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Office for Outer Space Affairs

The use of satellite technologies for observation and communication of extreme and slow onset events

UNISPACE+50

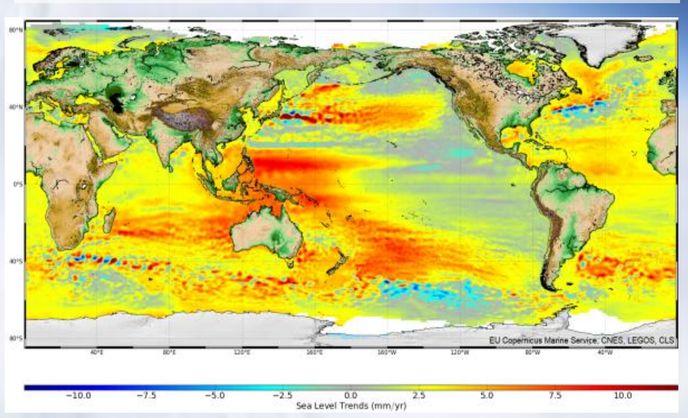
Satellites help us become aware of and take note of relevant parameters that need to be considered when addressing loss and damage:

Loss and damage due to tropical storms and sea level rise in coastal areas

More frequent and intense tropical storms

Satellites allow us to track more frequent and intense typhoons, cyclones and hurricanes (image courtesy of NASA).

Sea level rise and its regional transient features



Satellite altimetry lets us to track sea-level rise worldwide and its regional transient features (source: CNES AVISO: http://www.aviso.altimetry.fr/en/data/products/ocean-indicators-products/mean-sea-level.html.

Exposure and vulnerability of coastal areas

Satellites give us the most up to date view of what is exposed in coastal areas (image courtesy of ESA).

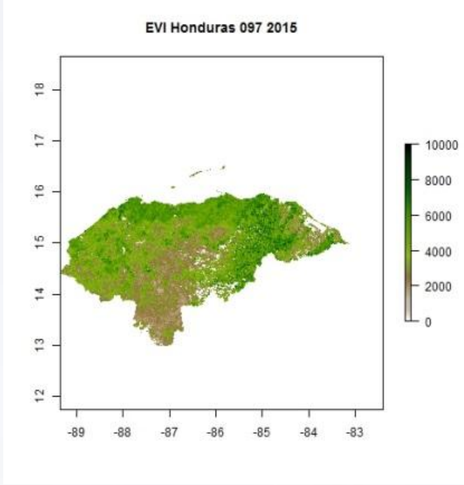
In case of droughts, satellites allows to track rainfall deficits as well as the effects of drought on vegetation in explicit ways

Loss and damage due to more intense and frequent droughts

Taking note of the exposure of crops and their vulnerability

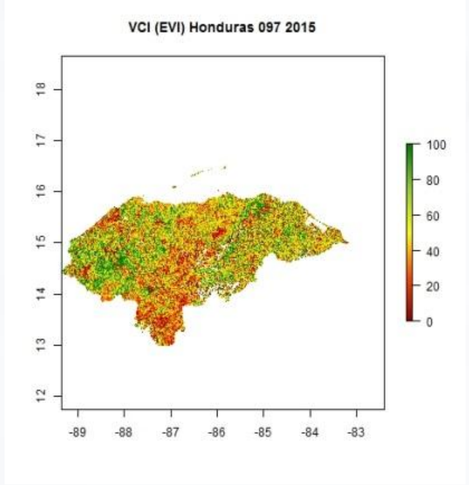
Using high resolution imagery and ground surveys to determine the vulnerability of crops.

Tracking agricultural drought



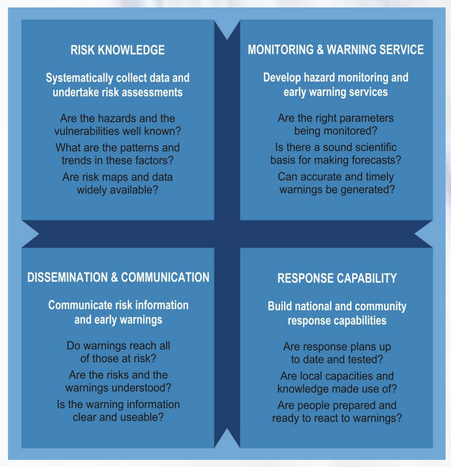
Using multi-spectral characteristics of satellite imagery to develop drought indices like the NDVI and the EVI.

Comparing historic and current droughts



Combining archived and up-to-date imagery to compare droughts in the last 30 years. For example the VCI or SVI.

Improving drought early warning systems



Incorporating the 4 elements of efficient, people-centred early warning.

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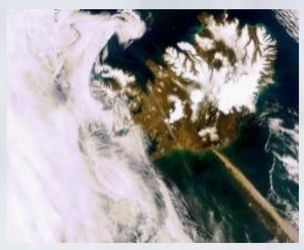
UNOOSA is addressing the topic of climate change through two of its programmes:

UN-SPIDER

- Serves as a gateway to space-based information;
- Bridges the space and the disaster management communities;
- Facilitates capacity building efforts and provides technical advisory support to developing countries.



SPACE APPLICATIONS PROGRAMME

- Enhances the understanding and subsequent use of space technology for peaceful purposes in general;
- Conducts capacity building efforts through workshops, fellowships and regional training centres.

Bringing the benefits of space to humankind