

Policy Action Plans for Young Entrepreneurs to Increase Economic Water Productivity in Olive and Milk Value Chains in Morocco



INITIATIVE ON
Climate Resilience

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Contents

List of Acronyms.....	2
Summary	3
Introduction	3
Methodology of Write-shops.....	4
Proposed Policy Actions	4
Further action points to support young entrepreneurs.....	5
Outcome Report	6
Annex 1. Olive Value Chain	6
Annex 2. Milk Value Chain	8
References.....	9

List of Acronyms

ClimBeR	CGIAR Initiative on Climate Resilience
G4R	Governance for Resilience
IWMI	International Water Management Institute
MPG	Multiscale Polycentric Governance

Cover photo: Flickr/Peter Orr-A photograph of farmers in Ouled Driss, Morocco, 2017

Summary

- This report presents suggested action plans based on stakeholder consultations on investment and institutional strategies for assisting young entrepreneurs in increasing the economic water productivity, i.e., the value or profit of water consumed in the olive and milk value chains in Morocco. Key recommendations to implement in the short-term for a road map are:
 - **Conduct awareness campaigns and training** targeting young entrepreneurs on various investment opportunities in the olive and milk value chains and how economic water productivity can be enhanced by providing advisories and services on climate smart land and water management, and agronomic practices, and marketing.
 - **Develop national, regional, and local-scale multisector Resilience Innovation Platforms (communities of practice)** to facilitate young entrepreneurs to enhance knowledge in improving the economic water productivity of the two value chains.
 - **Accelerate the expansion of drip irrigation with modernized irrigation infrastructure to address water scarcity**, a necessary and urgent action to implement to enhance the olive crop sector's water use efficiency and resilience to climate change.
 - **Pilot test young entrepreneurs** business models to form production companies with a view to enhance water productivity of the olive and milk value chain.

Introduction

Morocco is a fast-growing country with a high climate risk. The droughts in the last few years drastically affected the water, agriculture, and food systems. Morocco is also a country that has implemented innovative programs to address the risks of climate change impacts and rural economic growth. The National Irrigation Water Saving Program (2009-2010), the Green Morocco Plan (2010-2020), and the Green Generation Strategy (2020-2030) are three major climate adaptation programs implemented in the last two decades. The development of production companies and young entrepreneurs are integral components of Morocco's Green Generation Strategy.

The Directorate of Strategy and Statistics of the Moroccan Ministry of Agriculture, Maritime Fisheries, Rural Development, Water and Forests requested the International Water Management Institute (IWMI) to assist in designing an action plan to support young entrepreneurs to enter the olive and milk value chains with an emphasis in enhancing economic water productivity, i.e. the value or profit per unit of water use. This brief, a response to the Directorate's request, uses the knowledge generated from IWMI's research and two write-shops conducted in Morocco under the Governance for Resilience (G4R) Work Package of the Climate Resilience (ClimBeR) Research Initiative of the CGIAR.

In Morocco, IWMI research through ClimBeR's G4R assessed the interactions between climate change, transformative adaptation options, multiscale polycentric governance, i.e., multiple level (scales and sectors) governance and rural welfare using an impact pathways analytical framework (Ait El Mekki et al., 2022, 2023). Through this research, ClimBeR research developed a multiple level governance tool guide to assist in planning and implementing interventions addressing adaptation to climate change. One result from ClimBeR research in Morocco was that olive crops using modernized irrigation can contribute to enhancing water productivity and profits (Sikaoui et al 2016),

The ClimBeR's G4R also conducted two write shops in Rabat and Tadla as part of the action plan development. The write-shops used the multiple level governance tool guide to assess the stakeholders' perspectives on how young entrepreneurs can enter and use opportunities in the two value chains to assist farmers in increasing the water productivity and profits. Within the analytical framework proposed in the multiple governance tool guide. the young entrepreneur can be both a small production company and a rural service provider. Forming of the production

companies is a transformative adaptation option, and the rural service provider is a governance element for enhancing water productivity and profits, which are impact transmission factors in the framework. The value chains can be either an governance element or an impact transmission factor for improving economic water productivity.

The Rabat write-shop assessed the perspectives of about 30 officials from various departments. The Tadla write-shop at the Agriculture Development office in Tadla obtained the perspectives of about 45 regional stakeholders, including farmers. Annexes 1 and 2 give a detailed report of the stakeholder's perspectives on the Rabat and Tadla write-shops on the constraints and opportunities in these two value chains. This report presents suggested policy actions that could be implemented in the short- or long- term to help facilitating young entrepreneurs' entry into the olive and milk value chains with attention to water scarcity and the need to increase economic water productivity, which will translate into profitability.

