

*Improving Climate Resilience in the Steppe and Dry Forest Areas of the
Algerian Green Dam (ICR-AGD)*



ANNEX 23

Methodology - Beneficiaries

July 2026

Summary

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ANNEX 23 - EXECUTIVE SUMMARY

Project Title: Improving Climate Resilience in the Steppe and Dry Forest Areas of the Algerian Green Dam (ICR-AGD).

The project identifies a total of **1,084,103 beneficiaries**.

The breakdown of these beneficiaries is as follows:

- **Direct Beneficiaries (DB): 142,433**
- **Indirect Beneficiaries (IB): 941,670**
- **Total Women Beneficiaries: 489,064 (representing 45% of the total)**

Breakdown by Project Outcome

Outcome	Direct Beneficiaries	Indirect Beneficiaries	Total Beneficiaries	Including Women
Outcome 1 (Governance/Science)	18,250	68,918	87,168	5,444
Outcome 2 (Restoration/Ecosystems)	43,727	596,184	639,911	307,393
Outcome 3 (Livelihoods/Value Chains)	80,456	276,568	357,024	176,227
TOTAL	142,433	941,670	1,084,103	489,064

Key Metrics

- **Targeted Project Leaders:** The project identifies 8,401 project beneficiaries, including 5,384 women.
- Gender Quota in Result 3: Women represent 58% of the real economic beneficiaries.
- Direct Asset Ownership: Legal title for women over 1,700+ productive units (basketry and poultry farming).
- Cost per Beneficiary: The total grant cost per beneficiary is estimated at 38 USD.
- Direct Grant per Direct Beneficiary: 291 USD.
- Realistic Cost per "Adopter": 160 USD (after applying the 80% adoption multiplier to Outcome 3).

Below the breakdown of beneficiary numbers for the requested activities (realistic data after applying the 80% adoption filter):

1. Poultry Farming (Activity 3.2.2.1)

This activity is explicitly dedicated to rural women to promote individual economic agency.

- Data: 840 direct beneficiaries (based on 120 modules of 200 chicks each).
- Methodology (Realistic): 588 direct beneficiaries.
- Rationale: The narrative applies a 0.7 multiplier to account for "implementation leakage" (e.g., potential livestock mortality or management challenges). These women are classified as "Direct Owners" rather than indirect family beneficiaries.

2. Reforestation & Ecosystem Restoration (Outcome 2)

Reforestation is the project's largest component in terms of land area and labour.

- Data (Activity 2.1.3.1): 1,336 direct workers.
- Methodology (Total Outcome 2): 43,727 direct beneficiaries across all restoration sub-activities.

- Gender Shift: To meet GCF standards, the narrative introduces a 30% fixed quota for women to be hired directly for nursery maintenance and technical roles. This ensures women are not just "indirectly" benefiting from a husband's salary but are active project participants.

3. Other Key Activities

Activity	Code	Gross (Table)	Realistic (Methodology)	Gender Focus
Alfa Grass Basketry	3.1.1.9	1,680	1,176	100% Women-owned
Essential Oil Labs	3.1.1.5	1,008	706	Focus on female processing
Olive Oil Mills	3.1.1.4	1,680	1,176	Market-linked agency
Beekeeping	3.2.2.2	840	588	49% Women
Hydroponic Fodder	3.2.3.1	1,680	1,176	Technical resilience

The 1:6 Multiplier: For every direct beneficiary listed above, the methodology accounts for 6 indirect beneficiaries (household members). This math is used to reach the global target of 1.08 million total beneficiaries as presented in the Funding Proposal (FP).

Benchmark Global (GCF Compliance)

- Direct Investment Efficiency: USD 291 x direct beneficiary. (Total Grant GCF / 142,433 beneficiaries).
- Systemic Reach Efficiency: USD 38 x total beneficiaries. (Total Grant GCF / 1,084,103 direct & indirect beneficiaries).
- Outcome 3 Specific (Livelihoods): USD 160 x beneficiary.

OVERVIEW

Moving beyond traditional state-led conservation, this project intend to establish a community-owned market ecosystem through a de-risked, gender-transformative methodology for beneficiary engagement across the Algerian Green Dam (GDA) where local populations—specifically women and youth—are empowered as the primary custodians of natural resources.

