

Pacific Disaster Risk Management: SPC support to members

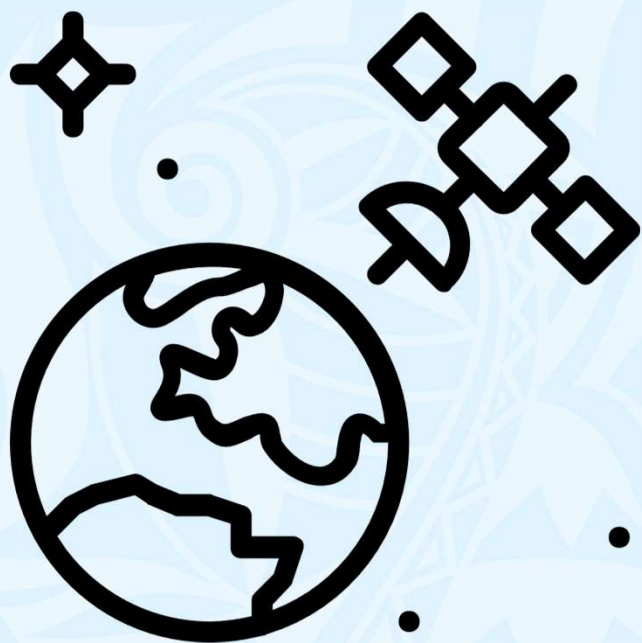
Kaliopate Tavola
Pacific Community (SPC)

The Pacific Community (SPC)



- Established in 1947 after WWII
- Scientific and technical intergovernmental organisation
- 27 members –
22 Pacific Island Countries & Territories 📍
+ 5 metropolitan countries
- collective capabilities in science, knowledge and innovation to support members in reaching their sustainable development goals and aspirations

