

Transforming climate-resilient aquatic food systems for shared prosperity

Why invest?



The Role of the Aquatic Foods Sector in Feeding the World

800 million

Number of people around the world who depend on **small-scale fisheries and aquaculture** for their livelihoods.

204 million tons

The volume of **aquatic food production** by 2030.

3.3 billion

Number of people getting **20%** of their **animal protein** from eating aquatic foods.

60 million

Number of people engaged in the primary sector of **fisheries and aquaculture** in 2018.

1 in every 2

Workers in the primary and secondary sector of fisheries and aquaculture are **women**.

1000 days

Aquatic foods are dense in **vitamins and micronutrients**, which are essential to cognitive development in the first 1000 **days of a child's life**.



The challenge

By 2050, we will need to feed more than nine billion people. The aquatic foods can help accomplish this but as it stands currently, fisheries and aquaculture-dependent communities are systematically disadvantaged.

They are among the most at-risk for the impacts of climate change. Their access to technologies, and market and non-market services is limited. Predicting and responding to climate hazards is a continuous challenge for both communities and resource managers alike.

At the same time, **policy and investment to create and bolster livelihoods are lagging behind the need.** Interventions often overlook local power structures, ultimately rendering them ineffective for aquatic foods-dependent communities.

Key statistics

The aquatic food sector is key to feeding the world but faces many challenges.



Tropical fish catch expected to **decline by 40% globally** by 2050 unless actions to curb CO2 emissions are taken.

The **weight of ocean plastic** will exceed the weight of all fish by 2050.



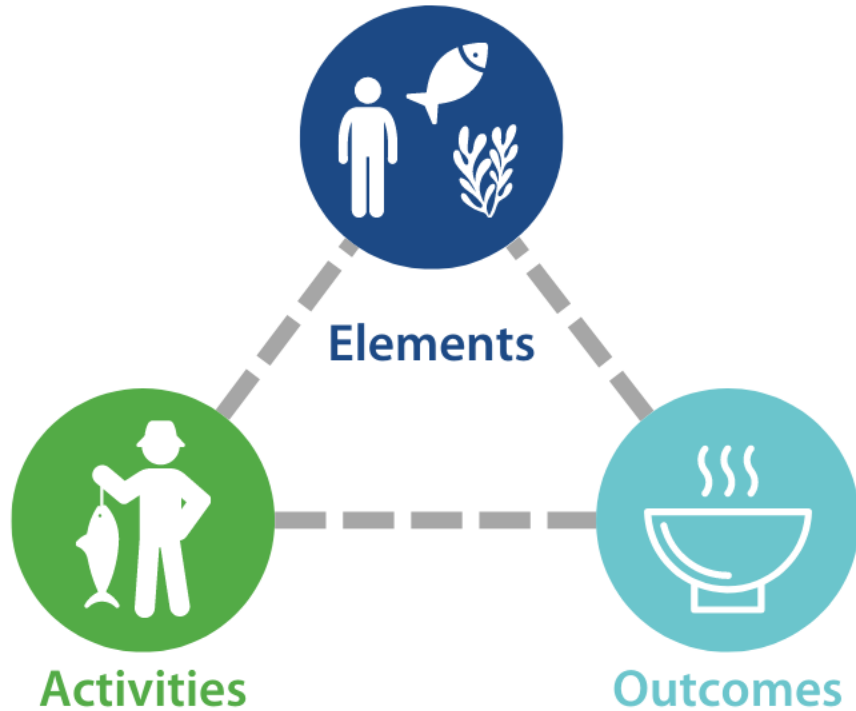
Just **66% of fish stocks** are within biologically **sustainable levels**, compared to 90% in 1990.

35% of the global catch from capture fisheries and aquaculture is **lost or wasted**.



What are resilient aquatic food systems?

An aquatic food system is a complex web of:



A sustainable aquatic food system ensures **food security and nutrition for all**, while not compromising the economic, social and environmental bases for future generations.

