



Environmental Quality Authority

**Action plans of the Palestinian
National Biodiversity Strategy**

2023

Introduction

The Convention on Biological Diversity (CBD) was a landmark event in humanities response to the challenges in the age of the anthropocene. Palestine signed the convention in 2015 but had already developed plans for biodiversity conservation in a national strategy in 1999. The new and significantly updated National Biodiversity Strategy and Action Plan (NBSAP) for Palestine must deal with the five main global threats: climate change, over-exploitation, habitat destruction, invasive alien species, and pollution, while enhancing the benefits to people from nature. In addition, we need to deal with a sixth threat to the Palestinian environment: decades' long Israeli occupation and colonization. More recently, the COVID-19 pandemic was added to lists of challenges Palestine faces (Climate Change, Habitat Destruction, Pollution, Invasive Species, Overexploitation, and Conflict/wars) towards sustainable human and natural communities. There have been positive developments in the State of Palestine, as articulated in the 6th National Report to the Convention on Biological Diversity (CBD) of the State of Palestine (SP). It is possible to use the opportunity of building a Biodiversity Strategy and Action Plan that contributes to making genuine and lasting transformations in the Palestinian society and its interaction with the environment. To identify and achieve sustainable human development targets that respect and protect the environment requires maximum participation and support from all sectors of the Palestinian society. This includes central government, local authorities, NGOs, CSOs, academia, religious organizations, media, and the general public. There is a pressing need over the next ten years for commitment across the world to identify and finance conservation initiatives that halt, mitigate and provide adaptations to climate change. This is particularly important for developing countries. By producing this document, Palestinians show they can be leaders in both conservation and achieving environmental justice.

One important milestone in raising global awareness and organizing action in defense of the planet was the creation of the Convention on Biological Diversity (CBD) in 1992. The Convention was inspired by the world community's growing commitment to sustainable development. It represents a dramatic step forward in the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. The Convention brought nations together to identify best practices to address the main threats to biodiversity caused by climate change, overexploitation of resources, pollution, habitat destruction, and the negative consequences of invasive alien species. SP became a signatory to the Convention in 2015 and provided a submission to its 5th National Report but has since been excluded from major funding under the Convention. [In line with most countries](#), SP provided its 6th National CBD report for the year 2021 noting in the report some progress but also significant challenges. The key areas globally identified for the failure to achieve the CBD's approved Aichi Targets to 2020 (or even the UN SDGs and the [ESCWA](#)) are: 1) Inadequate national policy responses, 2) Funding shortages, 3) Science–policy knowledge gaps, and 4) Weak review processes. For SP, the 6th National Report showed these and other challenges (primarily the occupation). Indeed, most countries fell short of meeting the Aichi Targets. Additionally, SP is a signatory to the United Nations Framework Convention on Climate Change. Another key set of targets are those set in the UN Sustainable Development Goals.

The first National Biodiversity Strategy and Action Plan (NBSAP) for SP was made in 1999. Its production coincided with adoption of an environmental law passed by the newly created Palestinian Authority. This NBSAP revision is a collective project that was led by the Environment Quality Authority (EQA) and the widest possible range of stakeholders. The project took place in two stages:

1) Producing the 6th National CBD Report which describes how Palestinians have responded to the challenging Aichi targets in spite of the negative consequences of the five main global threats and over five decades of Israeli occupation.

2) Producing an NBSAP that will in the words of CBD “galvanize urgent and transformative action by governments and all communities, civil society, and businesses, to achieve the outcomes it sets out in its vision, mission, goals and targets, and thereby to contribute to the objectives of the Convention on Biological Diversity, its Protocols, and other biodiversity related multilateral agreements, processes and instruments”.

The post-2020 Global Biodiversity Framework agreed to in Kunming, China and in Montreal Canada (adopted December 2022) recognizes:

- Ecosystems and their biodiversity underpin the global economy and human well-being and need to be valued and protected,
- Damage to global ecosystem services and biodiversity is acute and accelerating (five major threats globally: climate change, overexploitation, pollution, habitat destruction, and invasive alien species; and a sixth local threat; Israeli occupation/colonization),
- Ecosystem damage carries economic and social dimensions and costs,
- Growing demand from an expanding population is a key cause of biodiversity loss,
- Investing in ecological infrastructure can offer greater returns than man-made alternatives and thus contribute to economic stability,

Creating the updated NBSAP included over forty capacity-building workshops and associated activities that were used to assist in preparation of the strategy and action plan draft. Training was delivered on Geographic Information Systems (GIS), remote sensing and other forms of data recording. This included the collection and cataloguing of available cartographic, cognitive data and technical documentation. Information gathered has been archived and will be uploaded to a Central House Mechanism (CHM). The updated NBSAP offers a vision of sustainable development and ecologically balanced communities in SP. It also provides a road map and set of outcomes that will contribute to global efforts to conserve our shared planet.

Six guiding principles were used to produce this updated NBSAP:

1) The most important principle was grassroots involvement. While all levels of society have been involved in feeding into the planning and managing of natural resources, particular attention was given to participation by local communities. The intention was to ensure shared benefits from, and fair access to SP’s rich biodiversity.

2) Relying on post 2020 CBD frameworks coupled with the experience of other countries and local knowledge to create a strategy tailored for SP, and a practical/realistic plan for its

implementation. The aim is to move beyond Gross Domestic Product (GDP) indicators to measures of well-being, both in terms of human welfare and balanced ecosystems.

3) Empowerment through capacity building. Building human capacity requires restructuring educational systems at all levels. The role of schools and universities is to help young people become citizens who have respect for themselves, for others and for the environment in which they live in.

4) Respect for others and for the natural world leads to sustainability and coexistence with each other and with nature. Respect leads to caring, empathy, and collaboration both within bounded entities and across borders. Respect involves preserving Palestinian culture and the natural heritage of SP.

5) Indigenous knowledge, practices, and value systems should be used in addition to new technology. Through this, traditional means of production, cultural practices and forms of joint organization were drawn upon. This includes collaboration, support, self-sustenance, resilience, and persistence.

6) Environmental justice is an absolute right: every human being is entitled to clean air, clean water, and a healthy environment.

Based on the preliminary work articulated in the 6th National Report to the Convention on Biological Diversity and supplemented by the literature reviews, workshops and interviews undertaken in the formulation of this document, the situation in SP can be summarized as following:

Diagnosis: Like other developing countries, SP suffers from the common global threats of climate change, pollution, habitat destruction, overexploitation, and invasive alien species. The problems associated with these issues are compounded by Israeli colonial occupation. Nevertheless, environmental education, research, and conservation efforts taking place across SP are positive actions. However, these actions are not sufficient and cannot significantly stem the environmental deterioration currently taking place.

Therapy: The intention behind producing this National Biodiversity Strategy and Action Plan is to create a template within which the Palestinian society can be radically transformed. Accordingly, urban and rural communities can live in ecological harmony with the land and resources of SP. To achieve this, full participation and effort are needed from **every** sector of the Palestinian society: governmental institutions, local authorities, NGOs, CSOs, academia, religious communities, media, and the general public. The NBSAP provides an entry point and a means by which capacity building can be undertaken. Action will come about through increasing awareness and building abilities at all levels from the individual to the institutional. Focused effort will bring about participation in the economic, social, and political elements that provide the basis for an ecologically sustainable society. The NBSAP provides a means to leverage funds for SP from bilateral and multilateral sources earmarked for biodiversity and conservation initiatives. The strategy and action plan will also provide the means to identify projects to assist with mitigation and future adaptation to climate change and other threats.

Prognosis: With the implementation of the strategy and action plan:

- 1) SP would develop into a socially stable and economically successful society living in harmony with its natural environment,
- 2) The public would have greater awareness of environmental issues and through this have a deeper connection with the land and nature. More food with a low carbon footprint would be sustainably produced, thus contributing to greater food security.

