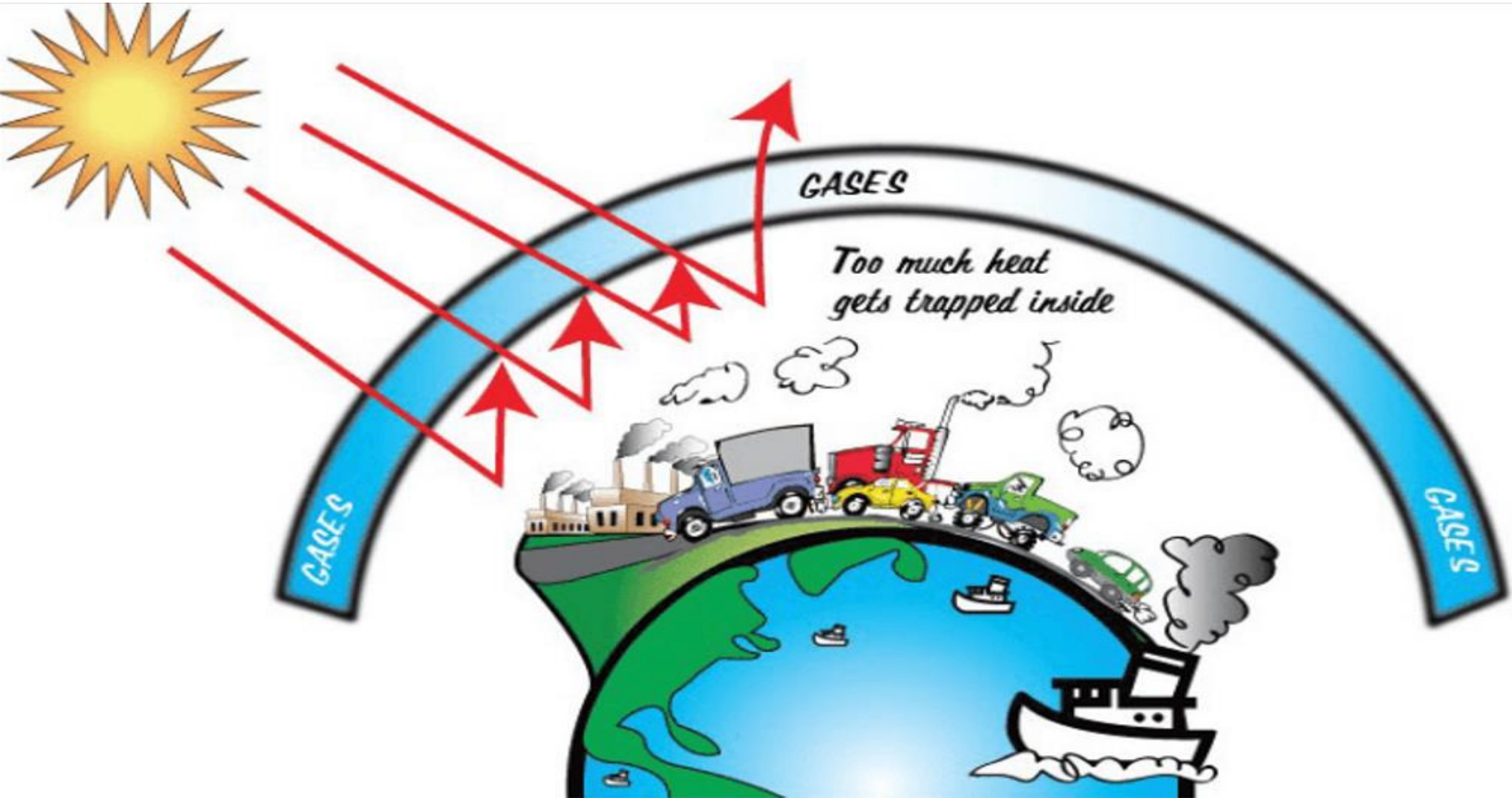




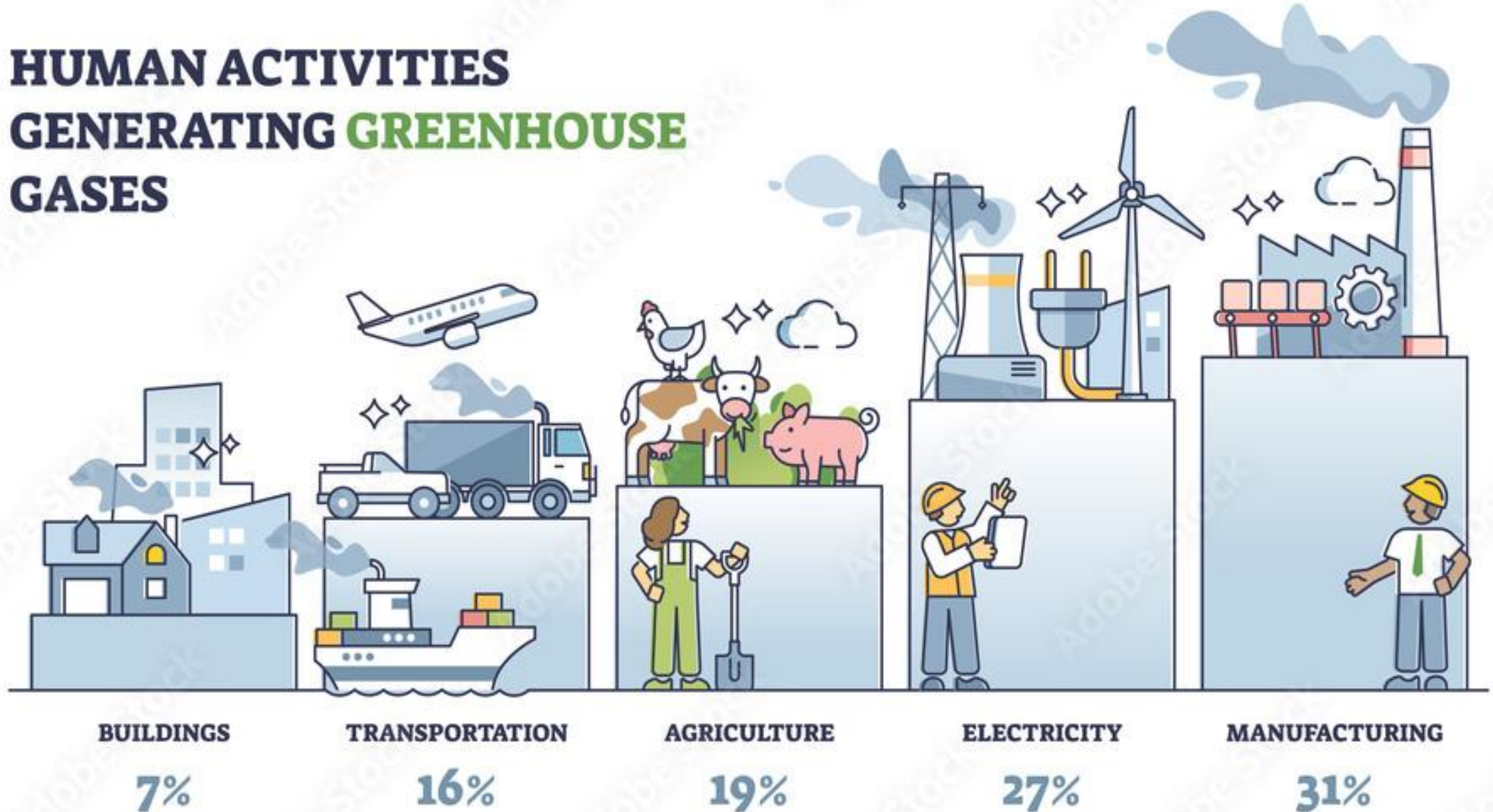
Empowering Vava'u Communities: Accelerating Energy Efficiency and Renewable Energy Goals through Local Engagement