Climate-proofed aquatic food systems can **safeguard the livelihoods of millions**, especially the poor and vulnerable communities who are dependent on aquatic foods for their food, nutrition and income security.

Tackling global challenges with aquatic foods

Our vision, mission and institutional strategy for research on aquatic food systems are aligned with One CGIAR.

Our work contributes to the majority of the SDGs, but remains primarily focused on **tackling five global challenges** targeted for collective impact by One CGIAR as a collective.

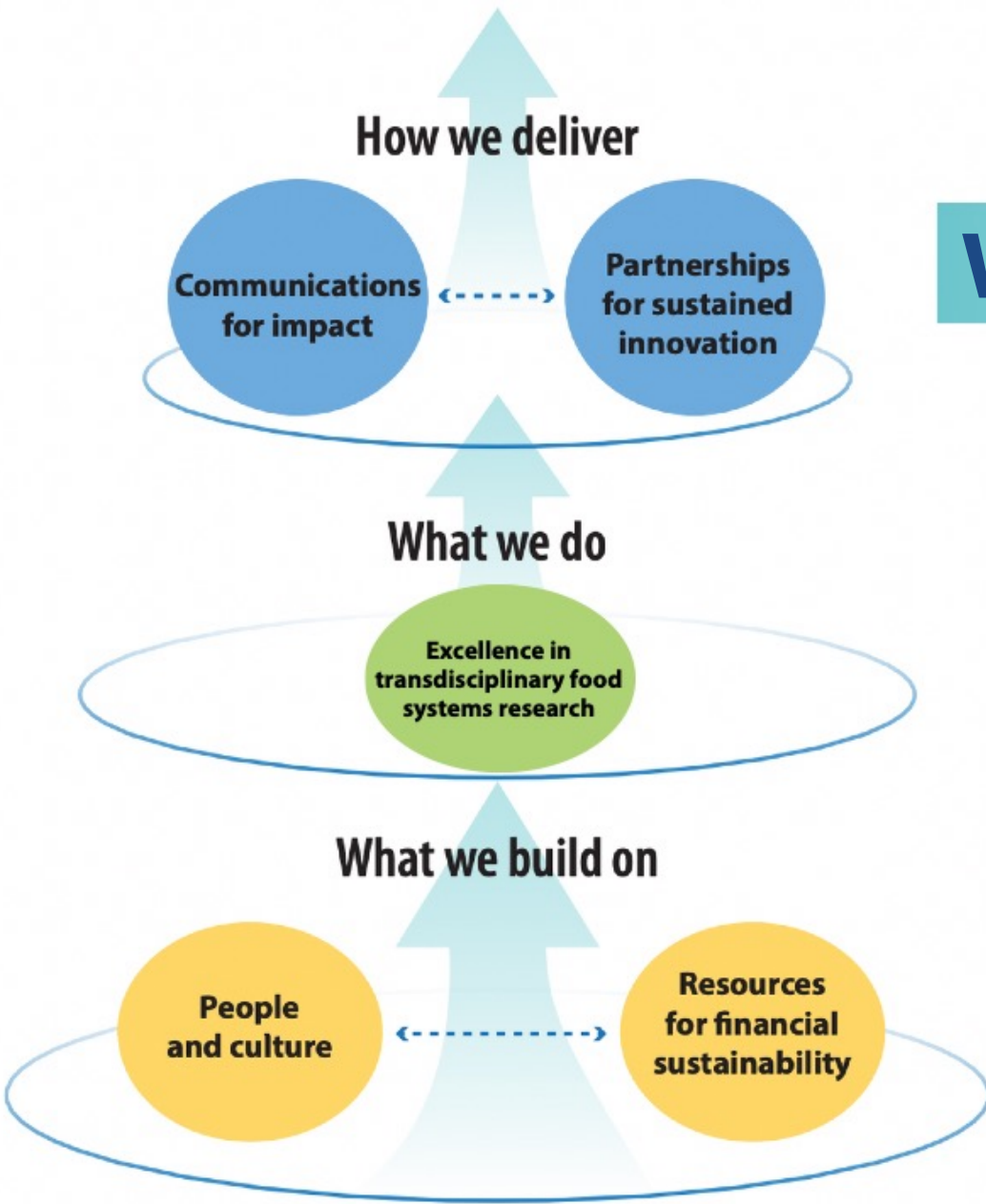
Food and
nutrition security

Gender
equality, youth
and social
inclusion

Poverty reduction,
livelihoods and
jobs

Climate
adaptation and
greenhouse gas
reduction

Environmental
health and
biodiversity



WorldFish strategy at a glance

Our **vision** is an inclusive world of **healthy, well-nourished people** and a **sustainable blue planet**, now and in the future.