The vision, mission, strategic goals and objectives of SP's 2022 NBSAP:

VISION of the NBSAP

By 2050 human and natural communities will be coexisting in harmony, where biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy Palestinian environment and delivering benefits essential for all people.

MISSION of the NBSAP

NBSAP of State of Palestine (SP) sets parameters, conditions, and programs to 2030, to be revisited every five years thereafter to achieve the vision stated via participatory strategic planning and implementation, capacity building, mainstreaming, and bridging science-policy-practice gaps. **The strategy includes 4 Strategic Goals, 6 Objectives, 20 Milestones, 17 Targets, and 77 specific actions formulated collectively.**

Goal A. Increase protection and conservation measures to halt the decline and minimize loss of habitats and species.

Objective A1: The integrity, connectivity, and resilience of all ecosystems are maintained, enhanced, or restored, supporting healthy and resilient populations of species. By 2050, human induced extinction of known threatened species is halted. The risk of species extinctions across all taxonomic and functional groups is halved, and genetic diversity of wild and domesticated species is safeguarded and maintained.

Milestone A1: Net gain in the area, connectivity and integrity of natural systems of at least 5 per cent by 2030.

Milestone A2: The increase in the extinction rate is halted or reversed in Palestine via habitat and ecosystem effective conservation.

Milestone A3: Genetic diversity of wild and domesticated species is safeguarded, with an increase in the proportion of species that have at least 90 per cent of their genetic diversity maintained.

Milestone A4: By 2035 protect minimum six large vertebrates showing increase in population.

Target 1. By 2030, have an updated protected area and KBA network that is logical, science based and manageable covering >11% of the land and provide effective management by 2050

1.1 Establishment of an effective and well managed Protected Areas Network (PAN) in Palestine

Targets for Action: 2030: Network adopted & approved by ministerial committee, adjusted spatial plan, negotiations commenced for sovereignty issues, and development of a management plan for all of the PAN; 2050: effectiveness shown by actual protection of 50% of the PAN

Indicators: Approval documents and management plans, as well as faunal, floral, and threats pre-post assessment surveys

Responsibility: EQA, other relevant ministries and Research Centers

Potential Funders: CEPF, GEF

Notes and explanations: Done partly via work with IUCN-EQA-PIBS (IUCN 2022)

1.2 Develop the laws and regulations for conservation

Targets for Action: 2030: all laws and regulations related to biodiversity conservation are updated

Indicators: Published and adopted laws and regulations

Responsibility: EQA

Potential Funders: Italian or Swiss agencies, GEF

Notes and explanations: Review of laws and regulations done via consultancy to EQA, reviewed by an external consultant as part of this work

1.3 Protect the very limited forests remaining in Palestine and expand it with adaptive natural cover

Targets for Action: 2030: forest national strategy is adopted, forest law is adopted, increased forest inventory, enhanced studies of ecosystem services of the forest ecosystems; 2050: Increase forested areas from 4% to 6%

Indicators: Developed forest national strategy, forests are included in the new law and the law is approved, periodic reports on situation, published scientific papers related to forests in Palestine, and actual maps showing increase in forested areas.

Responsibility: EQA, MoA, NGOs, Research centers

Potential Funders: FAO

Notes and explanations: Inclusion of forests in the laws of protecting nature reserves, conducting environmental, biodiversity and soil biodiversity studies in the forests, cultivation of indigenous plants in forests, increasing their areas, and adopting important forests as nature reserves, ensure proper monitoring by rangers.

1.4 Develop Micro-Reserves (MRs) when it is impossible to protect large areas

Targets for Action: 2030: establishment of micro-reserves of key areas; 2050: MR are managed and protected

Indicators: Identification and announcement of micro-reserve; published studies of MR areas; adopted management plan

Responsibility: EQA, MoA, NGOs

Potential Funders: IUCN, CBD

Notes and explanations: MR most probably will be included in privately owned areas, or areas highly threatened by urbanization, the study of protected areas can help in pointing and selecting important micro reserves for consideration.

1.5 Develop biosphere reserves

Targets for Action: 2030: Two biosphere reserves established; 2050: Expand to other areas

Indicators: Number of biosphere reserves established; number of people and communities actively engaged, state of protection

Responsibility: EQA

Potential Funders: GEF, UNESCO

Notes and explanations: The point is to involve local communities in managing those by having instruments of income for them also and to ensure sustainable conservation and to be models for other areas; join the international biosphere reserves network:

<https://en.unesco.org/biosphere/designation>

1.6 Develop and implement plans for cross-border (trans-boundaries) cooperation especially in areas of KBAs and regions of special interest including exchange of expertise and knowledge and even joint management (e.g. Jordan River area with Jordan)

Targets for Action: 2030: Close cooperation with the Royal Society for Conservation of Nature and the Ministry of Environment in Jordan; 2050: Have functioning trans-border protected area

Indicators: Number of joint programs and activities concerned with nature conservation (the target value being 5)

Responsibility: EQA and regional partners

Potential Funders: GEF, CEPF, CBD

Notes and explanations: Political issues preclude cooperation with Israeli nature authorities. But a more regional strategic thinking to 2050 is warranted. EQA cooperates with the Arab League structures related to environmental issues.

1.7 Develop and implement plans to protect the most vulnerable species of large vertebrates

Targets for Action: 2035: Plan in place to protect key vulnerable species like Griffon Vulture and Leopard and Wolf

Indicators: Compare data gathered in 2025 to 2035 for 3-5 vulnerable species.

Responsibility: NGOs, EQA

Potential Funders: Zayed Conservation Fund, National Geographic Society, CEPF

Notes and explanations: Research studies should be done 2023-2025 assessing status and most vulnerable species to target

Target 2. Reclaim/protect 50% of freshwater degraded areas (springs like Al-Auja) by 2050 under scenario of sovereignty/independence. For scenario of lack of independence, protect 50% of those in areas A and B by 2030. For marine areas, develop management plan associated with good data collection by 2030 and have significant improvement in protection based on that study by 2050.

2.1 Develop and implement a program for preservation of key wetlands and freshwater sources like Marj Sanour, Marj Deir Ballot, Bassat Wadi el Mallaha, and springs

Targets for Action: 2030: Plan produced and funding sources secured; 2050: 4 wetlands actually protected and listed globally

Indicators: Published plans; documents of projects; regulations on the four areas

Responsibility: EQA with NGOs and academic centers

Potential Funders: GEF, CEPF, CBD, MAVA

Notes and explanations: Palestine should sign RAMSAR and follow RAMSAR guidelines; see also The Mediterranean Wetlands Initiative (MedWet)

2.2 Rehabilitate water springs and wells in areas of rich biodiversity

Targets for Action: 2030: At least three valley system springs are controlled and rehabilitated (Al-Qilt; Al-Auja and Fasayel); 2050: a total of 10 spring systems are actually rehabilitated in 10 protected areas

Indicators: Number of valley system springs that are protected after rehabilitation (target value for 2030: 3); Number of spring systems that are actually rehabilitated (target value 2050: 10).

Responsibility: EQA with NGOs and academic centers

Potential Funders: GEF, CEPF, CBD, MAVA

Notes and explanations: This is a challenge if occupation persists.

2.3 Protect 8-10% of the marine ecosystem off the coast of the Gaza strip

Targets for Action: 2030: Research studies concluded to determine best areas to protect & management plans developed & regulations introduced to protect the areas from fishing. 2050: Actual protection evident

Indicators: Plans published; stakeholder consultation evidence; research on marine biodiversity along the coast concluded

Responsibility: EQA with NGOs and academic centers

Potential Funders: CEPF, GEF, Marine Stewardship Council

Notes and explanations: Synergy with action to reduce pollution and prevent sewage dumping into the sea; Take measures to prevent damage of marine biodiversity in Gaza from gas drilling (this needs an Environmental Impact Assessment)

Target 3. Ensure active management actions to enable the recovery and conservation of species and genetic diversity of wild and domesticated species, including via ex situ conservation.

