

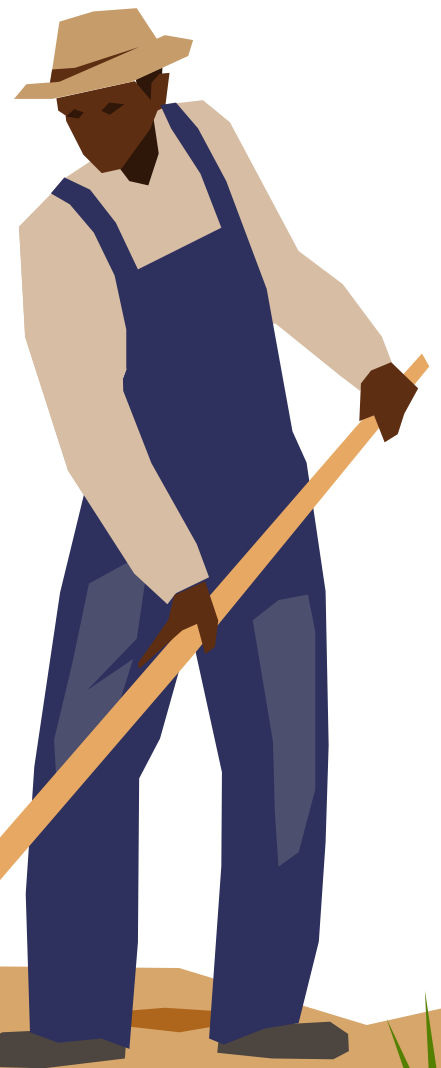
Position paper on the external dimension of
the European Green Deal

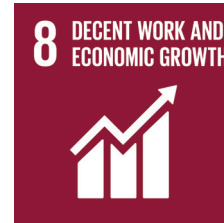
GLOBAL FOOD SYSTEMS - CHALLENGES AND POTENTIAL FOR TRANSFORMATION

The global food system is characterised by unsustainable practices. This results in, for example, micronutrient deficiency and malnutrition (> 800 million people), obesity (> 1 billion people), social inequality limiting access to healthy food, as well as food waste.

The challenges are global, but particularly pressing for Africa due to growing population, food safety and security problems, prominence of agriculture in the economy, climate change, and trade-offs linked to land-use changes.

Global transformation of food production and consumption patterns is urgently needed to achieve sustainable Food and Nutrition Security. Transformation takes place simultaneously through a number of different pathways and trajectories. Understanding these dynamics and interrelations requires a **systems approach**.





What a systems approach is

Systems approach analyses the transition processes, including the key actors, policies, potential niche initiatives, socio-cultural and economic implications of changes. This means participatory, multi-disciplinary, and multi-actor projects, which have to be context specific, i.e. 'place-based'. There are no silver bullets or one-size-fits-all solutions.

Promising systems approach solutions in food system include:

- New governance arrangements in food systems, through **new connections between producers and consumers** including new, local approaches to producing, processing and distributing food, new alliances, strengthened rural-urban linkages, fair trade and fair investment.
- **Sustainable, local climate-resilient production systems**, including aquaculture, school gardens, urban agriculture and combined systems.
- Development of **new, plant-based food products** from local agro-biodiversity sources
- **Technologies for processing and packaging** to minimize food waste.
- Participatory **awareness raising** activities that strengthen consumer awareness of food and dietary diversity and the health effects of diets.

Luke's expertise in systems approach

Luke has been applying systems approach in research projects in Africa for over ten years, for example in the FoodAfrica programme (2012-2018). Currently, Luke is involved in several new H2020 initiatives, including coordination of two 2020 food system projects starting 2020.

HealthyFoodAfrica (HFA) project takes a wide and participatory approach and will establish 'Food system labs' in ten locations in Kenya, Uganda, Ethiopia, Ghana, Benin and Zambia (covering all three SSA regions). Each lab will work with local stakeholders focusing on specific local challenges of the food system, taking a systems approach to understand these challenges in a wider context.

SustInAfrica will empower smallholder farmers and SMEs in Ghana, Burkina Faso, Niger, Tunisia and Egypt to facilitate sustainable intensification of African farming systems, and to develop and deploy a reference framework on best agricultural practices and technologies.

