



PLANET ACTION

Spot the impacts, engage in action

The Earth Observation
and GIS **communities**
fighting the climate crisis

WWW.PLANET-ACTION.ORG

Dr. Algis Kucinskas, Planet Action, Spot Image Individual Partner

co-founder



Planet Action is a non profit initiative launched by Spot Image,
leading supplier of satellite imagery and geoinformation technologies.

SPOT
IMAGE



DIGITALGLOBE





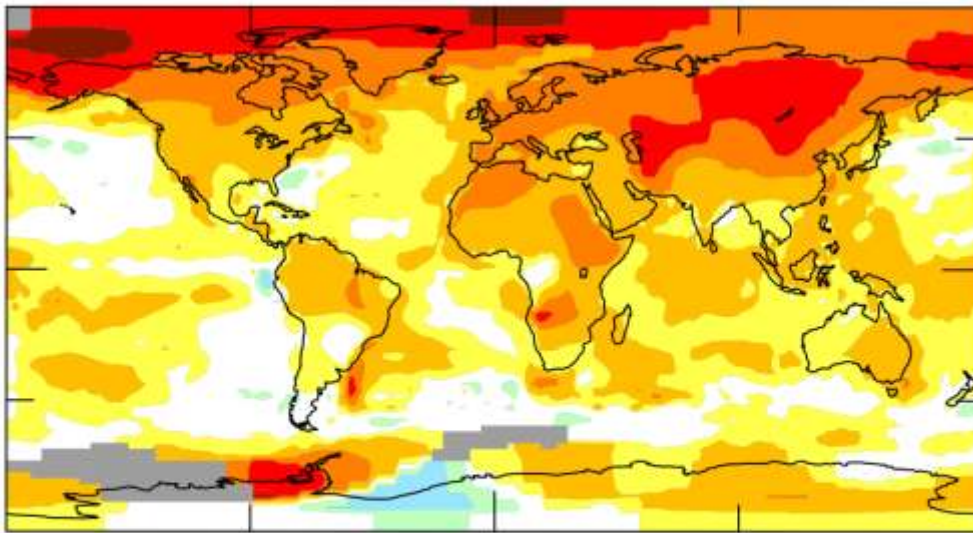
The Planet Action Initiative: Supporting Projects Addressing Climate Change Issues and Related Disaster Risk Reduction and Management

Dr. Algis Kucinskas

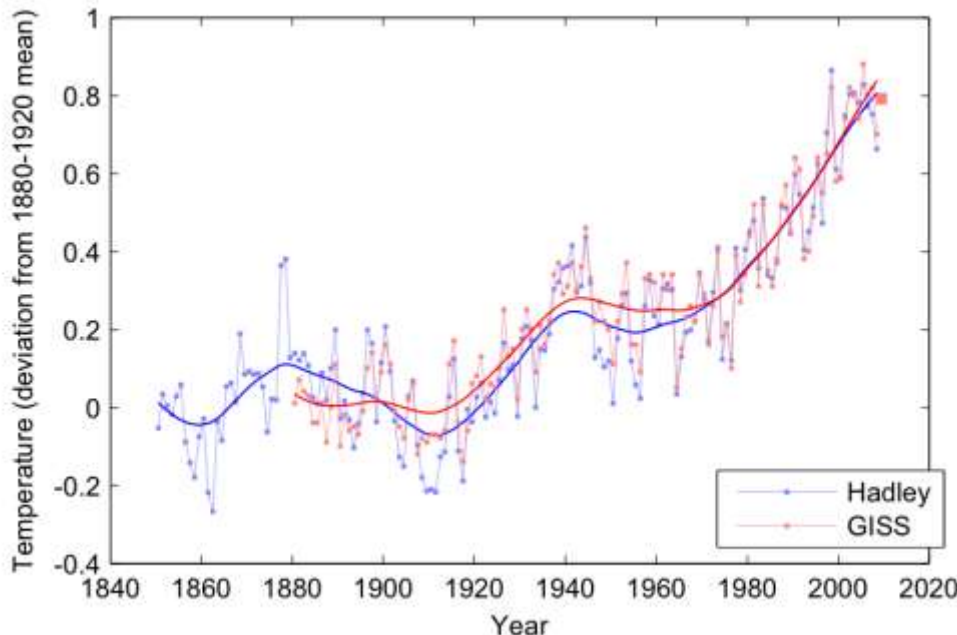
**Fourth United Nations International UN-SPIDER Bonn Workshop on Disaster Management and Space Technology: « The 4C – Challenge: Communication – Coordination – Cooperation – Capacity Development »
Bonn, Germany, 12 – 14 October 2010**