A. Methodological Rigor: The 80% Adoption Multiplier

To ensure financial integrity and compliance with FAO-IRMF standards, a 80% Adoption Multiplier (0.8) is applied to all entrepreneurial activities. This adoption rate will increase progressively from 50% in year 1 to 80% in year 7 along with the project implementation. This accounts for potential "implementation leakage" due to climate shocks or social barriers. By reporting a realistic direct target of 142,433 people, the project secures a high Value for Money (VfM), with a GCF investment of USD 291 per direct beneficiary and USD 38 per total reach beneficiary.

B. Gender Transformation: Individual Agency

Aligned with GCF Policy B.24/12, the project transitions from counting women as "household beneficiaries" to establishing Direct Economic Agency.

- Ownership: Women hold primary legal title to 1,700+ productive units (Basketry, Poultry).
- Resource Access: Integration of Solar Energy Kits specifically mitigates Time-Poverty, allowing women to reallocate labour hours toward income-generating activities.
- Target: Women represent 58% of the economic beneficiaries in Result 3.

C. Financial Sustainability and De-risking

- Disbursement Alignment: Funding tranches are strictly tied to verifiable adoption milestones (the 80% floor).
- Knowledge Institutionalization: A network of 101 Municipal Extension Agents provides 24 months of coaching, ensuring that technical interventions survive beyond the project's lifespan.
- Market Security: Contract farming models guarantee price stability and off-take, mitigating ROI risks for smallholders.

D. Conclusion

Annex 23 provides a technically sound, conservative, and verifiable framework for the GCF. It ensures that every dollar invested generates a measurable, transparent, and durable impact, fundamentally transforming the socio-economic resilience of the Algerian Steppe.

ANNEX 23: BENEFICIARY ESTIMATION AND GENDER INTEGRATION METHODOLOGY

1. STRATEGIC FRAMEWORK AND CLIMATE RATIONALE

The Algerian Green Dam (*Barrage Vert*) landscape is currently trapped in a vicious cycle of climate stress and maladaptation. Spanning 1,500 km across the pre-Saharan steppe, the ecosystem is witnessing a collapse of services that over 170,000 smallholders depend upon. Historically, the management of this territory has been state-led with limited community inclusion.

This project marks a fundamental Paradigm Shift by transitioning toward an integrated, multi-stakeholder, climate-resilient landscape management model. This Annex defines the methodology for reaching 1,084,103 total beneficiaries, ensuring that local communities, particularly women and youth, transition from being seen as "drivers of degradation" to being empowered as "custodians of natural resources."

1.1 The 80% Adoption Multiplier: Ensuring Methodological Rigor

In alignment with the GCF's mandate for conservative impact estimation and the FAO Integrated Results Management Framework (IRMF), this project introduces an 80% Adoption Multiplier (0.8) for all high-intensity interventions (Outcome 3):

- Addressing Implementation Leakage: We acknowledge that socio-economic barriers, localized climate shocks (extreme heat or drought), and varying learning curves may prevent a portion of recipients from fully operationalizing provided assets.
- Financial Integrity: By applying this 0.7 filter, the project reports a realistic direct target rather than a theoretical one. This justifies a Value for Money (VfM) of USD 291 per direct beneficiary, ensuring the GCF board that funds are allocated based on high-probability success rates.

2. COMPREHENSIVE BENEFICIARY MATRIX: DIRECT VS. INDIRECT REACH

To comply with GCF Core Indicator 2, the project distinguishes between those receiving direct technical/financial support and the wider community benefiting from systemic improvements.

2.1 Outcome 3 (Economic Agency)

Code	Activity	Direct (0.7 Applied)	Indirect (HH Spillover)	Total Reach	Methodological Rationale
3.1.1.9	Alfa Grass Basketry	1,176	4,704	5,880	100% Women-Owned. Multiplier 1:4.
3.2.2.1	Poultry Units	588	2,352	2,940	Asset ownership for rural women.
3.1.1.5	Essential Oil Labs	706	2,824	3,530	Focus on value-added processing.
3.2.5.1	Solar Kits	931	3,724	4,655	Time-Poverty Alleviation.
3.2.3.1	Hydroponic Fodder	1,176	3,528	4,704	Peer-to-peer adoption (1:3 ratio).

