Regional workshop on understanding the operational aspects of the drought observation system in Mongolia, Ulaanbaatar

ESCAP's space applications and the Regional Drought Mechanism

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ICT and Disaster Risk Reduction Division
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- Pillar I: Regional Drought Mechanism
- Pillar II: Capacity building and technical support
- Pillar III: Regional Plan of Action 2018-2030

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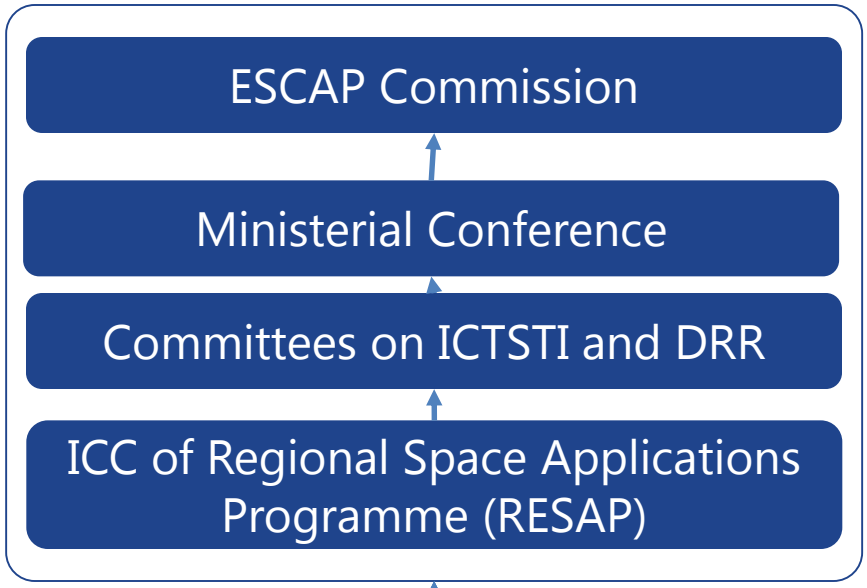
Introduction



Knowledge products and geospatial information services

-Analytic reports
-Manual and operation guideline

Capacity building and technical support

-RESAP and projects
-Regional Drought Mechanism
-Training networks

Regional commonality and norms

-Space plan of Action
-Cloud based meta-data platform

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Pillar I

Regional Drought Mechanism

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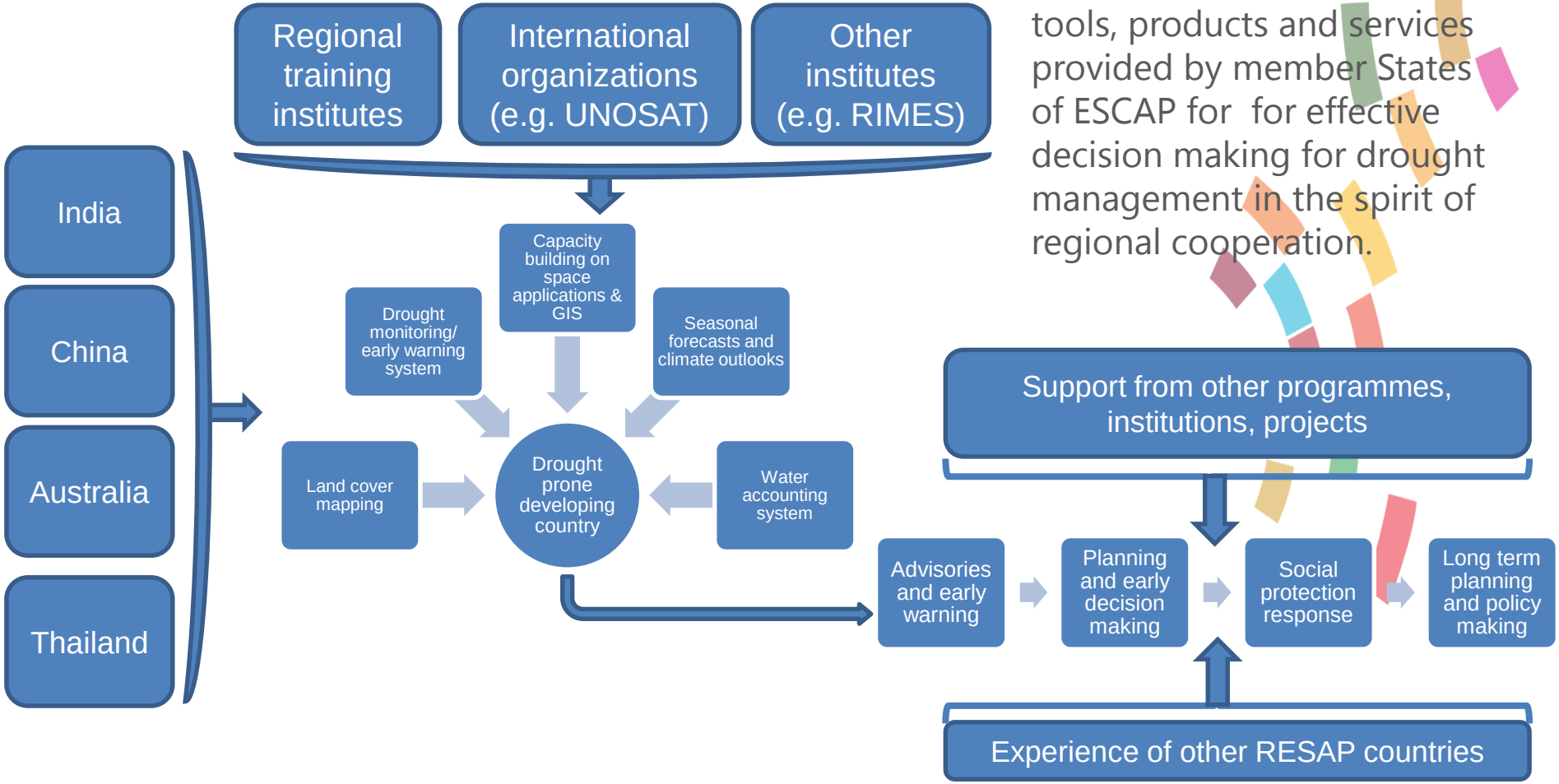
Provides a menu of tailored tools, products and services provided by member States of ESCAP for for effective decision making for drought management in the spirit of regional cooperation.



