing activity	Sustainable forest management		Decoupling growth from environmental degradation	SCAN	
			Forestry	8.9	By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	Changing activity	Sustainable forest management		Agro-tourism will promote the conservation of ecosystems and help to protect threatened species	LOCAL EXPERT	

Forestry	10.1	By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average	Changing activity	Sustainable forest management		Conservation: impacts on people living off of informal activities in forest (usually lower income)	SCAN	
Forestry	11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage	Changing activity	Sustainable forest management		Protection of threatened species preserves and safeguards the country's cultural and natural heritage	MODIFIED	
Forestry	12.2	By 2030, achieve the sustainable management and efficient use of natural resources	Changing activity	Sustainable forest management		Initiatives aimed at the protection of threatened flora and fauna can aid in the more sustainable management and efficient use of natural resources	MODIFIED	
Forestry	14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Changing activity	Sustainable forest management		The protection and restoration of marine areas can aid in the regeneration of threatened species and ecosystems	LOCAL EXPERT	
Forestry	14.5	By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	Changing activity	Sustainable forest management		The protection and restoration of marine areas based on research and scientific knowledge can aid in the regeneration of threatened species and ecosystems	LOCAL EXPERT	
Forestry	15.1	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Changing activity	Sustainable forest management		Increases conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services	SCAN	
Forestry	15.2	By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Changing activity	Sustainable forest management		Contributes to sustainable management of all types of forests, halt deforestation, restore degraded forests	SCAN	
Forestry	15.2	By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Changing activity	Sustainable forest management		Sustainable forest management	SCAN	
Forestry	15.3	By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Changing activity	Sustainable forest management		Contributes to restoring degraded land and soil	SCAN	
Forestry	15.3	By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Changing activity	Sustainable forest management		Conservation increases soil quality	MODIFIED	
Forestry	15.4	By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	Changing activity	Sustainable forest management		Conservation actions support the protection of threatened species and important ecosystems	LOCAL EXPERT	
Forestry	15.5	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Changing activity	Sustainable forest management		Conservation: reduces the degradation of natural habitats, halts the loss of biodiversity	SCAN	
Forestry	16.6	Develop effective, accountable and transparent institutions at all levels	Changing activity	Sustainable forest management		Species specific conservation legislation and conservation action plans support more effective insitutional capacity to protect threatened species	LOCAL EXPERT	
Forestry	16.7	Ensure responsive, inclusive, participatory and representative decision-making at all levels	Changing activity	Sustainable forest management		Increases inclusive, participatory decision making (by involving communities)	SCAN	

			Forestry	17.14	Enhance policy coherence for sustainable development	Changing activity	Sustainable forest management		Supports policy coherence through action pla	LOCAL EXPERT	
NATIONAL TARGET 2: By 2030, the genetic diversity of 50% of important native fauna and flora is conserved in-situ and ex-situ 2.1: Build on the results of National Actions 1.1 and 1.2 to extract the list of endemic and economically important species (such as medicinal plants, aromatic plants, wild relatives, etc.) and their conservation status. 2.2: Conduct monetary valuations of endemic and economically important species. 2.3: Create a GIS database mapping existing endemic and economically important species geographical location and extent. 2.4: Include endemic and economically important species in national conservation strategies and regulations; namely in-situ and ex-situ conservation programs (gene banks and on farm). 2.5: Adopt the outcomes of the Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants project and expand it to encompass other economically important species.	YES	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed 11.4 Strengthen efforts to protect and safeguard the world’s cultural and natural heritage 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed 17.14 Enhance policy coherence for sustainable development	Forestry	1.2	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Changing activity	Sustainable forest management		Job creation potential from the sustainable use of medicinal and aromatic plants, and other economically important species	LOCAL EXPERT	
				2.5	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	Vulnerability	Increase resource efficiency		Conservation of the genetic diversity of important flora and fauna, and the promotion of access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	LOCAL EXPERT	
				11.4	11.4 Strengthen efforts to protect and safeguard the world’s cultural and natural heritage	Vulnerability	Increase resource efficiency		Conservation of genetic diversity of native flora and fauna protects and safeguards natural heritage	LOCAL EXPERT	
				15.5	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Vulnerability	Increase resource efficiency		Support conservation measures that reduce the degradation of forests that supports the biodiversity of endemic and economically important species	LOCAL EXPERT	
				15.6	15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	Vulnerability	Increase resource efficiency		Promote the fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resource	LOCAL EXPERT	
				17.14	17.14 Enhance policy coherence for sustainable development	Vulnerability	Increase resource efficiency		National conservation strategies and regulations support policy coherence	LOCAL EXPERT	
NATIONAL TARGET 3: By 2030, the implementation mechanism of the Cartagena Protocol on Biosafety is operational 3.1: Enforce and make operational national legislation on biosafety through issuance of implementation mechanisms. 3.2: Assess the risks related to LMOs and monitor the adequacy of equipment at certified laboratories.	NO		Not climate related								
NATIONAL TARGET 4: By 2030, at least 20% of natural terrestrial and marine ecosystems are protected and all types of ecosystems are represented in the PA network 4.1: Develop clear and standardized criteria for characterizing natural and semi-natural ecosystems found across the country. 4.2: Classify identified ecosystems based on clear	YES	11.4 Strengthen efforts to protect and safeguard the world’s cultural and natural heritage 12.2 By 2030, achieve the sustainable management and efficient use of natural resources 14.2 By 2020, sustainably manage and protect	Forestry	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement

criteria to help guide and orient the level of emergency for intervention and the intervention approach required (conservation, restoration, sustainable land management, sustainable use of natural resources).

4.3: Produce a national map of ecosystem types and classifications to serve as a decision making support tool and set timelines for repeating the surveys.

4.4: Identify areas of high biodiversity values (such as hotspots) among the identified natural ecosystems.

4.5: Include the newly identified areas of high biodiversity value in the PA network.

4.6: Identify areas that could potentially become ecological corridors (such as thalwegs, sea canyons, and mountain peaks) and start preparing them (e.g. plant native trees).

4.7: Develop landscaping guidelines promoting the use of local and native species and enforce their implementation at a minimum in government funded projects and mainstream them into SEAs and EIAs.

NATIONAL TARGET 5: By 2030, the total percent coverage of nature reserves is increased to reach at least 5% of Lebanon’s total area

National Action 5.1: Take action to protect areas identified as “in need of protection” by the Sustainable Institutional Structure for Protected Areas Management (SISPAM) Project and other areas identified by MoE.

National Action 5.2: Identify further priority areas for conservation and establish ecological inventories for these areas.

National Action 5.3: Establish terrestrial nature reserves in the newly identified priority areas for conservation.

National Action 5.4: Implement the Marine Protected Area Strategy and establish the proposed marine nature reserves.

