



WorldFish in Cambodia

Healthy People. Healthy Planet. Shared Prosperity.



Country Profile

Fish is an integral part of the diet, culture, economy and food security of Cambodia, where per capita fish consumption is one of the highest in the world. Fish accounts for **76 percent** of households' protein intake and is the second most consumed food after rice.

However, the availability and affordability of fish for the most vulnerable is declining. Cambodia's growing population and the accelerating effects of climate change further threaten the country's aquatic biodiversity and food security.

The once-abundant inland fishery resources of the Mekong River Basin and the Tonle Sap floodplain, which have supported Cambodia for centuries, are now dwindling due to the construction of dams and irrigation canals. The expansion of private irrigated rice fields limits fishing rights and access to nutritious food for rural communities. Wild fish stocks, which often live in rice fields during the rainy season, have also declined due to climate change, illegal fishing and a lack of stock management.

Action must be taken to mitigate the conflicting uses of natural resources and competition for water and land.

FAST FACTS



27 percent of households engage in fishing activity.



In 2022, the country's total fish production was **862,000 metric tons**; aquaculture contributed **330,600 metric tons**.



32 percent of children under five in Cambodia are malnourished.



My family are so happy with the community fish refuge because during this rainy season, my family and neighbors can catch more fish – up to 2–3 kg per day. The previous rainy season, before establishing the CFR, we caught around 0.5–1 kg per day. The community benefits from the surplus catch by eating more fish and earning money.

*– Doen Samoen
Male fisher in Boeng Phouk*



WorldFish's Support

WorldFish has worked in Cambodia since 2006, collaborating with the government and development partners to increase productivity and investment in the agriculture and fisheries sectors. Our research focuses on improving the productivity and resilience of wild fisheries in human-modified environments such as rice fields and reservoirs. It provides assistance to the aquaculture sector, expands the role of fish in the nutrition security of women and children, and increases benefit-sharing in land and water management.

To improve food security for low-income households and promote sustainable fishing practices, WorldFish supported the creation of community fish refuges (CFRs) in the Tonle Sap region. These refuges are safe havens for fish to breed and grow, and make efficient use of increasingly scarce water and land. CFRs maintain rice productivity and almost double the profitability of the landscape while building resilience and enhancing biodiversity. Through the USAID **Feed the Future CFR project**, which facilitated community training, fish habitats rebounded, and fish production by the poor increased by **71 percent**. Between 2012–2020, with support from USAID, WorldFish improved **140 CFRs**, impacting more than **110,000 households** across four provinces. Between 2020–2023, with support from GIZ, WorldFish implemented a further **21 CFRs** in Kampong Thom province, benefiting more than **17,000 households**. This means, that with our support, more than **200,000 hectares** of rice fields are now managed more sustainably.

Enabling Impact

The **Mekong Fisheries Conservation project** uses a unique village-led research and education approach. It has established community-based learning hubs at **30 community fisheries** (CFIs) across six provinces. These hubs empower villagers and partners to exchange knowledge with communities that successfully implement good practices in sustainable fisheries management.

This project focuses on raising awareness, capacity building and providing communities with tools to improve natural resource management and fish ecology. It identifies and promotes best practices, and focuses on partnership building between representatives from government, civil society, local people and the scientific community. Thanks to WorldFish's support, community-based organizations have an improved understanding of fish ecology and have reported a significant recovery of fisheries resources.

The **Sustainable Aquaculture and Community Fish Refuge Management project (SAFR)** in Kampong Thom province aims to improve food security through improved fish production. SAFR improves the conditions of CFR systems and supports self-managing committees in these communities. WorldFish and partners are building capacity and supporting strengthened governance of the CFRs, benefiting more than **70,000 people**. Annual catch per fishing household is estimated to have increased from **170 kg in 2021 to 250 kg in 2022**.

