The Climate-Smart Pacific Food Systems Programme - Samoa

The goal is to build the wellbeing and resilience of communities to the impacts of climate change through Pacific-led, climate-smart food systems.

The Bioeconomy Science Institute is partnering with Pacific government agencies, civil society and industry to implement the four-year, Climate-Smart Pacific Food Systems Programme.

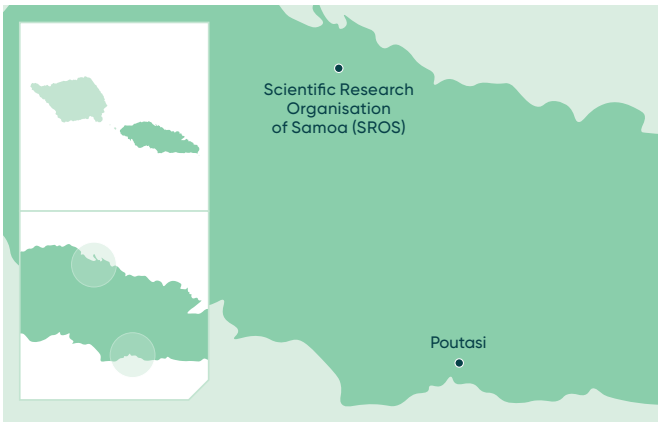
- The programme is operating in Samoa, Solomon Islands, Papua New Guinea, Fiji and Tonga and funded by the New Zealand Ministry of Foreign Affairs and Trade
- The Climate-Smart Pacific Food Systems Programme has three themes:
  - Climate-smart food production
  - Stewardship of water, land and waste
  - Sustainable, resilient food value chains
- The programme is focusing on integrating scientific innovation with community-driven solutions to build food security, reduce postharvest losses, and improve agricultural sustainability and climate resilience.

ABOUT SAMOA

- Largest Polynesian Island group
- **Land Area:** 2,831 km^2
- **Population:** 216,663
- **Agricultural Status:** Accounts for 6.5% of Samoa's GDP, the most widely grown and sold agricultural products include staple root crops like taro and ta'amu, as well as fruit such as bananas, coconuts, and pumpkin.

In Samoa

- This exciting initiative is being delivered through an anchor partnership between the Scientific Research Organisation of Samoa (SROS), Poutasi Development Trust and the Bioeconomy Science Institute
- Bioeconomy Science Institute expertise combined with the experience, networks and knowledge of the local partners will create country-relevant solutions able to be scaled up
- Participatory action research (PAR) consultations in Samoa identified a range of challenges for the programme to respond to, including labour shortages, pest and diseases, expensive input supplies, poor agrichemical practices, and water supply and rainfall issues
- In Year 2, we officially launched our Programme in Samoa. Additionally, we formalized our collaboration with SROS and with Greater Good Diaper Project.
- Additionally, the BSI team completed 8 in-country visits mobilising 13 staff. Together with SROS, we delivered 8 trainings, workshops and field visits, reaching 74 direct participants.
- To address labour shortages, BSI and SROS are trialling weed control through tarping and mulching, as well as less labour intensive vegetable production using hydroponic systems.
- To address emerging pest and disease pressures and challenges, BSI and SROS are working together to enhance surveillance and understanding of current pressures, and conduct farmer trainings on scouting, identifying pests and diseases and identifying best control practices.



- To address challenges around agrichemical use, BSI and SROS are developing training materials on safe agrichemical use, to build and enhance awareness. It is anticipated that this workstream will include a collaboration with MAF.
- To address high cost of seeds and input materials, BSI and SROS are trialling community nursery and fertiliser alternatives such as diaper and seaweed compost.
- To address water and irrigation challenges in food production, BSI and SROS are trialling intercropping various crops together to generate microclimates that protect against higher temperatures and water loss, in addition to mulching. Additionally, the team is applying a social lens to understanding drivers and barriers to tunnel house use in Samoa.

Climate Change Challenges Identified from PAR

- Labour Availability
- Pests & Diseases
- Seeds & Planting Materials
- Agrichemical Use
- Water & Irrigation

Year 2 Highlights

- Programme Launch in Samoa in Nov 2025
- Completed household baseline survey
- Intercropping trials progressing well
- Training modules incorporate adult education principles.
- Seaweed fertiliser trial progressing well.

Next 6-12 Months

- Continue trials at SROS, at MAF and at Poutasi community on tarping, mulching and hydroponics
- Enhance plant health and propagation capabilities
- Improve safe agrichemical use
- Strengthen availability of locally produced alternatives to fertilizers using diaper composting and seaweed fertilizers
- Better understand drivers and barriers to tunnel house and hydroponic systems use

What is the Bioeconomy Science Institute?

The Bioeconomy Science Institute is a New Zealand Government-owned Public Research Organisation. It brings diverse scientific expertise, including skills in land use suitability, achieving ecosystem balance, quantifying impacts and adapting to change, nutrient management, efficient water use, pest and disease management, and the reduction of postharvest losses and waste.

The organisation leverages its technical capabilities to drive its international development initiatives and has a long-standing history of working with Pacific partners to support sustainable and resilient food systems.

Applying research to support economic growth and resilience, a healthy environment and beneficial social outcomes

For more information

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