



Drops4Crops

Burkina Faso

When every drop counts

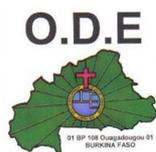
The Drops4Crops (D4C) project in Burkina Faso aimed to strengthen climate-resilient and water-efficient horticulture in the Yatenga and Zondoma regions. Led by Woord en Daad through a public-private partnership, the project improved access to water, land, and markets for more than 1,500 smallholder producers. Through integrated water resource management, efficient irrigation, and cooperative strengthening, D4C achieved remarkable results, including yield increases, higher water productivity, and improved incomes. The initiative has become a model for sustainable horticulture and inclusive economic growth in fragile, climate-affected regions.

The project was supported under the Sustainable Water Fund (FDW), a public-private partnership programme financed by the Dutch Ministry of Foreign Affairs and implemented by the Netherlands Enterprise Agency (RVO). Since 2017, the D4C project shows how FDW partnerships can turn funding and cooperation into real improvements in people's lives, stronger resilience to climate change, and more sustainable use of water and land.



Project title Drops4Crops (D4C) Burkina Faso
FDW project no. FDW16004BF
Location Northern Burkina Faso (Yatenga & Zondoma)
Implementation period 2017-2024

Consortium Woord en Daad (lead)
Living Water International
ODE (Office de Développement des Églises Évangéliques)
SCCA-PMY (Société Coopérative avec Conseil d'Administration des Professionels Maraichers du Yatenga)
DREA-Nord (Direction Régionale de l'Eau et l'Assainissement du Nord)
DRARAH-Nord (Direction Regionale de l'Agriculture, des Ressources Animales et Halieutiques du Nord)



Drops for Crops (D4C) strengthened water-efficient dry-season horticulture through an integrated approach: improving access to water, introducing IWRM practices, scaling efficient irrigation & good agricultural practices, securing land access (especially for women), and linking farmers to markets through cooperative strengthening, storage, and commercialization.

The Strength of Collaboration

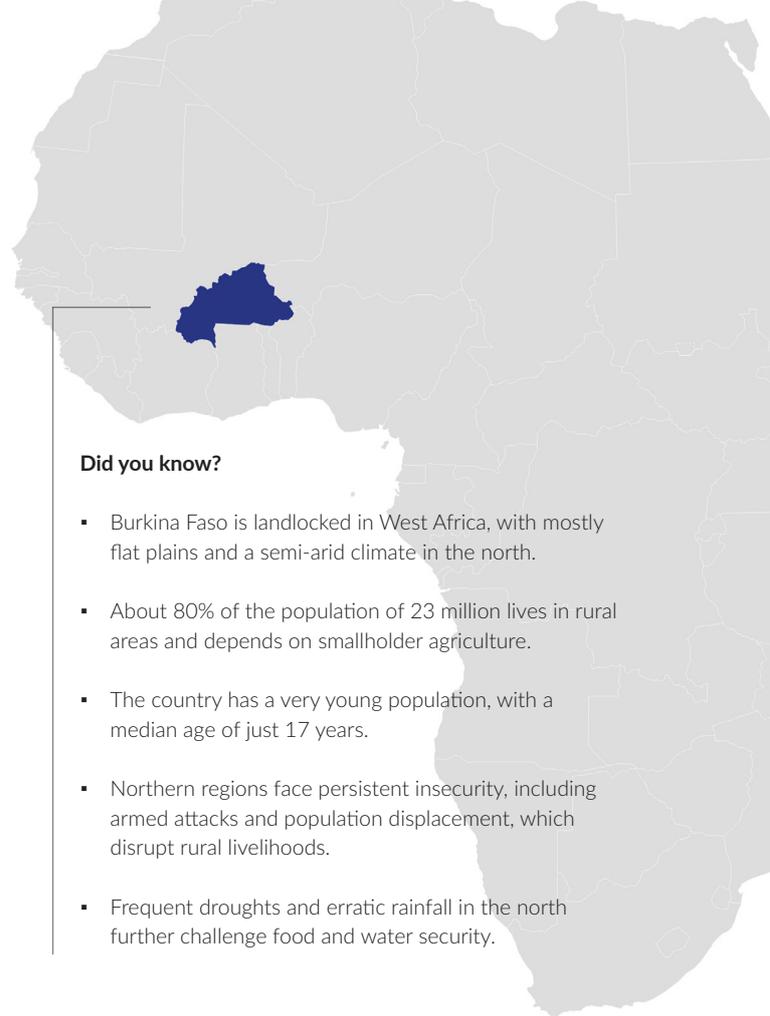
The project was a Public-Private Partnership (PPP) led by **Woord en Daad**. They were responsible for overall coordination, providing strategic guidance and liaising with the donor **RVO**. At national level, **ODE** acted as coordinator, aligning activities with Burkinabé water and agricultural institutions. **Living Water International** provided technical expertise in well and water point construction. The farmer cooperative **SCCA-PMY** anchored the organization of farmers, business development, and market linkages. On the public side, **DREA-Nord** supervised and monitored local water committees for water governance, while **DRARAH-Nord** supported agricultural extension and integration of horticultural best practices.

