



AGRICULTURE SECTOR

Green Growth National Action Plan 2021-2025



14 PRIORITY ACTIONS for implementation in the 2021-2025 period:



7 investment preparation and demonstration actions

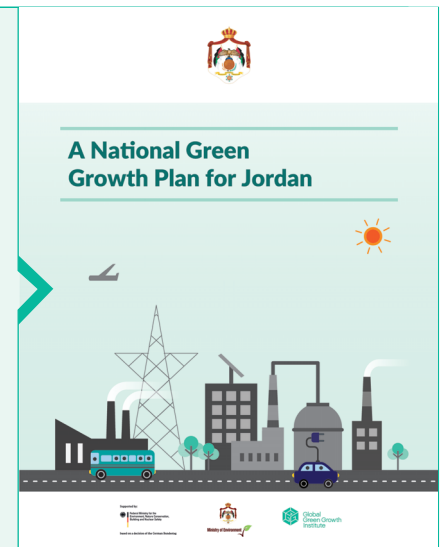
7 enabling policy and institutional reform actions



About National Green Growth Plan for Jordan

The NGGP charts out a plan for Jordan to achieve an expanding yet sustainable and resilient economy that ensures the creation of green jobs for its citizens and increased investment in green projects. The NGGP uses a cost-benefit analysis approach to identify the challenges and opportunities for project implementation and focuses on tackling these barriers in the six green growth sectors: Agriculture, Energy, Tourism, Transport, Waste and Water. **Four driving principles of green growth are identified and mainstreamed across the actions in the Green Growth National Action Plan 2021-2025:**

- Transparent governance processes and enforcement of legislation
- Mechanisms to incentivize green growth
- Integrated planning processes that value societal impacts
- Behavior shifts and capacity building



Implementation of these actions will contribute to the Agriculture Sector Green Growth SubObjective and the following:



Increase investment in future-oriented techniques, technologies and business models that will contribute sectoral growth.



Improve the processes and tools at government's disposal for sectoral planning across the full agricultural and food production value chain, from farm to market.



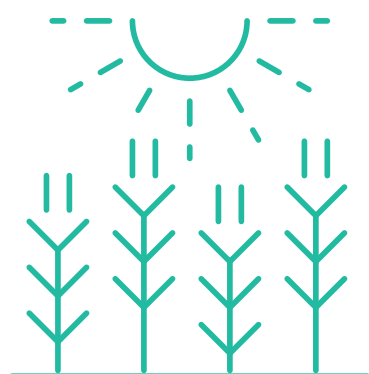
Reduce environmental impact of the sector by mainstreaming landscape restoration, forestry and resource efficiency measures into agriculture sector activities.



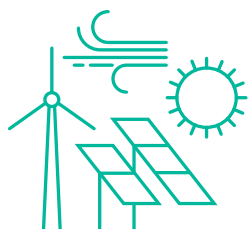
Increase opportunities for farmers and rural communities to improve their skills and access to finance to promote sustainable livelihoods and decent, green jobs in the sector.



The following table, which shows **the agriculture sector green growth actions**, can be used by action owners to begin **project proposal formulation** for the purpose of mobilizing public budget or external grants, loans or other financial support for implementation. It is understood that detailed implementation approach, outputs, timeline, budget, and stakeholders may change depending on the source of finance during the process of implementation.



| # | Action Title | Total Estimated Implementation Cost (USD) |
|------|--|---|
| AG01 | Design and implement capacity building program for green growth planning and implementation in the agriculture and forestry sector | 1,500,000 |
| AG02 | Mainstream green growth into the provision of agriculture extension services and explore options to improve their long-term sustainability | 5,000,000 |
| AG03 | Map and optimize research to impact pathways to improve relevance of innovation efforts in the agriculture sector | 2,000,000 |
| AG04 | Undertake sector reforms to improve access to finance for small farmers | 3,500,000 |
| AG05 | Develop a flexible crop planning and variety selection methodology and decision-making process based on crop-per-drop and economic competitiveness | 7,500,000 |
| AG06 | Design and implement program support demonstration resource efficiency projects in the olive cultivation and oil production sector | 25,000,000 |
| AG07 | Develop and implement pipeline of projects (all sizes) and policy recommendations to increase use of aquaponics and hydroponics in urban and rural areas | 21,000,000 |
| AG08 | Conduct national prefeasibility and market assessment to measure and leverage agriculture sector biowaste to resource potential | 11,500,000 |
| AG09 | Develop a long-term agriculture sector market development strategy and action plan (rationalizing and directing domestic consumption, export, imports) | 2,000,000 |
| AG10 | Upgrade packaging, scaling, storage and cooling of fruits and vegetables managed by the private sector | 15,200,000 |
| AG11 | Promote the development of organic agriculture through knowledge exchange and market development | 1,700,000 |
| AG12 | Establish an agricultural insurance company and develop agricultural risk mitigation strategy | 52,000,000 |
| AG13 | Develop and implement a National Afforestation Program in Jordan | 40,000,000 |
| AG14 | Support rural green growth and employment through ecosystems restoration | 6,000,000 |