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- Countries help each other to better manage drought and develop their capacity to operationalize the system, skills and tools for space applications in multi sectors over the long term.

- Mongolia is our first pilot country and graduated which can fully operate the drought monitoring system. Other pilots in Asia and Pacific are working with Regional Service Nodes to develop tailor system.

- Knowledge, skills and experience will be shared, through ESCAP regional cooperation platform, with other rigid and semi-rigid countries in Asia and the Pacific to benefit the people in effective monitoring and mitigate the risk and damage of drought.

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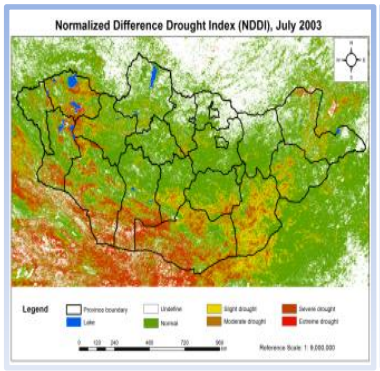
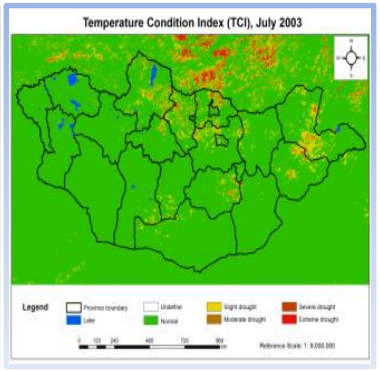
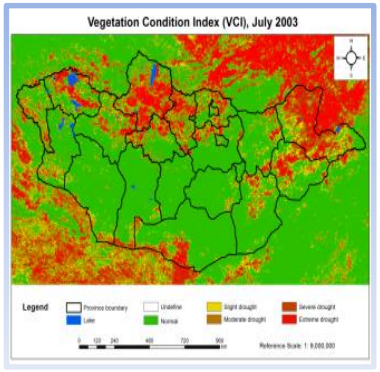
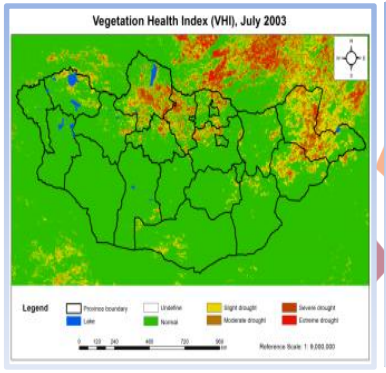
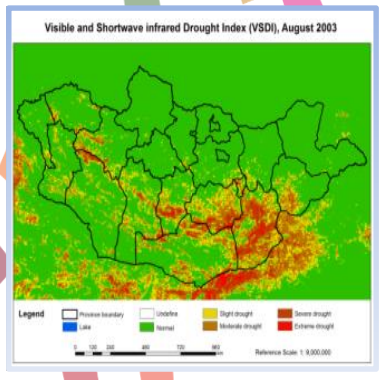
Operationalization of the Drought Watch system in Mongolia through technical support from China