Together, this consortium combined technical know-how, institutional support, and socio-economic engagement to achieve sustainable impact and create a collaborative model for future PPPs in the region.

Understanding the Context

Since 2019, northern Burkina Faso has been affected by persistent insecurity, marked by armed attacks, population displacement, and restricted rural access. At the height of the crisis, several production zones were temporarily inactive, while others adapted through local facilitators and flexible scheduling. Project teams used remote coaching and community-led monitoring to maintain operations. By 2024, improved stability allowed many producers to return to their villages and resume agricultural production.

At the same time, climate variability (erratic rainfall, shorter rainy seasons, and rising temperatures) further strained agricultural systems. D4C's integrated strategy combining access to water, Integrated Water Resource Management (IWRM), and efficient irrigation increased resilience and ensured continuity of production despite these shocks.



Did you know?

- Burkina Faso is landlocked in West Africa, with mostly flat plains and a semi-arid climate in the north.
- About 80% of the population of 23 million lives in rural areas and depends on smallholder agriculture.
- The country has a very young population, with a median age of just 17 years.
- Northern regions face persistent insecurity, including armed attacks and population displacement, which disrupt rural livelihoods.
- Frequent droughts and erratic rainfall in the north further challenge food and water security.



Ernst Prosman
Project lead
Woord en Daad

“The most rewarding part of D4C has been witnessing tangible results: higher harvests, better market access, more stable incomes and stronger, more resilient communities.”



Drops4Crops in Action

The D4C project was organized into multiple work packages, each addressing a key aspect of horticultural development, from water access and efficient irrigation to land tenure and market linkages. These work packages worked together in an integrated approach, ensuring that interventions reinforced one another and contributed toward the common goal of improving productivity, resilience, and livelihoods for smallholder farmers in northern Burkina Faso.

1 | Access to water

In total 542 water points were constructed or rehabilitated for small-scale vegetable farmers (SVPs), of which 92% are still effectively used. Maintenance systems financed through cooperative member contributions ensured sustainability. Minor constraints included limited access to replacement equipment.

*What is "Bandes d'Aspersion"?

Bandes d'aspersion is a low-pressure sprinkler irrigation system commonly used by smallholder farmers. Water is distributed evenly over narrow strips of crops, improving water efficiency and crop yields while being relatively affordable and easy to maintain. This system allows farmers to irrigate more land with less water compared to traditional methods such as watering cans or flood irrigation.

2 | Integrated Water Resources Management (IWRM)

Catchment protection included thresholds, stone bunds, and living hedges. Also, 2 water reservoirs were built. Overall, these IWRM measures impacted more than 200 hectares. 4 local water committees were strengthened and for each of them a Water Use Management plan was developed. These committees reduce resource conflicts and enhance women's role in water governance.

3 | Efficient water use

Through the establishment of 56 demo sites, over 1,900 farmers were trained in Good Agricultural Practices (GAP) and efficient water use. These demo sites were also used to test different techniques.

Bandes d'aspersion* achieved the best balance between performance and cost, while drip irrigation systems reached the highest water efficiency where properly managed.

4 | Access to land (gender focus)

52 lease contracts secured approximately 310 hectares for 1,537 producers, including 1,102 women. These formalized arrangements enabled infrastructure development and improved women's access to resources. Women now hold 13% of cooperative leadership positions, representing an important step toward greater inclusion and a foundation for further progress in gender equality in rural land ownership.

