

A woman in traditional attire is shown from a high angle, kneeling in a river. She is holding a large, circular fishing net made of woven material. She wears a red and white checkered long-sleeved shirt, a green shawl with intricate gold and red patterns, and a white headscarf with blue and red designs. The water is clear, showing the riverbed. The overall scene is brightly lit, suggesting a sunny day.

# Gender in a changing world

# CSIRO's gender capability

The world is changing fast and many systems are in crisis. Women in developing countries often are more vulnerable than men, less able to adapt to rapid change or to harness opportunities arising from it, due to social and cultural norms, levels of education, and health and nutrition status.

- Gender equality, health, education and women's economic empowerment are all linked. Women are more likely to be economically empowered if we provide support to social roles, education and nutrition status.
- We need to develop an understanding of the constraints, barriers and opportunities women face in differing contexts across the Asia-Pacific region to ensure the widest positive impact of our work.
- We need to establish partnerships at the policy, research and project level in order to enable transformative change. This requires an integrated multi-sectoral and multi-scaled response and cooperation between agriculture, health, education, energy and water sectors, as well as social protection.
- Improving household incomes alone will not necessarily lead to enhanced empowerment, improved education or improved household health and better nutrition. We need to review the entire system from design to program implementation.

Over the last decade, CSIRO has developed key capabilities in gender equality design and programming across a broad range of sectors, including; agriculture, water management, natural resource management, climate change, health, nutrition and education. Our key areas of expertise include:

## Gender: the fourth aspect of the water-energy-food nexus

The water-energy-food nexus is a cross-sectoral approach to address the challenges of climate change, poverty and inequality, in which each system (water, agriculture and energy) is analysed through their intersection with each other. Research on the water-energy-food nexus is growing, but early analysis suggests that gender perspectives are often left out of the framework. This can be seen in the categorisations which group together all farmers, manufacturers, water users, policy makers and agricultural or energy corporations, and how these groups plan and make decisions, regardless of other factors such as gender, class, ethnicity and geopolitical location.

CSIRO recognises the need to make gender part of the water-food-energy nexus, and we have been working closely with the Department of Foreign Affairs and Trade (DFAT) to achieve this aim.

Within the DFAT – funded SDIP program, we have been working with the International Centre for Integrated Mountain Development (ICIMOD) to explore the water-gender-livelihoods nexus in the Koshi Basin, focusing on how livelihood strategies are gendered, and how policies and interventions can be created to be more gender-aware and sensitive to these needs.

In Pakistan, we recently collaborated with the Pakistan Council of Research in Water Resources (PCRWR) on a water quality monitoring program in the Ravi and Sutlej Rivers. The project's main purpose was to understand the impact of water quality upon energy used for water treatment, public health, food security and agricultural risks due to POPs (persistent organic pollutants), salinity and heavy metals. The findings also provided significant gender information about how women and girls are specifically affected, and ways in which policy makers need to involve women in decision-making processes to ensure that both women and men's gender-specific needs and issues are considered. Further work is being done to integrate gender analysis into the water-energy-food nexus around gender impacts from national to local scales.



## Climate change adaptation and resilience

In the context of rapid social and economic change, uncertainty and risk from climate change, water scarcity, food insecurity, disaster and conflict; poorer women are increasingly exposed to higher levels of risks, including violence, increased workloads and forced migration. Women are often poorly positioned to negotiate access to the resources necessary to underpin adaptive responses to such risks (e.g. illiteracy, exclusion from 'male' services). Developing processes and mechanisms that include women as pivotal agents in efforts to strengthen community capacity, to adapt so that they are better able to absorb and manage shocks and risks, increases societal resilience.