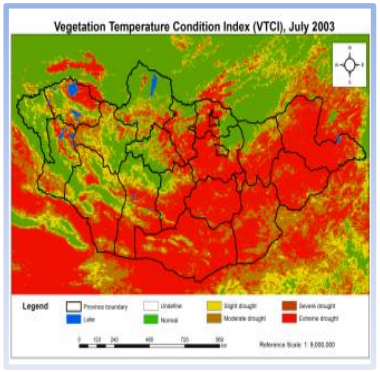


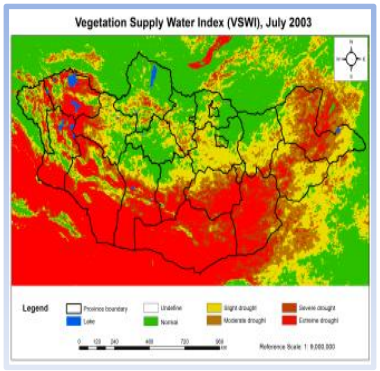


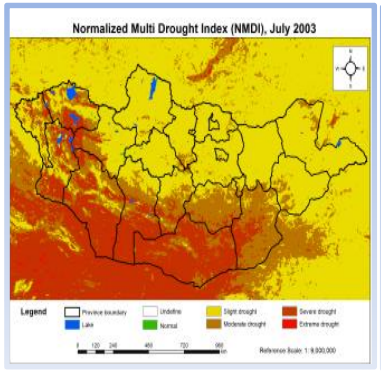


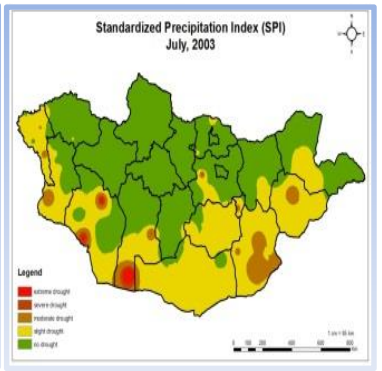


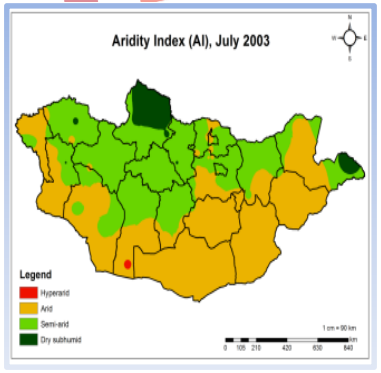












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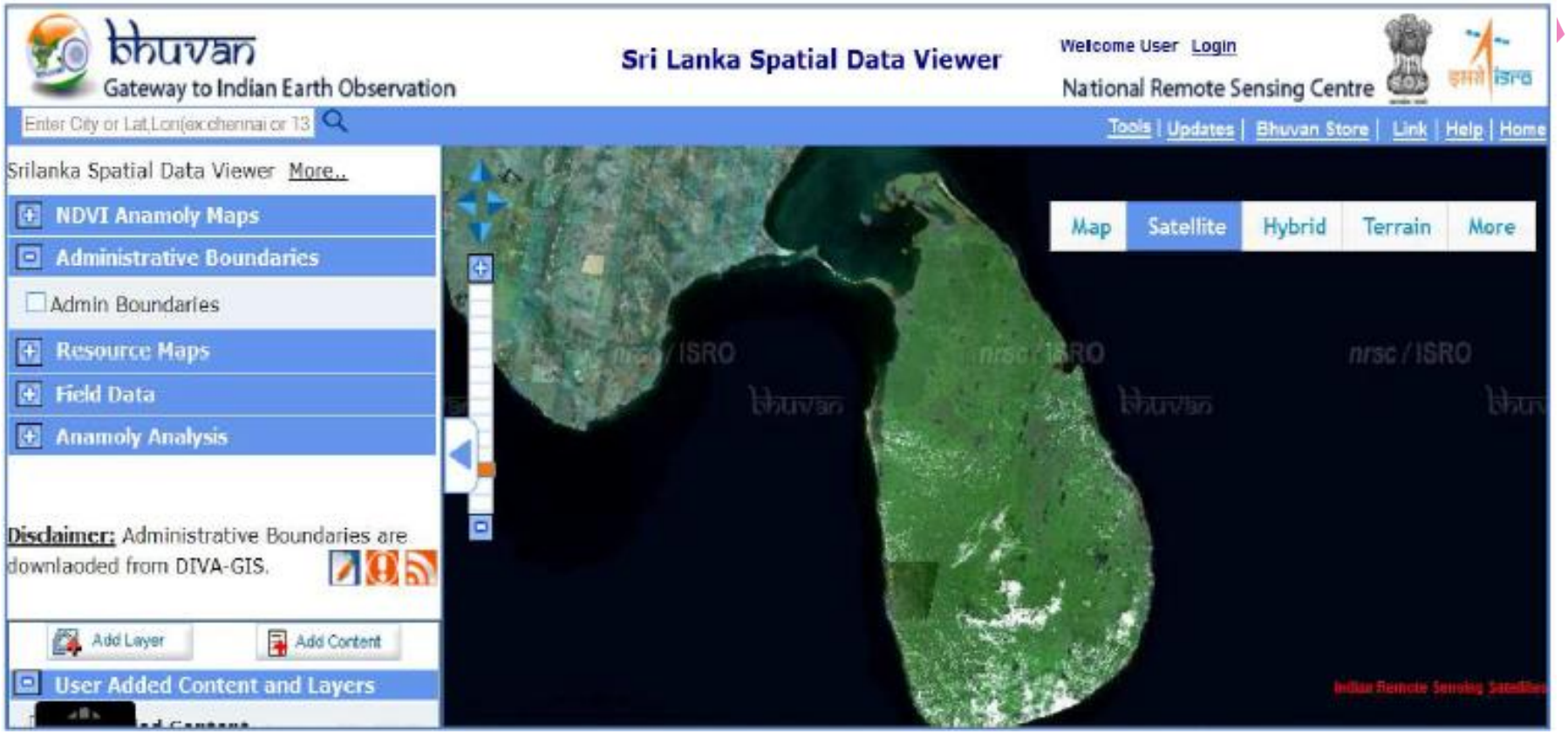
Operationalizing the Spatial Data Viewer for Sri Lanka by National Remote Sensing Center of Indian Space Research Organization (NRSC-ISRO)



