Improved crop production and livelihoods through soil health approaches:

Climate Smart Agriculture and priorities going forward

COP23, BONN

Dr Siosiua Halavatau, Dean Solofa

Pacific Community

So what is Climate Smart Agriculture and why care?

1. Sustainable agricultural productivity, to support equitable increases in farm incomes, food security and development;
2. Adapting and building resilience of agricultural and food security systems to climate change at multiple levels; and
3. Reducing greenhouse gas emissions from agriculture (including crops, livestock and fisheries)

Significant Achievement 1 : Improved Soil Health leading to increased crop production and livelihood of the target families

Significance to PICTs:

Downward spiral of soil fertility is becoming a big factor affecting food production in the Pacific Islands

SPC Land Resources Division providing scientific research and insight lead with partners.

Beneficiaries:

- Fiji, Samoa, Kiribati, Tuvalu, RMI and Tonga

- **The context and issue:**
  - Cropping systems in the Pacific face declining fertility, structure and biological health of soils.
  - Moreover, traditional knowledge of actively managing and investing in organic residues is in decline or has been lost.

- **Finding answers through (participatory) research**

- **Our contributions:** Science and technical support, and partnership facilitation

Challenges we faced:

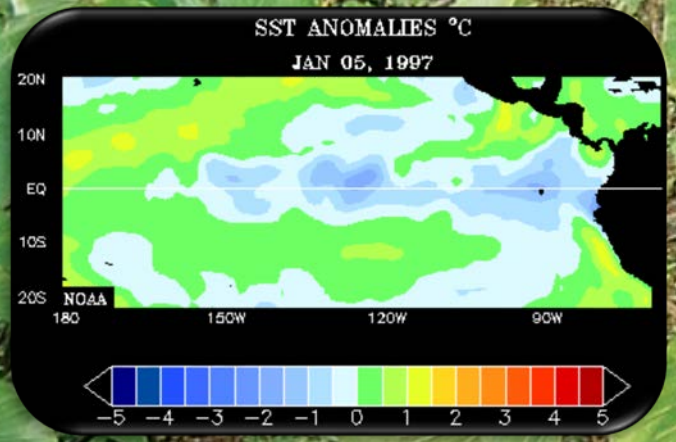
- Capacity of counterparts and farming communities
- Lack of tools, equipment and facilities

Lessons we learned:

- Community participation and ownership is key
- Capacity building is not a one off action, and needs to be supported long term
- Investment in, and accounting for, research pays off and is a worthwhile action.

Challenges we faced:

- Bridging the gap between seasonal climate forecasts and decision makers on the ground



Lessons we learned:

- Policy, decision makers and farmers know and believe in Climate variability and extreme events
- Preliminary results of work in Tonga suggests that any future improvement in forecast skill will not lead to substantial yield improvement.
- ACIAR is in a position to help SPC support countries in research into use of SCF

More CSA learnings

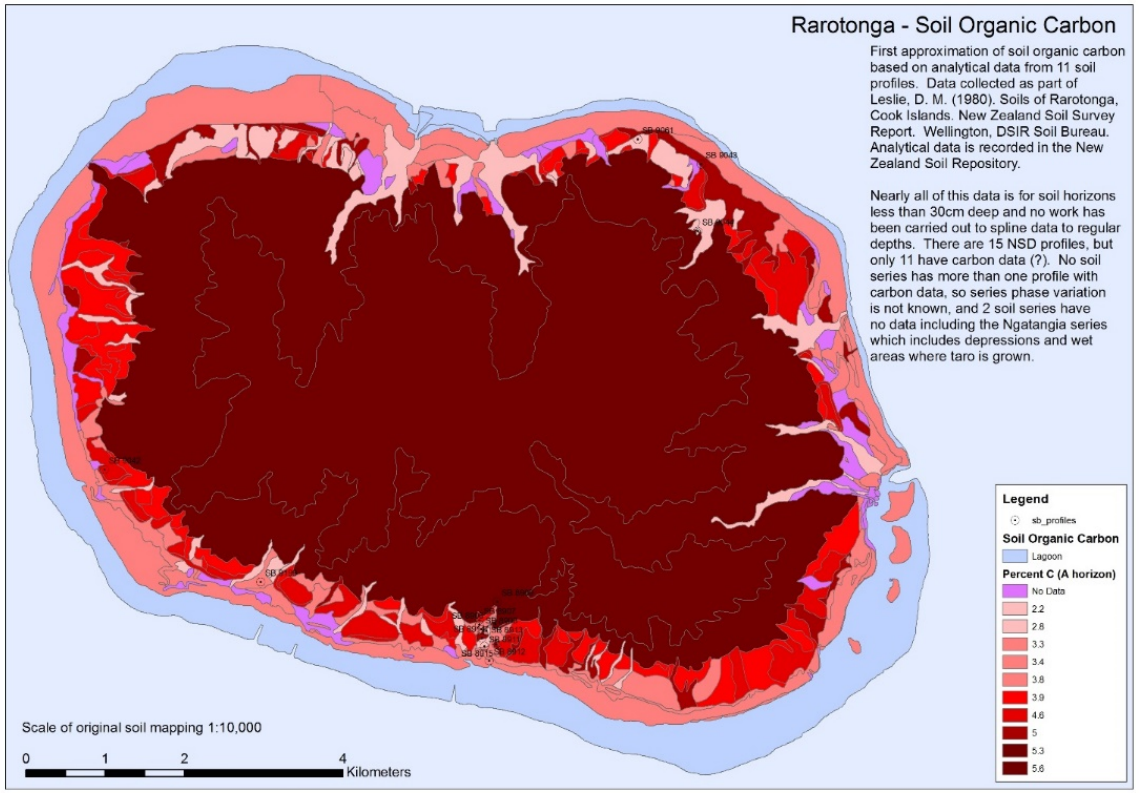
Bringing back trees to the farming systems