Objectives



Pacific Post Disaster Support

Activation of Sentinel Asia

Role – Post Disaster Support Facility

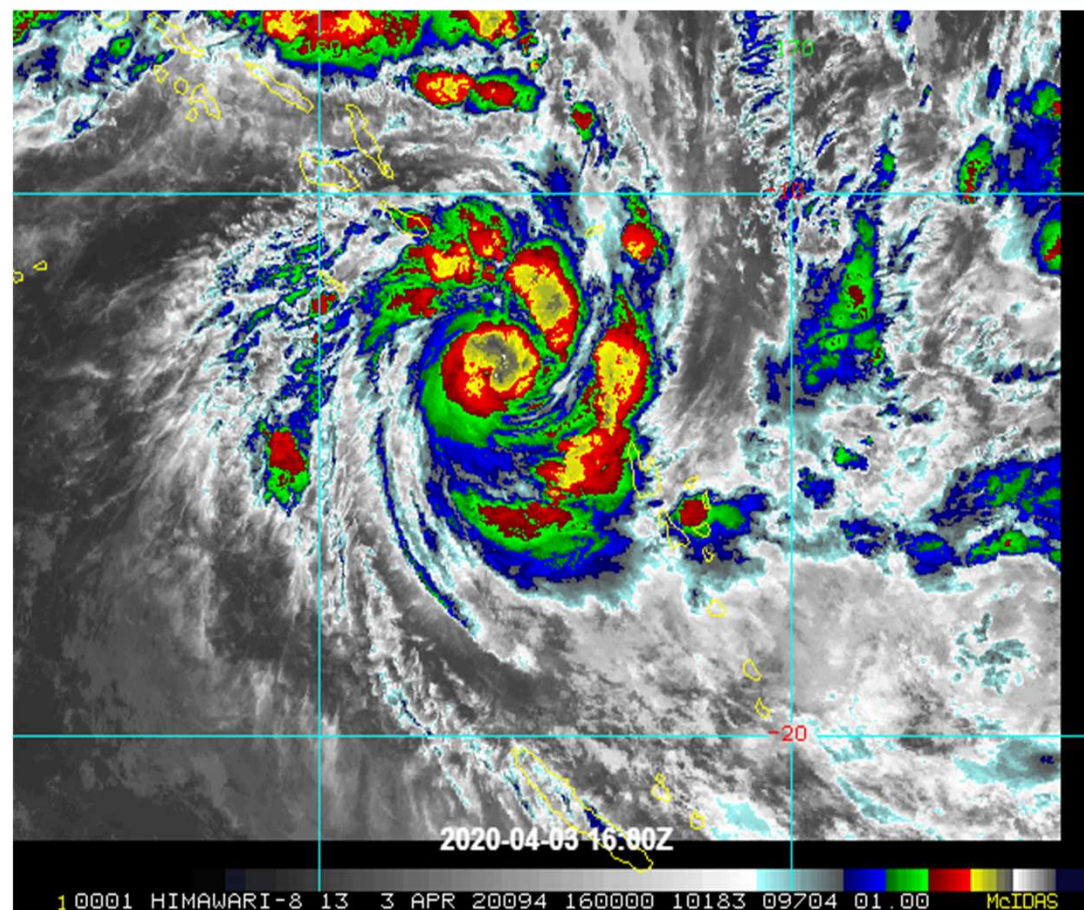
Case Study

Challenges and Limitations

Opportunities

Overview

- The Pacific Island Countries and Territories are susceptible to the social, economic, environmental and physical impacts of natural hazards
- SPC's engagement with Sentinel Asia has been as a post-disaster support facility where member countries can request and access satellite imagery and products.



Post Disaster Support

- SPC's work in disaster risk management is guided by the **Framework for Resilient Development in the Pacific** (FRDP) which is linked to other strategic documents including that of the organisation ie the Strategic Plan for SPC and the GEM Business Plan.
- FRDP aims to strengthen resilience of Pacific Island communities to climate change and disasters through integrated and sustainable approaches.
- Fosters strategic partnerships and collaboration with governments, regional and international organisations, civil society, the private sector, and communities to enhance coordination and leverage expertise.

Through the Geoscience, Energy and Maritime Division, SPC convenes:

- The biennial Pacific Disaster Risk Management Ministers Meeting
- The annual meetings of the Pacific Regional Disaster Managers and Pacific Islands Emergency Management Alliance
- The annual steering committees of a number of regional programmes.



Sendai Framework
for Action



Framework For
Resilient
Development In
The Pacific



2050 Strategy For
The Blue Pacific



SPC Strategic Plan



SPC GEM Business
Plan

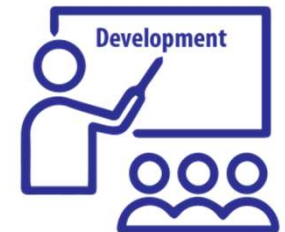


Declaration of the
Pacific DRM
Ministers


Disaster Risk Management Support

Areas of Work

- ❖ Early warning and preparedness
- ❖ Risk assessments – exposure mapping. Post-disaster technical assessments, and information management.
- ❖ Response Coordination
- ❖ Resource mobilization
- ❖ Disaster Recovery Coordination & planning
- ❖ Training and capacity development – design and delivery of accredited and non-accredited training, and workshops. Supporting peer-to-peer exchanges, conducting exercises and drills.



Activation of Sentinel Asia



World ▾ US Election ▾ Business ▾ Markets ▾ Sustainability ▾ Legal ▾ Breakingviews ▾ Technology ▾ More ▾


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Asia Pacific

Papua New Guinea landslide buried more than 2,000 people, government says

By Lewis Jackson and Renju Jose

May 28, 2024 12:39 AM GMT+12 · Updated 5 months ago



Estimates of those killed in the landslide around the Yambali village in country's north have been rising steadily since Friday.

Summary Companies

- Landslide hits six villages in remote province
- Government says 2,000 people buried
- Tribal warfare and tough terrain impede aid

Landslide in Enga province, Papua New Guinea (Sentinel Asia, EOR) - Message...

File Message Help Tell me what you want to do

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Landslide in Enga province, Papua New Guinea (Sentinel Asia, EOR)

杉浦正美 <ms-sugiura@adrc.asia>

To Litea Biukoto; Kaliopate Tavola

Cc z-sentinel.asia; kokusai.bousai; Sentinel Asia; sarequest_ADRC

This sender ms-sugiura@adrc.asia is from outside your organization.

