

PLACE-BASED SOLUTIONS



Sustainable food systems require place-based solutions that are locally led, inclusive and celebrate the rich diversity of agriculture systems around the world. There are no “one-size-fits-all” solutions.

- Place-based solutions draw on all stakeholders, including producers, food systems workers, entrepreneurs, industries, civil society, academia, private sector, and government.
- Place-based solutions reflect cultural diversity, respond to different production environments, and are locally led.
- Prescriptive approaches stifle innovation and limit the ability of producers, entrepreneurs, industry, and governments to adapt to new and emerging challenges.
- Farmers, fishers, ranchers and food system workers are essential. Efforts to improve the sustainability of agriculture and food systems must be inclusive of their perspectives and expertise, and must support their wellbeing.
- Producers need access to new technologies and effective innovative approaches to be resilient. Cutting-edge technologies, ecological management approaches, and tried-and-true farming practices all offer potential solutions.

“We must optimize farmer-led solutions and be open to the next big ideas, as well as continue investment in the agility and resilience of agriculture, rural communities, and supply chains around the globe.”

U.S. Agriculture Secretary Tom Vilsack
42nd FAO, June 14, 2021



A total of 440 farmers from 16 villages in Kenya were trained on the tricot methodology for testing varieties of sorghum, millet and beans. The farmers note which of the three is best and which worst on a list of characteristics that was developed together with the researchers.

This activity is part of Bioversity International's project on “Open Source” Seed Systems for Beans, Sorghum, and finger millet for climate change adaptation in East Africa that is implemented in collaboration with the Genetic Resources Research Institute (GeRRI), SANREM Africa, CCAFS and a Breeder from Maseno University.

- Public/private partnerships—especially those that include producers and food systems stakeholders—play a critical role in developing place-based, scalable solutions for meaningful and lasting benefits.
- Developing resilience capacity is a continuous process of learning and adapting. To be effective, it must be carried out by food system stakeholders - producers, consumers, civil society, industry, governments, and international organizations.
- Inclusive livelihood development means considering the needs and local circumstances of local stakeholders. Producers should have the flexibility to choose the strategy that best fits their needs.

Place-based solutions recognize

The unique role of local participants....

The Climate-Smart Village and Climate-Smart Valley approaches, pioneered by CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and partners, engage stakeholders in climate-smart strategy planning for their community, including practical steps smallholder farmers can take to adapt their agricultural practices to secure dependable food supplies and livelihoods while also improving their environmental impact. Stakeholders and researchers identify appropriate options for each village, including climate-smart technologies, information services, local development and adaptation plans, and supportive institutions and policies. Socio-economic and environmental factors, and local farmer knowledge, also factor into the solutions strategy. Major outcomes identified by farmers are increased water retention in fields, less risk of fertilizer losses due to flooding and increased rice yields. From 2012 to 2020, this approach resulted in a 94% increase in rice yields and a \$267 increase in per hectare net income in West African villages. To date, 1,370 West African hectares have been developed using the Climate-Smart approach, benefitting at least 14,027 households.



www.cgiar.org/innovations/climate-smart-villages-and-valleys/
<https://ricetoday.irri.org/a-smart-choice-for-africas-inland-valley-rice-farmers/>



www.unnnutrition.org/wp-content/uploads/FINAL-UN-Nutrition-Aquatic-foods-Paper_EN_.pdf
<https://www.cgiar.org/news-events/news/wfp2021>

The unique role of culture and diet...

Fisheries and aquaculture products represent a significant portion of animal protein consumed by humans globally. Although similar in many ways to agriculture, significant differences exist in the challenges and the solutions needed for these industries to be resilient and sustainable. The development of nutrition-sensitive approaches in aquatic food systems across Southeast Asia has established fish as an important source of essential micronutrients and fatty acids and improve the absorption of nutrients in plant-based foods. Research has reshaped scientific understanding of the benefits of fish in diets, demonstrating that these affordable and locally available foods offer life-changing benefits, specifically for children. Innovative work in aquatic food systems have improved health, incomes, and gender equality, boosted resilience, and increased the quality and quantity of nutritious, climate-friendly foods.

The unique role of production environments...

USDA's Agricultural Research Service (ARS) is working with farmers in Colorado, United States, to increase productivity and sustainability of irrigated farming systems in semi-arid and arid regions. Multi-faceted solutions are required as these farmers have varying control over the timing, amount, and methods of irrigation available to them. Solutions will depend on the ability to maximize crop water productivity (yield per unit water used by the crop). This, in turn, requires a better understanding and evaluation of complex plant traits, better management of interacting agricultural inputs, and better tools to manage agricultural water supplies more efficiently, especially in the face of greater competition and less water availability. There is also increased efficiency at the farm level that can be realized with better farm-scale decision making. ARS is collaborating with farmers to: 1) educate them on agronomic practices related to crop productivity under limited water; 2) develop tools to assist with real-time decision making for irrigation management; and 3) develop information and tools for farm-scale decision-making regarding crop selection, land area distribution between crops, and within-farm irrigation usage. This research will lead to increased productivity of cropping systems and improved irrigation management in Colorado.



<https://www.ars.usda.gov/research/project/?accnNo=432342>