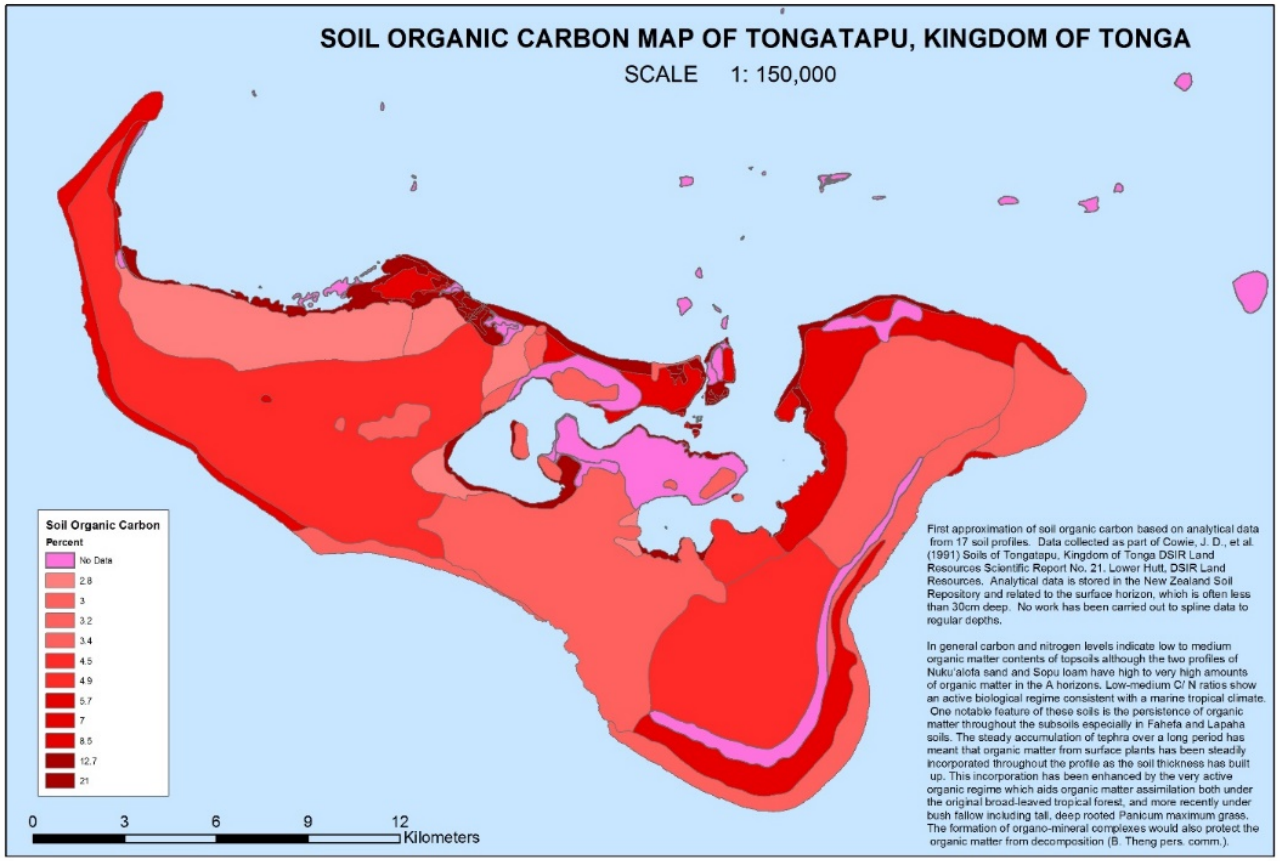
- Seed smart is great for food security – annual crops are not permanent sinks
- Trees – forest, fruits, traditional nutritious crops are longer term sinks
- We need to bring back trees to the farming systems
- Strengthen plant protection measures at farm level and develop on-farm biosecurity

- Improve resilience and reduce GHG emissions apart from improving productivity

How can we be climate smart?

Soil health and water management - whatever we do we must increase SOC





Soil Health Technology Impact Assessment