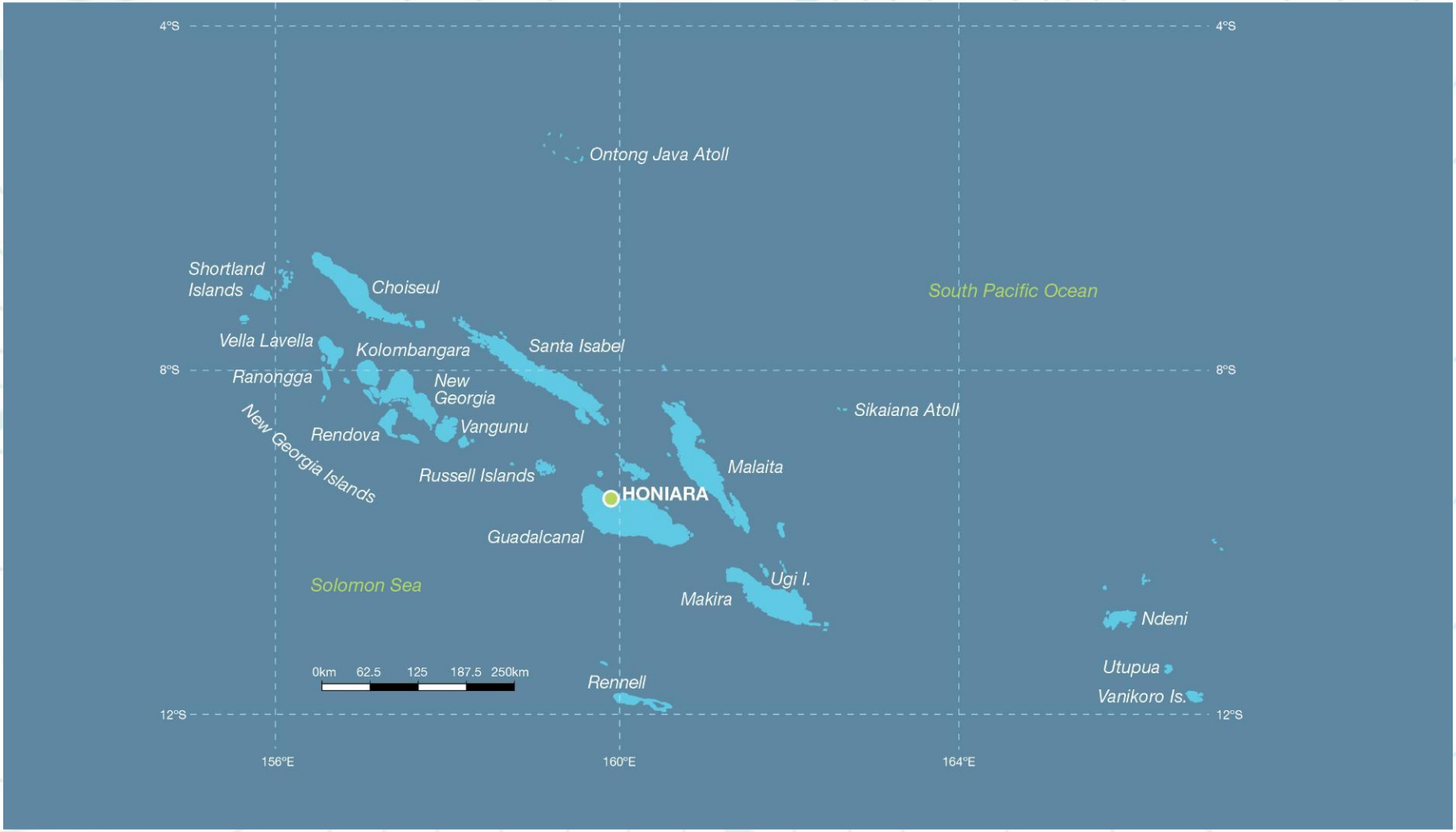
SOLOMON ISLANDS
GOVERNMENT

Solomon Islands Country Report on Digital Technology and Climate Change



Presenter: Max Sitai

Chief Meteorological Officer

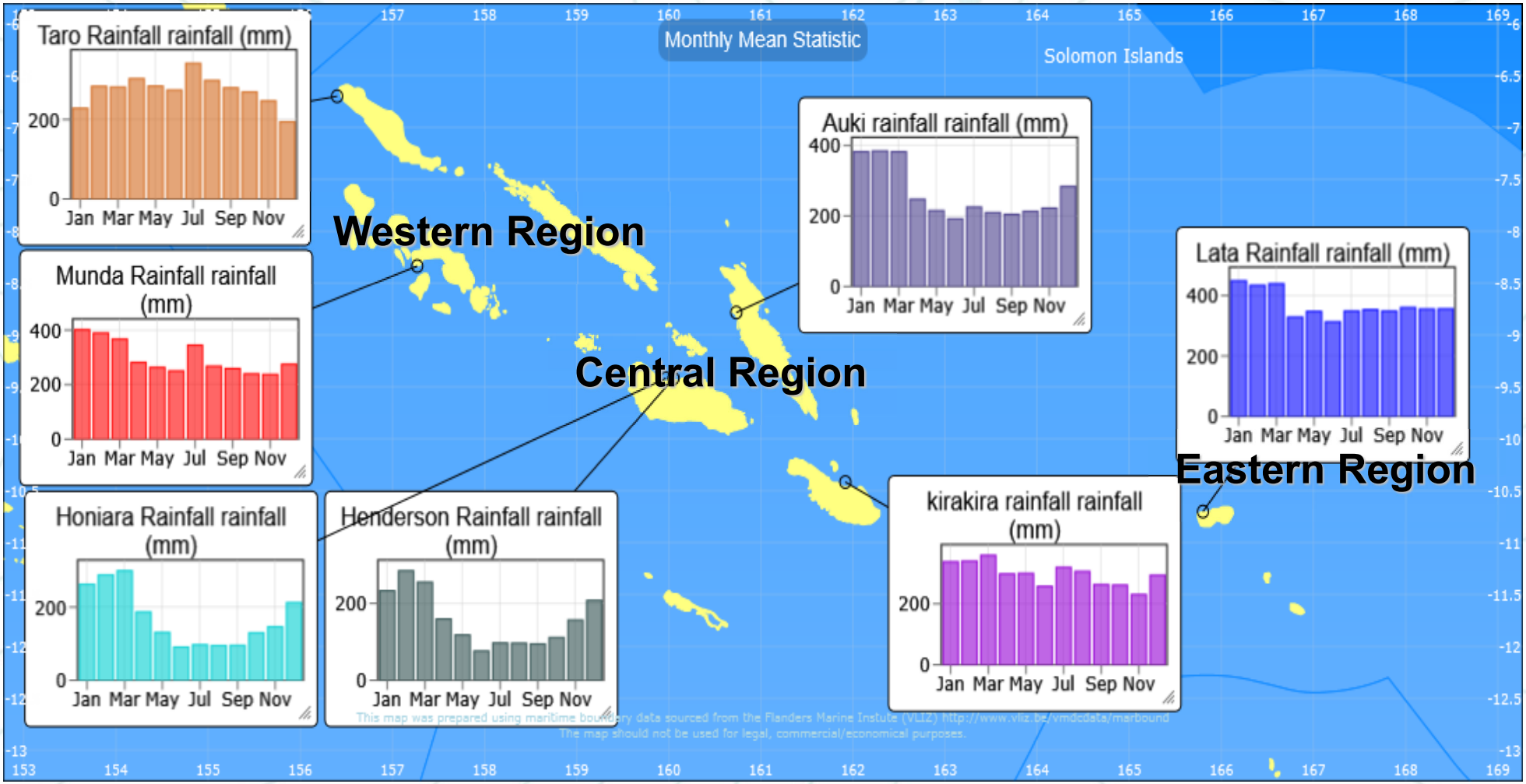
Solomon Islands Meteorological Service

Geography, Population and Economy of Solomon Islands

- The Solomon Islands is an archipelago located in the Melanesian region of the Pacific, south-east of Papua New Guinea. Located in the Coral Triangle, which is considered the “Amazon of the Seas”, the country’s expansive area covers a unique range of atolls, mountains, and salt-water lagoons, and has some of the world’s richest marine diversity.
- In 2020, Solomon Islands had a population of approximately 686,878 people, with a gross domestic product (GDP) per capita of around USD$2,258, putting it among the world’s poorest countries. Agriculture, forestry, and fishing are the mainstay of the economy, with agriculture contributing an estimated 34% of gross domestic product in 2013, compared to 58% from the services sector. Land degradation and deforestation are serious concerns in the Solomon Islands, as logging is a key source of revenue for the country but also a significant driver of biodiversity loss.
- The Solomon Islands are warming and are expected to continue to experience warming trends throughout the 21st century. Future rates of warming are clouded by current models’ inability to simulate very localized changes but are likely to be in the range of 0.7C – 2.8C depending on the 21st century rate of global emissions.
- Due to a combination of political, geographic, and social factors, the Solomon Islands is recognized as highly vulnerable to climate change impacts.