3.1 Create "greening belts" in order to combat desertification in particular near Mediterranean and Irano-Turanian areas including KBAs

Targets for Action: 2030: Develop green arcs especially on eastern slopes near Bethlehem and Hebron totaling 200 hectares with minimum 20,000 trees planted; 2050: Ten times the number done by 2030.

Indicators: Evidence of plantation and protection of planted trees (photos, documents/reports) of minimum 200 hectares

Responsibility: MOA, EQA, NGOs

Potential Funders: GFF, private sector and global funders

Notes and explanations: Use native species in planting, ensure protection of those from cutting and grazing. Educational programs to municipalities resulting in more logical greening policies (e.g. use of endogenous trees)

3.2 Create a central animal rehabilitation unit in Palestine

Targets for Action: 2030: Established central Animal Rehabilitation facility

Indicators: Evidence of operation and referral to the national center created

Responsibility: EQA and an interested NGO

Potential Funders: Global animal foundations, government, private sector

Notes and explanations: There are many resources on the web and in literature; Professional training is recommended and employment of wildlife veterinarian is needed as well as association with specialized academic center

3.3 Develop a comprehensive biodiversity survey including red listing plants and animals and updating vegetation maps

Targets for Action: 2030: A plan of research prioritization developed by an academic center or a research hub and approved by the government, research accelerating and focused on most threatened biodiversity areas (taxa and habitats)

Indicators: Plan & research data base published on CHM

Responsibility: NARC, Academic centers

Potential Funders: EU Horizon, GEF, Darwin Initiative, National Geographic Society, CEPF

Notes and explanations: Use GIS data and remote sensing, relate to phytogeographic zones; Need capacity building; Leverage the global taxonomic initiative.

3.4 Develop and implement plans to protect and enhance soil biodiversity

Targets for Action: 2030: A plan to conserve soil and soil biodiversity is developed, adopted, and implemented; 2050: Evidence of end of soil deterioration and reversal of trend onwards soil enrichment

Indicators: Plans adopted and implemented by MOA as evidenced by actions on the ground

Responsibility: MOA, EQA, farmers

Potential Funders: EU; GEF; Green Climate Fund

Notes and explanations: Increase planting natural plant in areas facing soil erosion to reduce this phenomena; swales and ditches to retain water; rebuilding/maintaining terraces; no use of pesticides or herbicides but use biological control etc.; see <https://www.soilver.eu/>; Soil Biodiversity Observation Network (Soil BON <https://geobon.org/bons/thematic-bon/soil-bon/>)

3.5 Implement environmental interventions within urban areas to provide habitats for the sustainability of biodiversity

Targets for Action: 2030: Master plans for all Palestinian communities developed and implemented to include green areas

Indicators: Approval of master plans by MOLG

Responsibility: MOLG, EQA, Local municipalities and village councils

Potential Funders: Green Climate Fund, Palestinian Government

Notes and explanations: Environment impact assessment planning should be done for urban development

3.6 Conserve plant stocks from which domesticated plants originated through seed and gene banking and establish a national botanical garden and develop existing ones including gene banks and seed banks

Targets for Action: 2030: Develop a management plan for all existing botanical gardens and strengthen their role in education; create one central botanical garden (suggested location Al-Qarn); Preserve endemic plants in gene banks for scientific research and development of crop cultivars in agriculture; Develop existing seed banks to include rootstocks for wild plants.

Indicators: One central garden and at least 4 other gardens in Palestine operational; Minimum two new seedbanks operational for both domesticated plant varieties and some rare wild plants.

Responsibility: MOA, EQA, NGOs, Academic centers, NARC, PARC

Potential Funders: BGCI, other international agencies

Notes and explanations: Ex situ and in situ conservation

3.7 Develop national red lists according to IUCN criteria

Targets for Action: 2030: Generate Red Lists for threatened Fauna, Flora, and Ecosystems

Indicators: Red lists generated for local threatened species and habitats per IUCN criteria

Responsibility: EQA, Academic and Research centers, NGOs

Potential Funders: CEPF, IUCN

Notes and explanations: See this link for how to create red lists

<https://docs.google.com/document/d/1b4iW9LemRI9J1VeINkML82Rrs7xsxcE2/edit>

Objective A2: Reducing the six major threats in Palestine affecting biodiversity (Climate Change, Habitat Destruction, Pollution, Overexploitation, Invasive Species, Israeli Colonization)

Milestone A5: By 2030 have structured strategies and SMART action plans to deal with the six major threats

Milestone A6: By 2030 have strong and enforced incentives and disincentives to result in 30% decrease in harmful practices

Target 4. Develop strategies with different scenarios and action plans to deal with threats of occupation and colonization to biodiversity

4.1 Develop a negotiation paper to be adopted by the PLO regarding nature areas and conservation in final status negotiations

Targets for Action :2024: Develop paper to highlight all issues for negotiations related to natural resources

Indicators :Plan developed and used by the Palestinian government

Responsibility :Need a good academic center collaborating with EQA

Potential Funders :EU

Notes and explanations:

4.2 Enhance studies and legal actions relating to occupation and colonization impact on the environment

Targets for Action: 2025: Have centers for study of both environmental impact of occupation and legal and other issues of environmental justice collaborate and produce publications that strengthens environmental justice

Indicators: Minimum three collaborating centers by 2025

Responsibility: EQA, Ministry of Foreign Affairs, Research and legal centers, relevant non-governmental institutions

Potential Funders: EU, individual foreign governments (Sweden, Swiss, Italy)

Notes and explanations: Previous efforts by some institutions were admirable but need to be taken to higher levels and integrated with policies/political issues

Target 5. Effectively manage human-wildlife interactions to avoid or reduce human-wildlife conflict

5.1 Reduce and eventually eliminate habitat degradation related to ecosystems (especially in KBA's & PAN)

Targets for Action: 2030: Net zero loss at 2030 of habitats for the most threatened taxa; 2050: gain in habitats by 5% over 2030

Indicators: GIS maps comparing 2025 to 2035 showing evidence, reports etc

Responsibility: EQA, MOA, MOLG, NGOs

Potential Funders: GEF

Notes and explanations: Focus on Eastern Mediterranean biodiversity; Watch for habitat fragmentation and follow guidelines from CBD and IUCN on habitat restoration

5.2 Set a management plan responsible for controlling fires to reduce habitat damage

Targets for Action: 2030: Plan developed with stakeholder support and in place and functional to control fires

Indicators: Plan adopted and certified by relevant authorities, evidence of implementation on the ground

Responsibility: Civil Defense, EQA, MOA, MOLG, municipalities and village councils

Notes and explanations: Develop local volunteer squads which include nature enthusiasts (because they will know what is happening on the ground and have passion for those areas)

5.3 Control domesticated and feral animals to reduce impact on the environment and human health

Targets for Action: 2030: Have minimum three centers for dealing with these animals (N WB, S WB, and Gaza) that do neutering and spaying and offer adoption services

Indicators: Three centers established and operational

Responsibility: MOLG, municipalities and village councils

Potential Funders: Animal welfare global funders, local people provide support and volunteering

5.4 Develop a program for assessment of wildlife impact on human health (zoonotics), wildlife harm to human health like snakebites, and otherwise minimize human-wildlife conflict

Targets for Action: 2030: Program established and implemented with known responsibilities

Indicators: Actual facilities with manuals of operations and publicized information as to who to go to address certain things (like pandemics, epidemics, snakes etc)

Responsibility: Civil Defense, EQA, MOA, MOH, specialized centers established (e.g. MOA's laboratories in Al-Arroub)

Potential Funders: WHO, UNEP, UNDF, GCF

Target 6. Ensure that the harvesting, trade, and use of any wild species is managed to protect biodiversity. Laws and policies are instituted to ensure sustainable and safe use for any allowed harvesting/trade/use and ensure enforcement of laws and regulations for protection.