National Action 5.5: Endorse the revised protected areas category system, law and related decree.

marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

17.14 Enhance policy coherence for sustainable development

Forestry	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement
Forestry	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement
Forestry	2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Exposure	Physical protection		Increases protection against extreme events that cause crop loss and food inflation, which leads to a difficulty in acquiring nutritional needs	SCAN	Expert judgement
Forestry	2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Exposure	Physical protection		May have trade-offs on agricultural land use, which make affordable food prices harder to achieve	SCAN	Kissinger et al. (2012)
Forestry	2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Exposure	Physical protection		Increases protection against extreme events that cause crop loss and food inflation, which leads to a difficulty in acquiring nutritional needs	SCAN	Expert judgement
Forestry	2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Exposure	Physical protection		May have trade-offs on agricultural land use, which make affordable food prices harder to achieve	SCAN	Kissinger et al. (2012)
Forestry	3.3	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	Exposure	Physical protection		Protection against flooding prevent spread and breeding of water-borne diseases	SCAN	Smith et al. (2014)
Forestry	3.9	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Exposure	Physical protection		Protection against flooding prevent spread and breeding of water-borne diseases	SCAN	Smith et al. (2014)
Forestry	4.1	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
Forestry	4.2	4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement

Forestry	4.3	4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
Forestry	4.4	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
Forestry	4.5	4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
Forestry	4.6	4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
Forestry	8.1	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement
Forestry	8.2	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement
Forestry	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Exposure	Physical protection		Reducing urban heat island effect through more trees and vegetation; reduces likelihood of flooding due to water flowing from high to low lying areas	SCAN	Expert judgement
Forestry	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Exposure	Physical protection		Limiting expansion of urban areas to accommodate growing population	SCAN	Expert judgement
Forestry	11.4	11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	Exposure	Physical protection		Protection of the nations natural heritage through the establishment of protection areas	LOCAL EXPERT	
Forestry	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Exposure	Physical protection		Promote the sustainable management and efficient use of natural resources through protection of ecosystems	LOCAL EXPERT	

Forestry	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Exposure	Physical protection		Physical protection through nature reserves and ecosystem corridors will aid in the conservation and restoration natural habitats	LOCAL EXPERT	
Forestry	15.2	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Exposure	Physical protection		Expansion of nature reserves supports the use of natural means to protect against flooding, storms and erosion.	LOCAL EXPERT	
Forestry	15.3	15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Exposure	Physical protection		Expansion of nature reserves supports combating desertification and helps to restore degraded land	LOCAL EXPERT	
Forestry	15.5	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Exposure	Physical protection		Expansion of nature reserves helps to protect against the loss of biodiversity and threatened species	LOCAL EXPERT	
Coastal Zone	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Exposure	Physical protection		Building of seawalls and other artificial structures protect against flooding that protect communities and livelihoods	LOCAL EXPERT	
Coastal Zone	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Exposure	Physical protection		Building of seawalls and other artificial structures may have adverse effects on community livelihood and protection against erosion. These structures negatively impact mangrove forests and their ecosystem functions; it also disrupts transition zones between terrestrial and marine systems, therefore impeding transport of resources across habitat boundaries and impact adjacent sedimentary ecosystems by modifying hydrodynamics which, in turn, influence sedimentology and erosion.	SCAN	Heatherington and Bishop (2012)
Coastal Zone	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Exposure	Physical protection		Building of seawalls and other artificial structures protect against strong waves that protect communities and livelihoods	SCAN	Expert judgement
Coastal Zone	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Exposure	Physical protection		Building of seawalls and other artificial structures may have adverse effects on community livelihood and protection against erosion. These structures negatively impact mangrove forests and their ecosystem functions; it also disrupts transition zones between terrestrial and marine systems, therefore impeding transport of resources across habitat boundaries and impact adjacent sedimentary ecosystems by modifying hydrodynamics which, in turn, influence sedimentology and erosion.	SCAN	Heatherington and Bishop (2012)
Coastal Zone	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Exposure	Physical protection		Building of seawalls and other artificial structures protect against strong waves that protect communities and livelihoods	SCAN	Expert judgement

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Coastal Zone	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Exposure	Physical protection		Building of seawalls and other artificial structures may have adverse effects on community livelihood and protection against erosion. These structures negatively impact mangrove forests and their ecosystem functions; it also disrupts transition zones between terrestrial and marine systems, therefore impeding transport of resources across habitat boundaries and impact adjacent sedimentary ecosystems by modifying hydrodynamics which, in turn, influence sedimentology and erosion.	SCAN	Heatherington and Bishop (2012)
Coastal Zone	2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and marine nature reserves help to increase adaptive capacity by increasing biodiversity and increasing fish population	LOCAL EXPERT	
Coastal Zone	2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Exposure	Physical protection		Building of seawalls and other artificial structures may have adverse effects on community livelihood and food supply through impeding transport of resources across habitat boundaries	SCAN	Heatherington and Bishop (2012)
Coastal Zone	2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and marine nature reserves help to increase adaptive capacity by increasing biodiversity and increasing fish population	LOCAL EXPERT	
Coastal Zone	2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Exposure	Physical protection		Building of seawalls and other artificial structures may have adverse effects on community livelihood and food supply through impeding transport of resources across habitat boundaries	SCAN	Heatherington and Bishop (2012)
Coastal Zone	4.1	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	Exposure	Physical protection		Household income protection from extreme events protects access to educational facilities and reduces the need to pull out children (mainly girls) from school to help with income-generating activities as a means of adaptation	SCAN	Expert judgement; UNICEF (2011)
Coastal Zone	4.4	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Exposure	Physical protection		Household income protection from extreme events protects access to educational facilities and reduces the need to pull out children (mainly girls) from school to help with income-generating activities as a means of adaptation	SCAN	Expert judgement; UNICEF (2011)
Coastal Zone	4.6	4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	Exposure	Physical protection		Household income protection from extreme events protects access to educational facilities and reduces the need to pull out children (mainly girls) from school to help with income-generating activities as a means of adaptation	SCAN	Expert judgement; UNICEF (2011)