Purpose & Objectives of Agriculture Sector Green Growth Actions

| # | Purpose/Objectives |
|------|--|
| AG01 | Design and implement capacity building program for green growth planning and implementation in the agriculture and forestry sector. |
| | The purpose of this action is to strengthen agriculture sector governance by building a shared understanding and vision for green growth among sector stakeholders through building the capacity of government decision makers to apply evidence-informed decision making. |
| | <ul style="list-style-type: none"> • Increase awareness of the role of the agriculture and forestry sectors in supporting climate change mitigation and adaptation, competitiveness, as well as sustainable consumption and production. • Improve the quantity and quality of data collected in the agriculture and forestry sectors to measure water and energy use, environmental quality, and climate resilience. • Link specific data points to green growth objectives, clarifying decision making procedures for key issue areas, and systematizing the use of this data in decision making. • Improve coordination and collaboration between government, private sector, and research to improve policy and investment decision making. |
| AG02 | Mainstream green growth into the provision of agriculture extension services and explore options to improve their long-term sustainability. |
| | The purpose of this action is to increase the quantity and quality of Jordan's agricultural extension services and explore the options for expanding access to extension services. |
| | <ul style="list-style-type: none"> • Green growth concepts mainstreamed into the extension services strategy and action plan for the MoAg. • Ensure stronger link between MoAg's green growth objectives and activities taking place on farms. • MoAg's extension agents are sufficiently trained and prepared to deliver high-quality, high impact support to farmers. • Identify opportunities for private sector development of agricultural extension and advisory services. |
| AG03 | Map and optimize research to impact pathways to improve relevance of innovation efforts in the agriculture sector |
| | The purpose of this action is to improve institutional coordination and increase effectiveness of agricultural research and innovation activities taking place in the Kingdom. |
| | <ul style="list-style-type: none"> • Increase awareness and knowledge sharing around research and innovation efforts being conducted in Jordan. • Increase the effectiveness of all national research and innovation efforts being conducted for the agriculture sector. • Identify solutions to private sector challenges to achieving agriculture sector growth and modernization while ensuring natural capital is maintained. • Develop recommendations for TVET and education sectors on reforms needed in training and education curricula to support research to impact pathways. |

| # | Purpose/Objectives |
|------|--|
| AG04 | Undertake sector reforms to improve access to finance for small farmers |
| | The purpose of this action is to increase the amount of finance available to farmers, Small and medium-sized enterprises (SMEs) and larger agro-processing companies to upgrade technologies to become more resilient to climate change, to achieve cost savings through resource efficiency, and to promote productivity (improving profits and revenues). |
| | <ul style="list-style-type: none"> Reduce the vulnerability to climate change of Jordan's agricultural system, particularly from its impacts on water resources, by testing innovative and efficient water-use technologies. Promote technically reliable, economically competitive, clean, and sustainable irrigation technology for the agricultural sector in different agro-climatic regions in Jordan. Create awareness among the farming community of the need to adopt new technologies and ways to improve their use of such technologies. |
| AG05 | Develop a flexible crop planning and variety selection methodology and decision-making process based on crop-per-drop and economic competitiveness |
| | The purpose of this action is to empower decision makers in the MoAg with the necessary data and analysis to better organize and enforce agricultural production in Jordan. |
| | <ul style="list-style-type: none"> Increase the crop-per-drop efficiency of water used in the agriculture sector. Promote the use of data and simulation models for improved crop planning. |
| AG06 | Design and implement program to support demonstration resource efficiency projects in the olive cultivation and oil production sector |
| | The purpose of this action is to improve resource efficiency in agricultural subsectors, starting with the olive sector, one of the most important and potentially profitable agricultural sub-sectors. |
| | <ul style="list-style-type: none"> Grow Jordan's business case for the olive value chain, and enhance Jordan's market share of the international olive and olive oil market. Establish the business case for greater investment in resource (water, energy and waste) efficient cultivation and production. Increase awareness among olive farmers and olive oil producers about the green growth challenges and opportunities associated with their sub-sector. Demonstrate proof of concept on a group of olive farms and olive oil production facilities. |
| AG07 | Develop and implement pipeline of projects (all sizes) and policy recommendations to increase use of aquaponics and hydroponics in urban and rural areas |
| | The purpose of this action is to identify the policy and investment parameters for the scale up of investment in soilless agriculture, specifically hydro and aquaponics, and to prepare a pipeline of projects that will catalyze a sector level shift away from business as usual and towards greater water efficiency. |
| | <ul style="list-style-type: none"> Support the scale-up of hydroponics and aquaponics production of relevant crops to increase irrigation efficiency and productivity in the agriculture sector. Identify policies and incentives needed to encourage urban and rural use of hydroponics and aquaponics for food production. Identify short- and medium-term targets for expansion of hydroponics and aquaponics, as well as stakeholders/institutions required to support implementation. |
| AG08 | Conduct national prefeasibility and market assessment to measure and leverage agriculture sector biowaste to resource potential |
| | The purpose of this action is to assess the market for such interventions and identify the investment and policy parameters needed to implement different types of waste-to-resource interventions. |
| | <ul style="list-style-type: none"> Identify the opportunities to promote circular economy through agricultural biowaste reuse. Identify the necessary policy measures and incentives required to scale up implementation of agriculture sector biowaste-to-resource projects (such as biogas generation, compost and fertilizer production, etc.). |