Our **mission** is to end hunger and **advance sustainable development** by 2030 through **science and innovation** to transform food, land and water systems with aquatic foods for healthier people and planet.

Our unique proposition

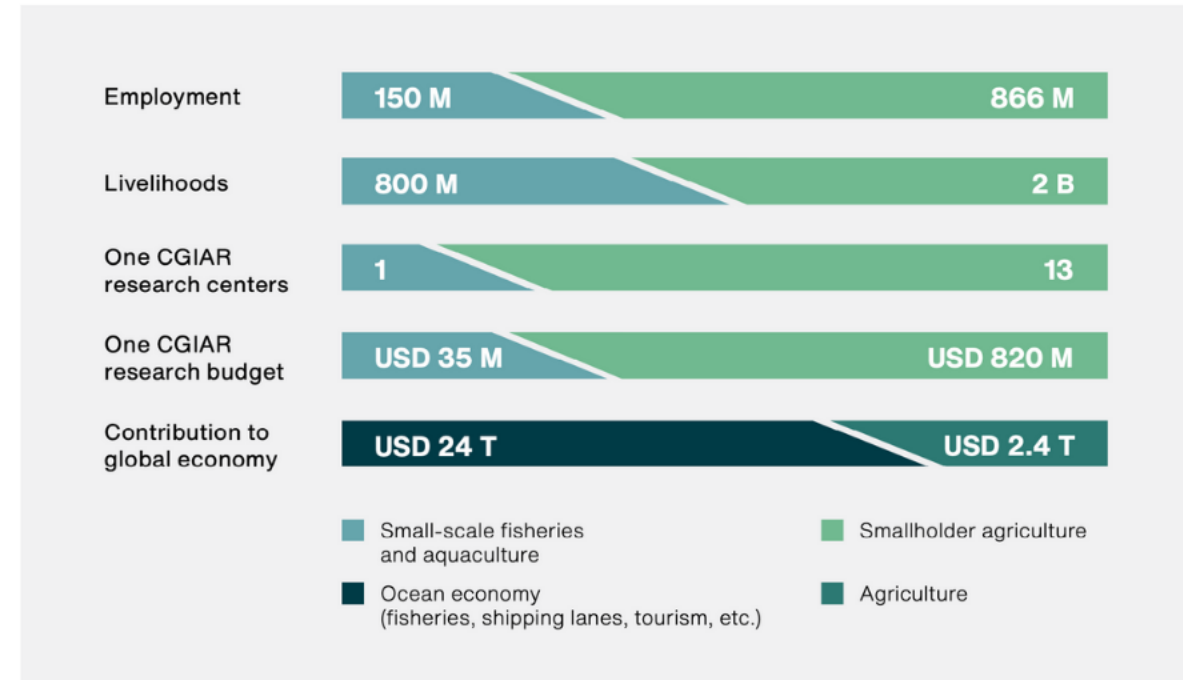
Transformation towards healthy and sustainable food systems for people and the planet is not possible without aquatic foods.

Our priority is to ensure greater integration of fish and aquatic foods into the global agricultural research agenda.

This is key to:

- Ensuring full representation of the food system
- Addressing the complex links between food, land and water
- Unlocking opportunities for people living in LMICs through an inclusive and people-centered blue economy

Research and innovation in aquatic food systems are critical to efforts to tackle climate change, protect nature and boost human well-being.