Neiafu, Vava'u | 25 Nov 2024

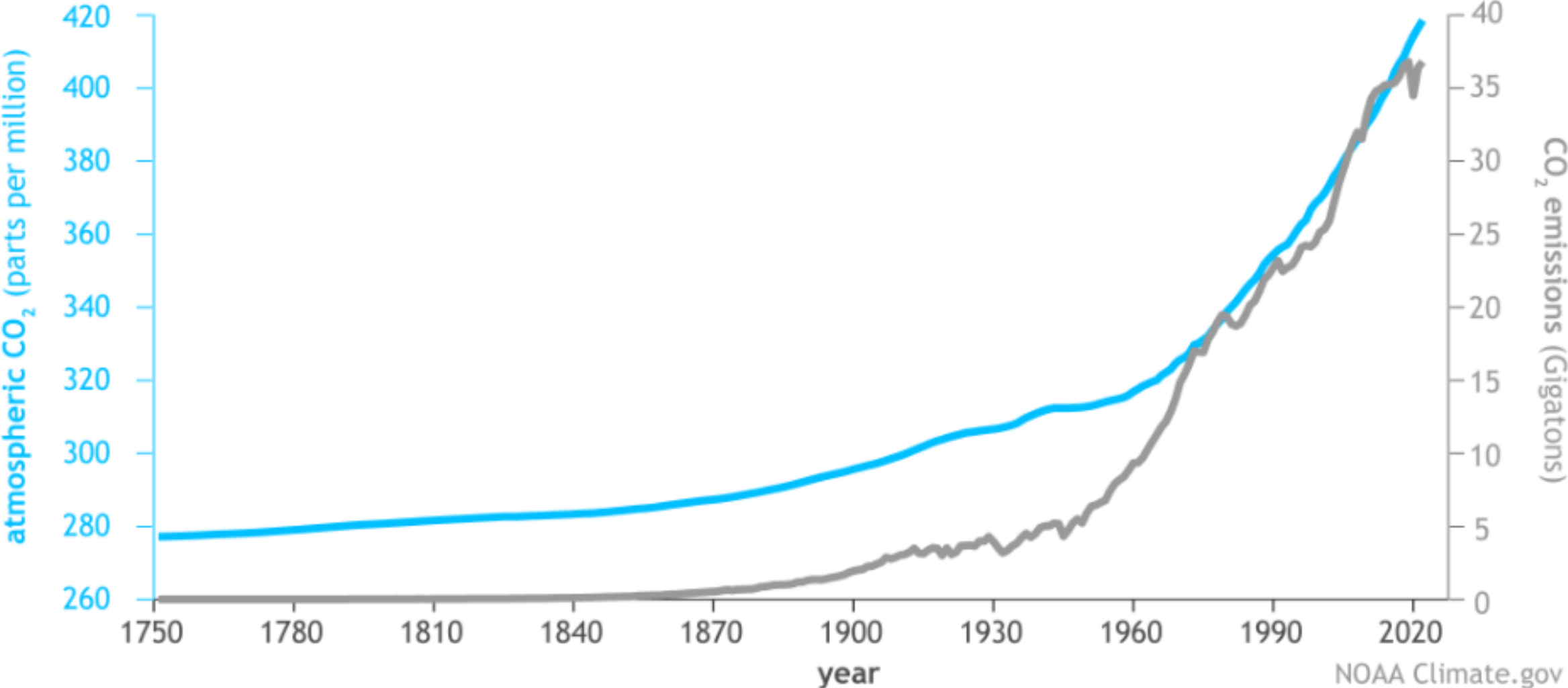
Linkage between Climate Change and Energy



HUMAN ACTIVITIES GENERATING GREENHOUSE GASES



Global atmospheric carbon dioxide compared to annual emissions (1751-2022)



NOAA Climate.gov
Data: NOAA, ETHZ, Our World in Data

- Amount of CO₂ in the atmosphere
- Human emissions – e.g., burning of fossil fuel

Climate Change is “real” in the Pacific Islands

Sea level rise



Severe tropical cyclones



2100



IPCC predicted; sea level may rise to 1-2 meters in 2100 and more

Paris Agreement 2014.....



Nationally Determined Contributions (NDCs) – heart of the Paris Agreement

**national climate action plans that outline each country's efforts to reduce GHG emissions and adapt to climate impacts.



Tonga's NDC

- The goal of the Paris Agreement is to stop the world's average temperature rising more than two degrees, or ideally 1.5°C.
- **196** countries signed the Paris Agreement

- 13% reduction in GHG emissions by 2030 compared to 2006 through a transition **to 70% renewable electricity** as well as **energy efficiency measures**