2.2 Global Reach Alignment (Funding Proposal Summary)

Consistent with Section A.6 of the FP, the total reach is calculated as follows:

- Direct Beneficiaries (142,433): Includes the 7,299 above, plus 8,401 farmers in Training of Trainers (ToT), technical staff from 15 institutions, and community members involved in large-scale reforestation (Outcome 2).

- Indirect Beneficiaries (941,670): Farmers and residents across 101 municipalities reached via Climate Information Services (CIS), early warning systems, and the improved regulatory framework (Pastoral Code reform).

3. GENDER-TRANSFORMATIVE STRATEGY: INDIVIDUAL AGENCY

This project adheres to the GCF Gender Policy (B.24/12) by moving from "gender-sensitive" distribution to "gender-transformative" agency.

3.1 From Household Income to Individual Ownership

Historically, women were counted as "indirect beneficiaries" through their husbands' income. This project corrects this by establishing Direct Economic Agency:

- Legal Ownership: Women are the primary legal recipients of the 120 basketry and 120 poultry units. Revenue generated is tracked as being under their direct control.
- Employment Quotas: For large-scale reforestation (Activity 2.1.3), the project enforces a 30% fixed quota for women, specifically in high-skill nursery management and seedling propagation technical roles.

3.2 Addressing Time-Poverty and Unpaid Care Work

The deployment of **Solar Energy Kits (Activity 3.2.5.1)** is not merely an energy intervention but a social one. By providing clean, reliable energy to isolated households, the project mitigates the isolation of rural household.

4. RISK MITIGATION AND ADOPTION INTEGRITY

To protect the 80% adoption floor, the project implements a multi-layered de-risking framework:

- Livelihood Diversification: Women engaged in poultry are cross-trained in basketry. This "Cross-Outcome" participation ensures that if one value chain suffers a climate shock, a secondary income stream remains viable.
- 24-Month Technical Coaching: Unlike one-off workshops, 101 Municipal Extension Agents will provide on-the-job coaching for two full agricultural cycles. This minimizes the "Knowledge Gap" which is the primary driver of non-adoption.
- Market Off-take Agreements: Through Contract Farming models (Activity 3.1.2), the project guarantees a minimum purchase volume for artisanal and agricultural products, providing the necessary financial security for the 30% "at-risk" adopters to remain engaged in the program.

4.1 FINANCIAL RISK MITIGATION – INFLATION AND CURRENCY FLUCTUATION

The large-scale procurement of technical assets (Solar Kits, Hydroponic units, Laboratory equipment) is highly sensitive to the economic volatility of the Algerian Dinar (DZD) and global inflationary pressures. To safeguard the budget of the 1,700+ productive units and ensure the 80% adoption target, the following financial safeguards are implemented:

4.1.1 Financial Risk Matrix

Risk Factor	Impact on Annex 23	Mitigation Strategy	Responsibility
High Inflation	Increased unit costs for equipment (Poultry, Basketry kits), reducing the number of beneficiaries reached.	Bulk Procurement & Early Contracting : Front-loading 60% of technical purchases in Year 1-2 to lock in prices and avoid cumulative inflation.	FAO PMU / Ministry of Finance
DZD Devaluation	Reduced purchasing power for international expertise and high-tech imports (AI Observatory, GIS).	USD-Based Budgeting : GCF funds are held in USD and converted only upon disbursement. Contracts for international	FAO / GCF

		equipment will be denominated in USD/EUR.	
Supply Chain Disruptions	Delays in delivery leading to "Implementation Leakage" and falling below the 80% adoption floor.	Regional Sourcing: Prioritizing suppliers from the Maghreb/MENA region to reduce shipping costs and exposure to global logistics shocks.	Procurement Officer

4.1.2 Adaptive Budgetary Mechanisms

To maintain the "Realistic Target" of 142,433 beneficiaries even in adverse economic scenarios, the project adopts a Dynamic Contingency Allocation:

- The 10% Resilience Buffer: A specific contingency line (10% of Result 3 budget) is reserved to cover price variances for the 1,700+ productive units. If inflation exceeds projections, this buffer will be used to maintain the quantity of assets distributed.
- Flexible Unit Specifications: In the event of extreme price hikes, the Technical Committee may approve "Alternative Technical Specifications" (e.g., locally manufactured solar components vs. imported ones) provided they meet the minimum GCF climate-resilience standards.
- Phased Disbursement Alignment: As outlined in Chapter 8, disbursements are tied to milestones. If currency fluctuation significantly devalues the Dinar, the project will recalibrate the local currency portion of the next tranche to ensure the operational "Value for Money" (VfM) remains constant at \$160/adopter.

4.1.3 Currency Exchange Monitoring

The Socio-Economic Observatory (Activity 1.2.1.1) will include a "Macro-Economic Watch" module. This will track the DZD/USD exchange rate and local Consumer Price Index (CPI) monthly. If a variance of >15% is detected against the baseline budget, a formal "Budget Realignment Request" will be submitted to the GCF Secretariat to protect the project's core outcomes.

5. MONITORING, EVALUATION & LEARNING (MEL)

The Ecological and Socio-Economic Observatory (Activity 1.2.1.1) will track progress through sex-disaggregated indicators:

1. Core Indicator 2 Reach: Verified monthly via the digital M&E platform.
2. Agency Index: percentage of female beneficiaries reporting direct control over income generated from project assets.
3. Adoption Success: Annual audits of the 120 poultry and basketry units to verify the 80% adoption floor.

6. STAKEHOLDER ENGAGEMENT PLAN (SEP)

The project adopts an inclusive, transparent and participatory stakeholder engagement approach throughout the project cycle to ensure that all relevant stakeholders are adequately informed, consulted and actively involved in project planning, implementation, monitoring and evaluation. Stakeholder engagement will promote local ownership, strengthen institutional coordination, facilitate the adoption of climate-resilient practices and ensure that project interventions respond to local needs and priorities. Attention will be given to the meaningful participation of women, youth and vulnerable groups, while ensuring that information is accessible, culturally appropriate and provided through locally relevant communication channels. A Grievance Redress Mechanism (GRM) will be established to enable stakeholders to raise concerns, provide feedback and contribute to the continuous improvement of project implementation.

Stakeholder group	Purpose of engagement	Main engagement modalities proposed
National institutions (MADRP, DGF, DGF, other technical ministries)	Strategic coordination and implementation oversight	Steering Committee meetings, technical coordination meetings

Stakeholder group	Purpose of engagement	Main engagement modalities proposed
Wilaya Climate Adaptation Committees	Local planning, beneficiary validation and coordination	Coordination meetings, implementation reviews
Municipal authorities (101 municipalities)	Local implementation and community mobilization	Community meetings, awareness campaigns, local consultations
Producer organizations and cooperatives	Dissemination of climate-smart practices and beneficiary support	Farmer Field Schools, exchange visits, technical workshops
Extension services and technical agencies	Technical assistance and monitoring	Field demonstrations, coaching, technical training
Beneficiary households	Participation in project activities and adoption of project interventions	Community consultations, training sessions, field demonstrations, GRM
Women and youth groups	Promote inclusive participation and access to project benefits	Targeted consultations, capacity-building activities, entrepreneurship support
Local communities and civil society organizations	Information sharing, transparency and feedback	Public meetings, communication campaigns, GRM
Financial institutions (e.g. BADR) and private sector partners	Sustainability of investments and market linkages	Technical meetings, partnership development

6.1 Identification and Selection Process (Equity & Transparency)

The project adopts a transparent, participatory and vulnerability-based household targeting approach to ensure that project resources reach those most affected by climate change and with the greatest potential to benefit from project support.

General eligibility criteria

Potential beneficiary households will be identified within the project intervention area through a combination of local administrative records, producer organizations, extension services and community consultations. Eligible households will include smallholder farming households, livestock breeding households, producer groups and rural households engaged in the targeted value chains.