| # | Purpose/Objectives |
|------|---|
| AG09 | Develop a long-term agriculture sector market development strategy and action plan (rationalizing and directing domestic consumption, export, imports) |
| | The purpose of this action is to bring together national stakeholders in the government and private sector responsible for planning, cultivating, and marketing agricultural products, as well as those responsible for using, consuming or exporting agricultural products in order to improve the environmental and economic efficiency (and productivity) of the sector. |
| | <ul style="list-style-type: none"> • Institutionalize and regulate the export of agricultural products using standardized and efficient methods, and establish a market intelligence system to capture full knowledge of the requirements of foreign markets and the quantities, dates, and specifications needed by these markets. • Increase the value added of agricultural products, their exports and enhances the importance of the agricultural sector within the national economy while at the same time benefiting investors, farmers, and exporters. • Increase the proportion of Jordanian agricultural exports to European and Russian markets by %10 from the 2019 baseline. |
| AG10 | Upgrade packaging, scaling, storage and cooling of fruits and vegetables managed by the private sector |
| | The purpose of this action is to mobilize investment in state-of-the-art sorting, packaging, and wholesale vending facilities for fruits and vegetables. |
| | <ul style="list-style-type: none"> • Establish better understanding, through scientific research, of the specific regional and national needs to grow the revenues of Jordan export of fresh vegetables and fruits. This should be at value chain-level, and should cover at least the needs to upgrade products' harvesting, temporary storage conditions, quality assurance, packaging, storage and cooling, transport, branding and marketing, etc. • Improve quality control, food safety, and hygiene of fruits and vegetables grown in Jordan by increasing the quality and quantity of facilities to check the quality of products and its packaging, to properly scale, store and cool them. • Achieve water and energy resource efficiency across all sorting, packaging, and wholesale vending facilities. • Increasing the total amount of Jordanian exports of fresh vegetables and fruits sent to international markets. |
| AG11 | Promote the development of organic agriculture through knowledge exchange and market development |
| | Accordingly, the purpose of this action is to promote the market's development by learning about organic agriculture from regional and international experts, and supporting the development of the market by coordinating and including producers in the process of certification and marketing of organic produce. |
| | <ul style="list-style-type: none"> • Exchange knowledge between public, private, and civil society stakeholders on the successes of Jordan's organic farming sector to date, as well as present the challenges and opportunities for organic farming in the 2030-2020 period. • Increase awareness and access to extension services available for organic farming. • Increase the number of farmers certified to sell organic fruits and vegetables. |
| AG12 | Establish an agricultural insurance company and develop agricultural risk mitigation strategy |
| | The purpose of this action is to establish a more effective mechanism for farmers to be protected from the impacts of climate change and other natural hazards. |
| | <ul style="list-style-type: none"> • Increase the financial resilience of farmers and the economic resilience of the agriculture sector to climate change impacts. • Improve effectiveness of public funds used to promote climate change resilience and risk mitigation. |

| # | Purpose/Objectives |
|------|--|
| AG13 | <p>Develop and Implement a National Afforestation Program in Jordan</p> |
| | <p>The purpose of this program is to develop and implement a set of Regional Afforestation Forums, bringing communities and the private sector together to identify the barriers, challenges, and investment opportunities to afforestation.</p> <ul style="list-style-type: none"> • Highlight afforestation as a national priority and develop a participatory approach to mobilize stake holders. • Reduced desertification through restoration of degraded ecosystems in rangelands and forests, and establishment of new man-made forests. • Enhanced biodiversity and provision of ecosystem services. • Enhanced awareness and involvement of all stakeholders, including communities, in landscape restoration and forest protection. • Job opportunities created through the promotion of tourism, nursery management, and other income generating opportunities, particularly those for gender inclusion. • Increased CO2 sequestration capacity |
| AG14 | <p>Support rural green growth and employment through ecosystems restoration</p> |
| | <p>The purpose of this action is to address the topic of rangeland restoration by incorporating ecosystems based approaches into the economic development strategy of the MoAg.</p> <ul style="list-style-type: none"> • Create an agricultural extension program targeted at training farmers, grazers, local communities, NGOs, and private sector to plan and implement local Badia restoration projects. • Align and consolidate national donor funding intended to support Badia restoration and management, while also protecting livelihoods and increasing economic impact. • Empower NGOs to support local communities with implementing ecosystems restoration approaches. |



OVERVIEW: Jordan Green Growth National Action Plan 2021-2025

The Green Growth National Action Plan 2021-2025 lays out pathways for sustainable development that will increase resilience, strengthening Jordan's capacity to contain shocks and recover from catastrophic events such as COVID-19.



FIGURE 2
 Relationship between the Five National Green Growth Objectives and SDGs

Figure 1 below shows a summary of the green growth planning and implementation in Jordan:



FIGURE 1
 Green Growth Planning and Implementation in Jordan