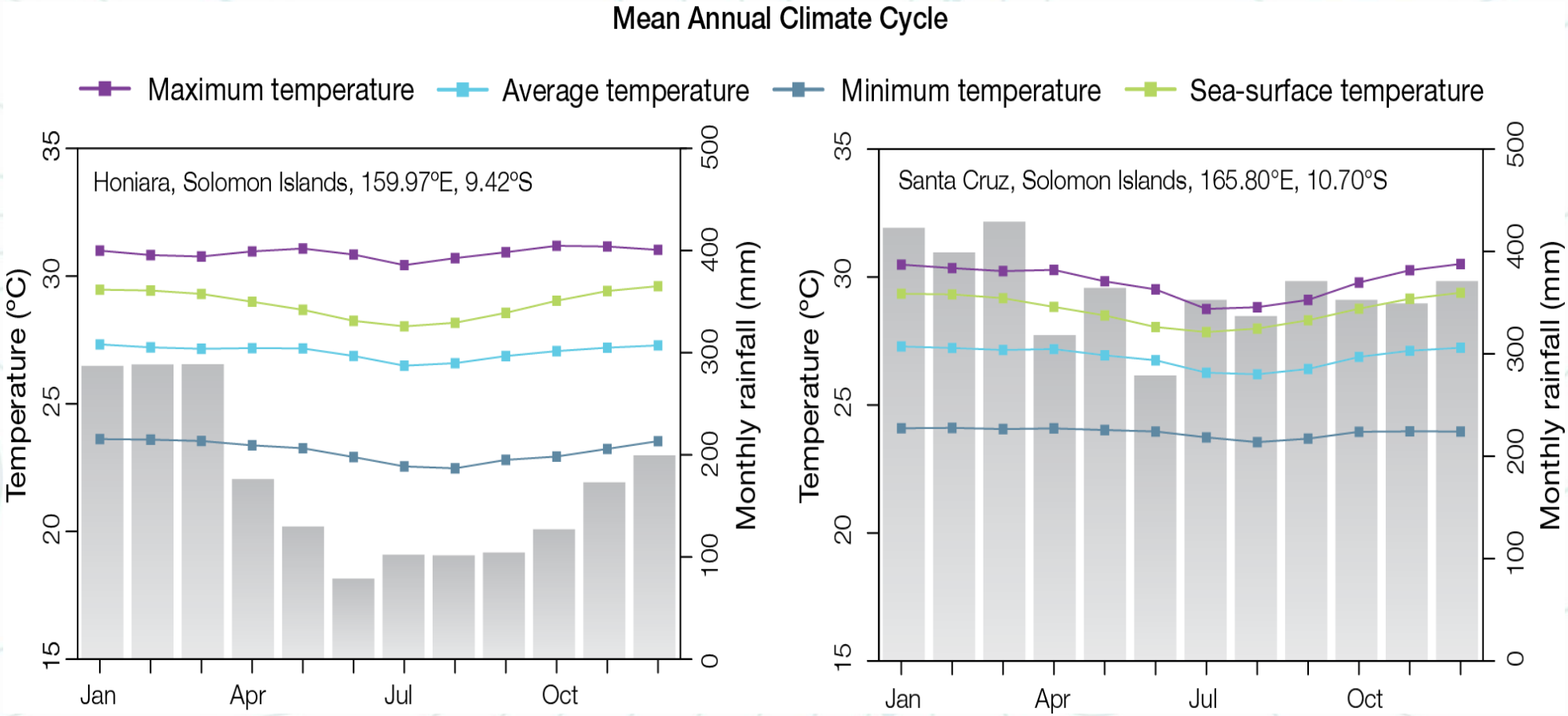
Current Climate

Rainfall in the Solomon Islands varies greatly from year-to-year, due mainly to the influence of the El Niño-Southern Oscillation. Rainfall is the least uniform of these climatic elements, as topographical effects cause significant variations between locations. The two seasons – Wet(November – April) and Dry Season(May – October)



Current Climate

Temperatures in the Solomon Islands are relatively constant throughout the year with only very small changes from season to season. Across the Solomon Islands temperatures are strongly tied to changes in the surrounding ocean temperature.