Methodology of Write-shops

In each write-shop, two stakeholder working groups with knowledge and interests in olive and milk value chains discussed the following aspects:

- The institutional mapping of the two value chains with a particular focus on institutions with a determining role in increasing water productivity
- The critical constraints and investment opportunities of the two value chains
- The action points to support young entrepreneurship in the two value chains
- Governance requirements to improve governance and efficiency, and
- Drafting an action plan or road map for young entrepreneurs' entry into the two value chains. This plan should include what actions are to be taken, the primary responsible institution (s), other institutions that contribute, the time frame, and monitoring and evaluation.

Given the limitations of the write-shops in terms of time and the number of participants, the perspectives presented provide key suggestions but are **not comprehensive**. To interest young entrepreneurs in agriculture is a significant challenge across Africa and requires a complex strategy (Boye et al., 2024; Moitui, 2019).

Proposed Policy Actions

The ClimBer analysis identified four policy actions that could receive attention in the short term to facilitate young entrepreneurs' entry into both value chains under consideration of the water scarcity challenge. Long-term strategies are laid out in the annexes.

1. **Conduct awareness campaigns** targeting young entrepreneurs to showcase opportunities and investments in the olive and milk value chains, including providing services and advisories of climate smart land and water management, and agronomic practices, and marketing and offer **training programs** to show how these opportunities can be more profitable with attention to economic water productivity.
2. **Develop national, regional, and local-scale multisector Resilience Innovation Platforms (communities of practice)** to discuss constraints, propose resilient pathways, strengthen collaboration among government agencies and non-government organizations, including the corporate sector, to support young entrepreneurs entering successfully the two value chains.
3. **Accelerate expanding responsible drip irrigation to address water scarcity**. This is a necessary and urgent action to accelerate in implementing to enhance the olive crop sector's water use efficiency and resilience to climate change. An IWMI study in Morocco showed the positive impact of irrigation

modernization. However, policies on drip irrigation expansion should ensure sustainable groundwater management.

4. **Pilot testing with young entrepreneurs** (a) the formation of production companies based on enhanced knowledge of olive or milk value chains, and (b) trials how increased water productivity can impact profits.

Further Action Points to Support Young Entrepreneurs

The write-shops in Rabat and Tadla developed separate policy action plans based on the discussions of relevant topics in the olive and milk value chains, including long-term recommendations, which are included in annexes 1 and 2. For short-term actions, the olive value chain has nine points, and the milk value chain has six.

Action points for the olive value chains

1. Increase awareness of investment opportunities in the olive value chain to young entrepreneurs,
2. Train young entrepreneurs in olive production value chains,
3. Raise awareness among large farmers and processing units for hiring young graduates,
4. Revitalize regional centers for young entrepreneurs
5. Facilitate access to land for young entrepreneurs
6. Accelerate drip irrigation facilities in olive crop areas
7. Fund or subsidize young entrepreneurs' projects
8. Adoption of a participatory approach in policy and project planning and implementation with all stakeholders (including farmers and their organizations)
9. Develop Resilience Innovation platforms at national, regional, and local levels.

Action points for the milk value chain

1. Increase awareness of investment opportunities in the milk value chain for young entrepreneurs
2. Train young entrepreneurs on the technical aspects of milk value chains (Producing fodder seeds and fodder, especially hydroponic barley, providing quality seeds and feed, Cattle fattening, milk quality control, collecting milk from breeders to processing units, Producing milk derivatives (cheese, yogurt, butter, etc.),
3. Provide financing and land for starting businesses for seed and fodder production, milk production, milk derivatives production (cheese, yogurt, butter, etc.), providing services
4. Promote research and innovation
5. Create an inter-professional organization for forage feeds in the region
6. Establish national production of heifers better adapted to the local production environment, in particular, resistance to drought conditions

Outcome Report

In a joint meeting, the Directorate of Strategy and Statistics agreed to consult the relevant stakeholders on the findings of the write shops to promote young entrepreneurship entry into olive and milk value chains (Ait El Mekki and Brouziyne 2024). This includes supporting incubation and acceleration programs for small and medium-sized enterprises with emphasis on optimizing the physical, social, and economic productivity of water use in both value chains.