6.1 Develop and implement program for control of trade in wildlife species and in excessive harvesting of wild plants

Targets for Action: 2030: Program introduced with specific responsibilities and implementation had commenced

Indicators: Evidence of implementation of program on the ground expanding on existing policies and procedure

Responsibility: EQA, Environmental Police, MOI

Potential Funders: GEF

Notes: Palestine to sign CITES agreement

Target 7. Control pathways for the introduction of invasive alien species, preventing, or reducing their rate of introduction and establishment and control or eradicate IAS to eliminate or reduce their impacts, focusing on priority species and priority sites

7.1 Adopt the national strategy on mitigating and combating invasive alien species and its action plans

Targets for Action :2030: Adopt the plan and implement it resulting in halt of spread of most invasive animal and plant species; 2030: Reverse the trend of presence and spread of any IAS

Indicators :Reports by relevant authorities with documentation for meeting relevant outputs in the national plan

Responsibility: EQA, MOA,

Potential Funders: GEF

Notes and explanations: Ensure implementation of the national strategy on invasive species by relevant authorities including EQA, MOA (specifically in nurseries); IAS list should be adopted based on scientific data and updated regularly, the list should prioritize most dangerous species, each species should have specified combating methodologies; Setting strict laws regarding the entry of animals and plants into Palestine without the presence of studies supporting the entry process.

Target 8. Reduce solid and liquid waste pollution by 30% by 2030 and by 60% by 2050

8.1 Develop and implement a plan to reduce and recycle organic solid waste

Targets for Action: 2030: Reduce percentage of solid waste that is organic from 60% of solid waste to 40% (composting the rest) and to 30% by 2050; implement NSSWM

Indicators: Records of amounts of solid waste kept by JSCs,

Responsibility: EQA, JSCs, MOLG

Potential Funders: GEF

Notes and explanations: Implement the National Strategy for Solid Waste Management

8.2 Develop and implement a plan to reduce and recycle non-organic solid waste

Targets for Action: 2030: Tax on single use plastics and metals adopted and implemented; Plan for recycling and recycling centers established

Indicators: Tax and plans show reduce use of plastics oviform 2025 to 2030

Responsibility: EQA, JSCs, MOE, MOHE

Potential Funders: GEF

Notes and explanations: Done through updates of laws and regulations, use f incentives and disincentives (for example on use of plastics). Implement the National Strategy for Solid Waste Management

8.3 Develop and implement a plan to reduce use of pesticides

Targets for Action: 2030: Plan adopted at MOA in partnership with MOE to 30% by 2030 and to 50% by 2050 compared to 2022-2023 levels

Indicators: Plan implementation and output measurements by MOA

Responsibility: MOA, MOE, EQA

Potential Funders: Public health funders

Notes and explanations: As part of this work, prepare and implement guidelines for Biological Pest Control to preserve agricultural crops from acquiring diseases and pests by minimizing the negative effects of chemical pesticides on environment and human consumption

Target 9. Minimize the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem-based approaches, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity.

9.1 Develop a concerted plan of water management systems and policies that conserves biodiversity and ecosystem services

Targets for Action: 2030: System in place; 2050: system implemented and monitored

Indicators: Government approved system with buy in from stakeholders

Responsibility: EQA, Water Authority

Potential Funders: World Bank

Notes and explanations: Follow national water strategies

9.2 Develop and implement a plan to monitor air pollution and controlling emissions based on new policies and procedures enforced by EQA in cooperation with other ministries.

Targets for Action: 2030: Policy document developed and implemented and enforced

Indicators: Evidence of implementation and control

Responsibility: MOT, EQA

Potential Funders: World Bank

Notes and explanations: If air pollution is cut by 50% modeling suggests premature mortality could decline by 220 and morbidity by 440 per year. Monetary benefit could be of 68 million euros per year.

9.3 Implement action plans described in the national strategy for climate change (EQA)

Targets for Action: 2030: Action specified in EQA 2016b are implemented for at least three sectors (suggested agriculture, transportation, energy)

Indicators: See EQA 2016 for specific action indicators

Responsibility: EQA

Potential Funders: GCF, World Bank

Notes and explanations: For background on scenarios and adaptation plans in different sectors see National Adaptation Plan to Climate Change

Target 10. Establish, strengthen capacity for, and implement measures to prevent, manage or control potential adverse impacts of biotechnology on biodiversity and human health, reducing the risk of these impacts.

10.1 Adopt and implement the national biosafety framework

Targets for Action: 2030: implementing the action plans specified in the Biosafety national plan 2021

Indicators: Evidence of policy and procedure change and centralized tracking (and transparency via CHM)

Responsibility: EQA, MOH

Potential Funders: WHO, World Bank

Notes and explanations: Requires formation of oversight committee and changes in some legislation and laws.

Target 11. Enhance responsible living including in production and consumption that strengthens both biodiversity and people's well-being

11.1 Create a national system of incentives and disincentives relating to biodiversity conservation

Targets for Action: 2030: System developed, set into laws and regulations. 2050: system implemented resulting in compliance of >90% of production and consumption that has net zero impact on local biodiversity

Indicators: Data on responsible consumption and production produced by MOE with monitoring by EQA show positive change

Responsibility: MOE, EQA

Potential Funders: None needed

Notes and explanations: Incentives like tax breaks for green technologies. Disincentives like costs/penalties for using plastics

11.2 Enhance the EIA procedures to include detailed actual field surveys for biodiversity

Targets for Action: 2030: Have new/updated & implemented policies and procedures for EIA at EQA and have a review every 2 years of all EIA decisions

Indicators: Records of review that shows actual studies and rational for approvals/disapprovals (actions taken) including compiling a public database

Responsibility: EQA

Potential Funders: Not applicable

Notes and explanations: Requires better regulations and enforcement

11.3 Publicize and implement the updated environmental law regarding the six threats that impact the Palestinian environment

Targets for Action: 2030: Law developed and implemented as are associated policies and regulations

Indicators: Evidence of law implementation via cases brought to court, penalties levied, and records of corrective actions

Responsibility: EQA, MOJ

Potential Funders: CEPF, GEF, EU governments

Notes and explanations: New law needs to be approved by government and educational program about it developed and implemented

11.4 Develop green buildings criteria to encourage the vertical urban expansion to increase the biodiversity inside the cities

Targets for Action: 2030: Reduce urban sprawl growth and have 20% of building follow PGBC criteria for green buildings

Indicators: Records of building licensure and approvals/disapprovals of building plans

Responsibility: MOLG, Municipalities, village councils, EQA

Potential Funders: Not applicable

Notes and explanations: Incentives and disincentives offered

11.5 Incorporate green design in public infrastructure (roads, public transportation, etc)

Targets for Action: 2030: Develop and implement plan for improving infrastructure via green design (e.g. light rails, biking, road infrastructure etc)

Indicators: Plan approved by government, funding sought/secured

Responsibility: MOT, EQA

Potential Funders: IMF, World Bank

Notes and explanations: Need to follow global guidelines

11.6 Reforming/regulating quarrying to ensure it does not affect PAs and biodiversity

Targets for Action: 2030: Quarrying is well regulated to have minimal impact especially near KBAs and Pas

Indicators: Evidence of enforcement and regulations being implemented on the ground

Responsibility: EQA, MOE

Potential Funders: Not applicable

Notes and explanations: Need to follow global guidelines

Goal B. Enhance ecosystem services (nature's contribution to people) and equitable benefit sharing

Objective B. Nature's contributions to people is valued, maintained or enhanced through conservation and sustainable use supporting the global development agenda with a substantial increase in both monetary and non-monetary benefits shared equitably.

Milestone B1. Nature and its contributions to people are fully accounted for and inform all relevant public and private decisions.

Milestone B2. The long-term sustainability of all categories of nature's contributions to people is ensured, with those currently in decline restored, contributing to each of the relevant Sustainable Development Goals.