Priority will be given to:

- households highly exposed to climate risks and environmental degradation;
- poor and vulnerable rural households;
- women-headed households and women beneficiaries;
- youth (18–29 years old);
- households demonstrating commitment to adopting climate-resilient practices and participating in project training and technical assistance;
- households located within the priority intervention areas identified by the project.

Selection and verification process

Beneficiary households will be selected through a transparent process coordinated by the Wilaya Climate Adaptation Committees in collaboration with local authorities, technical services, producer organizations and community representatives. Candidate households will be assessed against the agreed eligibility and prioritization criteria.

Eligibility will be verified through field visits, consultation with local authorities and producer organizations, and review of relevant administrative records where applicable. Preliminary beneficiary lists will be publicly displayed at the municipal level for community feedback before final validation, ensuring transparency and accountability throughout the selection process.

Household representation and dissemination of benefits

The project adopts a household-based targeting approach. For implementation purposes, each selected household will be represented by one designated household member (typically the household head or another adult member directly involved in the supported livelihood activity), who will participate in project activities, receive training and technical assistance, and serve as the primary interface with the project. While project support is delivered through the designated household representative, the resulting benefits, including improved productivity, increased income, enhanced food security and greater resilience, are expected to extend to all members of the selected household.

In addition, the project incorporates several structured knowledge dissemination mechanisms that are expected to expand project benefits beyond the directly supported households. These include exchange workshops involving representatives from the 101 municipalities, coordination and communication seminars across the six target wilayas, training-of-trainers approaches implemented through the mobilization of training structures, continuous technical support to local extension services, and farmer-to-farmer knowledge sharing through existing producer organizations and extension networks. These mechanisms are expected to facilitate the progressive dissemination and adoption of climate-resilient practices throughout the project area.

Specific technical eligibility requirements applicable to individual interventions (e.g. hydroponic systems, livestock support modules and value chain investments) are summarized in below Annex 1 – Annex 1: Eligibility Criteria and Selection Methodology for the Direct Beneficiaries of Livelihood Support and will be further detailed in the corresponding operational guidelines during project implementation.

- Integration in the BADR RFIG support loan: Beneficiaries will be responsible for the operation and maintenance plan for the hydroponic unit's equipment, based on a written commitment. This plan must serve as a benchmark for the area and must be maintained beyond the project's duration. As a reminder, this highly beneficial activity for livestock farming may also be eligible for a "RFIG" support loan from the BADR institution, after approval of the application by the local agricultural services. This loan will cover the necessary barley seeds for the duration of the project and beyond. This guarantees equipment maintenance and the sustainability of the activity.

7. CONCLUSION: TECHNICAL VALIDATION

Annex 23 provides a rigorous, de-risked, and transparent methodology for beneficiary estimation. By declaring a Realistic Target of 142,433 direct beneficiaries, the project demonstrates financial maturity and a commitment to genuine impact.

The balance between Immediate Relief (CfW) and Structural Transformation (Taxonomy & Incubators) ensures that the Algerian Green Dam evolves into a self-sustaining, market-integrated, and gender-equitable climate ecosystem.

Annex 1: Eligibility Criteria and Selection Methodology for the Direct Beneficiaries of Livelihood Support

This Annex defines how individual households are selected, prioritized and verified for value-chain, hydroponic, livestock and rustic fruit activities. These criteria constitute a disbursement condition for the corresponding livelihood sub-activities.

1. Scope and beneficiary universe: The eligibility framework applies to the 142,433 direct beneficiaries of livelihood support across four activity clusters: (a) six climate-resilient value chains under Activity 3.1.1 (opuntia, olive, rosemary, wool, alfa, peppermint) — 7,818 beneficiary households linked to off-taker MoUs; (b) hydroponic forage production units under Activity 3.2.3 — 240 hydroponic barley chambers, 360 field-based barley cultivation sites, and 240 alfalfa production units meeting the forage needs of approximately 25,146 sheep equivalents; (c) small-scale livestock modules under Activity 3.2.2 — 120 poultry units (100% women-owned) and 120 beekeeping units of 5 hives; and (d) rustic fruit orchards under Activity 3.2.1 across 5,974 hectares plus 2,143 hectares of agroforestry promotion.

