



Annual Performance Report (APR)

Reference number (FP042): Irrigation development and adaptation of irrigated

agriculture to climate change in semi-arid Morocco
AGENCE FRANCAISE DE DEVELOPPEMENT

Annual Reporting Period Covered in this Report:
(From 01st January 2024 to 31st December 2024)

SUBMITTED BY	
Name and Title	Mr LAAOUIMRI Med Taha - Project Officer with AFD
Date	May 2025
Shared with relevant NDA(s)?	YES

SECTION 1: GENERAL INFORMATION	
1. Funded Activity Title	Project: Irrigation development and adaptation of irrigated agriculture to climate change downstream of the Kaddoussa Dam
2. Funding Proposal Number	FP042
3. Date of Board approval - Board Meeting Number	04/06/2017 B.16
4. Accredited Entity	AGENCE FRANCAISE DE DEVELOPPEMENT
5. Focal Point of the Accredited Entity	LAAOUIMRI Med Taha laaouimrit@afd.fr
6. Executing Entity(ies)	Ministry of Agriculture and Fisheries, Rural Development, Water and Forests, Directorate of Irrigation and Agricultural Land Management (DIAEA), Regional Office of Agricultural Development in Tafilalet (ORMVATF)
7. Implementation Period	From: 10/08/2018 To: 11/04/2027
8. Extension approved?	Yes (it was extended)
G. Current Year of Implementation	7
10. Annual Reporting Period covered in this report	From: 01/01/2025 To: 31/12/2025
11. Total Project Budget	Loan (AFD): EUR 40,000,000 Grant (AFD): EUR 1,000,000 Grant (GCF): EUR 20,000,000 Country (Morocco): EUR 34,100,000 Total: EUR G5,100,000
12. Total amount of GCF Proceeds Approved	EUR 20,000,000
13. Total amount of GCF Proceeds disbursed (cumulative) to the Accredited Entity	EUR 17,000,000
14. Reporting year (1.1)	2025
15. Disclosable outside GCF? (1.1)	Yes - The Accredited Entity agrees that the information reported is disclosable.
16. Shared with NDA(s)? (1.2)	Yes

1.7 Executing Entity(ies) – Actual Outputs delivered

- The main pipeline is 100% completed
- The oases are 99% connected
- Subscription by beneficiaries and investors is 99% completed
- The extension distribution network is 100% completed
- Delegated management contract awarded and signed (Riegonor); implementation underway – 75%
- The seguias are resized and rehabilitated at 100%
- The khattaras are rehabilitated at 100%
- The non-irrigated plots are 100% leveled
- The banks of the oases are 100% protected
- 9 WUAs (AUEAs) created, with women and youth in governing bodies – 100%
- WUA board members and their agents are 100% trained
- New floodwater harvesting and recharge structures are 100% completed
- Climate-resilient agricultural production systems: 97% (AàP 2022 + 2023, ANOC, INRA)
- Gender inequalities reduced: 90% – 11 women elected to WUA bureaux
- Knowledge of Meski-Boudnib aquifer characteristics improved at 100%
- Groundwater monitoring network strengthened at 100% (29 piezometers)
- Water meters with remote reading: 70% deployed (first tranche complete; second underway)
- ESMP components implemented at 98%

APR CY2025 Section 2: Implementation Progress

2.1 Overall (summary) project progress

This report covers the period from 1 January to 31 December 2025. The project exists to answer a concrete climate threat: in the semi-arid Boudnib valley, the oasis communities have long depended on a groundwater aquifer that climate change, rising temperatures, and recurrent drought are depleting faster than nature can replenish it. The project's response is to substitute that fragile groundwater dependence with a reliable, regulated supply of surface water released from the Kaddoussa dam, and to put in place the institutions, monitoring, and local capacity needed to manage that water sustainably over the long term. By 2025, most of the physical infrastructure was already in place, so the year's real story is no longer about construction but about what the completed system now delivers for people and for the resilience of the territory.

That impact is measurable. Over the year, the project directly benefited 4,862 people, of whom 48% were women, including 390 newly reached beneficiaries and 4,472 who continued to benefit from interventions begun in earlier years. The cumulative number of direct beneficiaries reached 10,260, equivalent to close to 89% of the target population of 11,467 inhabitants, with women now representing a majority (52%) of those reached. Indirect beneficiaries reached 10,694 in cumulative terms, already exceeding the end-of-project target of 10,000. Behind these numbers lies the project's central adaptation outcome: thousands of households that were exposed to a declining and uncertain water source now have access to a secured one.

Main conclusions for 2025:

Component 1: Implementation & management of irrigation network

The system that transfers dam water to the valley is fully completed and operational, comprising a 22.6 km main pipeline and a distribution network of more than 127 km feeding collective and individual connection points across the seven oases. On this basis, the subscription campaign reached 99% of the 4,175-hectare target area, with 4,116 hectares now subscribed. In practical terms, farmers who previously relied on pumping from a stressed aquifer now have access to a dependable surface-water supply, which is the heart of the project's climate adaptation logic. The dam makes around 30 million m³ available each year, of which 10 million m³ are reserved for the 825 hectares of traditional palm oases and 20 million m³ for the 4,175 hectares of new plantations, allowing the historic oases and the modern extensions to coexist without deepening the pressure on groundwater. To make this arrangement durable and equitable, distribution is being entrusted to a professional delegated operator, Riegonor, selected under Law 54-05, whose contract guarantees the traditional palm oases a minimum of 5 million m³ each year even in periods of scarcity, an explicit protection for the most climate-vulnerable users. The first productive releases under this delegated arrangement are planned for the 2026 agricultural campaign.