EOR form.docx 44 KB

You don't often get email from ms-sugiura@adrc.asia. [Learn why this is important](#)

Dear Sir and Madam (SPC),

Thank you for your kind cooperation with Sentinel Asia activities.

We found the following news regarding Landslide in the highlands of Enga, Papua New Guinea.

<https://www.bbc.com/news/articles/cx778nq0izvo>

<https://edition.cnn.com/2024/05/27/world/papua-new-guinea-landslide-thousands-feared-buried-intl-hnk/index.html>

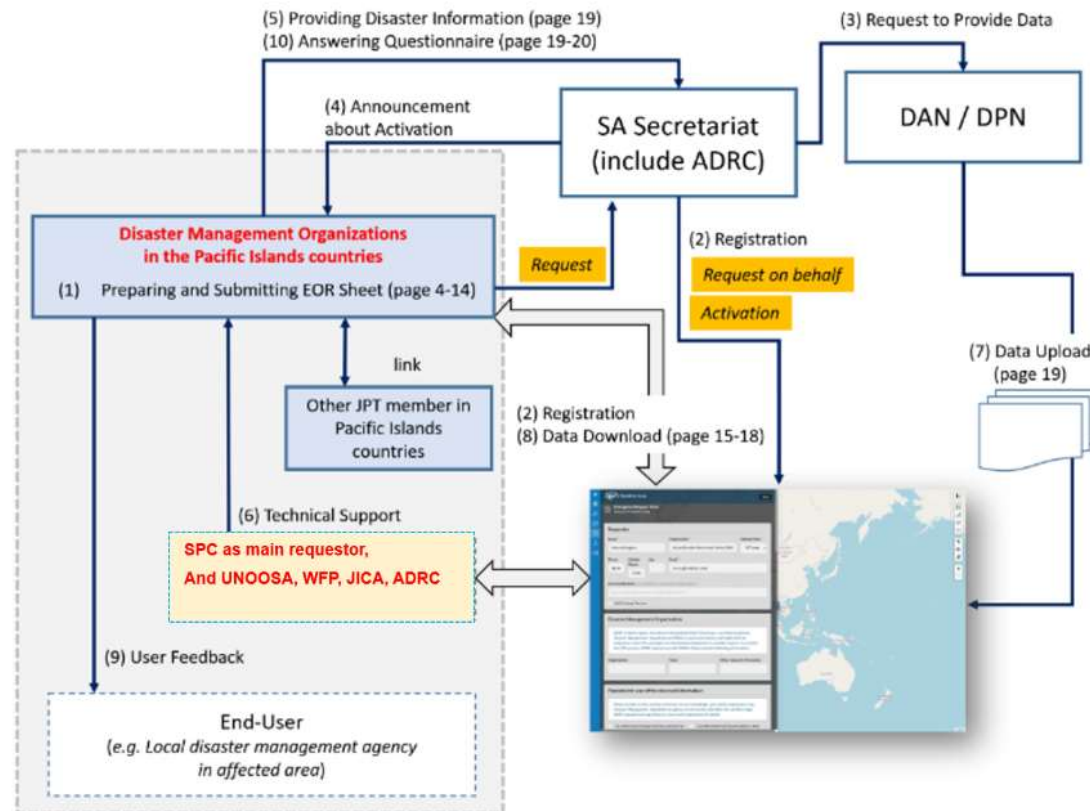
<https://www.reuters.com/world/asia-pacific/papua-new-guinea-continue-rescue-efforts-after-hundreds-feared-killed-landslide-2024-05-26/>

Please do not hesitate to submit the attached EOR sheet if you want to request or on OPTEMS.

With best regards,

ADRC Team

Activation of Sentinel Asia



- These activities are aimed at completion within 24 hours after a disaster.
- OPTEMIS or EOR Sheet
- Large-scale disasters can be escalated to International Disaster Charter (IDC)

Pacific Sentinel Asia Activation

Landslide in Papua New Guinea on 25 January, 2012

Country : Papua New Guinea
Occurrence Date (UTC) : 25 January, 2012
SA Activation Date (UTC) : 25 January, 2012
Requester : Asian Disaster Reduction Center (ADRC)