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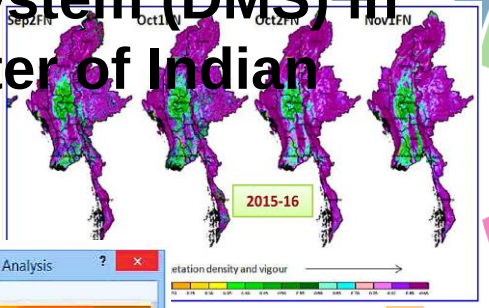
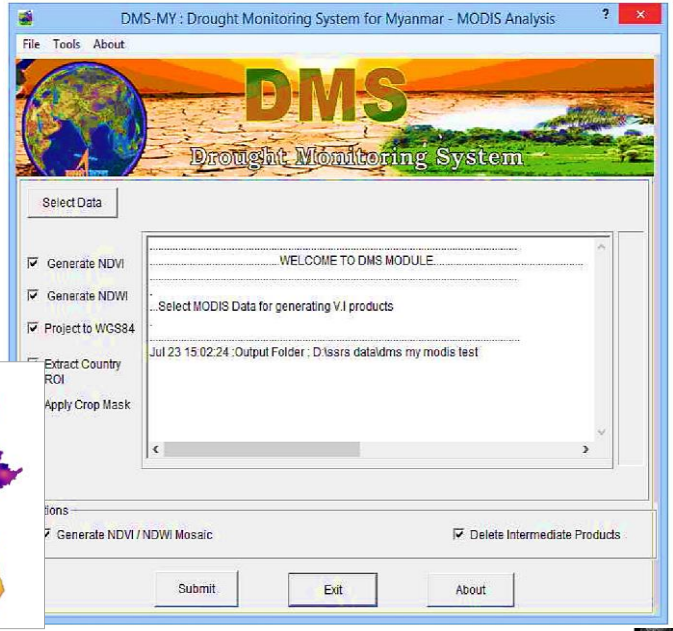
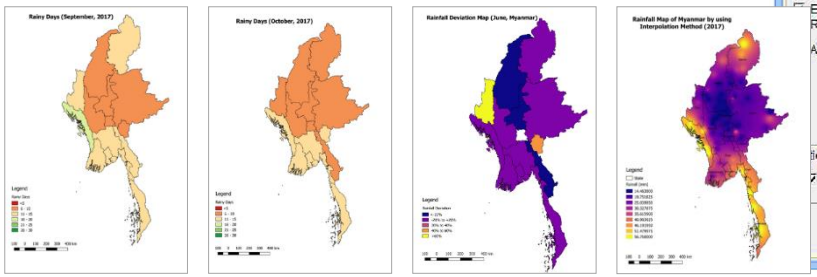
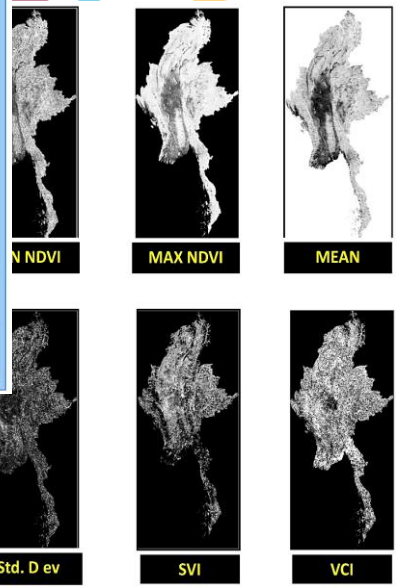
Operationalizing the Drought Monitoring System (DMS) in Myanmar by National Remote Sensing Center of Indian Space Research Organization (NRSC-ISRO)









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Training and Capacity Building

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Pillar II

Capacity building and technical support

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- Timely provision to countries affected by disasters: 400+ satellite images/products for drought, cyclone, earthquake and flood.
- 7X24 service with free data and support from RESAP member countries, valued 1+MUS$.
- Sponsor junior officials from developing countries to study the Master degree in CSSTAAP, Chinese University of Hong Kong and RADI.

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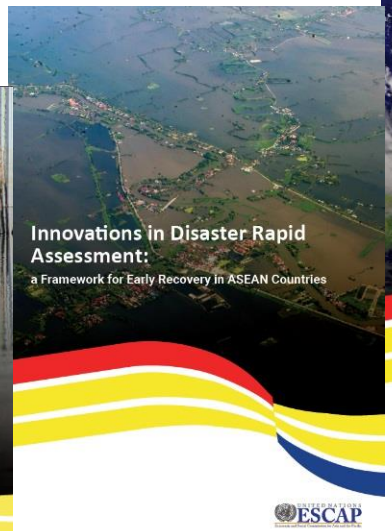
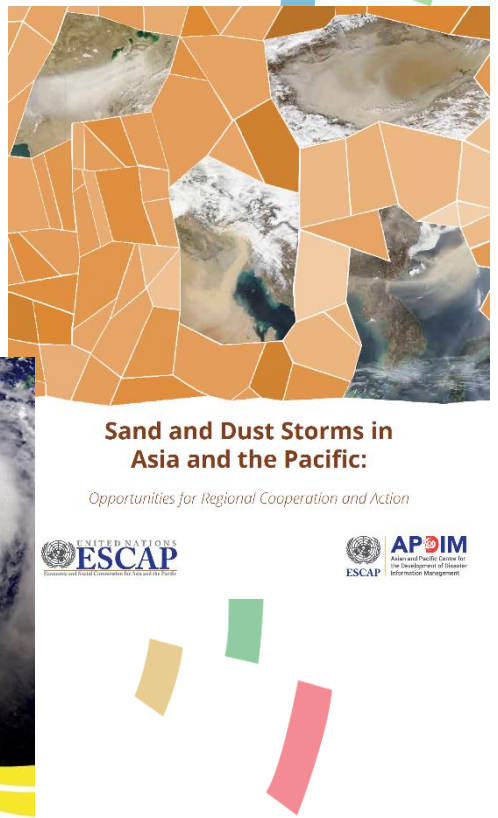
Knowledge products