2. Eligibility criteria: All applicants must satisfy the following six core eligibility criteria: (1) legal residence in one of the six target wilayas — El Bayadh, Naâma, M'Sila, Djelfa, Khenchela and Tébessa — and in one of the 101 target communes; (2) household classified as climate-vulnerable under the wilaya-level vulnerability index established at inception phase, using FAO Resilience Index Measurement and Analysis (RIMA) baseline pillars (Access to Basic Services, Assets, Social Safety Nets, Adaptive Capacity); (3) no receipt of a comparable public subsidy for the same activity in the preceding three years (double-dipping firewall); (4) demonstrable land tenure, communal-use right, or — for landless applicants — access to a public or communal parcel formally allocated by the APC; and (5) willingness to sign the standard beneficiary compact committing to attend the mandatory pre-launch induction, apply the technical package, and comply with the safeguards protocol.

3. Activity-specific requirements: In addition to the five core criteria, activity-specific requirements apply: (a) Value-chain households (Activity 3.1.1) — existing engagement in, or demonstrated willingness to enter, the target commodity, and formal membership in a producer cooperative or association aligned to the six-value-chain framework; (b) Hydroponic households (Activity 3.2.3) — a minimum stock of 15 sheep equivalents, evidence of reliance on rainfed rangeland forage, and no more than 5 ha of irrigated cropland; (c) Small poultry unit beneficiaries (Sub-activity 3.2.2.1) — women applicants only, no minimum land requirement, legal capacity to hold the asset in their own name; (d) Beekeeping unit beneficiaries (Sub-activity 3.2.2.2) — access to a suitable siting area with a five-hive carrying capacity, completion of the pre-launch beekeeping induction; (e) Rustic fruit orchard households (Activity 3.2.1) — legal tenure or use right on an eligible parcel of at least 0.5 ha, no active fruit-tree public subsidy in the preceding three years.

4. Prioritization quotas (binding): Where the number of eligible applicants exceeds the number of available units in a commune, the following binding prioritization quotas apply, in the order stated: (1) women-led households — minimum 50% share of value-chain beneficiaries, minimum 30% share of hydroponic beneficiaries, 100% share of small poultry beneficiaries, and priority allocation of solar energy kits (Activity 3.2.5); (2) youth (18–29) — minimum 40% share of value-chain and hydroponic beneficiaries, in line with the Gender Action Plan and the National Youth Employment Strategy; (3) transhumant, pastoralist and agro-pastoralist households under acute climate stress — priority for hydroponic and livestock modules; (4) landless labourers and households in food poverty — priority for poultry, beekeeping ; and (5) households in the 12 pilot municipalities identified for the hydroponic and alfalfa pilots — priority for units in Year 2. All quotas are enforceable and monitored quarterly on the digital M&E platform.

5. Six-step selection process: Beneficiary selection follows a six-step process managed by the Wilaya Climate Adaptation Committees in coordination with APCs (Assemblées Populaires Communales; the elected municipal councils at commune level in Algeria's territorial administration), DGF wilaya offices, and the PMU: Step 1 — commune-level social and vulnerability diagnostic drawing on the RIMA II baseline; Step 2 —

vulnerability and eligibility scoring against the criteria in section 2 and the activity requirements in section 3; Step 3 — application of the prioritization quotas in section 4 to produce a provisional beneficiary list; Step 4 — community validation through public posting of the provisional list in APC and DGF wilaya-office premises for seven (7) days, with a dedicated feedback and GRM window; Step 5 — Wilaya Climate Adaptation Committee review, DGF wilaya-office no-objection, and APC endorsement of the final list; Step 6 — PMU-issued eligibility certificate for each retained beneficiary, and registration in the project's central beneficiary registry with geo-referenced records linked to the beneficiary's national ID.

6. Verification, independent audit and anti-double-counting: Each retained beneficiary is registered in the project's central beneficiary registry and cross-checked, using the national ID, against (1) the wilaya taxpayer and agricultural-subsidy database, (2) the beneficiary registries of BADR, ANGEM, NASDA and CNMA to prevent double-counting across activities and against pre-existing public subsidies. An anti-double-counting rule caps each household at a maximum of two livelihood modules across Clusters B and C. Independent verification is carried out annually confirms selection integrity at baseline, mid-term (Year 4) and endline (Year 7).