Volcano Eruption in Papua New Guinea on 05 January, 2018

Country : Papua New Guinea
Occurrence Date (UTC) : 05 January, 2018
SA Activation Date (UTC) : 05 January, 2018
Requester : National Disaster Centre (NDC)

Flood in Solomon on 03 April, 2014

Country : Solomon
Occurrence Date (UTC) : 03 April, 2014
SA Activation Date (UTC) : 03 April, 2014
Requester : Secretariat of the Pacific Community (SPC/SOPAC)

Tsunami in Solomon on 05 February, 2013

Country : Solomon
Occurrence Date (UTC) : 05 February, 2013
SA Activation Date (UTC) : 05 February, 2013
Requester : The ASEAN Secretariat

Tropical Cyclone in Vanuatu on 07 April, 2020

Country : Vanuatu
Occurrence Date (UTC) : 06 April, 2020
SA Activation Date (UTC) : 07 April, 2020
Requester : SPC on behalf of Vanuatu NDMO

Tropical Cyclone in Fiji on 20 February, 2016

Country : Fiji
Occurrence Date (UTC) : 20 February, 2016
SA Activation Date (UTC) : 20 February, 2016
Requester : National Disaster Management Office, Fiji (NDMO)

Tropical Cyclone in Tonga on 10 January, 2014

Country : Tonga
Occurrence Date (UTC) : 10 January, 2014
SA Activation Date (UTC) : 10 January, 2014
Requester : Secretariat of the Pacific Community (SPC/SOPAC)

Volcano Eruption in Tonga on 15 January, 2022

Country : Tonga
Occurrence Date (UTC) : 15 January, 2022
SA Activation Date (UTC) : 16 January, 2022
Requester : Asian Disaster Reduction Center (ADRC)

Tsunami in Solomon on 02 April, 2007

Country : Solomon
Occurrence Date (UTC) : 02 April, 2007
SA Activation Date (UTC) : 02 April, 2007
Requester : Geoscience Australia

Tropical Cyclone in Vanuatu on 14 March, 2015

Country : Vanuatu
Occurrence Date (UTC) : 14 March, 2015
SA Activation Date (UTC) : 14 March, 2015
Requester : The ASEAN

Flood in Fiji on 22 January, 2012

Country : Fiji
Occurrence Date (UTC) : 22 January, 2012
SA Activation Date (UTC) : 22 January, 2012
Requester : National Disaster Management Office, Fiji (NDMO)

Fiji Flood, Storm on 28 December, 2019

Country : Fiji
Occurrence Date (UTC) : 28 December, 2019
SA Activation Date (UTC) : 30 December, 2019
Requester : National Disaster Management Office (NDMO)

Tropical Cyclone in Tonga on 12 February, 2018

Country : Tonga
Occurrence Date (UTC) : 12 February, 2018
SA Activation Date (UTC) : 12 February, 2018
Requester : Secretariat of the Pacific Community (SPC/SOPAC)

Role as a Post-Disaster Support Facility

❖ Response Coordination



- Coordination of SPC support to member countries under the arrangements of the SPC Post Disaster Framework