2017





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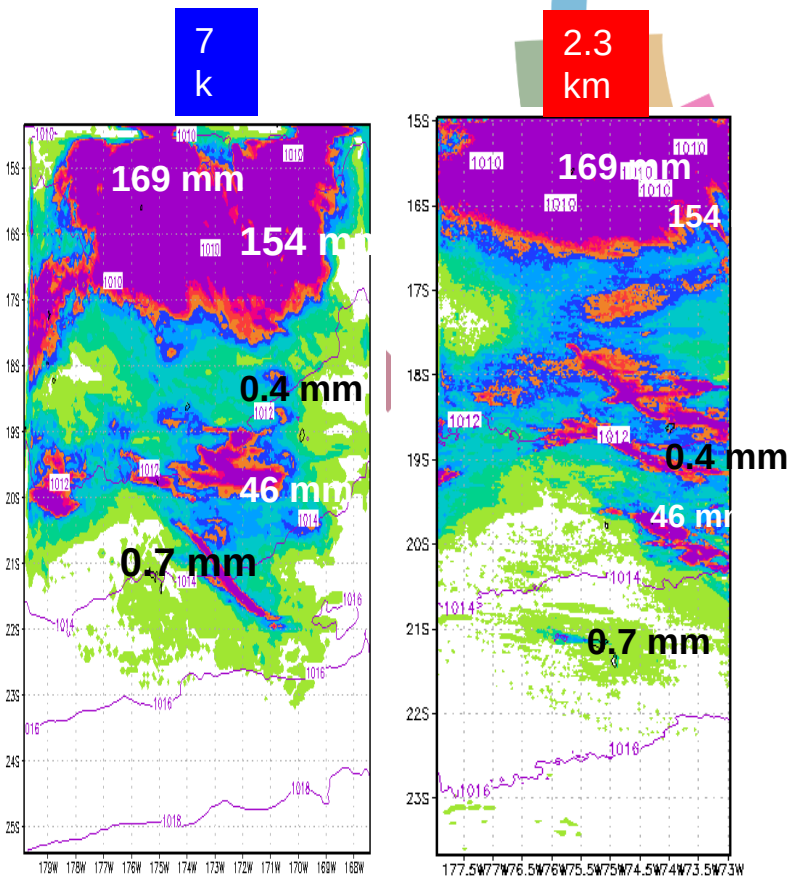
Capacity building for Pacific countries

Pilot Project in Tonga

- Implementation on Numerical Weather Prediction by WRF-TMS
- Implementation of Common Alert Protocol (CAP)
- High resolution weather prediction up to 2.3 km from 7 Km
- Development of 3-5 year work plan to guaranty the sustainability of implemented systems



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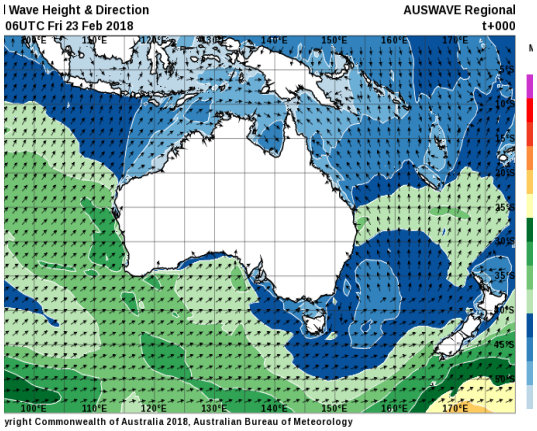
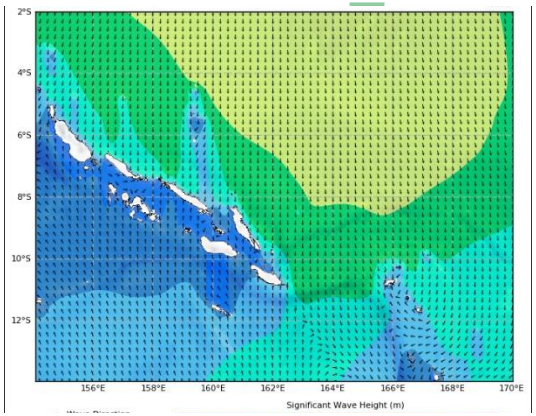
Pilot Project in Solomon Islands