Milestone B3. The share of monetary benefits received by providers, including holders of traditional knowledge, has increased equitably by 2030.

Milestone B4. Non-monetary benefits, such as the participation of providers, including holders of traditional knowledge, in research and development, has increased and improved in a fair and equitable way.

Milestone B5. Increase women participation in leadership positions by 2030. Increase children's awareness activities to reach 30% of all students (elementary, middle, and high school) by 2030

Target 12. Develop policies, procedures, and systems to enhance equitable benefits from nature (e.g. eco-tourism, medicinal plants, recreational activities, green spaces) while protecting biodiversity.

12.1 Develop ecotourism (including agrotourism) plan with an oversight board, to develop and mainstream ecotour paths while minimizing impact on environment

Targets for Action: 2030: Develop national ecotourism regulations and guidelines; applying national program for ecotourism training for tour guides; ecotourism in PAs is fully controlled by local municipalities; Reevaluate and update existing tour paths

Indicators: Guidelines for ecotourism developed, National training program developed, database for certified and licensed tour guides is developed, NGO's for ecotourism who have been duly trained (syllabus as evidence), existing tour paths have been evaluated (or reevaluated) included research on the biodiversity of the area

Responsibility: MOTA, EQA, NGO's, NEPTPO

Potential Funders: GEF

Notes and explanations: Better training and monitoring of tourist groups and tour guides, ecotourism offers many job opportunities; Reevaluate existing tour paths including for capacity; regulate group visits; instructions in path; divert to new alternative tourism programs (like agricultural tourism). Synergy with ideas of biosphere reserves.

12.2 Develop and implement plans for restoring and reusing traditional knowledge in enhancing agrobiodiversity, food security, and biodiversity conservation

Targets for Action: 2030: Plans are developed and implemented; Research enhanced in those areas

Indicators: Regulations and policies in place to help

Responsibility: MOTA, MOA, EQA, Academia, NGOs

Potential Funders: British Council Cultural Protection Fund

Notes and explanations: Biocultural work should be expanded; Develop training modules for local people to disseminate widely via social media that are culturally sensitive and that draws on the rich traditional knowledge and practices of our people (in the Fertile Crescent).

12.3 Increase participation of women's groups in ecosystem services such as embroidery of fauna and flora, ecotourism, poverty alleviation, etc.

Targets for Action: 2030: Develop and implement a national plan to increase women participation; hold minimum 100 workshops to encourage women participation in environmental conservation and ecosystem services

Indicators: Number of women involved increased dramatically over base-level of 2023

Responsibility: MOE, MOWA, EQA, NGOs, Academia, Women Cooperatives

Potential Funders: EU

Notes and explanations: Have quotas for support of women initiatives that promote women leadership. At all levels from women farmers, women entrepreneurs. In work with local communities near protected areas, women unions, women cooperatives, and others should be engaged in all stages of conservation from planning to actual protection to ecosystem services. Gender mainstreaming (GM) can improve community-oriented conservation outcomes because gender roles often shape values, knowledge, use, and access/control of environmental resources. As such, NGOs and other groups are advised to set specific gender mainstreaming policies. Examples: embroidery of fauna and flora, ecotourism, poverty alleviation, etc.

12.4 Develop and implement a program to educate all sectors of society on healthy living practices (these protect biodiversity)

Targets for Action: 2030: Develop and implement a national plan to increase awareness of these issues, Hold workshops to educate locals about healthy living practices

Indicators: Records of workshops, feedback on workshops (before and after evaluations)

Responsibility: Academia, NGOs, EQA, MOH, MOE

Potential Funders: WHO, FAO, UNEP, UNDP

Notes and explanations: Education on proper nutrition, organic foods, food conservation, health and exercise. Include ecosystem services in educational components in all levels of society from Childhood to elderly

Target 13. Develop sustainable agricultural production that ensures food sovereignty while enhancing biodiversity and providing fair and equitable benefit to all.

13.1 Develop a system that enhances agrobiodiversity for biodiversity protection and food production including for protection of local plant varieties and encouraging their cultivation.

Targets for Action: 2030: Increased awareness and knowledge of agricultural engineers and farmers about agricultural biodiversity and environmental principles; Review, evaluate and develop the university education system for agricultural engineers about flexibility in agricultural biodiversity and the introduction of environmental technologies in it

Indicators: Evidence of programs developed and implemented; networking possibilities; established seed banks and gene banks;

Responsibility: MoA, NGOs, MoHER, Academia, NARC

Potential Funders: FAO, World Bank, MOA, Private sector

Notes and explanations: Introduce the concept of practical equivalence between the diversity of agricultural crops and the diversity of living organisms in the same region and the study of the relationship between them. Development of implementation of new techniques to increase quantity and quality of food production, diversifying food products, reducing imports while increasing local output, tax incentives for agroproduction, development nodes for agriculture. encourage local seeds production and use among farmers; protect local baladi seeds and ensure sustainability of local baladi species through bank seeds and accessibility availability to farmers; raise awareness and knowledge regarding the importance of using local seeds ecologically and economically and socially; Capacity building in local seeds production and collection; collect and introduce seeds of edible wild plants to farmers; ensure optimal conditions of local seeds long term storage; Networking between seed bank and schools and different educational institutions for the use of local seeds produced in the bank; Marketing of the baladi seeds among society through success stories; support seeds bank to increase production of seeds to cover the local needs; encourage other seeds production projects commercially to increase the production for the local use; balance the baladi agriculture and the irrigated agriculture to cover the needs; produce educational resources like catalogs and research of the mechanism and use of the seeds; increase knowledge of identification of the baladi seeds; document the local tradition and heritage of the baladi seeds and traditional culture.; reintroduce Palestinian local species from international institutions of species not presented in Palestine today; create a national record of the seeds and to register it officially to protect the national local seeds as sovereignty action against Israeli attempts to own the species nationally.

13.2 Develop and implement programs to enhance eco-friendly agriculture, especially around olive trees

Targets for Action: 2030: Permaculture model farms (minimum 10) established as educational centers; Program developed and implemented by MOA to encourage ecofriendly agriculture; 2050: Aim for 40% of agricultural production to be eco-friendly

Indicators: Targets achieved as evidenced by records, documents, spot checks etc.

Responsibility: MOA

Potential Funders: FAO, GEF

Notes and explanations: Research on agriculture must be redirected to organic and permaculture methods; Map olive lands - where do we have ancient (معمّر) olive trees? - due to its high value; Improve olive value chain to help farmers in protecting olives and biodiversity; corridors of natural areas around olive farms,; ploughing minimized; diversified agriculture; Small scale (e.g. homes) and large scale systems are possible; Develop vermicomposting (worm fertilizer), and biochar (especially with red wiggler earthworms) technologies to reduce pollution and enrich agrobiodiversity

13.3 Encourage local production and consumption to ensure food sovereignty and to minimize impact on environment

Targets for Action: 2030: Plan for food sovereignty developed and began to be implemented

Indicators: Plan development records (with stakeholders)

Responsibility: MOA

Potential Funders: FAO, GEF

Notes and explanations: Use home gardens to enhance agrobiodiversity and food resilience, also use hydroponics and fish farming systems, also use programs to rationalize energy consumption and use alternative energy systems and use of water. Also encourage farmers to manufacture organic fertilizer from plant residues resulting from agricultural operations. Also raise awareness and education of cow farm owners about ways to benefit from the resulting manure and convert it into organic fertilizer

13.4 Implement more fair trade and organic agriculture including of diverse high value products

Targets for Action: 2030 Fair trade becomes well established and publicized and policies and procedures adjusted accordingly

Indicators: Procedures and policies records; show change in behavior and knowledge of fair trade

Responsibility: MOE, MOA, EQA

Potential Funders: World Bank, IMF, Governmental

Notes and explanations: Research is needed on fair trade practices and how to expand them in line of NBSAP. PCBS can do surveys. Need to be associated with education and awareness campaigns and capacity building (at all levels of society on subject).