5 | Market access and storage

Production rose to about 3,188 tons of onion and 1,684 tons of potato in 2024, generating total sales of €1.6 million. Additionally, the construction of twelve warehouses allowed delayed sales for better market prices, preserving 257 tons of onions, resulting in a net result of €67,000. Improved commercialization and cooperative coordination increased farmer income compared to previous campaigns.



The Story of Madame Maiga Safoura

Madame Maiga Safoura is a 38-year-old market gardener from the outskirts of Ouahigouya in northern Burkina Faso. For years, she cultivated a small rented plot using a watering can, producing just enough to support her family through the dry season. Repeated droughts, poor water access, and the insecurity that isolated her community made it difficult to maintain stable production. When the D4C project began, Madame Safoura joined the local cooperative SCCA-PMY, eager to learn new irrigation methods and strengthen her voice as a woman farmer.

Through the training sessions and demo sites, she mastered the *bandes d'aspersion* technique and adopted improved seed and composting practices. Her onion yields nearly doubled, and for the first time she stored part of her harvest in the cooperative warehouse to sell when prices improved. The extra income allowed her to repair her house and send her eldest daughter to school.

Madame Safoura now leads a women's production group and encourages others to sign formal land-lease agreements. *"Before, we worked alone and feared losing our plots"; she says. "Now we work together and plan for the future."*



Insights & Reflections: What Drops4Crops Taught Us

By achieving measurable improvements in yields, water efficiency, and incomes, the D4C project also generated valuable lessons for future water-smart agriculture initiatives. Reflections on innovations, cooperative development, and gender dynamics reveal what worked well, the challenges encountered, and opportunities to build on these experiences for lasting impact in similar contexts.

Digital innovation and data-driven farming

FarmerLink is a digital tool for gathering and analyzing field data on yields, irrigation, and markets. It gave farmers and cooperatives real-time insights to adjust their practices and improve results. By making data visible and accessible, it strengthened decision-making, accountability, and learning.

Stronger cooperatives

Developing a viable business case for farmers and building SCCA-PMY's management capacity were central to success. The cooperative transformed into a local agribusiness hub offering input supply, financing, and market services. These changes improved farmer autonomy, boosted revenues, and ensured continuity after project closure.

Learning and innovation at demosites

Demosites tested and compared irrigation and production techniques under real conditions. Monitoring revealed that *bandes d'aspersion* systems were optimal for balancing water efficiency and farmer preferences. Solar-powered irrigation proved difficult to adopt among farmers. Many experienced low water pressure during cloudy weather or at sunrise and sunset, when solar output dropped. Local repair services were scarce, making maintenance slow and costly compared to the readily available support for motor pumps. In addition, the high purchase cost of solar pumps (around five times that of a motor pump) made them unattractive for most producers. Demosites also served as powerful learning centers. They promoted peer exchange and knowledge transfer beyond the immediate beneficiaries, leading to wider adoption of efficient irrigation practices.

Women's empowerment

Land rental contracts gave women and other market gardeners secure and formal access to land, allowing them to plan and invest in infrastructure such as irrigation systems. This security encouraged long-term cultivation and improved productivity. Women's participation in cooperatives also increased, giving them a stronger voice in decision-making at both household and community levels.



Embedding local water governance

To ensure sustainability, monitoring of local water committees has now embedded in the bi-annual monitoring plans of DREA-Nord. This water authority continues to oversee and report on these local water management structures, maintaining their functionality beyond the project.

Partnership

The D4C partnership model showcased effective adaptive programming, allowing quick responses to insecurity, climate variability, and logistical challenges. Strong collaboration among international, national, and local actors built trust and improved coordination, ensuring implementation continuity even under difficult conditions.

Before 2016, SCCA-PMY functioned mainly as a small association with limited staff and almost no formal systems. The organization had only one accountant and lacked strategic documents such as a business plan, gender policy or investment plan.

With the start of the D4C project in 2017, SCCA-PMY transitioned into a cooperative and professionalized its management. It built a multidisciplinary team, including specialists in accounting, monitoring and evaluation, gender, IWRM and community development. This structure allowed for better planning, follow-up, and accountability. The cooperative now operates with clear strategic tools and uses FarmerLink, a digital platform, to collect and analyze production data across its member base.