- High resolution WRF weather model is installed & resolution up to 7-km.
- Ocean Wave model Wavewatch3 with the domain of the whole region of Solomon Islands.
- Wavewatch3 model has been used operationally and very helpful to prepare marine warnings and forecast up to 7 days.
- Development of 3-5 year work plan to guaranty the sustainability of implemented systems

Before



After



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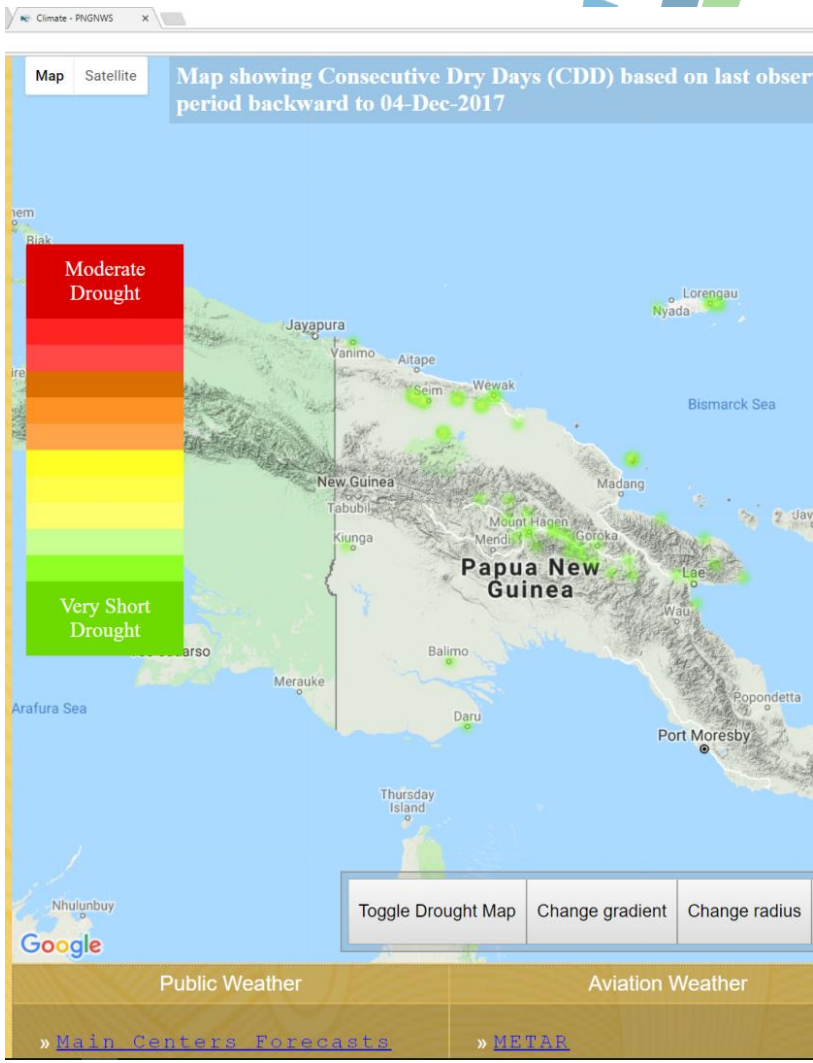
Pilot Project in PNG

- Establishment of Drought Monitoring System
- On-site capacity building session on installing, running and managing drought monitoring system as an operational program for PNG NWS
- Improving the interactive dissemination of Drought Monitoring Information for stakeholders
- Focus Group Discussion with National Agriculture Research Institute (NARI) and National Disaster Center (NDC) to enhance the climate awareness for stakeholder
- Development of 3-5 year work plan to guaranty the sustainability of implemented systems



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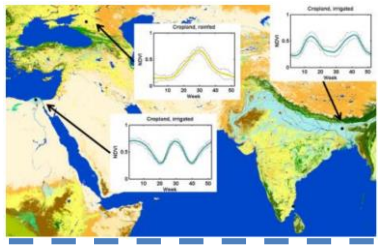
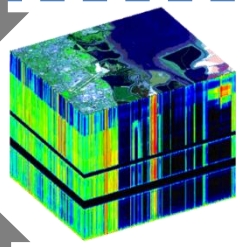
Cloud-based meta-data platform

Agriculture | Environment | Development



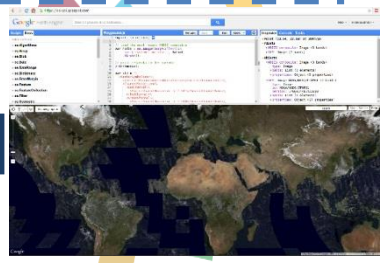
Thematic Apps
(Algorithm taken to Data)

Exploit Data



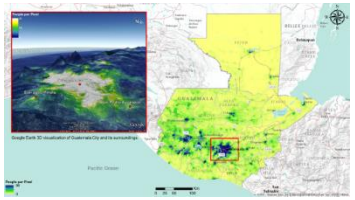
DataCube
Google Earth Engine
Vector DB

Interoperability?