Climate Change Challenges – Natural Hazards

- **Flood and Cyclones** - The Solomon Islands experiences significant risk driven by extreme rainfall, involving loss of life and damage to infrastructure and livelihoods. Tropical cyclones have historically affected the Solomon Islands, mainly between November and April.

- **Drought** - Drought can be expressed in many ways, from looking at simple precipitation deficits to complex estimates of remaining soil moisture. Solomon Islands, it is likely that the percentage of time spent in drought may decrease. The most extreme droughts are projected to maintain their length and frequency, while lower intensity events are expected to reduce in frequency.

- **Sea Level** - Solomon Islands are in an area that has experienced above average rates of sea-level rise in recent decades. Studies have shown that rises even at the lower end of these projections threaten the homes and livelihoods of communities in the Solomon Islands' coastal areas. Sea-level rise is not just a threat due to long-term encroachment on coastal areas, but also due to the projected increase in the frequency of extreme sea-level events.

- **Heat Wave** - For the Solomon Islands, this probability steadily increases in the long term. This is held within the global context in which probabilities are expected to increase due to long-term warming.

- **Earthquake and Tsunami** - The Solomon Islands are located near to the Pacific "ring of fire" where regular earthquake increase the frequency of such hazards, resulting in Tsunami events.

Digital Transformation

Key developments include:

- **Inclusive Digital Economy**

  - Launch of M SELEN mobile money, bringing 20,000 users into the digital finance ecosystem. (United Nation Capital Development Fund)

  - Introduction of regulatory sandbox in 2022 and a Digital Innovation Unit within the Ministry of Communication and Aviation to promote fintech innovation. (United Nations Capital Development Fund)

  - Partnerships to develop bulk payments and digital savings tools (e.g., “Digital Jam Jar”) targeting informal economy participants. (UNDP)

  - Connectivity Landscape - As of early 2024, mobile connections covered approximately 71.8% of the population. The country benefits from improved digital infrastructure such as fiber undersea cables (Coral Seas Cable System) and expanded domestic connectivity.

- **Meteorological Capacity Building**

  - Enhancing meteorological observation infrastructure—rehabilitating 8 surface stations and constructing 3 upper-air stations—to strengthen climate resilience and early warnings. (AMOS-RD, UNDP).

Digital Transformation

Key developments include:

- **Geospatial and Remote Sensing Tools:**

  - Under the MACBLUE project, government officials and researchers received training on using open-source GIS and remote sensing tools to monitor mangroves and seagrass ecosystems via SPC's Digital Earth Pacific platform. (SPC)

- **Enhanced Field Data Equipment:**

  - KOICA support, supplied advanced tools like laser-imaging devices, undersea drones, tablets, and laptops to MECDM for improved Integrated Vulnerability and Adaptation Assessments

- **Climate Finance Writeshop:**

  - In collaboration with the Commonwealth Climate Finance Access Hub, stakeholders were trained to integrate earth observation data into climate finance.

Assistance Needed - KOICA

Action Plan: Solomon Islands Meteorological Service

- Early Warning Messages provided by the Solomon Islands Meteorological Service are not reaching all the individuals in the Solomon Islands.

- Accessing warnings on tropical cyclone, strong wind, rainfall, tsunami warning, and weather updates on mobile phone devices will help to take the necessary decision making or early actions before a disaster hits.

- The Solomon Islands Meteorological Service (SIMS) provides and disseminates Multi-Hazard Early Warnings to the government and the people of Solomon Islands.

- Early warning messages do not reach individuals and people in the remote communities for many reasons. One of these issues is easy access so that individuals can taken relevant actions in respond to early warnings messages. We only have a website but the platform to give individual real time update is lacking.

Assistance Needed - KOICA

Action Plan: Solomon Islands Meteorological Service(SIMS)

- **Proposed Project** – To develop an early warning Application for SIMS

- **Proposed Purpose** - To disseminate multi-hazard early warnings and updates to individuals for easy access to inform early actions

  - To allow users provide verification of impact pictures via the application

- **Actionable Steps** - 1. SIMS-Stakeholders provided the details of the multi-hazard early warning needs.

  2. SIMS identify experts/software engineers to perform coding and funding agency to support.

  3. SIMS-Stakeholders-Expert finalizing the web applications based on feedback

  4. SIMS officers are trained to use, manage the application, and trainers of the application.

Thankyou