Coastal Zone	6.3	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and establishment of marine nature reserves will aid in the protection of marine and coastal ecosystems.	LOCAL EXPERT	
Coastal Zone	6.6	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and establishment of marine nature reserves will aid in the protection of marine and coastal ecosystems.	LOCAL EXPERT	
Coastal Zone	8.1	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and establishment of marine nature reserves will aid in the protection of marine and coastal ecosystems.	LOCAL EXPERT	
Coastal Zone	8.4	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	Exposure	Physical protection		Natural means to mitigate the negative impacts of sea-level rise and storm surges minimize economic losses due to extreme weather events; and improve livelihood opportunities which increase sustainable economic growth without environmental degradation.	SCAN	Expert judgement
Coastal Zone	8.7	8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	Exposure	Physical protection		Protection of household income from extreme events reduces the need to pull out children from school to help with income-generating activities as a means of adaptation	SCAN	UNICEF (2011)
Coastal Zone	10.1	10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average of the population at a rate higher than the national average	Exposure	Physical protection		Reducing the impact of extreme weather damages means less disproportional impact on the poor and vulnerable, particularly women, children, elderly	SCAN	Levy and Patz (2015)
Coastal Zone	11.a	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	Exposure	Physical protection		Developing rural livelihood resilience and enhancing connectivity to prevent excessive rural to urban migration	SCAN	Expert judgement
Coastal Zone	14.2	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and establishment of marine nature reserves will aid in the protection of marine and coastal ecosystems.	LOCAL EXPERT	
Coastal Zone	14.2	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Exposure	Physical protection		Some artificial structures such as sea walls may reduce biodiversity and have ecological impacts to coastal areas	SCAN	Heatherington and Bishop (2012)
Coastal Zone	14.5	14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	Exposure	Physical protection		Implementation of the Marine Protected Area Strategy and establishment of marine nature reserves will aid in the protection of marine and coastal ecosystems.	LOCAL EXPERT	

			Coastal Zone	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Exposure	Physical protection		Protected marine nature reserves will increase biodiversity and provide additional livelihood	LOCAL EXPERT	
			Coastal Zone	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Exposure	Physical protection		Some artificial structures such as sea walls may reduce biodiversity and have ecological impacts to coastal area	SCAN	Heatheringt on and Bishop (2012)
			Coastal Zone	17.14	17.14 Enhance policy coherence for sustainable developm	Exposure	Physical protection		National conservation strategies and regulations support policy coherence	LOCAL EXPERT	
NATIONAL TARGET 6: By 2030, 50% of all natural ecosystems are sustainably managed and properly considered in spatial planning implementation 6.1: Extract, from Land Use /Land Cover database, a map on national ecosystems highlighting those in need for sustainable management. 6.2: Enforce regulations related to the management of nature reserves and increase the level of fines in relation with the nature of goods and services illegally harvested and extracted. 6.3: Include non-officially classified natural ecosystems of high ecological and biodiversity value in the Master Plans of each related village. 6.4: Establish a management plan for the natural areas of high ecological and biodiversity values (for those that are not classified as PAs). 6.5: Identify and map the extent and spatial distribution of areas under sustainable forestry, fisheries, grazing, agriculture, and water management; including information on safe ecological limits of these productive systems. National Action 6.6: Organize capacity building and awareness campaigns on the value of biodiversity and the sustainable use of natural resources.	YES	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts 16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	General	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Avoiding potential impacts	R&D		R&D that enhances understanding of valuable ecosystems can enhance human resiliency through strategic conservation of natural resources, potentially safeguarding income	LOCAL EXPERT	Expert judgement
			General	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Avoiding potential impacts	R&D		R&D that enhances understanding of valuable ecosystems can enhance human resiliency through strategic conservation of natural resources, potentially safeguarding income	LOCAL EXPERT	Expert judgement
			General	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Avoiding potential impacts	Awareness raising programmes		Awareness campaigns on the value of biodiversity and the sustainable use of natural resources can help build resilience of the poor	LOCAL EXPERT	Expert judgement
			General	1.b	1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions	Avoiding potential impacts	R&D		Training programs to diversify livelihoods (e.g. from fisheries to tourism) may be designed to be gender-sensitive and targeted to poor communities living in coastal areas	SCAN	Hammill and Price-Kelly (2017)
			General	2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Avoiding potential impacts	Institutional development		A better understanding of national ecosystems in need of protection, better enforcement of regulation, and protection of natural areas of high ecological and biodiversity values can contribute to a better understanding of more climate resilient and sustainable agricultural practices	LOCAL EXPERT	
			General	2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Avoiding potential impacts	Institutional development		A better understanding of national ecosystems in need of protection, better enforcement of regulation, and protection of natural areas of high ecological and biodiversity values can contribute to a better understanding of more climate resilient and sustainable agricultural practices	LOCAL EXPERT	

		<p>16.6 Develop effective, accountable and transparent institutions at all levels</p> <p>17.14 Enhance policy coherence for sustainable development</p>	General	2.3	2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	Avoiding potential impacts	R&D		A better understanding of national ecosystems in need of protection, better enforcement of regulation, and protection of natural areas of high ecological and biodiversity values can contribute to a better understanding of more climate resilient and sustainable agricultural practices	LOCAL EXPERT	
			General	2.4	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Avoiding potential impacts	R&D		A better understanding of national ecosystems in need of protection, better enforcement of regulation, and protection of natural areas of high ecological and biodiversity values can contribute to a better understanding of more climate resilient and sustainable agricultural practices	LOCAL EXPERT	
			General	2.5	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	Avoiding potential impacts	R&D		Knowledge sharing and spill-overs that support resilient seed proliferation	LOCAL EXPERT	
			General	4.7	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Avoiding potential impacts	Awareness raising programmes		Better research and the dissemination of information through awareness campaigns on the value of biodiversity and the sustainable use of natural resources can empower people to better respond to climate change and promote sustainable development	LOCAL EXPERT	
			General	5.1	5.1 End all forms of discrimination against all women and girls everywhere	Avoiding potential impacts	Awareness raising programmes		Inclusion of women in awareness programs on climate change impacts and adaptation	SCAN	Expert judgement
			General	5.c	5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	Avoiding potential impacts	Institutional development		Ensuring inclusion of women in climate change adaptation programs	SCAN	Expert judgement
			General	6.3	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Avoiding potential impacts	R&D		R&D on ecosystem conservation can improve water quality and supply	LOCAL EXPERT	Expert judgement
			General	6.4	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on climate change and the importance of ecosystem conservation can change behavior towards water (efficiency, conservation and new sources of water e.g., decentralized rainwater collection); as well as hygiene and sanitation practices	LOCAL EXPERT	