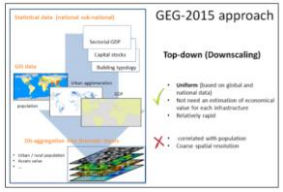
Ingest Data

Satellites

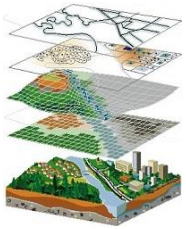


WorldPop

GHSL



GEG 2015



Other

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Pillar III

Regional Plan of Action 2018-2030

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Regional plan of action (2018-2030)

1. Rapid digital innovation continues to augment the availability of geospatial information on providing countries of Asia and the Pacific, particularly those with special needs, with an expanded choice of tools to implement the 2030 Agenda. A regional plan of action will help to harness this opportunity in a coordinated way.

2. Developed in follow-up to "the Asia-Pacific Plan of Action for Applications of Space Technology and Geographic Information Systems for Disaster Risk Reduction and Sustainable Development, (2012-2017)" (ESCAP resolution 69/11)

3. Developed in response to request of member countries at the 20th session of Intergovernmental Consultative Committee (ICC) on the Regional Space Applications Programme for Sustainable Development (RESAP) and the Asia-Pacific Space Leaders Forum, held on 2 November 2016 in New Delhi, India.

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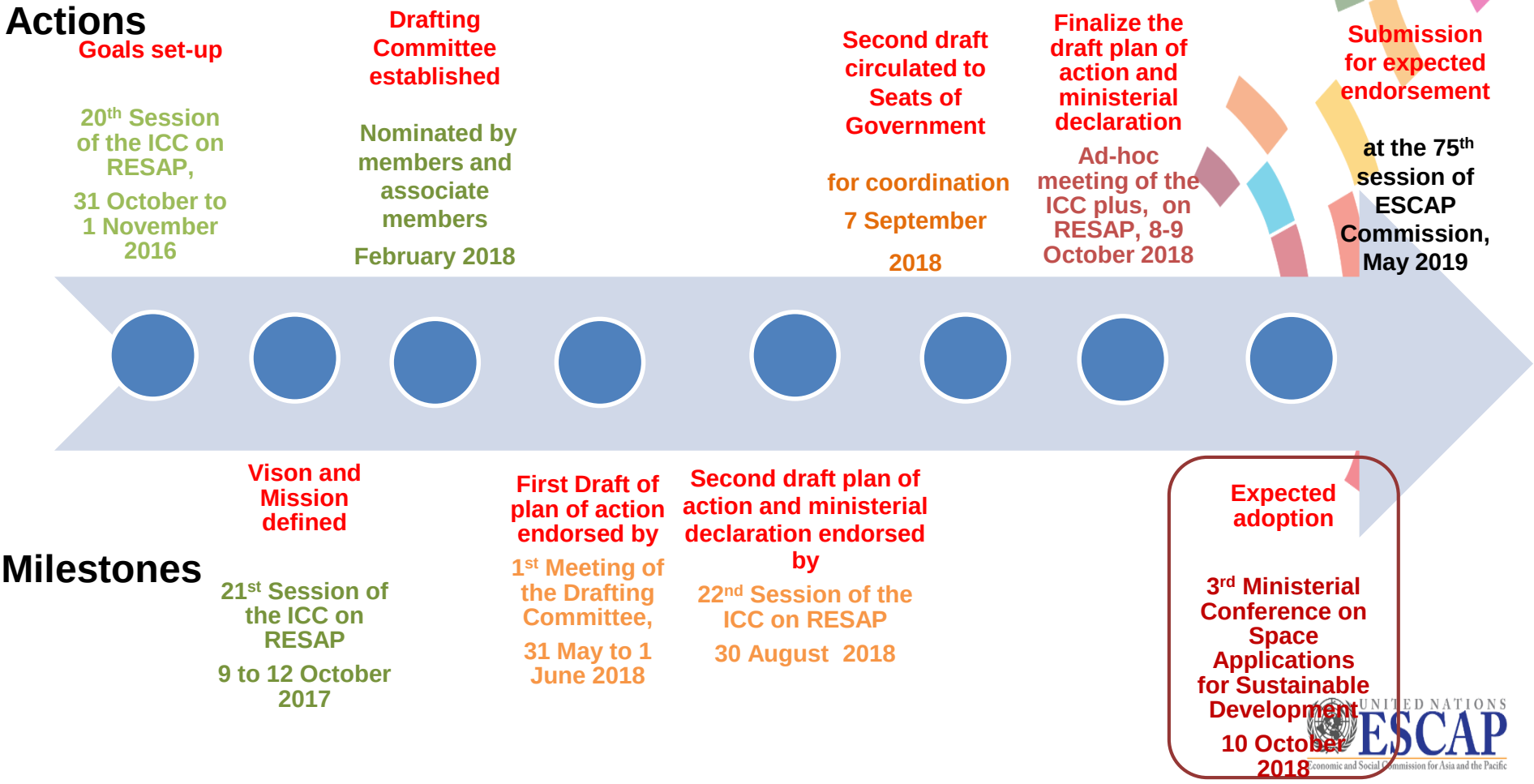
Process of formulating regional plan of action (2018-2030)

inclusive, collective, open and driven by country-needs



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Purpose of the plan of action

- Leveraging innovations in digitization, cloud computing, artificial intelligence, big data, and IoTs
- Engaging end-users in multiple sectors, youth and the private sector and bridging national demands/end users with regional information/service providers
- Strengthening implementation through enhanced partnership with global stakeholders
- Guiding national sustainable development and stimulating regional cooperation in support of global initiatives
- Contributing to global UNISPACE+50 “2030 Agenda”