FarmerLink has been central to SCCA-PMY's modernization. The digital tool enabled the cooperative to register producers, track production areas and yields, and assess water productivity. With reliable data, SCCA-PMY can now plan targeted interventions, make evidence-based decisions, and produce



Mahamady OUEDRAOGO
Cooperative Manager
SCCA-PMY

“With FarmerLink and a professionalized cooperative structure, we can make better decisions, support our farmers, and ensure transparency and sustainable growth for the future.”

transparent reports for members and partners. It also supports advisory services: field agents use FarmerLink for real-time coaching, helping farmers improve their practices. By improving traceability, decision-making, and financial credibility, the tool has turned SCCA-PMY into a transparent and data-driven organization.

Today, SCCA-PMY manages storage facilities that reduce post-harvest losses and allow members to sell later at higher prices, strengthening both household income and cooperative funds. Its governance is participatory, with decisions taken collectively and benefits reinvested into services such as training, inputs, and microcredits. Looking to 2030, SCCA-PMY envisions becoming a nationally recognized cooperative that increases farmer income and also supports value addition through product processing.

Making a Difference: The Impact of Drops4Crops

The D4C project has significantly strengthened the capacity of smallholder horticultural producers in northern Burkina Faso. It has delivered measurable progress in agricultural productivity, household livelihoods, water efficiency, climate resilience, and social inclusion.

- **Yields (production):** Adoption of efficient irrigation techniques increased onion yields by nearly 23% and potato yields by over 54%, increasing food availability for the rural population.
- **Income:** Farmers' revenues rose due to yield gains, better market access, and warehouse storage enabling strategic sales. Household income stability improved, supporting investments in education and health.
- **Water efficiency:** Water productivity increased by about 90%, showing that per drop of water more crops are produced.

- **Resilience:** Integrated approaches combining water management, land access, and cooperative strength enhanced the sector's resilience to climate and security shocks.
- **Social impact:** Women's secure access to land and stronger leadership roles fostered more inclusive local governance and economic empowerment.

Overall, D4C demonstrates how combining infrastructure, capacity building, and cooperative business models can sustainably enhance livelihoods and agricultural resilience in fragile and climate-stressed regions. The lessons learned from D4C are now informing the design of future sustainable agriculture initiatives across Burkina and the wider Sahel, providing an example for climate-smart inclusive approaches that benefit both communities and the local economy.





Jacob J. Vreugdenhil
Chief Program Officer
Woord en Daad

“The impact of D4C goes beyond the project, creating lasting benefits for smallholders: and that’s what it was all started for.”

“The unique strength of Public Private Partnerships is that they center around a societal challenge that require both public and private involvement. Public or private efforts alone would not suffice to tackle the challenge. So there is a very clear rationale to collaborate.

The business case is central in the joint efforts, bringing the required sustainability. Over the years we have seen a deep collaboration grow in D4C, that moved from project to partnership. This results in lasting effects for smallholders beyond project outputs and project lifetime: and that’s what it was all started for.”

Looking ahead: Building on Success

Drops4Crops demonstrates the power of partnership and collaboration in transforming smallholder agriculture. By combining technical expertise, access to water and land, efficient irrigation practices, and strengthened cooperative networks, the project helped farmers in northern Burkina Faso increase their yields, improve incomes, and build resilience to climate variability and insecurity. The success of D4C relied on close cooperation between local communities, cooperatives like SCCA-PMY, technical partners such as Living Water International and ODE, and public institutions including DREA-Nord and DRARAH-Nord. With the support of the Sustainable Water Fund, managed by the Netherlands Enterprise Agency (RVO), these combined efforts turned the interventions into real, tangible benefits for farmers and their families.

Building on the achievements and lessons of D4C, the ARFSA project, also funded by RVO, is now supporting farmers in northern Burkina Faso to boost sustainable agriculture practices for wet season crops, like sorghum and maize. While continuing to strengthen cooperative capacity, ARFSA aims to complement and expand the impact of D4C, ensuring that communities remain resilient, productive, and empowered in the face of climate and security challenges. Together, these initiatives illustrate how long-term, partnership-driven approaches can create lasting change and serve as a model for future initiatives that focus on sustainable agriculture across the Sahel.





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Credits

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