13.5 Expand green spaces, community and home gardens, as well as other similar community initiatives in a biodiversity friendly way

Targets for Action: 2030: Develop a national program for expanding green spaces, and the program has started implementation in a pilot phase in a minimum of 10 communities especially around protected areas

Indicators: National program for expanding green spaces has been developed and the program records and data on implementation shared on CHM

Responsibility: EQA, MOA, MOPLH, MOE, NGOs

Potential Funders: GEF, FAO, EU and external funders

Notes and explanations: Research studies on this need to be done first to check best methodologies and potential beneficiaries (needs assessment). Examples actions can be done in rooftops in refugee camps, schools, and public facilities including government buildings, backyards and even walls.

13.6 Domesticate more wild varieties

Targets for Action: 2030: Develop a program for domestication of species, implement it, and disseminate knowledge

Indicators: Program established and supported

Responsibility: NARC (MOA), support from researchers at academic centers

Potential Funders: FAO

Notes and explanations: Utilize modern genetic approaches while guarding from technological dangers of modified genomes

Goal C. Research, mainstream and valorize biodiversity conservation at all levels of society in an inclusive and participatory manner

Objective C. Develop programs for capacity building, knowledge generation, and knowledge dissemination (awareness)

Milestone C1. New university level programs relating to biodiversity planned and introduced.

Milestone C2. Increased children education and awareness via both curricular and extracurricular programs.

Milestone C3. Increased research productivity in areas of biodiversity by 300% by 2030.

Target 14. Expand and modernize research of habitats, ecosystems, species and traditional practices and ensure that it is used and shared equitably in society.

14.1 Encourage and expand biodiversity research programs

Targets for Action: 2030: Increase research publications in relevant biodiversity areas by 300% facilitated by a centralized research hub created. Hub has policies, procedures and programs emphasizing most important areas of research; 2050: Research extended to cover all relevant areas focusing on conservation and education efforts.

Indicators: Research hub website and linked to CHM; Publications in reputable journals (minimum 120) and all publications related to Biodiversity shared on CHM; there is evidence of bridging science-policy-gap by showing use of research in setting national policies and producing actions on the ground;

Responsibility: EQA, MOA, MOHER, MOH, academics

Potential Funders: Over 100 funders including EU, GCF, WWF, IUCN, Darwin initiative, National Geographic Society.

Notes and explanations: Research data collection need to be based on mapping and assessment. There needs to be research on ecosystem services including on a) how, when and where are ecosystem services co-produced by social– ecological systems; b) who benefits from the provision of ecosystem services; and c) what are the best practices for the governance of ecosystem services. Carry out scientific research, including an inventory of alien species. Seek support via groups like <http://www.scientists4palestine.com/>. Awareness of the local community about not linking scientific research to the existence of external funding, in light of the possibility of conducting scientific research and publishing its results without the need for funding; Research examples include: 1) protected area studies that enhance conservation; 2) alien invasive species, with distribution maps, including eradication methods, and potential threats, and impact on the environment, biodiversity, and humans; 3) threatened habitats & ecosystems; 4) ecosystem services; 5) soil biology and biodiversity, 6) eco-friendly land rehabilitation, 6) wild origins of plants in Palestine and their locations; 7)

pollinators 8) agricultural biodiversity, 9) use of molecular methods (including eDNA and metabarcoding, 9) zoonotic and adverse human-wildlife interaction, 10) pedagogical research on the impact of environmental awareness

14.2 Develop biodiversity capacity building (research and practice) and mainstreaming programs that ensure gender equality

Targets for Action: 2030: National Biodiversity Oversight Committee facilitates creation of academic body for biodiversity capacity building and develop programs at academia and NGO; Program developed and implemented to encourage relevant applied research and capacity building

Indicators: Programs functioning and graduating knowledgeable individuals. Data on program, participants, beneficiaries, stakeholders

Responsibility: MOHER, MOE, EQA and CSOs, NGOs, PALAST, Academia

Potential Funders: EU Horizon, ERASMUS+

Notes and explanations: Ensure capacity building is gender neutral and encourage more women in the scientific areas of biodiversity

14.3 Develop a functional Clearing House Mechanism (CHM) that serves all needs for biodiversity areas (education, conservation, knowledge acquisition and dissemination, resource mobilization)

Targets for Action: 2030: Create a categorized section on the CHM for a digitized field guide; All NGO's should send their reports to the EQA, and the EQA will update the CHM annually based on the work done by the NGO's; Have 8 Cash/Camera Gear prizes for the 8 most active photographers on the CHM each year. 2050: Have an electronic field guide for all flora and for all fauna of the State of Palestine

Indicators: CHM up and running and enriched with data and photographs especially of threatened species; CHM used to write national reports; Wildlife photographer's knowledgeable about the usage of it

Responsibility: EQA

Potential Funders: UNDP, UNEP, Hanns-Seidel; Belgians

Notes and explanations: Establishment of special thematic sections on the CHM: such as a kids' section, a section on ABS and the Nagoya Protocol, a section on water or waste, a section on eco-tourism, a section on wildlife photography, etc. This should involve streamlining and integrating the national management of biodiversity information.

14.4 Expand existing institutes of biodiversity and establish other similar centers

Targets for Action: 2030: Existing institutions grew in productivity and resources (staff, finances) and 3 more institutions are created; 2050: existing institutions expand in ways that serve society and nature's needs

Indicators: Institutional websites and their annual reports

Responsibility: EQA, NGOs, Academic centers

Potential Funders: Many

Notes and explanations: Ensure geographic representation (north WB, south WB, Gaza).
Get government support.

14.5 Create a database of medicinal and herbal plants including methods of conservation

Targets for Action: 2030: Database completed and shared on CHM

Indicators: Publicly available database

Responsibility: NARC (MOA), Academic centers, NGOS

Potential Funders: Many

Notes and explanations: Ensure scientific principles and confirmation for data before publishing

14.6 Develop programs to ensure women hold minimum 40% of conservation jobs (at government and non-government levels) and participate equitably and share benefit (monetary and non-monetary) from biodiversity resources and knowledge generation

Targets for Action: 2030: Program developed jointly by MOWA & EQA to involve women and is implemented with relevant regulations and guidelines publicized/disseminated

Indicators: Program publications and communication evidence

Responsibility: MOWA, EQA

Potential Funders: Many

Notes and explanations: Can introduce guidelines as in municipal elections for minimal female representation

14.7 Install weather stations across all habitats and make use of the remote sensing and GIS data.

Targets for Action: 2030: All protected areas have weather stations installed nearby and GIS/Remote sensing is used to centralize data in synchrony with CHM

Indicators: Number of weather stations installed; quantity and quality of data collected and evidence use of the data in research and conservation

Responsibility: EQA, Palestine Meteorological Center, Academic centers

Potential Funders: Swiss government and other European government

Notes and explanations: Weather stations to be checked as operational (by EQA) and data should be made public.

Target 15. Mainstream biodiversity to all sectors of Palestinian society ensuring action plans that result in tangible and measurable protection of biodiversity.

15.1 Use of locals in the data collection process as a method of mainstreaming and upload to CHM and/or available data acquisition portals

Targets for Action: 2030: Develop and implement a program to encourage locals and wildlife naturalists to work together with professionals and share their data (esp. photos) to advance conservation efforts.

Indicators: Data uploaded on CHM, iNaturalist, observation.org etc. from amateur naturalists in Palestine (checked by professionals). Workshops records.