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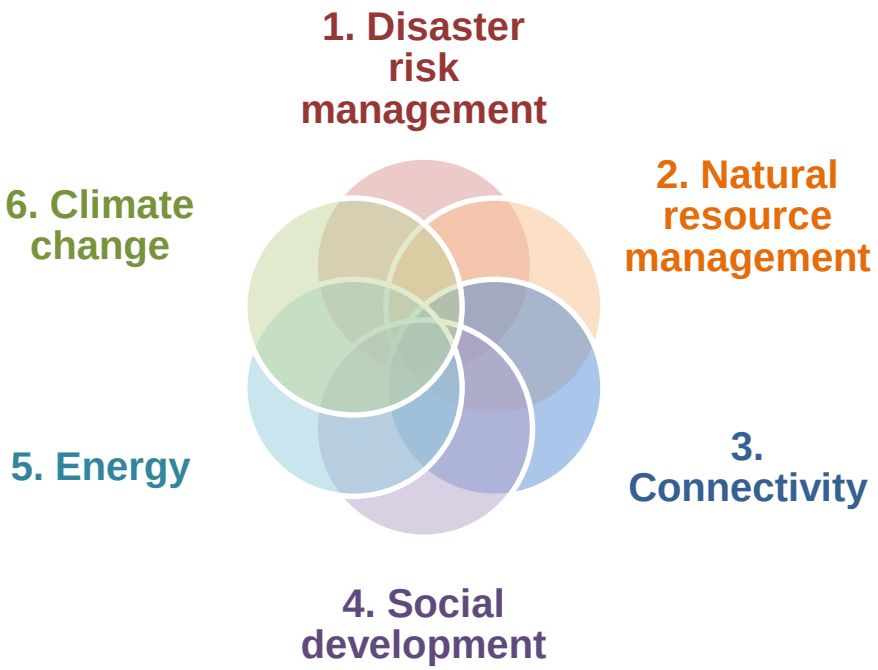
Focus of interventions under the plan of action

- Builds on good practices and experiences that emerged from the implementation of the previous Asia-Pacific Plan of Action (2012-2017)
- In line with the thematic areas contained in ESCAP's Regional Road Map, the current plan of action addresses the following thematic areas:



- ✓ Significantly contributes to the implementation of 13 SDGs and Sendai Framework for DRR
- ✓ Directly contributes to achieving 35 targets
- ✓ Maps the sectoral demands and resources at national and regional levels
- ✓ Consolidates needs assessment
- ✓ Promotes multi-sectoral coordination and collaboration

Implementation modalities

- ✓ Among the three, capacity building and technical support has been recommended by the ICC as a priority for most Asia-Pacific countries in implementing the plan of action
- ✓ Focus is on geospatial information applications

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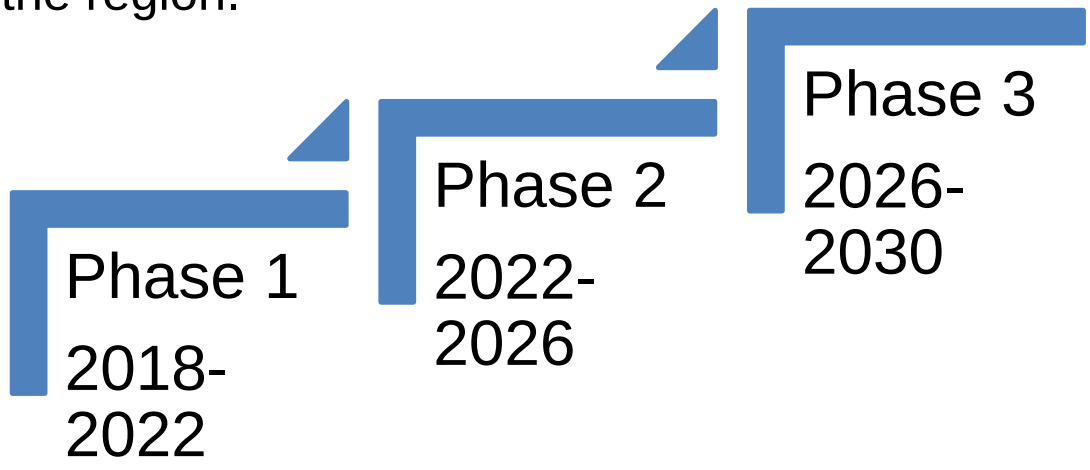
Phased review of the Plan of Action

As the plan of action covers a long implementation period until 2030, the ICC, at its 22nd Session, also recognised the need to review and amend the Plan of Action periodically to reflect the evolving needs of countries, emerging technologies, shifting priorities and unforeseen challenges arising in the region.



- As a result, a phased review has been suggested over 4-year periods.
- The ICC noted that different sub-regions and countries have their own priorities.

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Means of implementation

- An ongoing collective effort
- Foresees enhanced cooperation and partnerships, at the regional level, between existing RESAP members and intergovernmental mechanisms, international and technical organizations
- Leverages existing capacities in the region
- Primary responsibility of funding lies with national governments, in-kind contributions will be sought and the establishment of a Trust Fund to support implementation is proposed

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Thank you!

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