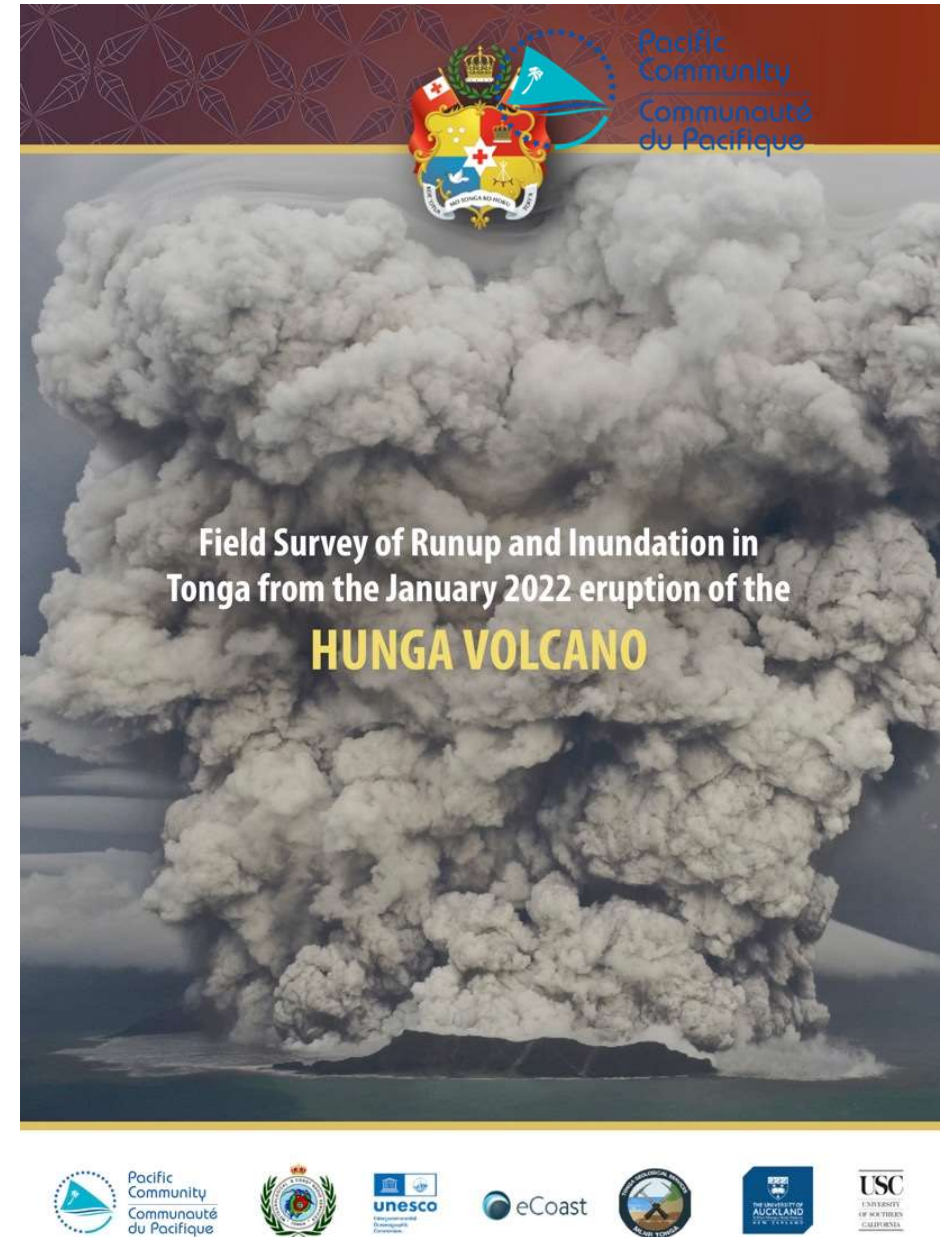
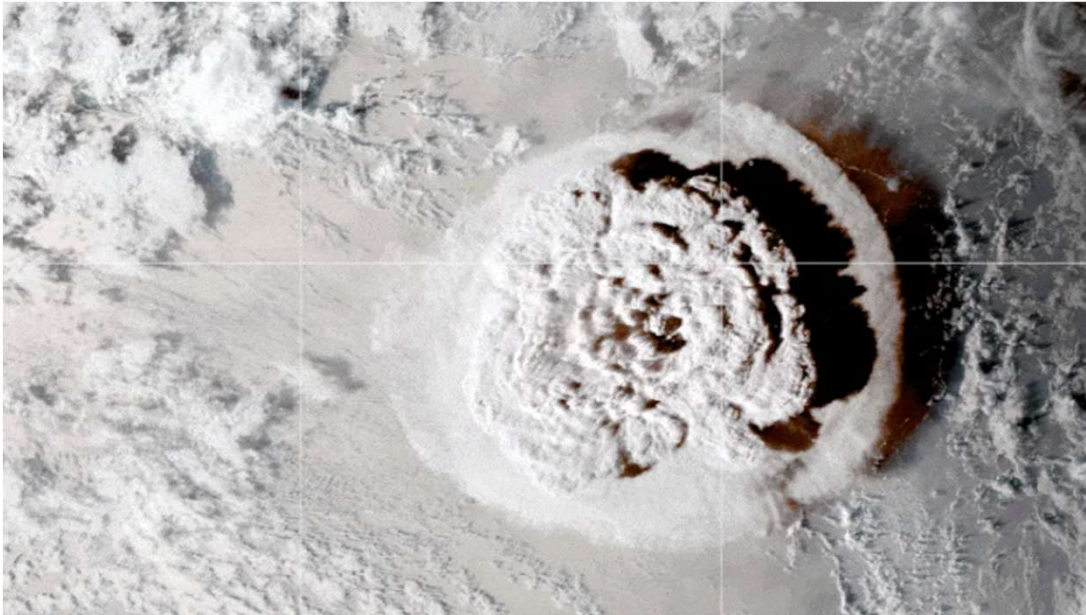
❖ Disaster Recovery Coordination & Planning: Support Includes:

- Scientific and technical assessment & coordination with country impacted and partners
- Activation of Sentinel Asia & UN Disaster Charter
- Groundwater assessment
- Assessment of tsunami inundation or flooding
- Post-disaster needs assessment (PDNA).
- Etc..



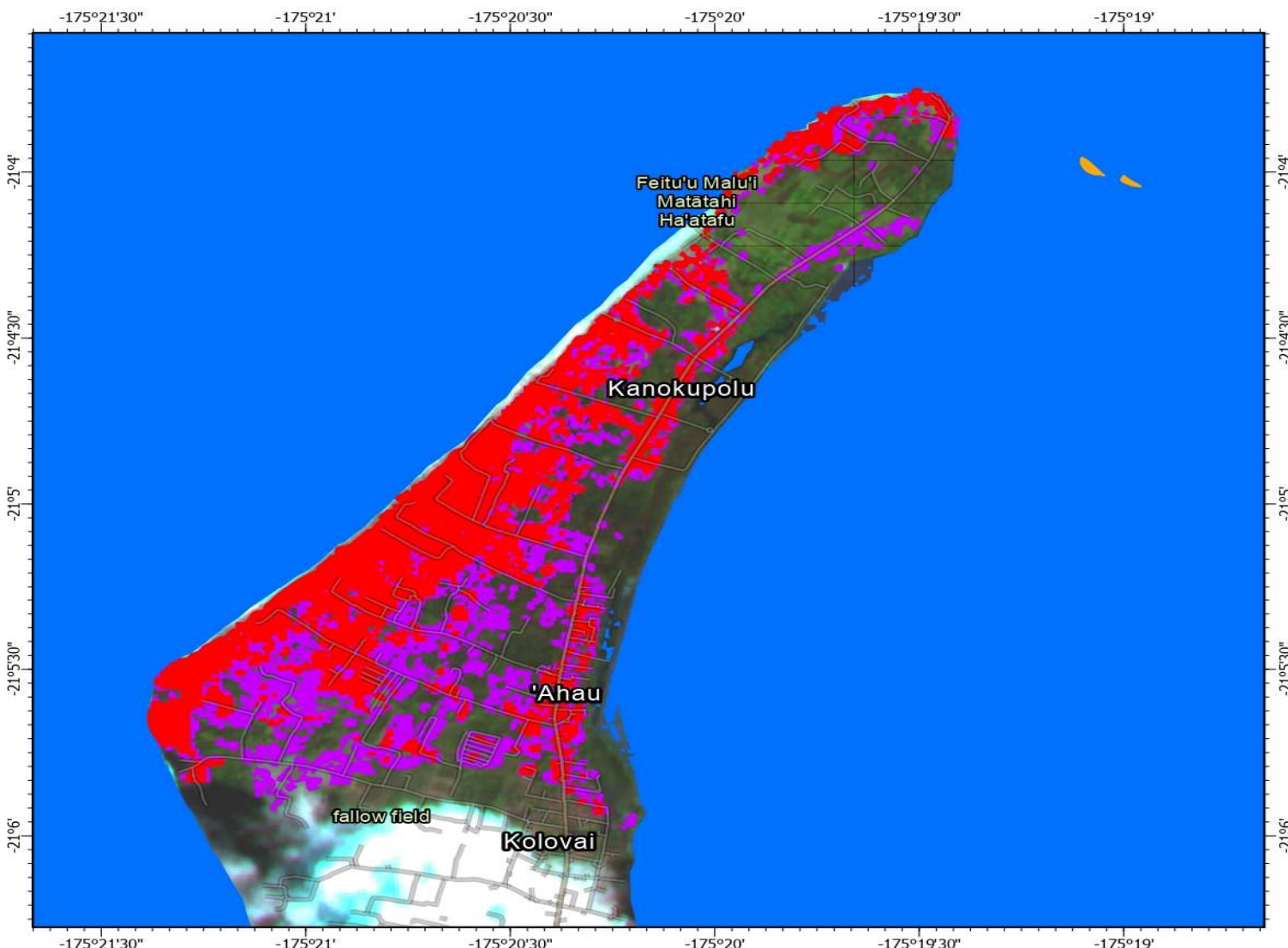
Activation - Tonga

- Hunga-Tonga-Hunga-Ha'apai Volcano eruption and Tsunami on 15 January 2022
- Activation of Sentinel Asia - 16 January 2022
- SPC, UNESCO IOC, ITIC worked with Government of Tonga to ensure that field assessments were analysed and available



Ha'apai Volcanic eruption impact Kanokupolu, Tonga

As Observed by *Sentinel 2* on 17 Jan,2022



Locator



Legend

- Pumice Raft
- Volcanic Ash Sludge
- Tsunami Impact Area
- Permanent Waterbody

Description

