

Activating
agricultural
transitions
to sustainability
**through
participatory
research and
co-innovation**

Stories of
change across
Africa, Asia and
Latin America
from the DeSIRA
initiative





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DISCLAIMER

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"CFS has been very helpful to me as a farmer as now I started to use organic manure/fertilisers called 'Jholmol' in my farm which was taught in our sessions. These fertilisers contributed to achieving good yields on my farm. In addition to these, we have been able to learn many CRA practices and techniques useful in our farming."

This collaboration also contributes to the empowerment of youth leadership. Rajani Mijar Roka had just completed her Isc. (Intermediate of Science) in agriculture from the Nepal Polytechnic Institute. She is now working as a local resource person for the GRAPE programme in Chure Rural Municipality, Kailali. Thanks to her work she gets to practise and share what she had learnt: *"Thanks to GRAPE, farmers have now learned about CRA, which is based on simple, affordable, nature-based solutions. It helps to increase people's capacity to adapt to climate change"*. In an era where numerous young individuals are turning away from agriculture, Rajani's narrative stands out as a source of motivation for others, showcasing the possibilities of adopting and advocating for climate-resilient agricultural practices within their homes and communities. She concludes: *"The learning journey has been truly enriching."*

Other young leaders are inspired as well, for example Jyoti Mandal, a law student and member of the Youth Sounding Board (a consultative platform for Nepalese youth to exert influence on European Union actions), who remarks: *"Since this project has been executed through collaboration and cooperation among federal, provincial and local governments, establishing a solid foundation of accountability and transparency, it serves as a commendable model"*.

Redefining partnerships with non-governmental organisations

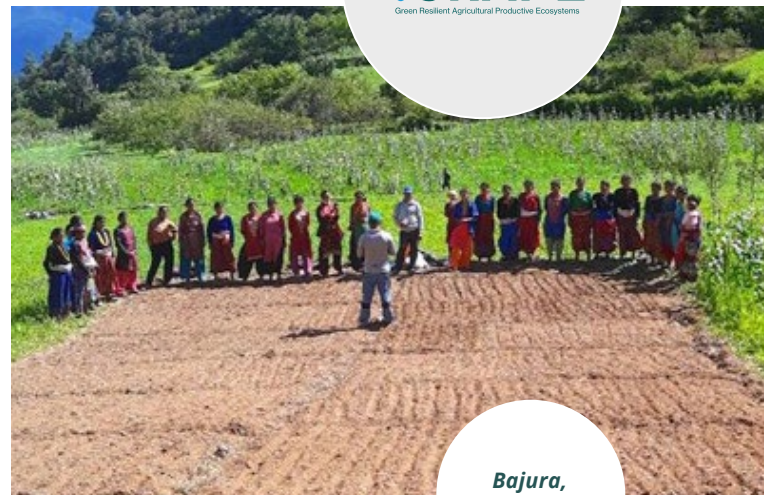
The GRAPE programme facilitated the creation of a Community of Practice (CoP) for NGOs interested in strengthening CRA, which was initiated by FCA. CoP provides a space for members to connect, exchange experiences and collectively enhance their expertise within the domain of CRA. A separate forum for female NGO members to develop their leadership capacities through diverse training and coaching modules was created to help promoting women's leadership in CRA. Providing exposure specifically to women and enhancing their technical and leadership skills was motivated by a perceived gap in the representation of female leaders in various platforms.

GRAPE is also fostering connections between NGOs and universities. The initiative involves enhancing the capacity of NGOs and universities to assess CRA technologies. GRAPE integrates CRA into university curricula and

strengthens the capabilities of local NGOs in promoting CRA. Additionally, through INGOs, they facilitate the import and export of various CRA technologies between Nepal and other nations, scaling up solutions beyond Nepal's borders.

GRAPE's uniqueness lies in its evolution from viewing partnerships with NGOs as tools for enhancing implementation capacities to making partnership building a primary outcome. GRAPE partners now collaborate through a programme-based approach, investing in building networks and collaborations that can extend well beyond the project's implementation phase. This approach often leads to the development of innovative solutions and sustainable business models that benefit all partners over time.

To achieve lasting improvement in the agricultural sector of Nepal, patient, long-term work is necessary. Putting resources and effort into building partnerships can be particularly beneficial for a robust future of cooperation in the field. Functional partnerships are an excellent basis to build on, not only for the next phase of GRAPE but also for other projects and collaborations in the agriculture sector of Nepal.



Bajura, Nepal

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STORY OF CHANGE

An innovative financial model for equipping farmers with small irrigation systems

IRRINN project, Burkina Faso



IRRINN – Innovative Irrigation is a research and development project, funded by the European Union under the DeSIRA Initiative, and implemented in Burkina Faso by a consortium of CIRAD, CSIC, ZALF, Practica, 2iE, INERA and APESI.

The same year she built a new house and bought a small motorcycle, and, in addition, was able to better provide for her children.

The first testing phase served not only to demonstrate the effects of irrigation but also to improve the design of the irrigation kit thanks to input from users. The innovative farmers had the right to adapt their kits and to add new elements according to their needs. The modifications and comments on their experience as new users of the technology were collected through evaluation questionnaires.