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Power



Land Transport

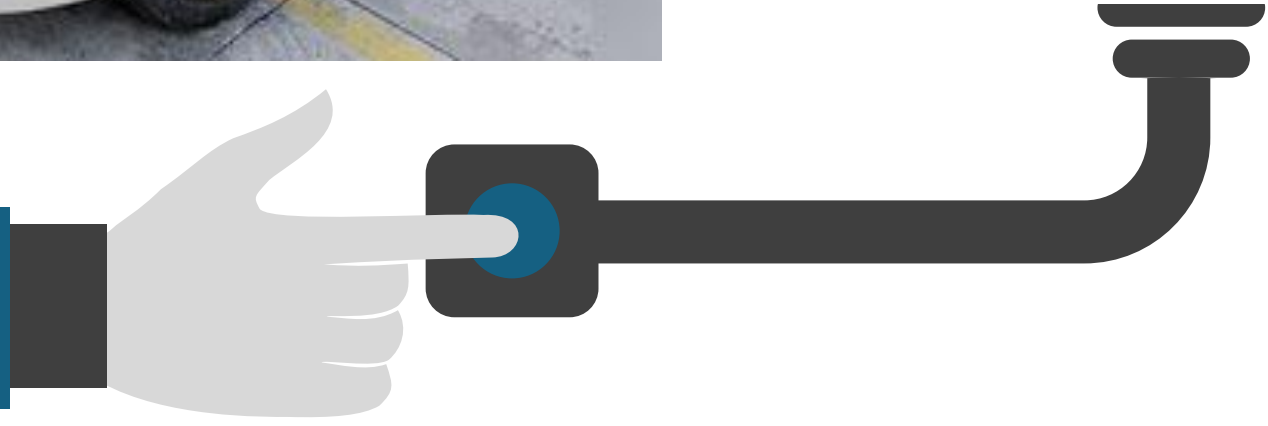




Renewable Energy Technologies



Go electric, reduce
transport emissions



What is PCREEE? – Pacific Centre for Renewable Energy and Energy Efficiency

- Established in 2017
(office based in Tonga)
- Going 8 years now
- UNIDO, Austria, Norway
& NZ funding support



SPC – The Pacific Community



Climate Change and Environmental Sustainability



Educational Quality and Assessment



Fisheries, Aquaculture & Marine Ecosystems



Public Health



Statistics for Development



Flagships



Human Rights and Social Development



Land Resources

Geoscience, Energy and Maritime



Pacific Centre for Renewable Energy and Energy Efficiency

SE4ALL Centre of Excellence to Promote Sustainable Energy Markets, Industries and Innovation

Vision: “Promoting sustainable energy markets to transform the lives of Pacific Islands people”.

Mission: To create, educate, and facilitate the increased awareness and development of the RE&EE Agenda in the Pacific region, with special emphasis on the private sector and local industries.

Objectives:

- To improve access to modern, affordable, and reliable energy services, energy security, and mitigation of negative externalities of the energy system (e.g. local pollution and GHG emissions)
- To promote RE&EE investments, markets, and industries in the PICTs.

BUSINESS PLAN 2020-2030

Pacific Centre for Renewable
Energy and Energy Efficiency



Four (4) Strategic Areas

Programme 1. RE&EE Business Start-Up and Entrepreneurship Support

- Programme 2. RE&EE for Sustainable Mobility
- Programme 3. RE Mini-grids
- Programme 4. Energy Efficiency Investment



Support to PICs

1. Capacity Buildings Program
2. Energy Policy Development – (incl. guidelines /standards)
3. Energy Forum, Awareness
4. Development/review of Concept Note and Project Proposal.

Initiatives supported by PCREE that could benefit the youth in Tonga...

- **Development AND Delivery** of National Qualifications in Sustainable Energy
- Support **Productive Uses of Energy** (through 20% - 30% subsidy)
- **Internship Program**



1. Development AND Delivery of National Qualifications in Sustainable Energy



- NSCE Level 1 & 2 successfully started on the 12 September 2022 with 20 students (71% female, 29% male) registered under Level 1 and 30 students for Level 2 (21% female, 79% male).



- Certificate Level 3 successfully registered in Tonga 2023.
- Next step is for TIST to seek accreditation from TNQAP to deliver these registered Level 3 courses
- Development of SE National Certificates Level 4 is underway.
- Hopes to extend the qualifications to Diploma level in the future.

2. Support the Productive Use of Energy [20 – 30%]



At the Solomon Islands:

- One rural community reached out to PCREEE for funding assistance to purchase solar freezer systems that could be used to store their catches /fish for sale at the markets in Honiara.
- PCREEE provided subsidy ~ 30% of the total cost.



3. Internship Opportunities



Tiueti Sisilia Fangupo

Ms. Tiueti Fangupo completed her 6 weeks Summer Internship with the PCREEE in February 2019. She was a Structural Engineering student from the University of Technology, Auckland, NZ. Tiueti started her Summer Internship in December 2018 and her internship included working with the Tonga Department of Energy exposing her to some of the small scale and community-based Renewable Energy projects that the department is working on.

Intern



Sione Folau

Mr. Sione Folau was a Master of Science in Climate Change student from the Pacific Centre for Environment and Sustainable Development (PaCE-SD) of the University of the South Pacific. Sione completed 3 weeks with PCREEE in March 2018, doing research for his thesis on the topic – Carbon Footprint Mitigation Strategies for the Kingdom of Tonga. The research is based on Tonga's Energy Sector. Sione worked closely with the PCREEE team together with the Tonga Department of Energy and was grateful for their inputs to his research.

Intern



Malo 'aupito