Responsibility: EQA

Potential Funders: National Geographic

Notes and explanations: Use the CHM to create a local hub for the local wildlife photographers and have thematic areas in the CHM (e.g. children, women); Hold workshops to emphasize the importance of wildlife photography and build capacity of documentation (methods of documenting, habitats, angles, location, threats) , Introduce courses and workshops related to wildlife photography at Palestinian universities. Collect and collate available data for fauna, flora and habitats and enter them into global databases such as GBIF, and link them to local databases; Create a hub for local wildlife photographers; Network our wildlife photographers with international wildlife photographers; Have competitions which aim at highlighting and supporting talented wildlife photographers, which will increase awareness regarding the importance of their work. Have page on the CHM to highlight nature enthusiasts. Develop a vision in the strategy for the way to benefit from documenting wildlife by photographers and those interested in scientific research; Update data on Wikipedia.

15.2 Develop new programs (curricular and extracurricular) in Palestinian universities in areas of biodiversity and sustainability

Targets for Action: 2025: Study to outline needs of university (needs assessment), 2030: Programs approved by relevant bodies and implemented

Indicators: Programs started and students are enrolled in it, published studies

Responsibility: Universities (approval by ministry), MOE. MOHER

Potential Funders: Erasmus+

Notes and explanations: Try to avoid redundancy of programs, study market needs (NBSAP helps to look at actions and people need to implement actions going forward to 2050). develop educational modules more relevant and cause long term changes; ensure that education content reflect the environmental reality of Palestine and the world; introduce educational tools and skills which increase awareness of the young generation ; make a difference ; the environment; develop formal and informal environmental education modules and unites with minimal costs that enable schools and institutions. New educational units should be in parallel with the formal curriculum; train teachers in practical workshops ; develop and ; teach educational modules; monitor and evaluate the educational units periodically for better performance and update; engage and include community for raising awareness on the importance of education in protecting biodiversity; engage media as educational tool for raising awareness; develop online electronic content for educational education

15.3 Develop and implement the mass communication strategy and action plans for mainstreaming biodiversity through the media.

Targets for Action: 2030: Reach minimum 40% of Palestinians with messages that enhance biodiversity conservation

Indicators: Mainstream and social media coverage

Responsibility: MINFO, EQA, MDC, NGOs, Academia

Potential Funders: Many

Notes and explanations: Media actions should focus on measurable change in behavior.

15.4 Develop programs with ministry of education to change Palestinian school curricula and enhance extra-curricular activities including environmental clubs.

Targets for Action: 2030: School curricula reviewed by MOE/EQA with experts; extra-curricular programs evident in more than 30% of schools

Indicators: Before and after school curricula showing change to increase biodiversity conservation

Responsibility: EQA, MOE, MOHER, Experts

Potential Funders: Many

Notes and explanations: Involve students in practical experiences and observations about the environment and biodiversity to enhance environmental understanding. Also direct school trips for schools to environmental centers for environmental awareness and education. Ensure equity and reach to marginalized communities and schools.

15.5 Make yearly and monthly national themes for biodiversity as well as calendar of key days for biodiversity.

Targets for Action: Start in 2024 (develop plan in 2023) and ongoing after

Indicators: Actual record of thematic work activities by stakeholders

Responsibility

Led by EQA but involve all stakeholders and all ministries (esp. MINFO)

Potential Funders : Not needed

Notes and explanations: Example each month highlight one invasive species (Myna bird, haven tree) with invasive species as a yearly theme (can cover 12 topics with actions for each). See <https://www.cbd.int/biodiversity-day/celebrations>

15.6 Develop programs to integrate biodiversity values into university systems at all levels (staff, faculty, students) including developing green academic institutions

Targets for Action

2025: Programs developed and adopted by leadership of universities (Presidents meet regularly)

Indicators

Evidence of programs, minutes of meetings, actual implementation starting

Responsibility

Council of university presidents, university administrators

Potential Funders: Not needed

Notes and explanations: This can be in the form of workshops that result in green campus initiatives, green clubs, etc. Can also involve all faculties (especially sciences) and specialized campus institutions like PIBS

15.7 Develop youth programs including by use of museums of natural and cultural heritage as well as botanic gardens

Targets for Action: 2030: Setup two new educational museum/institutes in Palestine; Use mobile educational units to reach a minimum 40 marginalized communities; Develop minimum 100 educational modules related to ethnoecology that are transmissible through mobile educational units (games, short videos, banners, brochures, etc.); 2050: At least one large national museum and five local museums; Mobile educational units to reach all marginalized communities in Palestine;

Indicators: Evidence of new institutions, new programs, and number of beneficiaries increased dramatically (100% by 2030)

Responsibility: MOC, MOTA, MOA, EQA, Existing facilities, NGOS

Potential Funders : Many

Notes and explanations: Data gathering especially on areas like inclusivity of marginalized/disenfranchised youth. Formation of more youth environmental clubs. Museums and exhibitions work on collecting cultural heritage related to nature and agriculture and promoting this concept in Palestinian community, in addition to reflecting this heritage through educational exhibitions. Remind people of heritage as part of Fertile Crescent; Collecting and documenting ethnoecological heritage and making it available to the community to add to it and benefit from it, use ethnoecology in promoting and encouraging agricultural tourism to develop local communities and increase their income, cultural heritage can be promoted and enhanced through museums and exhibitions. Educational awareness related to traditional, native, and green agriculture. Involve MoE and make sure visits to such museums and gardens are integrated in school and university education, Develop a network of such facilities with government involvement and support.

15.8 Designate other national fauna and flora similar to the Sunbird (national bird) and Faquaa Iris (national plant)

Targets for Action: 2030: National designation for mammal, insect, reptile, fish

Indicators: Adopted national new animals by 2030 and programs to disseminate info on them under way

Responsibility: EQA

Potential Funders: Not applicable

Notes and explanations: Put on national stamps, billboards, highlight in protected areas etc.

Goal D. Improve governance, partnerships, and resource mobilization

Objective D1. Bridge science-policy-practice gaps

Milestone D1. By 2030, new systems are developed and implemented (e.g. via documentary evidence) that improve performance of governmental, academics, and NGOs

Milestone D2. Create a biodiversity board composed of key stakeholders that oversees the implementation of the NBSAP

Milestone D3: Develop & implement effective strategies and action plans that are science based to influence policy.

Milestone D4. Develop & implement effective strategies and action plans that ensure policies (including laws and regulations) are implemented

Target 16. Restructure entities that are engaged in biodiversity research, education, and conservation and connections between them to be more effective as a conservation network by (among other things) creating channels of communication, joint capacity building, mergers of entities, creation of new entities and NGOs in deserving areas, and management restructuring in the EQA and areas of other ministries related to biodiversity.

16.1 Create a National Biodiversity Oversight Committee (NBOC) of effective partners and stakeholders to manage and implement NBSAP

Targets for Action: 2030: NBOC is created of representative stakeholders, and is ensuring that all action plans are being implemented; 2050: NBOC continues to oversight the implementation of the NBSAP Action Plans

Indicators: Bylaws of NBOC adopted and published; meetings with relevant stakeholders with meetings minutes showing actions

Responsibility: EQA with key stakeholders

Potential Funders: None (voluntary)

Notes and explanations: Bylaws should include responsibility, composition, who does it answer to (EQA office), TOR, etc. NBOC should also be empowered to ensure M&E of NBSAP implementation and report regularly on progress to all relevant entities/ministries/NGOs etc.