Annex 1. Olive Value Chain

Action	Key actors	Approach	Institutional dependence	Planning period	Monitoring & Evaluation Indicators
Increase awareness of investment opportunities in the olive value chain to young entrepreneurs.	Ministry of Agriculture, Banks, Farmers organizations	Awareness campaigns, Media materials, Scientific events Study trips, Brochures and leaflets	Partnership agreements with: Ministry of Interior Ministry of Industry Minister of Environment International Olive Council Universities and research institutions, Donors	2025 - 2027	Number of awareness campaigns, Number of training days, Number of media programs organized, Number of young people targeted,
Train young entrepreneurs in olive production value chains.	Ministry of Agriculture ONCA, INRA, ONSSA, Universities and institutes	Continuing training Distance training Training courses	Training agreements Farm Field Schools	2025 - 2027	Number of trainees Integration rate of young people trained in employment Number of projects created
Raise awareness among large farmers and processing units for hiring young graduates.	Regional Agriculture Department Regional Agricultural Extension Department Agricultural Inter-profession Training institutes	Hiring incentives	Ministry of Finance Exporters Supermarkets	2025 - 2030	Number of young employees Targeted value chains
Revitalize Regional Centers for Young Entrepreneurs	Ministry of Agriculture	Funding of centers Strengthening human and financial resources	Regional Directorate of Agriculture Farmers and interprofessional Research organizations Agricultural training institutes	2025 - 2030	Financial audits and management controls Number of young people registered The number of projects created
Facilitate access to land for young entrepreneurs.	Minister of Agriculture	Public-private partnership Exploitation of collective lands	Ministry of the Interior Ministry of Finance	2025 - 2030	Areas granted Number of installed projects

					Number of start-ups created
Accelerate drip irrigation facilities in Olive crop areas	Ministry of Agriculture,	Donor funded projects	Ministry of the Interior Ministry of Finance Banks, Donors	2025-2030	New area irrigated, Drip irrigated area,
Fund young entrepreneurs' projects	Ministry of Agriculture	Motivating bank loans Financial incentives Donations Recovery facilitation and modulation of allocated credits	Banks Donors	2025 - 2030	Number of projects funded, Investment amounts, A number of young people assisted and supported, Young entrepreneur's production companies formed, Water Productivity of Olive
Adoption of a participatory approach in policy and project planning and implementation with all stakeholders (including farmers and Farmer Organizations)	Minister of Agriculture, Regional Agricultural departments, Chamber of commerce-Olive sector, Banks, Farmers /farmers organizations Universities, Donors	Private-public partnership	Ministry of Interior, Ministry of Finance	2025 - 2030	Number of projects planned Number of projects implemented Number of policies revised/enacted
Develop Resilience Innovation platforms at national, regional, and local levels	Ministry of Agriculture Regional agriculture Department	Participatory approach	Chamber of commerce- Olive sector, Banks, Farmers/Farmer Organizations, Universities Donors	2025 - 2030	Number of committees formed, Number of meetings held,

Annex 2. Milk Value Chain

Action	Key actors	Approach	Institutional dependence	Planning period	Monitoring & Evaluation Indicators
Increase awareness of investment opportunities in the milk value chain for young entrepreneurs	Ministry of Agriculture, Banks, Regional/provincial directorates of agriculture	Awareness campaigns, Media materials, Scientific events Study trips, Brochures and leaflets	Partnership agreements with: Ministry of Interior Ministry of Industry Minister of Environment Universities and research institutions, Donors	2025-2030	Number of awareness campaigns, Number of training days, Number of media programs organized, Number of young people targeted,
Train young entrepreneurs on the technical aspects of milk value chains (Producing fodder seeds and fodder, especially hydroponic barley, providing quality seeds and feed, Cattle fattening, milk quality control, collecting milk from breeders to processing units, Producing milk derivatives (cheese, yogurt, butter, etc.),	Ministry of Agriculture, Regional/provincial directorates of agriculture, Veterinarians, Milk collectors, Milk Producers, Distributors,	Setting up a capacity-building platform (Regional Center for Young Agricultural Entrepreneurs)	Training institutes, Universities, Regional/provincial directorates of agriculture and extensions,	2025-2030	Number of trainees Integration rate of young people trained in employment
Provide financing and land for starting businesses for seed and fodder production, milk production, milk derivatives production (cheese, yogurt, butter, etc.), and providing services.	Ministry of Agriculture, Ministry of Economy and Finance	Donor funded projects, Public-private partnerships Preferential credit rates	National Initiative for Human Development Banks, Donors Private sector Milk collectors, Milk processors	2025-2030	Number of entrepreneurs/businesses created Number of employment created Number of service providers created
Promote research & innovation	Ministry of Agriculture	Launch competitions for research projects	Universities Research institutes (INRA and others) Banks Private sector	2025-2030	Number of completed and successful projects
Create an inter-professional organization for	Farmers	Setting up conventions	the Ministry of Agriculture	2025 - 2030	Area sown with forage crops; Number of contract

forage feeds in the region

members; Number of actions carried out

Establish national production of heifers better adapted to the local production environment, in particular, resistance to drought conditions	Ministry of Agriculture	Establish/increase local breeding centers, Setting up public-private partnerships	Ministry of Agriculture Small and large-scale breeders, Dairy production companies	2025-2030	The number of improved heifers produced
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To learn more about the CGIAR Initiative on Climate Resilience (ClimBeR), see here: <https://www.cgiar.org/initiative/climate-resilience/>

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