Annex 2: Indirect beneficiaries estimation framework

This annex provides evidence on the estimate of the indirect beneficiaries; structure, reach and effectiveness of farmer networks and knowledge-sharing mechanisms underlying this estimate, and recognizing that indirect beneficiaries exist within the 12 pilot municipalities and not only in the remaining communes.

1. Clarification of the direct-beneficiary definition.

The 142,433 direct beneficiaries reported in Annex 23 and in FP Section A.6 is not defined as the total population of the 12 pilot municipalities. They are defined as individuals who receive tangible project inputs — asset transfer (poultry, beekeeping, hydroponic units, rustic-fruit orchards, solar kits), climate-adapted microcredit, participation in the six climate-resilient value chains, or structured training and technical assistance — and their household members counted per the 1:6 (Cluster A) or 1:7 (Cluster B and C) multiplier already documented in Sections 3 to 8 above in Annex 23. The 142,433 figure therefore does not imply 100% direct reach in the 12 pilot municipalities: a portion of the population of those municipalities falls into the indirect-beneficiary category defined in 8.5.

2. Typology of indirect beneficiaries.

Indirect beneficiaries (941,670) are composed into three transparent categories:

Category A — within the 12 pilot municipalities (spillover): Residents of the 12 pilot municipalities who are not direct beneficiaries per point 1 but who benefit from (i) improved climate information services and advisory bulletins broadcast in Arabic and Tamazight through the mobile app (Sub-activity 1.2.5.3); (ii) restored water infrastructure — 22 boreholes, 3 pastoral wells, 13 ponds, 14 ceds and the associated WUAs (Activity 2.2.3); (iii) rehabilitated 478 km of rural and agricultural tracks (Activity 2.2.1); (iv) forest-fire alert protocols and DFCI response (Activity 2.1.6); (v) neighbourly demonstration effects from adjacent restored parcels; and (vi) improved market access and price transmission from off-taker MoUs benefiting cooperative members. Estimated share: approximately 25% of the total indirect estimate, i.e. $\approx 235,000$ people.

Category B — remaining 89 target communes in the six wilayas (network-mediated adoption). Farmers, agro-pastoralists and residents in the 89 remaining communes across the six wilayas — El Bayadh, Naâma, M'Sila, Djelfa, Khenchela and Tébessa — reached through the farmer networks and knowledge-sharing mechanisms detailed in point 3 below, plus wilaya-wide broadcast of climate information services, wilaya-level regulatory reforms (reformed Pastoral Code, WUA statutes, climate-adapted microcredit accessible through BADR/CNMA/ANGEM/NASDA/FGAR), and the AFOLU compensation mechanism. Estimated share: approximately 60% of the total indirect estimate, i.e. $\approx 565,000$ people.

Category C — household members of direct beneficiaries (1:6 spillover). Household members of the 142,433 direct beneficiaries who benefit from improved household income, food security and asset ownership without themselves being direct owners of the project asset — a well-established indirect-benefit category in comparable dryland livelihood programmes. Estimated share: approximately 15% of the total indirect estimate, i.e. $\approx 141,000$ people. This category is deliberately smaller than the theoretical maximum to avoid overlap with Categories A and B.

Reconciled totals.

Category A (235,000) + Category B (565,000) + Category C (141,000) $\approx 941,000$, aligning with the 941,670-figure reported in FP Section A.6 within rounding. Direct 142,433 + indirect 941,670 = 1,084,103 total beneficiaries. The Categories A/B/C decomposition is offered as the transparent basis for the estimate and is monitored during implementation via the M&E instruments.

3. Structure, reach and effectiveness of farmer networks and knowledge-sharing mechanisms: The Category B indirect estimate rests on the following identified network and knowledge-sharing mechanisms, each with a defined structure, reach and effectiveness benchmark:

(a) Wilaya-level extension services and commune-level female extension agents: Structure: DGF extension staff and DSA agricultural extension agents deployed in all 101 target communes, complemented by commune-level female extension agents recruited under the Gender Action Plan. Reach: 101 communes; 8,401 project beneficiaries trained across 60 sessions (Sub-activity 1.2.6.2); wilaya-level coordination through 6 wilaya committees.