16.2 Increase capacity building for government officials related to biodiversity

Targets for Action: 2030: Develop and implement a program that reaches at least 5 key people from each ministry plus 2 people from each governor's office to ensure biodiversity conservation and sustainability; 2050: the capacity building program reached to >90% of government officials including municipalities and village councils

Indicators: Program training material (including syllabus, subjects, videos, power points etc.); Program attendance sheets; inclusion of biodiversity in other governmental strategies

Responsibility: EQA with support from Academic centers

Potential Funders: GEF, EU, Governments

Notes and explanations: To facilitate, maybe develop training video and disseminate it

16.3 Develop programs for training school teachers and professors to teach courses and modules related to biodiversity

Targets for Action: 2030: Develop and implement a ToT program that reaches science school teachers and professors; Training modules developed and disseminated; 2050: All science teachers received capacity building on biodiversity;

Indicators: Actual training material (including syllabus, subjects, videos, power points etc.); Program attendance sheets, records of training workshops

Responsibility: EQA, MOE, MOHER, academic institutions and centers

Potential Funders: GEF, EU, Governments

Notes and explanations: To facilitate, maybe develop training video and disseminate it

16.4 Revisit signed agreements and put biodiversity issues on agenda of negotiations over our natural resources

Targets for Action: 2030: Palestine has withdrawn from any signed agreements that harm the environment and developed plans and negotiation positions over natural resources

Indicators: Decisions taken by PLO and the State of Palestine documented and disseminated

Responsibility: EQA gives recommendation to PLO including Negotiations Affairs Department who are responsible

Potential Funders: EU

Notes and explanations: Some agreements are harmful to the environment like the Paris agreement (Annex to Oslo accords) and should be withdrawn from. Other issues should be included as part of negotiations and insisted on (e.g. retention of all protected areas and Jordan River basin - which should also be allowed to reflow).

16.5 Join four international treaties after ensuring proper mechanisms for compliance and benefits: Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Wetlands (RAMSAR) 1971, CMS (Convention on Migratory Species) - Bonn, and Agreement on the Conservation of African-Eurasian Migratory Waterbirds.

Targets for Action: 2030: Four agreements (Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Wetlands (RAMSAR), Convention on Migratory Species (CMS) - Bonn, and Agreement on the Conservation of African-Eurasian Migratory Water birds) have been joined including articulating mechanisms of compliance, benefit and obligation analysis; 2050: Full compliance is made towards the signed international agreements;

Indicators: Actual signed agreement and ratification; reports submitted for signed conventions

Responsibility: EQA with Palestinian Presidency

Potential Funders: None

Notes and explanations: The chosen agreements have significant benefits.

16.6 Reforming governance and administrative organization of relevant sections of EQA, MOA, and NGOs to ensure efficiency and efficacy of operations related to biodiversity conservation

Targets for Action: 2030: New organizational structures developed and implemented at EQA, MOA, and key willing NGOs

Indicators: Evidence of operational efficiency and efficacy by data

Responsibility: EQA, MOA, NGOs

Potential Funders: USAID, EU (good governance programs)

Notes and explanations: Transparency and democracy are essential for conservation

16.7 Develop programs to encourage further work via regional and global networking with relevant entities (planetary responsibility).

Targets for Action: 2030: Develop and implement a program to ensure that Palestine is networked with double the number of now-existing global organizations effectively in ways that advance both local and international conservation efforts;

Indicators: Program is developed and being implemented, List of global organizations, networks, signed MOUs,

Responsibility: EQA and relevant local stakeholders

Potential Funders: Not applicable

Notes and explanations: Palestinians involved in biodiversity attend conferences abroad to network on topics of biodiversity

16.8 Develop NGOs and introduce branches of existing environmental institutions in poorly served areas

Targets for Action: 2025: A study on the niches of biodiversity where new NGOs are needed is done; 2030: Strategy developed and implemented to strengthen and empower existing and newly developed NGOs

Indicators: Evidence of increased efficiency and productivity via annual reports and summary reports from EQA; New NGOs created;

Responsibility: EQA and NGOs

Potential Funders: GIZ, HSS

Notes and explanations: Insistence by EQA and other government regulatory agencies on transparency, collaboration, and work that is in line with NBSAP

16.9 Developing plans for regular contact between researchers and policy makers to ensure that the gap between science and policy is bridged

Targets for Action: 2030: Regular and functioning channels of communication are in action

Indicators: Evidence provided by policy being guided by research (overseen by NBOC)

Responsibility: EQA, NBOC, Academics/researchers

Potential Funders: GEF, GIZ

Notes and explanations: Requires significant effort and insistence to ensure inclusion of science in decision making and execution

16.10 Provide legislative and outreach actions to private sector to encourage green and biodiversity protective business practices

Targets for Action: 2030: Have system in place networking with private sector and beginnings of actions to have green private sector with at least 5 institutions following green practices; Create an incentive system to encourage green investments and practices

Indicators: System in place; records kept, number of modular institutions following green practices

Responsibility: EQA, MOE, Private sector

Potential Funders: GEF, GIZ

Notes and explanations: Requires incentives and disincentives

Objective D2. Mobilize resources (financial and otherwise) to achieve mission

Milestone D5. Adequate financial resources to implement the framework are available and deployed, progressively closing the financing gap

Milestone D6. Adequate other means, including capacity-building and development, technical and scientific cooperation and technology transfer to implement the framework for 2030 are available and deployed.

Target 17. Increase financial and non-financial resources for biodiversity in SP (doubled by 2030 and quadrupled by 2050).

17.1 Develop an Environmental Trust Fund (ETF) to support local campaigns and environmental projects

Targets for Action: 2030: Develop Environmental Trust Fund of \$1 million annually that is not depended on restricted donations -to be managed by the NBOC for urgent and emerging projects; 2050: fund is raised to \$3 million annually

Indicators: The Environmental Trust Fund has been developed; local campaigns and projects implemented via the ETF

Responsibility: EQA, NBOC

Potential Funders: World Bank; GCF, UNDP, Palestinian Government

Notes and explanations: Submit proposals for funding the environmental trust fund which will provide fund for local action oriented campaigns that aim for protection, restoration, sustainable development, conservation, or education. Make an agreement with the government to provide funding for such fund. Network with internationals to ensure a sustainable funding of this trust fund. We can use the (not-yet-developed) funder's database to network with different funders. Then we need to advertise the trust fund, and fund matters in a prioritization manner; Environmental fines should go into designated account for environmental uses; Governmental support to develop small and medium agri-food enterprises, cooperatives, consortia and clusters, as well as social protection programmes; Attracting funding to bring in fermentation units at the level of residential communities that contribute to reducing waste output. Setting up mechanisms for connecting funders with stakeholders, mechanisms for M&E, mechanisms for alignment with NBSAP.

17.2 Marshal global and local resources available for local biodiversity and makes Palestinian biodiversity globally visible.

Targets for Action: 2030: Plans created and implemented to marshal resources globally and locally for local work and a program of networking to have global influence; 2050: Local biodiversity is well represented regionally and globally

Indicators: Plan shown to be created and is working; Palestinian biodiversity has gained attention regionally and globally through financial support, increased twinning programs and international partnerships/memberships; increased volunteer support from abroad and locally

Responsibility: EQA, Academics/researchers

Potential Funders: World Bank, GEF, CEPF

Notes and explanations: Include issues like institutional partnerships, twinning programs, membership in international organizations. There are also opportunities to get volunteer support from abroad and locally.

17.3 Develop capacity for project fundraising and management in biodiversity stakeholders especially for women.

Targets for Action: 2030: Hold a minimum of 30 workshops on fundraising, project design, project implementation, and in M&E to aid local groups achieve the NBSAP benefitting males and females equally; 2050: Hold a minimum of 100 workshops on fundraising, project design, project implementation, and in M&E to aid local groups achieve the NBSAP benefitting males and females equally and ensure equality of biodiversity project management from both genders

Indicators: Records of successful training (gender ratio 50:50), before and after surveys

Responsibility: EQA, Successful project holders

Potential Funders: GIZ

Notes and explanations: Create a database with a list of potential donors for funding, capacity building also for all people to network and recruit resources.

17.4 All budgets for projects and institutions dealing with biodiversity should be transparent and publicized including their outputs and outcomes (including on CHM).

Targets for Action: 2030: All institutions have publicized their projects including outputs and outcomes via publishing on their website and the CHM website;

Indicators: Records summarized on CHM, links to websites of institutions where all data should be visible

Responsibility: EQA

Potential Funders: Institutional funds

Notes and explanations: Transparency and effective expense budgets is the best guarantee for continued and increased funding

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