

***Remote Sensing Case Studies & Supporting Communities***

*Summary reports and searchable portals on humanitarian and development applications of RS*

* [Beyond Borders: Satellite Applications for Humanitarian Emergencies](https://www.spacefordevelopment.org/wp-content/uploads/2022/08/Caribou-Space-Beyond-Borders-Public_V1.pdf)
* [Using Earth Observation for M&E](https://gda.esa.int/story/using-earth-observation-for-monitoring-evaluation/)
* [Measuring Impact from Space](https://poverty-action.org/sites/default/files/publications/Goldilocks-Deep-Dive-Micro-satellite-Data-Measuring-Impact-from-Space_5.pdf)
* [Beyond Borders: Satellite Applications for Humanitarian Emergencies](https://www.spacefordevelopment.org/wp-content/uploads/2022/08/Caribou-Space-Beyond-Borders-Public_V1.pdf)
* [Catalogue of Existing Applications of Satellite Imagery to Humanitarian emergencies](https://www.spacefordevelopment.org/catalogue/) put together by the European Space Agency and Caribou Space
* [NASA Worldview](https://worldview.earthdata.nasa.gov/) demonstrating stories with satellite imagery

**Case studies**

[Google Earth Engine](https://earthengine.google.com/) includes a number of case study stories that illustrate its potential for analyzing the earth:

* [Mapping global surface water](https://blog.google/around-the-globe/google-europe/nature-water-unveiling-most-detailed-view-water-earth/)
* [Mapping global forest cover change](https://blog.research.google/2013/11/the-first-detailed-maps-of-global.html)
* [Predicting malaria risk](https://www.ucsf.edu/news/2014/09/116906/ucsf-google-earth-engine-making-maps-predict-malaria)

ESRI provides many storymaps and examples relevant to humanitarian and development applications, including [Demining Efforts,](https://www.esri.com/about/newsroom/arcnews/gis-supports-demining-efforts-around-the-world/?rmedium=arcnews&rsource=https://www.esri.com/esri-news/arcnews/fall16articles/gis-supports-demining-efforts-around-the-world) [Water Resource Scarcity,](https://www.esri.com/about/newsroom/blog/economic-water-resource-scarcity/?ite=72112&ito=2187&itq=ffe93f2a-569a-4991-a1d7-be28838d7852&itx%5Bidio%5D=2765985) [Afforestation,](https://www.esri.com/about/newsroom/blog/tracking-tree-planting-sub-saharan-africa/?ite=25305&ito=2160&itq=32a58b80-1137-4e4a-b19c-e6711f8716dc&itx%5Bidio%5D=2765985) [Refugee Camps,](https://unhcr.maps.arcgis.com/apps/Cascade/index.html?appid=5fdca0f47f1a46498002f39894fcd26f) [Natural Disasters,](https://www.houstonchronicle.com/local/hc-investigations/harvey/damagedanddefiant/) [Mapping Energy and Water Resources,](http://usaid.maps.arcgis.com/apps/MapJournal/index.html?appid=7d94bc889b3c4ff5bc892de734498dd0) [Drought and Precipitation,](https://usfs.maps.arcgis.com/apps/MinimalGallery/index.html?appid=cc2d7543d619495dae0385ac3e7f26dc#viewer=5cc1f9b53fa14f38b92b4bf76d49cca7) [Emerging Hot Spots of Forest Loss](http://gfw.maps.arcgis.com/apps/Cascade/index.html?appid=d917920501534bcb8fd82b925de562c6), [Deforestation Patterns in the Columbia Amazon](https://maaproject.org/maap-deforestation-patterns-colombian-amazon/), [Resource Exploitation](https://www.amazonteam.org/maps/suriname-gold/)

Projects implemented under the [Geodata for Agriculture and Water](https://g4aw.spaceoffice.nl/en/g4aw-projects/g4aw-projects) (G4AW) initiative, including:

* [CROPMON](https://g4aw.spaceoffice.nl/en/g4aw-projects/g4aw-projects/13/cropmon.html) in Kenya built a crop monitoring system to alert farmers about non optimal growth conditions.
* [Sat4Rice](https://g4aw.spaceoffice.nl/en/g4aw-projects/g4aw-projects/22/sat4rice.html) in Vietnam, a project to improve resilience of rice producing communities.
* [MODHEM](https://g4aw.spaceoffice.nl/en/g4aw-projects/g4aw-projects/4/modhem.html) aimed to improve moving herd management and incomes for Burkina Faso’s pastoralists.
* [SIKIA](https://g4aw.spaceoffice.nl/en/g4aw-projects/g4aw-projects/20/sikia.html) aimed to support rice farmers in Tanzania with weather forecasts and crop advice, and strengthen the value chain.

**Communities offering help on RS for humanitarian use cases**

[GIS Corps](https://www.giscorps.org/request-volunteers/) provides volunteer GIS professionals to public entities, nonprofit organizations, non-governmental organizations, and professional associations. Examples:

* [Cyclone Gita Image Crowdsourcing](https://www.giscorps.org/gita_222/)
* [Mapping Regions of DRC](https://www.giscorps.org/polio_204/)
* [Spatial Analysis of Sri Lanka floods](https://www.giscorps.org/srilanka_186/)
* [Afghanistan](https://www.giscorps.org/afghanistan_174/) & [Nepal](https://www.giscorps.org/acaps_170/) earthquake responses
* [Automatic digitization of tree cover in Panama tropical landscapes](https://www.giscorps.org/azuero_188/) - including an open source canopy cover tool
* [More examples here](https://www.giscorps.org/our-projects/)

The [Humanitarian OpenStreetMap team](https://www.hotosm.org/) is an international team dedicated to humanitarian action and community development through open mapping. Examples:

* [Using drones to map slums](https://www.hotosm.org/projects/code-for-africa-using-drones-to-map-makoko-one-of-africas-largest-slums/)
* [Supporting digitization of social safety nets in Liberia](https://www.hotosm.org/projects/4-county-digitization-liberia/)
* [Capturing data on population, infrastructure, and services in refugee communities in Uganda](https://www.hotosm.org/projects/bridging-data-gaps-mapping-refugee-contexts-in-east-africa/)
* [Supporting disaster response in multiple countries](https://www.hotosm.org/projects/2ndhalf2018-disaster-response/)