(b) Multi-stakeholder Green Dam governance platform (Activity 1.1.4). Structure: wilaya-level platforms linking APCs, DGF wilaya offices, HCDS, ANRH, WUAs, cooperatives, women's groups and civil society, with 12 collaborative territorial management agreements (Sub-activity 1.1.4.1). Reach: 101 communes across the six wilayas; institutional decisions broadcast via APC premises and DGF wilaya-office notice boards.

(c) Digital climate information and advisory services (Sub-activity 1.2.5.3). Structure: Android-first mobile application, bilingual Arabic-Tamazight, offline-mode compatible, delivering forecasts, maps, alerts and personalized advisories. Reach: designed to reach a target 80% of registered farmers and herders in the six wilayas by Year 7 (Annex 11), with delivery cross-verified through advisory-platform acknowledgement logs.

(d) Khibra knowledge platform and FAO regional networks. Structure: FAO Khibra platform (operational under the FAO/GEF Bibans project), complemented by SURAGGWA (8 partner states), ReInvest NENA, and the Middle East Green Initiative (MGI). Reach: cross-border and cross-wilaya diffusion of technical guidance notes, case studies, policy briefs and video documentaries. Effectiveness: Khibra has documented cross-country knowledge transfer between Algerian, Tunisian and Moroccan cooperatives on olive, opuntia and rangeland rehabilitation practices; SURAGGWA hosts peer-to-peer exchanges.

(e) Cooperative-to-cooperative peer-to-peer exchanges. Structure: structured twinning between beneficiary cooperatives and non-beneficiary cooperatives in the same wilaya, with dedicated women-cooperative twinning arrangements. Reach: at least 60 twinning arrangements planned across the six wilayas by Year 4.

(f) Community Liaison Officers (CLOs) and wilaya Climate Adaptation Committees. Structure: one CLO per wilaya (six in total) as the community-facing interface, plus the Wilaya Climate Adaptation Committees managing the 'Vulnerability-First' selection (Section 8.1 and 8bis.5). Reach: all 101 target communes.

(g) Regional and international dissemination (Annex 11). Structure: FAO Regional Office for NENA (RNE), PAGGW (African Union), AOAD, UNCCD Regional Coordination Mechanism; UNFCCC and UNCCD COPs; World Forestry Congress. Reach: partner countries of SURAGGWA (Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria, Senegal) and the wider Great Green Wall corridor. Effectiveness: reinforces national uptake in the 6 wilayas and 89 non-pilot communes through South-South learning loops.

4. Verification during implementation:

The Categories A/B/C decomposition is monitored — not merely assumed — through the following M&E instruments already provisioned in Annex 11: (i) the sex-disaggregated beneficiary registry with commune-level granularity for direct beneficiaries and Category C household members; (ii) the annual KoboToolBox beneficiary survey extended to a randomized sample of non-beneficiary residents in the 12 pilot municipalities

to measure Category A spillover; (iii) an annual network-reach survey conducted across the 89 non-pilot communes to measure Category B adoption via extension services, mobile app uptake, and cooperative-to-cooperative diffusion; and (iv) the Climate Information Use Index (Annex 11) as a proxy for advisory-service uptake at wilaya scale. If the Category B network-reach survey shows an indirect reach materially below the Y4 target of $\geq 60\%$, corrective actions (extension of the mobile-app campaign, additional cooperative twinning, expansion of the advisory-bulletin network) are activated before the next disbursement per the corrective triggers already defined in Section 8.

5 Conservative treatment:

Adopting a conservative approach: (a) the direct-beneficiary count of 142,433 is retained without inflation; (b) the indirect-beneficiary count of 941,670 is retained but with a transparent three-category decomposition; (c) no assumption of 100% direct reach in the 12 pilot municipalities is embedded; (d) the effectiveness benchmarks cited in point 3 are drawn from comparable Maghreb dryland programmes rather than optimistic projections; and (e) if implementation-stage evidence indicates that Category B network-mediated reach falls below the assumed share, the indirect count will be adjusted downward in the corresponding Annual Performance Report and reported to GCF.