-This Map shows impact of Ha'apai Volcanic Eruption occurred on 15 Jan,2022.Volcanic ash have been observed all over Tonga and also mixed with water (sludge). Urban and Agriculture is effected by Volcanic Ash. Tsunami had a devastating impact on Coastal areas. Pumice raft are also observed closer to Island
-Accuracy of this product is not validated

Map Information

-Coordinate System: GCS WGS 1984 DD

-Unit Degree

0 0.3 0.6 1.2 1.7 2.3 Km



Data Source

Copernicus Open Access Hub ESA

-Satellite Product: Sentinel 2

-Observation Range:
2022-01-17

Activation – Papua New Guinea

27 May 2024

- Request from Papua New Guinea National Weather Service to ESCAP to provide high-resolution satellite imagery or SAR data for damage assessment.

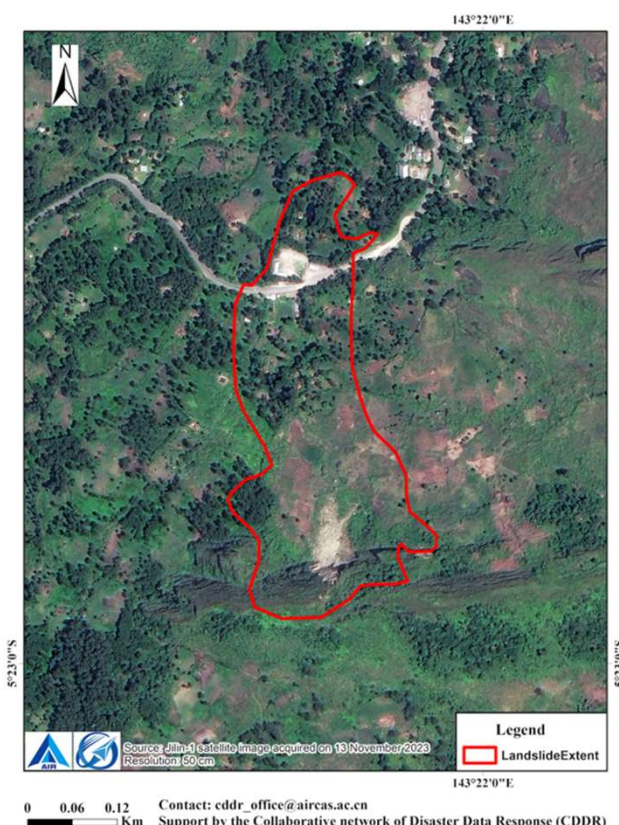
27 May 2024

- Collaborated network on Disaster Data Response (CDDR) mechanism was activated by Aerospace Information Research Institute of the Chinese Academy of Sciences