General	6.5	6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	Avoiding potential impacts	Institutional development		Sustainable ecosystem management will require and integrated water resources management at all levels: including the need for spatial and management plans, improved research, identification of priority areas and awareness raising.	LOCAL EXPERT	
General	6.6	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Avoiding potential impacts	Institutional development		Increasing conservation research knowledge, insitutional capacity, regulatory enforcement, including the identification of priority conservation areas will help protect and restore water-related eco-systems including mountains, forests, wetlands, etc	LOCAL EXPERT	
General	6.b	6.b Support and strengthen the participation of local communities in improving water and sanitation management	Avoiding potential impacts	Awareness raising programmes		Protection of ecosystems will require awareness raising on improving water and sanitation management at all levels	LOCAL EXPERT	
General	8.4	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	Avoiding potential impacts	Institutional development		Capacity building to mainstream CC into development plans, and ensure sustainable, inclusive, and rapid economic growth	SCAN	Expert judgement
General	8.9	8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	Avoiding potential impacts	R&D		Promotion of nature based and sustainable tourism	SCAN	Expert judgement
General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation ; promotion of nature based and sustainable tourism	SCAN	Expert judgement
General	12.5	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation ; promotion of nature based and sustainable tourism	SCAN	Expert judgement
General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation ; promotion of nature based and sustainable tourism	SCAN	Expert judgement
General	14.4	14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal fishing by local and foreign commercial boats (boundaries based on UNCLOS)	SCAN	Expert judgement

General	14.6	14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation	Avoiding potential impacts	R&D		Improved coastal and fisheries resources through non-destructive fishing techniques ensures sustainable food production system	SCAN	Expert judgement
General	14.a	14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	Avoiding potential impacts	R&D		R&D and demonstrations on sustainable fishing and water tourism can help protect biodiversity under water	sCAN	Expert judgement
General	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Avoiding potential impacts				LOCAL EXPERT	
General	15.2	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation, and unsustainable practices such as slash and burn	SCAN	Expert judgement
General	15.5	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection	SCAN	Expert judgement
General	15.7	15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection	SCAN	Expert judgement
General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	Institutional development		Integration of CC impacts to development planning	SCAN	Expert judgement
General	16.3	16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection	SCAN	Klein et al. (2014)

			General	16.3	16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	Avoiding potential impacts	Institutional development		If adaptation action is the protection of critical habitat for vulnerable species through regulatory protection, this creates concerns over property rights and regulatory barriers to regional economic development	SCAN	Klein et al. (2014)
			General	16.6	16.6 Develop effective, accountable and transparent institutions at all levels	Avoiding potential impacts	Institutional development		Develop research, plans, policies and regulations that support the institutional capacity to implement conservation strategies initiative	LOCAL EXPERT	
			General	17.14	17.14 Enhance policy coherence for sustainable development	Avoiding potential impacts	Institutional development		National conservation strategies and regulations support policy coherence	LOCAL EXPERT	
NATIONAL TARGET 7: By 2030, the gap between Lebanon’s ecological footprint and biocapacity is alleviated to reach an equal state 7.1: Reevaluate Lebanon’s bio-capacity as per the Global Footprint approach (latest study was in 2011) 7.2: Assess the current ecological footprint on the identified natural ecosystems. 7.3: Carry out valuations of ecosystem goods and services at the national level (payable ecosystem services). 7.4: Disseminate the results of the studies related to the economic value of biodiversity to decision makers. Provide recommendations on appropriate policy responses.	YES	12.2 By 2030, achieve the sustainable management and efficient use of natural resources 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	General	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Avoiding potential impacts	R&D		R&D programs to enhance crop/animal/human resiliency to climate change can protect the livelihood and productive capacity of the poor	SCAN	Expert judgement
			General	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Avoiding potential impacts	R&D		R&D programs to enhance crop/animal/human resiliency to climate change can protect the livelihood and productive capacity of the poor	SCAN	Expert judgement
			General	2.5	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	Avoiding potential impacts	R&D		Knowledge sharing and spill-overs that support resilient seed proliferation	SCAN	Nyasimi et al. (2016)
			General	4.7	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development	Avoiding potential impacts	R&D		R&D programs to better understand ecosystem valuation can help to quantify the value of ecosystem conservation and increase awarness on the need for protection	LOCAL EXPERT	
			General	6.3	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Avoiding potential impacts	R&D		R&D on ecosystem valuation can lead to better understanding of the value of water quality and encourage behaviour change	LOCAL EXPERT	

			General	8.9	8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	Avoiding potential impacts	R&D		Assesment of the eco footprint and ecosystem valuation research can quantify the value of promoting conservation through nature based and sustainable tourism	LOCAL EXPERT	
			General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	R&D		A better understanding of the gap between the ecological footprint and biocapacity can lend to a better understanding of more efficient uses of natural resources	LOCAL EXPERT	
			General	14.a	14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	Avoiding potential impacts	R&D		R&D and demonstrations on sustainable fishing and water tourism can help protect biodiversity under water	SCAN	Expert judgement
			General	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Avoiding potential impacts	R&D		Ecosystem valuation and biocapacity research can support effective initiatives aimed at the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems	LOCAL EXPERT	
			General	15.2	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Avoiding potential impacts	R&D		Ecosystem valuation and biocapacity research can support the knowledge base needed for sustainable forest protection and management	LOCAL EXPERT	
			General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	R&D		Ecosystem and biodiversity research that provides a basis of knowledge for the development of local and national plans	LOCAL EXPERT	
NATIONAL TARGET 8: By 2030, the private sector has taken steps to implement plans for sustainable production and consumption to mitigate or prevent negative impacts on ecosystems from the use of natural resources 8.1: Create incentives and establish a legislative framework for the private sector's engagement in biodiversity actions. 8.2: Implement the developed incentives mechanism. 8.3 Conduct awareness campaigns on the need to endorse sustainable strategies (e.g. sustainable consumption targeting consumers etc.).	YES	12.2 By 2030, achieve the sustainable management and efficient use of natural resources 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements 15.4 By 2030, ensure the conservation of		12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources		PPP		Private sector engagement in sustainable consumption and production can greatly support ecosystem protection	LOCAL EXPERT	
				12.6	12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle		PPP		Incentives and legislation can support the private sector in adopting more environmentally friendly practices to support biodiversity actions	LOCAL EXPERT	
				12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature		PPP		Through effective awareness campaigns the private sectors can adopt more sustainable consumption strategies	LOCAL EXPERT	
				15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements		PPP		Private sector engagement in sustainable consumption and production can greatly support ecosystem protection	LOCAL EXPERT	

		mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development		15.4	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development		PPP		Private sector adoption of sustainable consumption policies help to protect natural habitats and biodiversity	LOCAL EXPERT	
		15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems		15.a	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems		PPP		Incentives can encourage private sector adoption of sustainable production and consumption practices	LOCAL EXPERT	
		16.6 Develop effective, accountable and transparent institutions at all levels		16.6	16.6 Develop effective, accountable and transparent institutions at all levels		PPP		A legislative framework for private sector engagement provides a more effective and transparent institutional framework	LOCAL EXPERT	
		17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships		17.17	17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships		PPP		Private sector engagement in ecosystem protection through sustainable consumption and production plans can greatly expand the scale of intervention	LOCAL EXPERT	
<p>NATIONAL TARGET 9: By 2030, rehabilitation plans are implemented in at least 20% of degraded sites so that they can safeguard the sustained delivery of ecosystem services</p> <p>9.1: Update and complete existing inventories to prepare a national inventory of degraded sites by type and location.</p> <p>9.2: Develop technical guidelines for the rehabilitation of the different types of degraded sites and give them a legally binding status.</p> <p>9.3: Develop a prioritization scheme based on socioenvironmental criteria to specify sites in need of immediate intervention.</p> <p>9.4: Review and adapt existing rehabilitation plans to comply with the newly developed guidelines.</p> <p>9.5: Develop a master plan for the rehabilitation of different types of degraded sites that builds on existing master plans (i.e. quarry and dumpsite rehabilitation).</p> <p>9.6: Secure funding, internally or from international donors, to enable the rehabilitation of priority sites.</p> <p>9.7: Undertake pilot rehabilitation in key sites based on the developed prioritization scheme covering at least one of each type: quarries, dumpsites, degraded forest, rangeland, riverbed, old terraces, and coastal areas.</p> <p>9.8: Designate selected degraded sites as pilot sites for research and development of effective rehabilitation methods.</p>	YES	12.2 By 2030, achieve the sustainable management and efficient use of natural resources		1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Exposure	Physical protection		Identification and rehabilitation of degraded land can increase resilience to extreme events	LOCAL EXPERT	
		15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements		1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Exposure	Physical protection		Identification and rehabilitation of degraded land can increase resilience to extreme events	LOCAL EXPERT	
		15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world		1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Exposure	Physical protection		Identification and rehabilitation of degraded land can increase resilience to extreme events	LOCAL EXPERT	
		15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development		2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Exposure	Physical protection		Identification and rehabilitation of degraded land can return land to economic productivity	LOCAL EXPERT	
		15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species		2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Exposure	Physical protection		May have trade-offs on agricultural land use, which make affordable food prices harder to achieve	SCAN	Kissinger et al. (2012)
		15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems		2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Exposure	Physical protection		Identification and rehabilitation of degraded land sites can increase resilience to extreme events that can cause crop loss and food inflation, which leads to a difficulty in acquiring nutritional needs	LOCAL EXPERT	
		17.14 Enhance policy coherence for sustainable development									
				2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Exposure	Physical protection		May have trade-offs on agricultural land use, which make affordable food prices harder to achieve	SCAN	Kissinger et al. (2012)

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	3.3	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	Exposure	Physical protection		Identification and rehabilitation of degraded land site can increase protection against flooding which can prevent the spread and breeding of water-borne diseases	LOCAL EXPERT	
	3.9	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Exposure	Physical protection		Identification and rehabilitation of degraded land site can increase protection against flooding which can prevent the spread and breeding of water-borne diseases	LOCAL EXPERT	
	4.1	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
	4.2	4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
	4.3	4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
	4.4	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
	4.5	4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
	4.6	4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	Exposure	Physical protection		Protection from soil erosion, flooding ensure continued access to educational facilities	SCAN	Expert judgement
	8.1	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement
	8.2	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Exposure	Physical protection		Protecting assets of poor households through reduction of economic losses during extreme events such as forest fires; and providing natural shade against heat extremes which cause lower labor productivity and other heat related stress	SCAN	Kjellstrom et al. (2016); Expert judgement

			11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Exposure	Physical protection		Reducing urban heat island effect through more trees and vegetation; reduces likelihood of flooding due to water flowing from high to low lying areas	SCAN	Expert judgement
			12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Exposure	Physical protection		Rehabilitation of degraded land can return land for more sustainable and efficient uses of natural resources	LOCAL EXPERT	
			15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Exposure	Physical protection		Rehabilitation of degraded land can support the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems	LOCAL EXPERT	
			15.2	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Exposure	Physical protection		Restoration of degraded land sites to protect against flooding, storms, and erosion that also supports biodiversity	LOCAL EXPERT	
			15.3	15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Exposure	Physical protection		Restoration of degraded land sites to protect against flooding, storms, and erosion that also supports biodiversity	LOCAL EXPERT	
			15.4	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	Exposure	Physical protection		Restoration of degraded land supports the conservation of mountain ecosystems and biodiversity	LOCAL EXPERT	
			15.5	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Exposure	Physical protection		Restoration of degraded land sites can support the protection of threatened species	LOCAL EXPERT	
			15.a	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	Exposure	Physical protection		Mobilize internal and international funding to support the rehabilitation of priority degraded sites.	LOCAL EXPERT	
			17.14	17.14 Enhance policy coherence for sustainable development	Exposure	Physical protection		Enhance policy coherence through planning, technical guidelines, and research	LOCAL EXPERT	

NATIONAL TARGET 10: By 2030, the national law on access and benefit sharing is endorsed, operational and enforced 10.1: Finalization of the MoE draft law on Access to Lebanese biological and genetic resources and sharing of the benefits arising from their utilization (in relation to Nagoya Protocol) in harmony with the MoA draft law on the Management of Lebanese Plant Genetic Resources in relation to the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). 10.2: Development of implementation decrees for each Law. 10.3 Development of legal monitoring and compliance procedures with defined roles and responsibilities.	YES	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed 12.2 By 2030, achieve the sustainable management and efficient use of natural resources 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	Regulation	2.5	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed		Regulation		Maintain genetic diversity through the enactment of national laws and decrees that establishes access and benefits sharing regulations	LOCAL EXPERT	
		15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Regulation	16.6	16.6 Develop effective, accountable and transparent institutions at all levels		Regulation		Laws on access to biological and genetic resources and sharing of the benefits arising from their utilization that creates effective, transparent and accountable policy on genetic diversity	LOCAL EXPERT	
		15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts 16.6 Develop effective, accountable and transparent institutions at all levels 17.14 Enhance policy coherence for sustainable development	Regulation	17.14	17.14 Enhance policy coherence for sustainable development		Regulation		Genetic diversity laws and regulation creates policy coherence	LOCAL EXPERT	
NATIONAL TARGET 11: By 2030, effective measures are in place to control the introduction and diffusion of Invasive Alien Species (IAS) into the environment 11.1: Support ongoing efforts for the establishment of a register of IAS reported in the Mediterranean basin. This register should be considered a live document to be updated when new IAS are identified. 11.2: Identify and map pathways of introduction/proliferation of IAS in Lebanon to allow for better management and monitoring. 11.3: Regulate the import of species for agricultural, landscape, recreational, and reforestation purposes to avoid genetic pollution of local species and genotypes. 11.4 Develop and implement an awareness strategy	YES	15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species 16.6 Develop effective, accountable and transparent institutions at all levels 17.14 Enhance policy coherence for sustainable development	General	1.b	1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions	Avoiding potential impacts	Building Early Warning Systems	Conducting risk assessments, vulnerability mapping, and strengthening early warning systems reduce possible economic losses from extreme events	SCAN	Expert judgement	
			General	2.c	2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility	Avoiding potential impacts	Building Early Warning Systems	Prevention can significantly reduce the impact of invasive alien species on land and water ecosystems and the adverse impact on agricultural products	LOCAL EXPERT	Expert judgement	