Source: adapted from the CGIAR System Annual Performance Report 2019, CGIAR System Organization (2019) and *Reviving the Ocean Economy*, WWF (2015).

Focus geographies and communities

Over the next 10 years, our intention is to expand our geographical footprint in key countries and communities across the globe, where our work can make a difference to persisting development challenges.

Latin America and the Caribbean

Key countries:

Colombia, Honduras, Mexico, Peru



Asia

Key countries:

Bangladesh, Cambodia, India, Indonesia, Malaysia, Myanmar, Vietnam

Africa

Key countries:

Egypt, Ghana, Kenya, Malawi, Mozambique, Nigeria, Senegal, Sierra Leone, Tanzania, Zambia

The Pacific

Key countries:

Solomon Islands, Timor-Leste

How we work

WorldFish...

- **Scales up** the capacity of local communities
- **Partners** with local governments
- **Equips** small-scale fishers and farmers with new innovations, technologies and practices
- **Empowers** those who often remain marginalized

Our research...

- **Informs policy, market, institutional and technological innovations** that prioritize rights and access to natural resources, land, assets, technologies, public services and finance

Our network...

- **Uses formal and informal approaches**, participatory research methods, and multi-stakeholder engagement
- **Creates space for dialogue** and proactive engagement in the wider innovation ecosystem

Small-scale
producers,
processors,
traders and
consumers

Local
community
and
development
actors

Scientific
community
in LMICs

Public
sector

One
CGIAR

Media and
the
general
public

Private
sector

Young
scientists
and
entrepreneurs

Investors,
philanthropic
actors and
development
agencies

Our innovations

We put innovation, learning and digital transformation at the very heart of everything we do.



Integrated Aquaculture Systems

An **IAAS approach** uses otherwise-wasted and support both agriculture and aquaculture. By integrating fish and small livestock, farmers in Zambia are **diversifying their products** and becoming more **resilient to climate change**.

Climate information systems (CIS) is a technological service that provides **real-time information** to aid small-scale fishers, farmers and supply chain actors in Bangladesh, Odisha and Zambia to **adapt and mitigate** the most severe impacts of climate change.

Climate Information Services



Solar tent fish drying

Solar tent fish drying in Nigeria reduces post-harvest losses, creates new value-added fish products, increases aquaculture supply chain actors' income and creates employment opportunities.

Community-based natural resource management (CBNRS) is a governance approach in the Pacific that ensures locals are the ones leading the **sustainable management** of resources.



Community-Based Management



Dried fish powder

In Myanmar, using **dried fish powder** with nutrient-dense fish ensures healthy, affordable, consistent and **sustainable food access** as well as creates new supply chain jobs.