In the village of Kouzoughin, near the capital Ouagadougou in Burkina Faso, agriculture has for centuries been rain-fed and focused on producing cereals for self-consumption. Since the 1950s, some villagers began using well water to irrigate small gardens where they grew vegetables to sell in the city. Rasmata Kaboré's family is one of these pioneers. For years, Rasmata irrigated a small gardening plot from a 17-meter deep well, dug by her husband, close to the family house. The work is hard - she must draw water by hand and walk around the plots with a watering can. Very few market gardeners have acquired generators and submersible pumps to facilitate water extraction but in the village, water is still drawn manually.

After the test and participatory evaluation phase, the IRRINN project proposed to equip 40 villagers with solar irrigation kits. The solar pump and pipes are worth a little less than 2,000 euros (around 1.2 million FCFA). To test this technological solution on a larger scale, it was necessary to find a financing method accessible to small individual producers, interesting to equipment suppliers, and limiting financial risk for both parties. The project decided to test a financial model based on lease, where the producer becomes the owner of the kit at the end of the repayment period for part of the equipment. This model was suggested by one of IRRINN project partners, Practica, who had already tested a similar solution in other projects. This model was therefore adapted to local conditions by the project team and proposed to the farmers and suppliers.

The IRRINN project, which aims to intensify agricultural production using innovative technologies, started around Ouagadougou in 2021. Its objective is to remove the technical, financial, organisational and institutional constraints which limit the development of small-scale irrigation. In its initial phase, the project team, together with local producers, tested a variety of small-scale irrigation equipment and techniques (drip irrigation, sprinkler strips, low-cost drilling, nozzles). Rasmata Kaboré was then selected to test the benefits of a solar pump. Her irrigation kit included a solar pump, solar panels and flexible pipes to water her plots. She installed the system in the family well. The results were remarkable from the first year. Rasmata was able to expand the area she was cultivating, increase yields and produce vegetables throughout the year.

Following the successful example of Rasmata, in the village of Kouzoughin more than 60 people registered to participate in a draw for around 10 pumps that the project planned to install in this village. Among the lucky ones selected, there were six other women, widows and married women who had a family plot and a well.

The innovation platforms initiated by IRRINN were quickly adopted by local stakeholders. Each platform has a management team that organises meetings and co-ordinates activities. The representatives of IRRINN are present to provide support in animation, if necessary, but now the local actors have become the driving forces behind the platforms' activities.

Normally, solutions using solar energy are not accessible to individual small-scale producers, due to the high cost and lack of financing options. The model proposed and tested in the IRRINN project made it possible to bring producers and suppliers closer together.

The principle of acquiring the kits is guaranteed by a direct private contract between the producer and the supplier. After an initial payment of 7% by the producer to the supplier and the payment of a first instalment of the subsidy (60%) by the project, the producer pays the remaining 23% of the total value of the kit according to a schedule agreed upon with the supplier. Thanks to the close relationship between producers and suppliers facilitated by the project, repayment schedules took into account the specific situations of families; for example, deadlines were set not to coincide with the start of the school year, when families have bigger expenses, etc.

Project partner APESI, a local non-profit association active in the field of entrepreneurship and irrigation, that supplies the irrigation kits, closely monitors the



Irrigated plot with solar kit.

agricultural activities of the project beneficiaries to provide advice on the use of the system and assures its maintenance.

If the producer is satisfied with the supplier's monitoring and support service, the project pays 10% to the supplier after two years and when the cost of equipment is reimbursed, the producer becomes the owner. If the producer suspends their reimbursements, the supplier has the right to collect the equipment. One year after the installation of 40 pumps in four villages, the farmers have repaid 100% of the instalments and all the pumps have been operating normally.

At the same time, APESI continued to improve the technical solution. The project team observed in the field that the beneficiaries were not using all pipes simultaneously and thus it was possible to reduce the number of pipes in a kit. This allowed the cost to be reduced by 40%, making it more bearable for producers. A new phase of the project was accepted unconditionally by the supplier to equip 20 new producers in two villages, this time with a subsidy of 50% instead of the 70% used in the previous phase. With this approach, the subsidy made it possible to reduce the risk incurred by the supplier. However, the idea was to gradually reduce the subsidy until it is eliminated.

The reflection on how to continue providing the solution without granting subsidies is carried out within the innovation platforms focused on small private irrigation that operate in two of the municipalities where the IRRINN project intervenes: Tanghin-Dassouri and Komsilga. The innovation platforms initiated by IRRINN were quickly adopted by local stakeholders. Each platform has a management team that organises meetings and co-ordinates activities. The representatives of IRRINN are present to provide support in animation, if necessary, but now the local actors have become the driving forces behind the platforms' activities. Regular meetings are hosted by the municipalities. The composition of the platforms is dynamic; different actors participate

depending on the subject covered. Private actors, perceived by the project as part of the innovation support services, have been involved from the start. Meetings within the platforms make it possible to create a climate of trust between these services and the smallholder producers to achieve a win-win partnership: setting up guarantee and security conditions for suppliers while facilitating the acquisition of solutions for farmers. Microfinance companies were included in the platforms to contribute to the co-construction of solutions. The platform members are currently considering a configuration where microfinance companies could serve as a guarantee to reassure suppliers. The conditions created by the IRRINN project made it possible to develop and test a solution, both technical and organisational, that would be sufficiently interesting for the private sector, so that the private actors keep implementing it after the project finishes.

Convinced by the benefits of meeting within the innovation platforms, their members are advocating to obtain sources of financing independent of the IRRINN project. Their goal is to sustain these structures beyond the project's duration, so that other projects or state actors could also rely on them to develop small-scale private irrigation.

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