11.4 Develop and implement an awareness strategy for the management of identified IAS			General	8.2	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Avoiding potential impacts	Building Early Warning Systems		Conducting risk assessments, vulnerability mapping, and strengthening early warning systems reduce possible economic losses from extreme events	SCAN	Expert judgement
			General	15.8	15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	Avoiding potential impacts	Building Early Warning Systems		Established measures to control the introduction and diffusion of invasive alien species can protect land and water ecosystems	LOCAL EXPERT	
			General	17.14	17.14 Enhance policy coherence for sustainable development	Avoiding potential impacts	Building Early Warning Systems		Regulating the import of species provides policy coherence	LOCAL EXPERT	
NATIONAL TARGET 12: By 2030, 100% of school and university students and at least 60% of the public are aware of the importance of biodiversity, its values, and the need for its conservation and sustainable use 12.1: Raise the awareness of decision makers on the importance of biodiversity and its conservation, sustainable management, and promoting related education (Deputies, Ministers, Directors Generals, Heads of Departments and Heads of Services). 12.2: Enhance the role of the awareness unit at the MoE to improve dissemination and public outreach through social media and direct public outreach (e.g. biodiversity related tips through SMS, a monthly or yearly scientific journal distributed to schools, universities, public institutions, etc.). 12.3: Build on the Central Administration of Statistics (CAS) services to assess and monitor people's awareness on biodiversity. 12.4: Further adopt and implement the existing National Strategy for Environmental Education developed by AFDC and adopted by the MoEHE. Implementation should be coupled with training and capacity building of school teachers. 12.5 Organize participatory events to raise students and public' awareness about biodiversity, i.e. national science fair, guided open-house events at the MoE.	YES	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	General	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Avoiding potential impacts	Awareness raising programmes		Raising awareness about biodiversity values will help safeguard income and vulnerability to extreme events	LOCAL EXPERT	
			General	4.7	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Avoiding potential impacts	Awareness raising programmes		Awareness programs integrated in the curriculum can empower children to better respond to threats of climate change	SCAN	Expert judgement
			General	5.1	5.1 End all forms of discrimination against all women and girls everywhere	Avoiding potential impacts	Awareness raising programmes		Inclusion of women in awareness programs on climate change impacts and adaptation	SCAN	Expert judgement
			General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation ; promotion of nature based and sustainable tourism	SCAN	Expert judgement
			General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation ; promotion of nature based and sustainable tourism	SCAN	Expert judgement
			General	15.2	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Avoiding potential impacts	Awareness raising programmes		Increasing awareness on environmental protection can change behavior towards resource conservation, demand for products that cause deforestation, and unsustainable practices such as slash and burn	SCAN	Expert judgement

			General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	Awareness raising programmes		Awareness campaigns that Integrate ecosystem and biodiversity values and are instrumental to national and local planning, development processes, poverty reduction strategies and accounts	LOCAL EXPERT	
NATIONAL TARGET 13: By 2030, government entities mainstream biodiversity priorities (conservation, benefits sharing, pressure alleviation, sustainable management,sustainable use of natural resources) into their policy making processes and their implementation 13.1: Promote the Strategic Environmental Assessment (SEA) Decree (number 8213/2012) in the public sector and institutions at both, the central and local levels. 13.2: Develop guidelines for the implementation of ecological impact assessments as part of the SEA, a planning process and training sessions. 13.3: Strengthen the capacity of MoE to implement the SEA process (including review) by creating a dedicated unit or expert groups within the ministry. 13.4: Strengthen the planning capacity in all sectors (similar to SISSAF project) and enhance environmental considerations. 13.5: Establish a mechanism to enforce the implementation of environmental measures in national and sectoral strategies and policies such as agriculture, fisheries, forestry, tourism, poverty reduction,sustainable development, land use, water, coastal management, climate change, and disaster risk reduction. 13.6: Hire the necessary technical permanent staff in the departments of the various concerned ministries (e.g. Department of Ecosystems at MoE). 13.7: Conduct training and capacity building to raise awareness and build technical skills in public institutions concerned with biodiversity conservation; e.g. MoA, MoEHE, DGUP, CDR, MoEW, MoPWT, etc. 13.8: Raise the awareness of the internal security forces and the municipality police on biodiversity legislation.	YES	12.2 By 2030, achieve the sustainable management and efficient use of natural resources 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts 16.6 Develop effective, accountable and transparent institutions at all levels 17.14 Enhance policy coherence for sustainable development	General	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Avoiding potential impacts	Institutional development		Capacity building to mainstream CC into development plans, and ensure inclusive and sustainable urbanization	SCAN	Expert judgement; Nerini et al. (2017)
			General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	Institutional development			LOCAL EXPERT	
			General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Avoiding potential impacts	Institutional development			LOCAL EXPERT	
			General	15.5	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection	SCAN	Expert judgement
			General	15.7	15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection	SCAN	
			General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	Institutional development		Integration of CC impacts to development planning	SCAN	Expert judgement
			General	16.3	16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	Avoiding potential impacts	Institutional development		If adaptation action is the protection of critical habitat for vulnerable species through regulatory protection, this creates concerns over property rights and regulatory barriers to regional economic development	SCAN	
			General	16.6	16.6 Develop effective, accountable and transparent institutions at all levels	Avoiding potential impacts	Institutional development		Establishing rules and regulations for biodiversity supports more effective, accountable and transparent institutions	LOCAL EXPERT	