Our impact in 2021

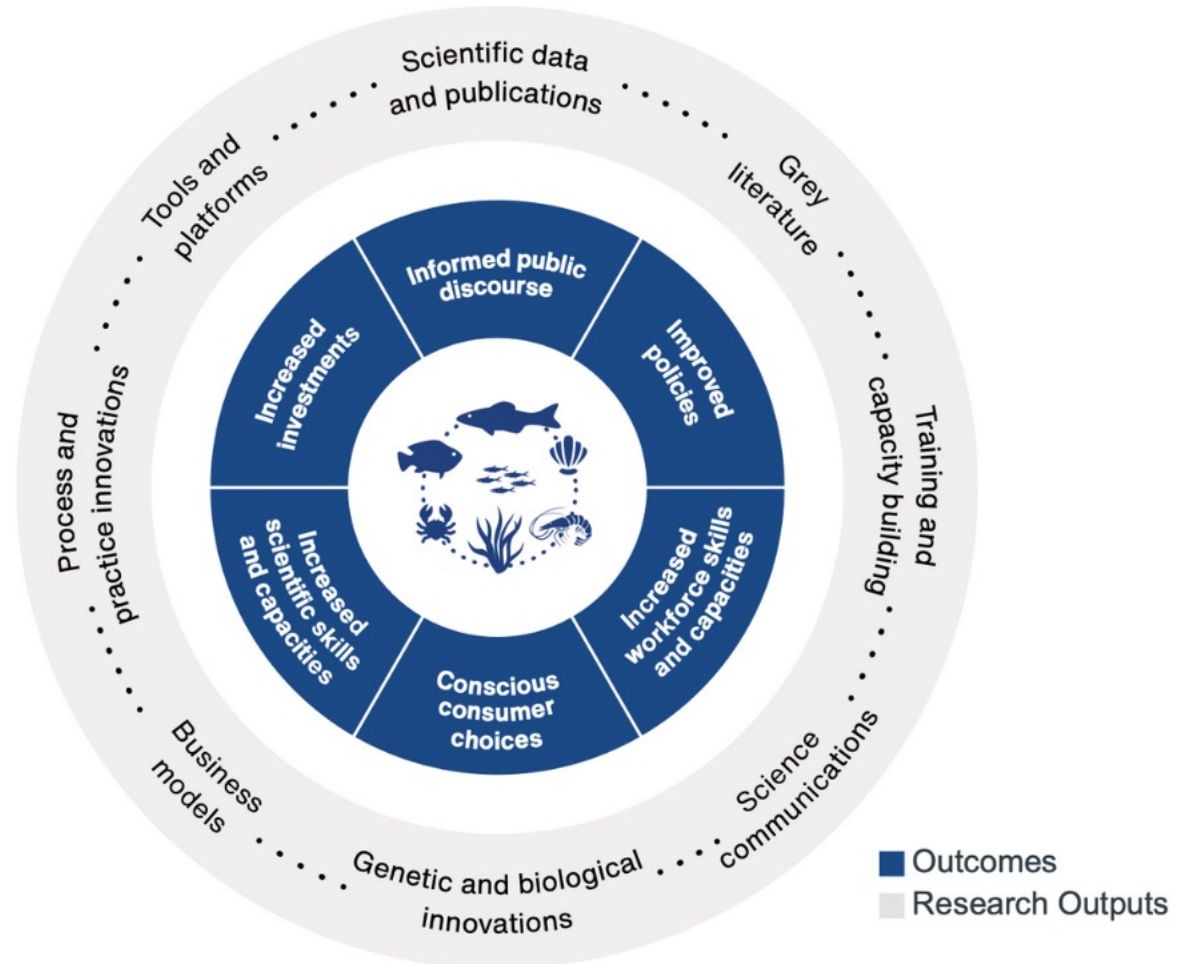
462,863 households adopted improved **fisheries management practice**

