

IRRIGAR: Homestead irrigation improves diets in Mali for women and children

Malnutrition in Mali

One million children under five are affected by stunting in Mali (more than one in four)¹ and the number of stunted children is not expected to fall in the coming years. Mali is therefore currently not on track to meet the international target for stunting2. At the same time, other forms of malnutrition also persist. More than one in eight children suffer from wasting. Only 9% of children aged 6-23 months old eat even a minimally acceptable diet. In recent years, the prevalence of overweight and obesity in women has almost doubled³, while half of women have anaemia. The double burden of malnutrition4 results from many factors. often rooted in widespread multi-dimensional poverty. The economic cost of undernutrition in Mali is estimated to be 4% of GDP⁵. National efforts to tackle malnutrition have largely focused on strengthening health services, but it is increasingly recognised that a multi-pronged approach with a strong focus on agriculture is required.

IRRIGAR⁶ (2014-2019)

IRRIGAR was a EUR 27.7 million programme funded by the EU⁷, and implemented by GIZ, KfW and decentralised state services. The programme aimed to contribute to improving food security and nutrition by increasing and diversifying agricultural production. Located in several regions⁸, the focus was on establishing small-scale irrigation and pond structures for fish farming. Poor farmers (both women and men) received support to use this infrastructure efficiently, for both household consumption and sales through local markets. To maximise the impact on people's nutrition, educational materials were developed and disseminated in collaboration with local health actors. As a result, people have become more aware of the risks associated with malnutrition and the importance of ensuring a more diverse

and healthy diet and food hygiene. A community dynamic has emerged through the creation of local level nutrition action groups. Both the second phase of IRRIGAR, jointly funded by the EU and Germany, and an anticipated third phase, will ensure continued progress in the two regions of Sikasso and Koulikoro.

Tangible results in the lives of women and children

IRRIGAR set up a robust monitoring and evaluation system to ensure that the situation at the end of the programme could be compared with that at the start. Data collected in 2019 now confirms a marked improvement in the dietary diversity of both mothers and young children as well as in household food security compared to the baseline situation of 2015. Sales of agricultural and market garden products had increased while household expenditure on health is more regular. There has also been an improvement in mothers' attendance at ante-natal check-ups, an increase in exclusive breastfeeding and a more frequent preparation of nutritious recipes for children than was previously the case.

IMPROVEMENTS IN THE LIVES OF WOMEN AND CHILDREN: PROJECTS FROM THE FIELD



Outcomes ⁹	2015	2019
Household food security	53.6%	93%
Mothers' diet	2.3%	21.9%
Children's diet: 6-23 months 24-59 months	10.4% 11.4%	17% 23.9%
Exclusive breastfeeding	33.8%	39.9%

Realising human potential

In Mali, the poorest children are three times more likely to be affected by stunting as those from better-off families. Nutrition inequalities can have short- and long-term consequences, such as poor health, delays in early child development and underperformance at school. The IRRIGAR programme ensured support for disadvantaged women and men in the creation of mechanisms for local community engagement in rural areas: 121 food and nutrition security community action groups with the involvement of local mayors. Gender considerations were central to the programme, which promoted the participation of men as well as women, facilitated women's access to irrigated land and ensured gender disaggregated data in the design of monitoring and evaluation systems. Working with local radio stations to produce and broadcast informational programmes also helped raise to public awareness of nutrition and food hygiene as well as ensuring dissemination of messages in four local languages for maximum outreach.

Tackling climate and environmental challenges

Already subject to frequent droughts, Mali is highly vulnerable to climate change, which is expected to increase local temperatures, rainfall variability and the magnitude of extreme weather events. Climate-related changes are already being felt and are leading to a steady, southwards shift of agricultural activities to areas where population density is higher and the risk of conflict greater. The investments in small scale infrastructure associated with IRRIGAR play a key role in helping to mitigate drought risks and create new income opportunities. Reduced levels of outward migration have also been reported in the areas covered. Sensitivity to conflict with respect to the management of scarce water resources to preserve social cohesion has been central to IRRIGAR's effectiveness.

- 1 Stunting prevalence is 27% (Mali DHS, 2018).
- 2 World Health Assembly target to reduce the number of stunted children by 40% by 2025
- 3 Prevalence of overweight and obesity in women 15-49 years: DHS-2001: 15%, DHS-2018: 28%.
- 4 The double burden of malnutrition is characterised by the coexistence of undemutrition (including micronutrient deficiencies) and overweight and obesity.
- 5 Cost of Hunger in Mali, 2018.
- 6 IRRIGAR: Initiative de Renforcement de la Résilience par l'Irrigation et la Gestion Appropriée des Ressources.
- 7 IRRIGAR is a subcomponent of a larger programme, PASSIP (Programme d'Appui au Sous-Secteur de l'Irrigation de Proximité), co-funded by the EU and the Department of Global Affairs Canada, which supports the National Small Scale Irrigation Programme.
- 8 Inner delta of Niger, the Dogon country and regions of Koulikoro and Sikasso.
- 9 Evaluation finale du volet sécurité alimentaire et nutritionnelle du PASSIP dans les régions de Koulikoro, Sikasso, Mopti et Tombouctou. The evaluation applied internationally recognised indicators: for household food security, the Food Consumption Score; for mother's diet, the Dietary Diversity Score for Women; for children's diet, the Minimum Dietary Diversity.

PDF ISBN 978-92-76-40341-8 doi:10.2841/09683 MN-BI-21-005-EN-N

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Published by Directorate-General International Partnerships, Directorate Green Deal, Digital Agenda, February 2021. The contents of this publication do not necessarily represent the official position or opinion of the European Commission.

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Photo: Women trashing and winnowing rice in village Banankoro, Mali. © GIZ Credit: Joerg Boethling