29 May 2024

- First images were sent

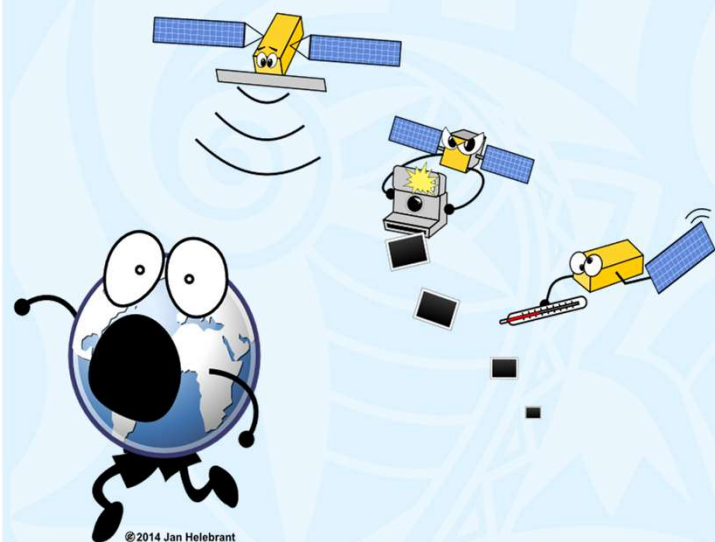
Data Coverage Map of Papua New Guinea Landslide with Chinese High-Resolution Satellites



Data Coverage Map of Papua New Guinea Landslide with Chinese High-Resolution Satellites



Challenges and Limitations



- Ability to coordinate support from within the country once an NEOC is activated
- Understanding the area impacted to know the AOI for request

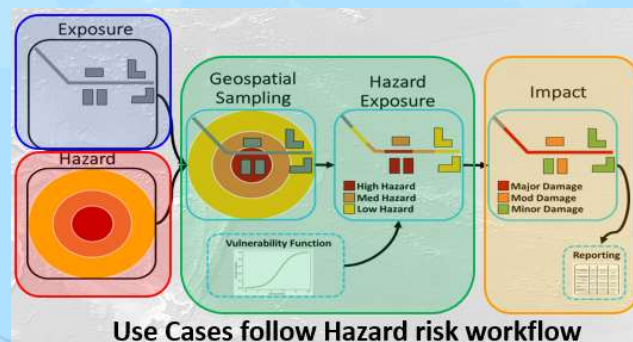


- Limited Bandwidth
- Limited analytical capabilities and staff availability for satellite imagery analysis.

Pacific Risk Tool for Resilience Project - 2



Republic of the Marshall Islands



Tuvalu



Samoa



Cook Islands



Tonga



Vanuatu

Tropical Cyclone Post-event EO Damage Information support



Sentinel Asia

Focus on climatic hazard risks: 3 Use cases



1) Coastal inundation risk under climate change scenarios

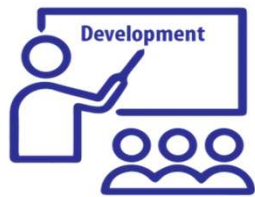


2) Tropical Cyclone exposure forecast and post-event impact assessment

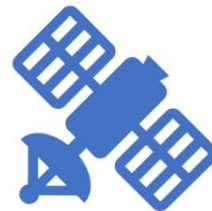


3) Drought risk monitoring to support water resources management

Opportunities - Capacity Building & Collaboration



Capacity-building delivered to support and upskill government officials and stakeholders



Regional Workshop for key Stakeholders on:
Using Earth Observation Data to support and inform DRM & DRR activities.



Collaboration with other Organizations to enhance technical support

Conclusion

- Earth observation data is essential for the Pacific region, as utilizing this technology enables the creation of decision-ready products that provide precise, analysed information supporting evidence-based actions by decision-makers.
- Greater awareness of the services available through Sentinel Asia and also directly by partners
- Through continued partnership and collaboration, we can strengthen climate and disaster risk resilience to overcome existing challenges in the Pacific.
- SPC is committed to working with members and partners to find ways to build resilience together.



Pacific Regional Disaster and Emergency Managers Meeting Week



8-12 April 2024 Tanoa International Hotel, Nadi, Fiji



Pacific
Community
Communauté
du Pacifique

Any Question ?

Salamat po.