			General	17.14	17.14 Enhance policy coherence for sustainable development	Avoiding potential impacts	Institutional development		Enhance policy coherence through strengthening planning and technical capacity and the establishment of a mechanism to enforce environmental measures	LOCAL EXPERT	
<p>NATIONAL TARGET 14: By 2030, vulnerable ecosystems to climate change are identified and adaptation plans are developed and implemented</p> <p>14.1: Identify key ecosystems vulnerable to climate change and their needs for adaptation.</p> <p>14.2: Include a chapter dedicated to biodiversity and vulnerable ecosystems in Lebanon’s National Communications to the United Nations Framework Convention on Climate Change (UNFCCC).</p> <p>14.3: Define pilot national monitoring sites and species, representing the various ecosystems, to monitor medium and long term effects of climate change and implement pilot action to adapt natural ecosystems to climate change.</p>	YES	<p>15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts</p> <p>16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime</p> <p>17.14 Enhance policy coherence for sustainable development</p>	General	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Avoiding potential impacts	Institutional development		Capacity building to mainstream CC into development plans, and ensure inclusive and sustainable urbanization	SCAN	Expert judgement; Nerini et al. (2017)
			General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	Institutional development			LOCAL EXPERT	
			General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Avoiding potential impacts	Institutional development			LOCAL EXPERT	
			General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	Institutional development		Ecosystem and biodiversity values are integrated into climate change related plans	LOCAL EXPERT	
			General	16.3	16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	Avoiding potential impacts	Institutional development		If adaptation action is the protection of critical habitat for vulnerable species through regulatory protection, this creates concerns over property rights and regulatory barriers to regional economic development	SCAN	Klein et al. (2014)
			General	17.14	17.14 Enhance policy coherence for sustainable development	Avoiding potential impacts	Institutional development		Ecosystem vulnerability to climate change is integrated into adaptation plans and National Communication to the UNFCCC creates policy coherence	LOCAL EXPERT	
			General	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Avoiding potential impacts	R&D		Research on biodiversity valorization: conservation, sustainable management, and economic valuation. can protect the livelihood and productive capacity of the poor	LOCAL EXPERT	
<p>NATIONAL TARGET 15: By 2030, research on biodiversity is improved in Lebanon, and research outputs and biodiversity related reports are shared through a centralized platform (from both public and private institutions), which is updated and made accessible to the public (CHM)</p> <p>15.1: Create a Biodiversity Research and Information Unit responsible for centralizing biodiversity related information and coordinating the works between the multiple stakeholders, mainly public, private, academics and NGOs.</p> <p>15.2: Identify priority areas of research in the biodiversity field.</p> <p>15.3: Update the national Science Technology and Innovation Policy (STIP) to include biodiversity as a priority and define the areas where research is needed within the biodiversity sector.</p> <p>15.4 Allocate larger budgets for research on</p>	YES	<p>4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development</p> <p>12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</p> <p>15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty</p>	General	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Avoiding potential impacts	R&D		Research on biodiversity valorization: conservation, sustainable management, and economic valuation. can protect the livelihood and productive capacity of the poor	LOCAL EXPERT	

biodiversity valorization: conservation, sustainable management, and economic valuation.

reduction strategies and accounts

15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

General	1.4	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Avoiding potential impacts	R&D		Research on biodiversity valorization: conservation, sustainable management, and economic valuation can enhance the livelihood and productive capacity of the poor and can provide farmers with better information to help to break the cycle of low input, low output subsistence agriculture; and contribute to the improvement of SDG indicator 1.4.1 Proportion of population living in households with access to basic services	LOCAL EXPERT	
General	2.3	2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	Avoiding potential impacts	R&D		An improved knowledge base on biodiversity can help to improve food security through more sustainable farming techniques and lead to an increase in small-holder profitability	LOCAL EXPERT	
General	2.4	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Avoiding potential impacts	R&D		R&D programs to increase understanding of biodiversity can lend knowledge to crop resiliency to climate change - therefore protecting against food insecurity and inflation	LOCAL EXPERT	
General	2.5	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	Avoiding potential impacts	R&D		Knowledge sharing and spill-overs that support resilient seed proliferation	SCAN	
General	2.a	2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries	Avoiding potential impacts	R&D		Increased investment in Biodiversity R&D can enhance sustainable agricultural productive capacity	LOCAL EXPERT	
General	2.a	2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries	Avoiding potential impacts	R&D		Biodiversity R&D can enhance understanding in crop resiliency to climate change and help ensure climate resiliency of food production, therefore protecting against food insecurity and inflation	MODIFIED	
General	2.c	2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility	Avoiding potential impacts	R&D		Increased knowledge of biodiversity can help to protect ecosystems, threatened flora and fauna, and prevent invasive species thus safeguarding and assuring a proper functioning food commodity market	LOCAL EXPERT	

			General	4.7	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Avoiding potential impacts	R&D		Improved research on biodiversity will add to the body of knowledge for all learners encouraging environmental protection and the conservation of ecosystems	LOCAL EXPERT	
			General	6.3	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Avoiding potential impacts	R&D		Improved R&D and understanding of biodiversity can lead to behavior changes resulting in less pollution, dumping, and release of hazardous chemicals thus improving water quality	LOCAL EXPERT	
			General	8.9	8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	Avoiding potential impacts	R&D		Research on biodiversity valorization: conservation, sustainable management, and economic valuation creatomg opportunities for nature and sustainable tourism	LOCAL EXPERT	
			General	10.2	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Avoiding potential impacts	R&D		Biodiversity related reports are shared through a centralized platform (from both public and private institutions), which is updated and made accessible to the public (CHM) promotes inclusion of all	LOCAL EXPERT	
			General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Avoiding potential impacts	R&D		Increasing awareness on environmental protection	LOCAL EXPERT	
			General	14.a	14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	Avoiding potential impacts	R&D		Biodiversity research will increase scientific knowledge of marine biodiversity and improve ocean health	LOCAL EXPERT	
			General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	R&D		Biodiversity research contributes to the development of national and local plans	LOCAL EXPERT	
			General	15.a	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	Avoiding potential impacts	R&D		Financial resources are utilized for research on biodiversity valorization: conservation, sustainable management, and economic valuation.	LOCAL EXPERT	

<p>NATIONAL TARGET 16: By 2030, traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published</p> <p>National Action 16.1: Prepare a survey of assessment on the traditional use of folk medicine, herbals, food and feed, seed production and preservation, flora and fauna uses and agricultural practices. The survey will be published once completed.</p> <p>National Action 16.2 Plan festivals exhibiting local and traditional practices in different localities of Lebanon. Those festivals could be expanded all over the country.</p>	YES	<p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality</p>	General	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Avoiding potential impacts	Awareness raising programmes		Knowledge transfer or traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published thus building resilience in vulnerable situations	LOCAL EXPERT	
		<p>2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed</p>	General	2.4	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Avoiding potential impacts	Awareness raising programmes		Traditional knowledge, uses, and practices of local communities that help to maintain biodiversity and sustainable use of resources are documented, preserved, and shared/ published	LOCAL EXPERT- From Plan	
		<p>4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development</p>	General	2.5	2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international		Awareness raising programmes		Maintain genetic diversity through sharing traditional knowledge and sustainable local community practices	LOCAL EXPERT	
		<p>8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products</p> <p>12.2 By 2030, achieve the sustainable management and efficient use of natural resources</p>	General	2.c	2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility	Avoiding potential impacts	Awareness raising programmes		Transfer of traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published thus building resilience in vulnerable situations and ensuring proper functioning of the food commodity market	LOCAL EXPERT	
		<p>12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</p> <p>15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements</p>	General	4.7	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Avoiding potential impacts	Awareness raising programmes		Transfer of traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published	LOCAL EXPERT	
		<p>15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development</p>	General	6.4	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Avoiding potential impacts	Awareness raising programmes		Traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published - which may include water conservation/ efficiency practices	LOCAL EXPERT	