Communities also have improved access to other aquatic animals and plants, providing supplementary nutrition and surplus food for the dry season. Through this project, **1,837 (full-time equivalent) jobs** have been created in the fish value chain. This project has upscaling potential to support government development strategies such as a post-COVID-19 recovery plan, climate change resilience and ecology restoration for wild capture fisheries.

Moving Forward

WorldFish, through **the CGIAR Research Initiative on Asian Mega-Deltas**, has been working in Cambodia to build integrated, nutrient-sensitive and climate-resilient production systems. Through climate-resilient mapping, cross-sectoral policy analysis, and financial and technical capacity building, the program aims to mitigate the impacts of climate change on farmers. We are working through this Initiative, and across many other programs, to improve the connectivity between CFIs, CFRs and irrigation systems – bringing rice farming and fisheries together as an integrated food production system to mitigate the impacts of climate change.

Through the **CaPFish Aquaculture project**, WorldFish is working to drive sustainable, climate-resilient, and inclusive growth in Cambodia's aquaculture. This includes strengthening the sector's governance and developing and implementing regulations for effective policymaking, certification and regulation. The project aims to support the Cambodian Ministry of Fisheries in creating a more sustainable and regulated aquaculture industry.

Global food production systems are increasingly losing soil fertility and biodiversity. Through the **ASEAN-CGIAR program** (Intervention Package 1), WorldFish and partners seek to support the implementation of regenerative agriculture practices, including circular economy principles and reduced use of harmful agrochemicals, in key agroecological systems through public-private sector collaboration, multistakeholder platforms and participatory research practices. Regenerative agriculture improves nitrogen- and water-use efficiency and applies farming principles and practices that adapt to and mitigate the effects of climate change. The next phase of this work will start in Kampong Thom province, in areas affected by annual flooding of the Tonle Sap river, using rice-fish integrated agriculture systems to improve soil health.

A more climate-resilient, sustainable and regulated fisheries sector brings WorldFish closer to its vision for Cambodia. It will enhance nutrition and food security, create jobs to reduce poverty and improve livelihoods, and protect environmental health and biodiversity.



Partners and Donor

- Department of Aquaculture development of Fisheries Administration
- Inland Fisheries Research and Development Institute of Fisheries Administration
- Department of Planning and International Cooperation of Ministry of Water Resources and Meteorology
- Fisheries Administration Cantonment, Kampong Thom, Takeo, Prey Veng
- International Water Management Institute
- International Rice Research Institute
- Akphivath Neary Khmer Organization
- Cambodia Development Resources Institute
- International Institute of Rural Reconstruction
- Royal University of Phnom Penh
- Royal University of Agriculture
- CGIAR
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Margaret A. Cargill Philanthropies
- United States Agency for International Development (USAID)

WorldFish, the only CGIAR member, has its own office in Cambodia composed of 16 staff, including Finance, Admin, and Program Staff, and two internationally recruited Staff (IRS). The Finance, Admin, and Programs are managed through One Corporate System of CGIAR. WorldFish Cambodia is operated as part of the WorldFish Global. It is an international research organization that works to reduce hunger and poverty by improving aquatic food systems, including fisheries and aquaculture. It collaborates with numerous international, regional, and national partners to deliver transformational impacts to millions of people in the developing world who depend on fish for food, nutrition, and income. The organization is a member of CGIAR, the world's largest research partnership for a food secure future dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources.

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About WorldFish

WorldFish is a leading international research organization working to transform aquatic food systems to reduce hunger, malnutrition and poverty. It collaborates with international, regional and national partners to co-develop and deliver scientific innovations, evidence for policy, and knowledge to enable equitable and inclusive impact for millions who depend on fish for their livelihoods. As a member of CGIAR, WorldFish contributes to building a food- and nutrition-secure future and restoring natural resources. Headquartered in Penang, Malaysia, with country offices across Africa, Asia and the Pacific, WorldFish strives to create resilient and inclusive food systems for shared prosperity. Learn more at www.worldfishcenter.org

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