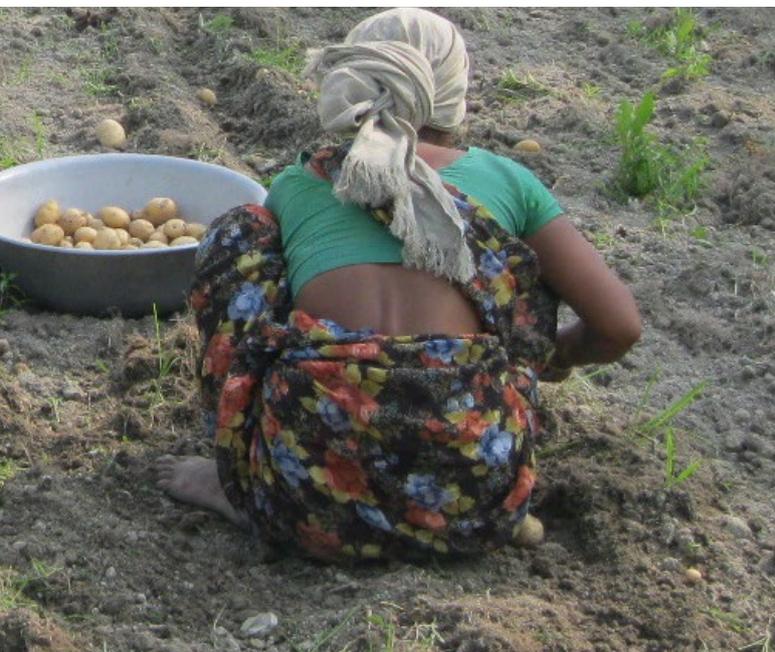
We have key capability and demonstrated expertise in stakeholder engagement processes that support communities and wider enabling stakeholders within government, private and civic sectors to better understand interconnected risks, develop future scenarios that anticipate change, and to make informed decisions that open and strengthen adaptive pathways. More equitable gender relations forms an integral part of these pathways. Our researchers use an inter- and transdisciplinary systems approach relying on a wide range of deliberative engagement and planning processes (e.g. stakeholder and institutional analysis, Theory of Change and impact pathway mapping, participatory action research, scenario analysis, innovation platforms), to better understand vulnerabilities and co-develop adaptive capabilities with men and women, in a variety of projects, including Sustainable and resilient farming systems intensification in the Eastern Gangetic Plains (SRFSI).

## Women's economic empowerment

Gender equality is the one of the main goals of development programs, and women's economic empowerment is a pathway to achieving this goal. Improving mechanisms to deliver women's economic empowerment requires a systems approach, which catalyses change in policy, market and production environments, as well as official development assistance (ODA) program design and implementation. A key step is supporting the systems and individual capacity building, so that women farmers, entrepreneurs, and Micro, Small and Medium Enterprises (MSME) owners are able to take advantage of knowledge, ideas and analysis, partnerships and networks to use ideas for better development practice and policy.

We work on a number of DFAT and Australian Centre for International Agricultural Research (ACIAR) funded projects focused on innovation of market systems so that it is more favourable for both males and females, including Applied Research and Innovation Systems in Agriculture (ARISA) and Promoting socially inclusive and sustainable agricultural intensification in West Bengal and Bangladesh (SIAGI). The development of collaborative partnerships are key to developing the policy and regulatory framing which enable women's participation in value chains, including research institutions, government, civil society and businesses that are prepared to pursue a gender inclusive agenda. These collaborative partnerships focus on developing innovative practice to ensure women are able to strengthen their agency and actively engage in economic opportunities that present themselves.

CSIRO has co-authored the DFAT's Gender Equality and Women's Economic Empowerment in Agriculture Guidance Note for program managers and have been involved in the development of women's economic empowerment strategies and design implementation across Asia-Pacific.





## Nutrition sensitive agriculture (NSA)

CSIRO has previously partnered with ACIAR and DFAT to better articulate the links between agriculture and nutrition and inform strategic policy and programming initiatives.

NSA approaches recognise that food systems play a key role in shaping health and nutrition outcomes. At the household level, these pathways are primarily mediated by women and their capacity to provide nutritionally-dense, affordable and safe food for their families. A food environment which struggles to meet these qualities will impact negatively on livelihoods and the wellbeing of individuals and their communities. Gender equality is key to enhancing broader health and nutrition outcomes and reaching the SDGs.

In partnership with DFAT, the CSIRO informed the development of a rural development program incorporating NSA considerations in Timor-Leste. CSIRO also co-authored the DFAT's Nutrition-Sensitive Agriculture Operational Guidance Note for program managers. Two dossiers have also been developed to assist researchers and practitioners in thinking about NSA in their work.

## Monitoring evaluation and learning

Mainstreaming gender into MEL (Monitoring, Evaluation, and Learning) systems is an avenue for fostering greater gender awareness, contributing to the development of organisation-level gender strategy, and guiding gender-sensitive approaches to the design and implementation of research and capacity building. It is also a way to adapt programs and catalyse change in how CSIRO and partners engage with women. This includes integrating gender into the development of program/project Theories of Change and Impact Pathways and into the design and implementation of research activities and broader development interventions across scales; and the development of gender-sensitive indicators and reporting tools. These activities are critical to CSIRO advancing gender equality and equity and improved outcomes for women and girls in developing countries.

A key program where this approach is being implemented is the Sustainable Development Investment Portfolio (SDIP) project, where CSIRO is collaborating with the International Centre for Integrated Mountain Development (ICIMOD - Nepal), DFAT and IOD PARC (UK) to mainstream gender into MEL systems.

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**WE IMAGINE  
WE COLLABORATE  
WE INNOVATE.**

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