Component 2: Building the climate-resilience of oases communities through a holistic approach

The historic oasis irrigation system has been fully restored, with rehabilitated open canals (seguias), traditional underground channels (khattaras), levelled plots, and protected oasis banks, all of which secure reliable water delivery across roughly 825 hectares of protected oasis ecosystems. Four diversion and recharge structures are fully operational and actively replenishing the aquifer, which buffers the area against prolonged dry spells. Equally significant is the progress in local water governance: nine Water User Associations are now operational, beyond the initial target of seven, and for the first time in Morocco they integrate women and youth into their governing bodies, with eleven women elected to association boards. In 2025 the community development team supported two of these associations, Kaddoussa and Tarba Oulahcen, in holding their statutory general assemblies, a sign that these bodies are becoming functioning local institutions rather than formal shells. Support to local initiatives translated into tangible livelihood diversification across the project's two Calls for Projects. Of the 61 projects financed under the 2022 Call, 60 are operational and have been the subject of a completed participatory evaluation; the 2023 Call selected 78 projects out of 227 applications, including 13 women's cooperatives, 3 women entrepreneurs, and associative projects benefiting women and youth. Taken together, 118 of the 139 projects financed under the two calls had been completed by year-end, with proximity support continuing through ORMVATF, the TA-PMU, ANDZOA, ONCA, INRA, and ANOC. Partnership conventions reinforced these results, with 392 farm visits delivered under the ANOC agreement and agroecology training provided to 110 oasis farmers, of whom 21 were women, under the INRA convention. Throughout, the Gender Action Plan continued to be mainstreamed across all areas of intervention, with women's cooperatives receiving sustained technical and organizational accompaniment.

Component 3: Implementing Cross-Cutting Sustainability Measures

Sustaining the oases over time depends on managing the aquifer they ultimately rely on, and 2025 saw decisive progress on this front. The groundwater monitoring network has been strengthened to 29 operational piezometers across the Meski-Boudnib system, giving authorities and users a reliable, real-time picture of the resource. Metering of abstraction has begun, with a first tranche of 50 water meters equipped with remote reading installed and procurement underway for a second tranche of 239, which will make agricultural water use measurable and accountable for the first time. A participatory aquifer management framework (the CGPN) is operational, bringing users, the basin agency, and local authorities together around shared rules, and the safeguard decree that will formally establish pumping limits is in its final stage before publication in the Official Bulletin. Environmental and social safeguards continued to be

implemented rigorously, reaching 98% of the management plan, with regular site monitoring, a functioning grievance mechanism, and biodiversity monitoring under the FST Errachidia convention. Finally, a research partnership was signed with the National School of Agriculture of Meknes (ENAM), replacing the previous partner, and has begun, at 20% progress, to document and capitalize the project's adaptation lessons so they can inform other semi-arid oasis systems.

Component 4: Project Management

Throughout 2025, the executing structures and their partners maintained regular coordination and institutional governance, including supervision missions, coordination meetings with key partners, and procurement managed in line with AFD directives. A 20-month extension of the technical assistance contract was approved through AFD's no-objection procedure, securing continuity of support all the way to project closure in April 2027.

Constraints and changes in project implementation in 2025

The year's two principal challenges are also the conditions precedent for the fourth and final GCF disbursement (DR4, EUR 3M), and both saw decisive movement in 2025.

The first was contracting a professional operator for delegated water management. An initial tender launched in 2022 was declared unsuccessful in December of that year, which risked delaying the moment when subscribed farmers could actually receive dam water. The response was institutional as much as procedural: responsibility for relaunching the tender was transferred to ORMVATF as the operational executing structure, the tender was reissued, and the contract was awarded to Riegonor under Law 54-05 and signed during 2025, with implementation now underway. Crucially, the contract was designed to protect the most climate-vulnerable users, guaranteeing the traditional palm oases a minimum of 5 million m³ each year even in periods of scarcity. The first productive releases under this arrangement are planned for the 2026 agricultural campaign.

The second challenge concerns the documentary regularization of partnership expenditure channeled through ANDZOA (about EUR 1.6M under sub-component 2.3), where justifying funds proved difficult, particularly for agreements signed with municipalities. Rather than letting the matter stall, the project escalated it to the regional level: the Wilaya of Draa-Tafilalet was formally engaged and dedicated working sessions were organized with ANDZOA to close the outstanding files before project end. This condition remains under active resolution and is expected to be lifted ahead of closure.

A third, recurring challenge was ensuring that women were not left behind in a context where administrative and social barriers can limit their access to project benefits. This was addressed through deliberate facilitation measures, including delivering water-subscription paperwork directly to women at home and allowing them to designate trusted intermediaries to complete the formalities on their behalf. These adjustments translated into measurable results, with women now representing a majority of the project's cumulative direct beneficiaries and eleven women elected to Water User Association boards.

Lessons learned

Three lessons stand out from the 2025 implementation experience and are likely to be relevant to other semi-arid oasis programmes.

First, reaching women requires deliberate design rather than good intentions alone. The facilitation measures put in place for subscription and governance, simple as they were, produced a clear rise in female participation, confirming that adapting procedures to the realities of women's daily lives is what

turns a gender objective into a gender outcome.

Second, embedding women and youth directly in the leadership of Water User Associations, a first in Morocco under the project's modalities, strengthened the legitimacy and ownership of these bodies. Local institutions that reflect the community they serve are more likely to function as genuine governance structures rather than formal shells, as illustrated by the associations now holding their statutory assemblies on their own.

Third, managing a shared and stressed aquifer is most effective through a participatory framework that combines real monitoring, jointly agreed rules, and a guaranteed water floor for the most vulnerable users. The combination of the piezometric network, metered abstraction, the participatory management body, and the forthcoming safeguard decree offers a replicable model for sustainable groundwater governance under climate stress.