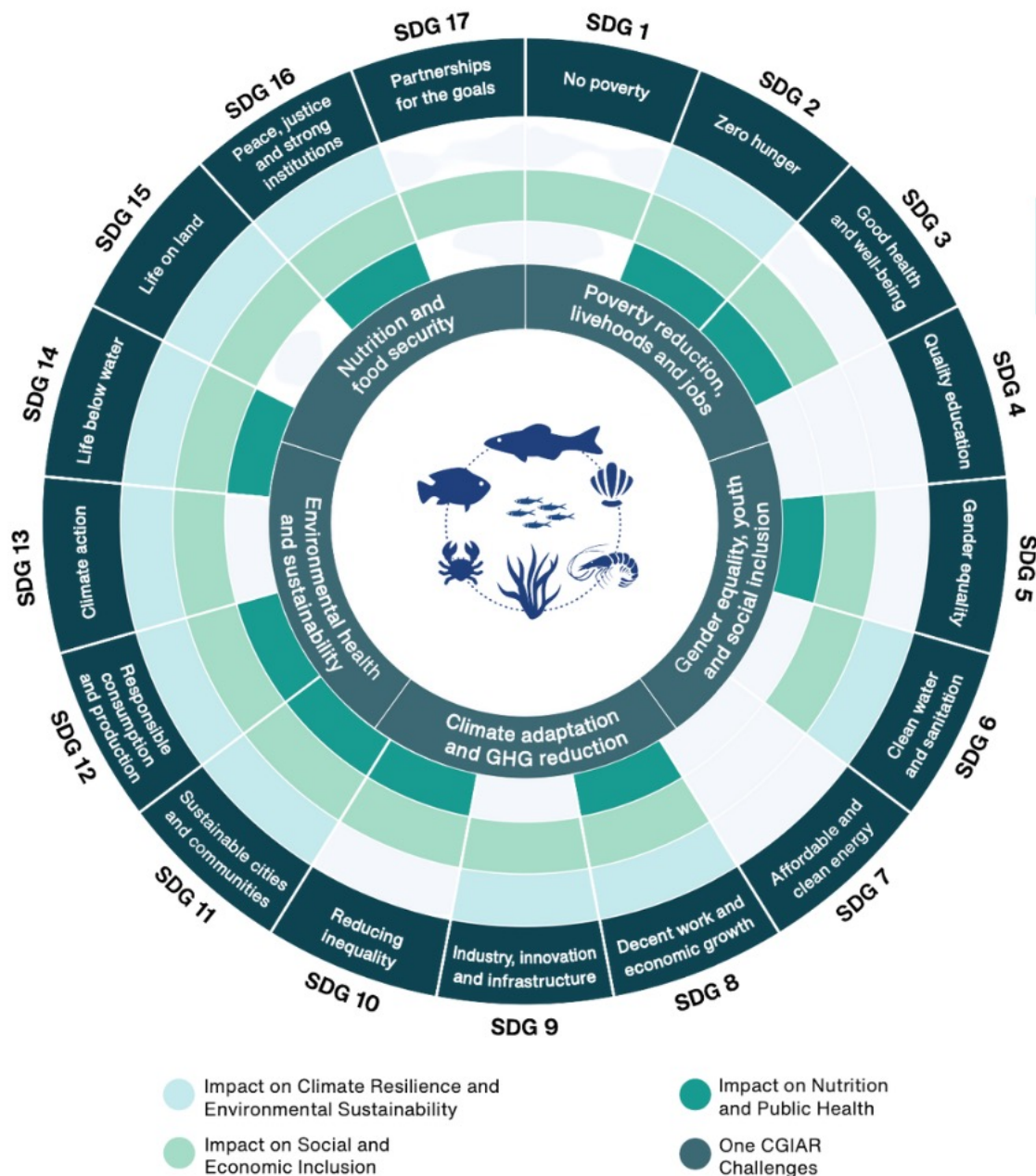
776,306 people assisted to **exit poverty**

691,349 vulnerable people increased **dietary diversification** due to aquaculture

350,510 hectares of **water** were brought under improved fisheries

3,000 capacity development initiatives involving **121,183** people





Our contribution to the SDGs

Food – and sustainable, equitable aquatic foods in particular – influences all 17 of the SDGs.

That's why our research commits us to a food systems approach, seeing food from water as only one part of the complex web that binds production to consumption.

Our main target is **SDG 2: Zero Hunger**, although we also pay special attention to **SDG 14: Life Below Water**.

Our main focus on these two goals will enable us to contribute to many other SDGs.

Our strategic partnerships

At WorldFish, we believe **multidisciplinary and cross-sector collaboration** is at the heart of scientific discovery and the formulation of innovative solutions for tackling complex problems of great significance to human well-being and environmental sustainability.

We have a strong legacy of working in partnership with a broad range of actors who play an important role in co-creating **demand-driven research and translating scientific data and evidence** into action.

Our philosophy and practices on impact-oriented partnerships for innovation and sustainability will be guided by **three key commitments**:

1. Mission and impact-oriented partnerships

2. Innovation ecosystem of partners

3. Business development and entrepreneurship

Thank you!

Learn more: www.worldfishcenter.org

