

# 13 – Climate Action



Goal 13: Take urgent action to combat climate change and its impacts >

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## Goal: Take urgent action to combat climate change and its impacts.

EO data offer an invaluable opportunity for better-informing development policies and quantifying various targets. How can EO be used to help countries achieve specific targets? [Source: ESA compendium of EO contributions to the SDG Targets and Indicators](#)

### Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

*This target is complementary to the global targets of the Sendai Framework for Disaster Risk Reduction, specifically targets A and B. The definition of hazard, according to the open-ended intergovernmental expert working group of the UNISDR (United Nations Office for Disaster Risk Reduction (UNISDR) and United Nations General Assembly (UNGA), 2016), is “a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation”. Hazards may be natural, anthropogenic or socio-natural in origin.*

*EO can be used by countries in two ways, both in planning for the target, though a more robust system of identifying, monitoring and preparing for climate related hazards and natural disasters and in achieving the target, through improved resilience to disasters through ecosystem-based adaptation strategies. For the former, EO is a powerful monitoring technology to track natural, anthropogenic or socio-natural hazards on the land or sea surface. Populations in the path of disasters can be prepared and alert to disasters before they occur if EO is used effectively in an early warning system, e.g. in tracking hurricanes approaching coastlines, tracking wildfires near human settlements or in detecting terrain movements prior to volcanic eruptions. For the latter, strengthening resilience and adaptive capacity to disasters requires longer term planning. Ecosystem-based approaches to climate change adaptation are included in many disaster risk reduction strategies as they provide a natural buffer to hazards while providing other ecosystem services to surrounding communities. EO is useful as a national planning tool for the target in ecosystem-based adaptation to natural disasters because it can map the extent of such ecosystems as well as potential areas for increasing the extent and composition of these ecosystems to strengthen resilience. For example coastal ecosystems such as mangroves are readily mapped through EO and can be conserved and resorted to strengthen resilience to coastal hazards such as storm surges and wave damage.*

*(eo services based on Identifying, monitoring and preparing for climate related hazards)*

### Relevant Success Stories

- [Simple Water Visibility Information for Dive Planning](#)

- Optimizing Biodiversity Conservation in the Tropical Andes: Tailoring Essential Biodiversity Variables to Policy Needs
- Valorising long-term observation data
- European Earth Observations Leading Global Vineyard Innovation
- EYWA- Early Warning System for Mosquito Borne Diseases
- How observations of sargassum west of Africa helps the Caribbean to prepare for seasonal influxes of Sargassum
- CRITERION service
- Sub-seasonal to seasonal predictions for tyre companies
- Seasonal and decadal climate predictions for German state capitals
- Sub-seasonal and seasonal forecasts for winter maintenance activities in cities
- A solar nowcasting, forecasting system and atlas to guide energy management and planning in Egypt
- Global tool for effective POPs monitoring
- A complete meteo-hydrological chain to support early warning systems from weather scenarios to flooded areas: the Apollo medicane use case
- Improved well-field management with Sentinel-1 SAR data
- Flood Risk & Impact assessment through automatic change detection of S-1+S-2 images (FRIEND pilot)