			General	6.b	6.b Support and strengthen the participation of local communities in improving water and sanitation management	Avoiding potential impacts	Awareness raising programmes		Traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published - which may include water conservation/ efficiency practices	LOCAL EXPERT	
			General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	Awareness raising programmes		Sharing and promoting traditional knowledge, uses, and practices of local communities relevant to biodiversity contributes to the sustainable use of natural resources	LOCAL EXPERT	
			General	12.5	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	Avoiding potential impacts	Awareness raising programmes		Traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources are documented, preserved, and shared/ published - which may include producing less waste	LOCAL EXPERT	
			General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Avoiding potential impacts	Awareness raising programmes		Provide relevant information to learners everywhere through sharing and promoting traditional knowledge, uses, and practices of local communities	LOCAL EXPERT	
			General	15.2	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Avoiding potential impacts	Awareness raising programmes		Sharing and promoting traditional knowledge, uses, and practices of local communities relevant to biodiversity and sustainable use of resources may encourage the restoration of forests	LOCAL EXPERT	
NATIONAL TARGET 17: By 2030, the relevant institutional and legal framework and government policies are reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use 17.1: Train ISF inspectors on environmental matters and create within the ISF a dedicated unit to control environmental violations until the establishment of an environmental police. 17.2: Establish the environmental police. 17.3: Raise the awareness of the ISF and the municipality police on biodiversity legislation. 17.4: Review the existing environmental legislation, make necessary amendments and prepare all remaining implementation decrees, and draft new laws where needed. 17.5: Engage inspectors from other sectors (tourism, agriculture etc.) in the identification and reporting of environmental violations. 17.6: Provide the MoJ with all existing environmental legislation and train judges. 17.7 Integrate the biodiversity agenda in NCE to enhance coordination.	YES	16.6 Develop effective, accountable and transparent institutions at all levels 17.14 Enhance policy coherence for sustainable development	General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Avoiding potential impacts	Institutional development		LOCAL EXPERT		
			General	12.3	12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	Avoiding potential impacts	Institutional development		Increase in international trade, particularly on food exports to lessen post-harvest losses and waste and improve global food security	SCAN	Expert judgement
			General	14.4	14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal fishing by local and foreign commercial boats (boundaries based on UNCLOS)	SCAN	Expert judgement

			General	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Avoiding potential impacts	Institutional development			LOCAL EXPERT	
			General	15.4	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	Avoiding potential impacts	Institutional development			LOCAL EXPERT	
			General	15.5	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Avoiding potential impacts	Institutional development		Relevant institutional and legal framework and government policies are reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use .	LOCAL EXPERT	
			General	15.7	15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	Avoiding potential impacts	Institutional development		Increase institutional capacity to monitor illegal activity, particularly related to endangered species and illegal logging; protection of critical habitat for vulnerable species through regulatory protection	SCAN	
			General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Avoiding potential impacts	Institutional development		Relevant institutional and legal framework and government policies are reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use	LOCAL EXPERT	
			General	16.3	16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	Avoiding potential impacts	Institutional development		Establishment of environmental police promotes the rule of law	LOCAL EXPERT	
			General	16.6	16.6 Develop effective, accountable and transparent institutions at all levels	Avoiding potential impacts	Institutional development		Legal framework and government policies are reviewed, updated and reinforced where necessary to ensure effective biodiversity conservation and sustainable use of resources	LOCAL EXPERT	
			General	17.14	17.14 Enhance policy coherence for sustainable development	Avoiding potential impacts	Institutional development		Laws and regulation create policy coherence	LOCAL EXPERT	
NATIONAL TARGET 18: By 2030, Lebanon has developed and is implementing a robust resource mobilization strategy with a sustainable mechanism to finance biodiversity initiatives 18.1: Adopt the decree on the National Environmental Fund and prioritize biodiversity for funding. 18.2: Study innovative sources of financing for biodiversity.	YES	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems 15.b Mobilize significant resources from all	General	8.3	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	Strengthening adaptive capacity	Financial support		Conduct economic valuation studies for all nature reserves and make use of it in decision making, seeking internal and external funding, and ecotourism promotion.	LOCAL EXPERT	

18.3: Engage donors in the implementation of the strategy.
18.4: Engage the private sector in resource mobilization.
18.5: Conduct an environmental valuation study to promote the mobilization of internal resources.
18.6: Explore opportunities for technical assistance.
18.7: Introduce biodiversity valuation in SEAs and EIAs to assess the economic value and potential loss resulting from the assessed project's impacts.
18.8: Develop a national framework enabling proper evaluation of the economics of ecosystems and biodiversity (TEEB, BIOFIN) in Lebanon. This can include payments for ecosystem services, reforming environmentally harmful subsidies or introducing fiscal incentives for conservation.
18.9: Conduct awareness campaigns and educational seminars to introduce the concept of biodiversity valuation and its importance to decision makers and concerned stakeholders (public sector, private sector, research institutions, NGOs, etc.).
18.10: Conduct economic valuation studies for all nature reserves and make use of it in decision making, seeking internal and external funding, and ecotourism promotion.

15.0 Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

General	8.10	8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	Strengthening adaptive capacity	Financial support		Study innovative sources of financing for biodiversity, engage donors in the implementation of the strategy, engage the private sector in resource mobilization, conduct an environmental valuation study to promote the mobilization of internal resources.	LOCAL EXPERT	
General	11.6	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	Strengthening adaptive capacity	Financial support		Subsidies to households that use clean energy		Expert judgement
General	12.2	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Strengthening adaptive capacity	Financial support			LOCAL EXPERT	
General	12.8	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Strengthening adaptive capacity	Awareness raising programmes		Build awareness of the importance of biodiversity valuation through seminars and awareness campaigns	LOCAL EXPERT	
General	15.1	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements					LOCAL EXPERT	
General	15.4	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development					LOCAL EXPERT	
General	15.9	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and account					LOCAL EXPERT	
General	15.a	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems				Mobilize resources to develop a national framework for evaluating the economics of ecosystems	LOCAL EXPERT	
General	15.b	15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation				Implement a robust resources mobilization strategy from all sources to finance biodiversity initiatives	LOCAL EXPERT	
General	17.17	17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	Strengthening adaptive capacity	Financial support		Engage private sector to mobilize resources to finance biodiversity initiatives	LOCAL EXPERT	

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