Luke's overall expertise in the food sector

Luke's expertise covers the entire food system from farm to fork. Among other things, we have strong experience in:

- Primary production
 - Supporting and boosting R&I in multiple sectors in Africa and other development countries
 - Designing sustainable land management strategies (includes soil and plant management, ecosystem services)
 - Implementing carbon accounting systems and conducting carbon assessments at various scales
 - Setting up programs and train local experts in animal genetics and breeding



- Bioeconomy
 - New protein sources and minimizing the environmental impact of mono-cropped cultivars
 - Linking primary production and value chains to boost economic growth
 - Sustainable use of biowaste, new ways to monitor and reduce food waste
 - Side streams and by-products: circular economy
- Sustainability issues
 - Environmental impact and carbon footprint of different food products and diets
 - Socio-economic and gender analysis (livelihoods, value-chains)

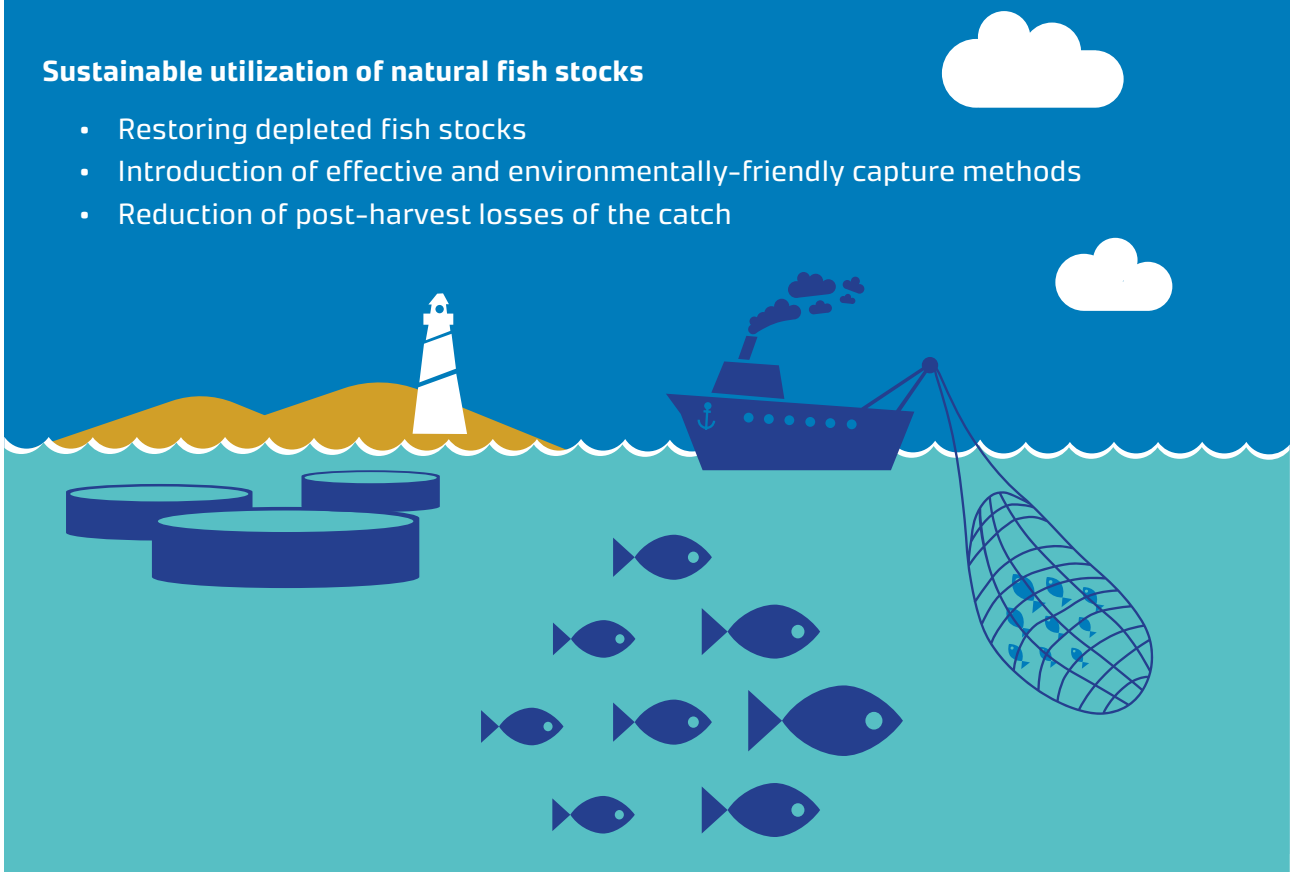
FISHERIES AND AQUACULTURE

High-value aquaculture concept for mountainous areas

- Aquaculture equipment and facilities
- Feed development and nutrition
- Sustainability and cost-efficiency
- Fish health management
- Recirculation and flow-thru technologies

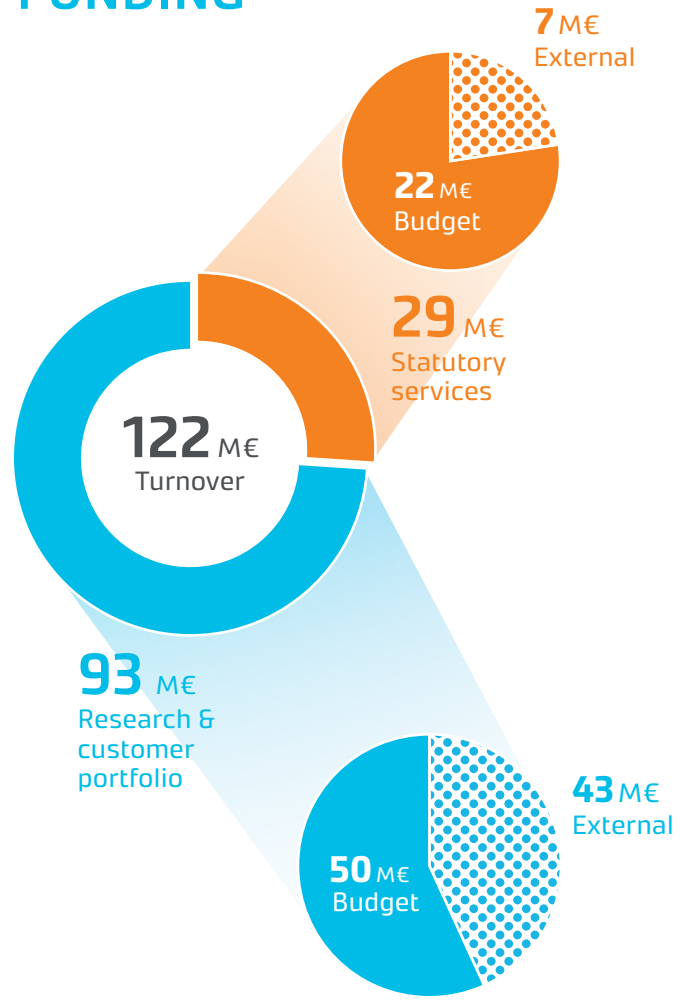
Sustainable utilization of natural fish stocks

- Restoring depleted fish stocks
- Introduction of effective and environmentally-friendly capture methods
- Reduction of post-harvest losses of the catch



Natural Resources Institute Finland promotes bioeconomy and sustainable use of natural resources

FUNDING



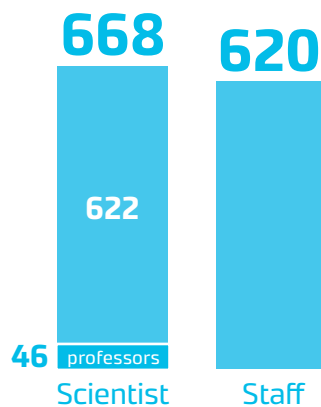
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PERSONNEL



CONTACT DETAILS

Johanna Buchert, President and CEO
Antti Asikainen, Executive Vice President, Research
Mila Sell, Senior Scientist

Natural Resources Institute Finland (Luke)
PO Box 2, FI-00791 HELSINKI
Switch: +358 29 532 6000
www.luke.fi