Climate Change is a reality

(Top) mean surface temperature anomaly for the period 2001 to 2007 relative to the “baseline period” 1951-1980. (NASA/GISS)



(Bottom) global average temp. From 1850 to 2009 relative to the “baseline” period 1880-1920. (NASA/GISS & Hadley Center)



The Copenhagen Diagnosis

Updating the World on the Latest Climate Science



<http://www.copenhagendiagnosis.com/>

Examples of Climate Change Related Issues



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Glacier melting



Natural hazards



Agriculture resources



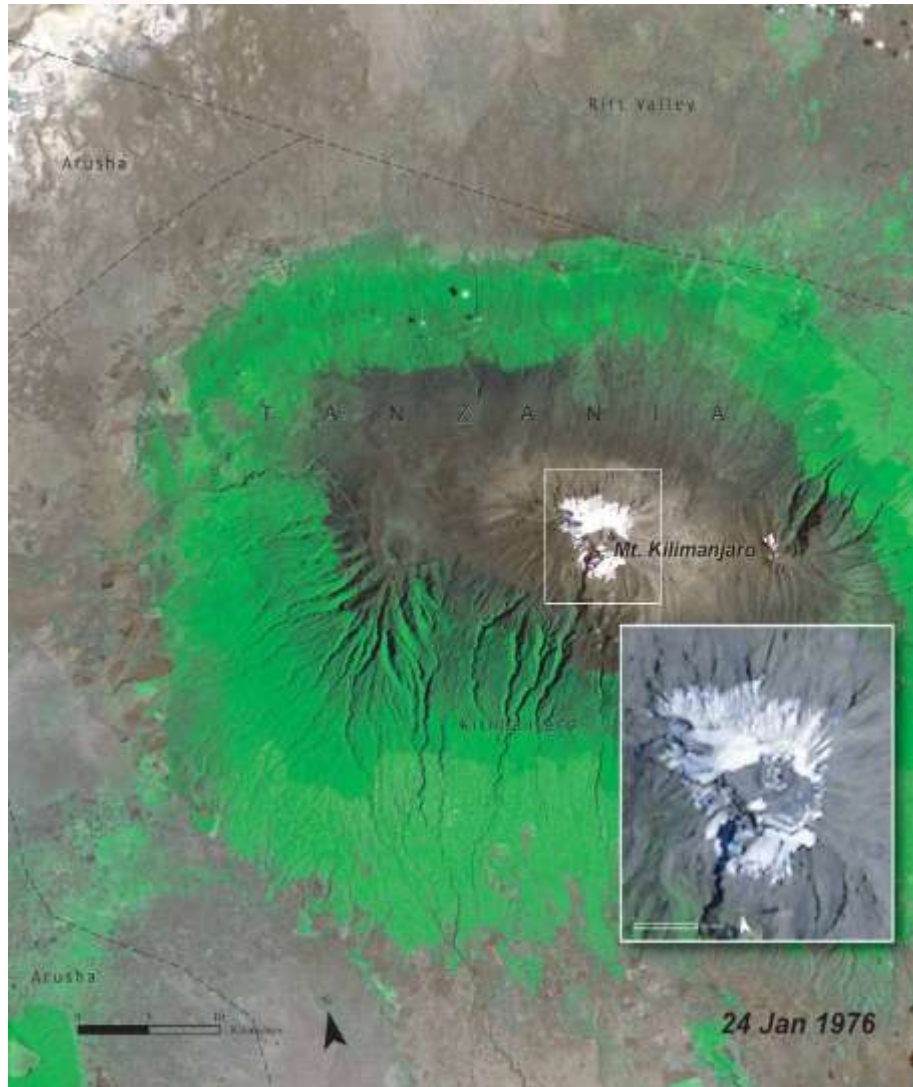
Deforestation



Loss of biodiversity



Threat on human & cultural sites

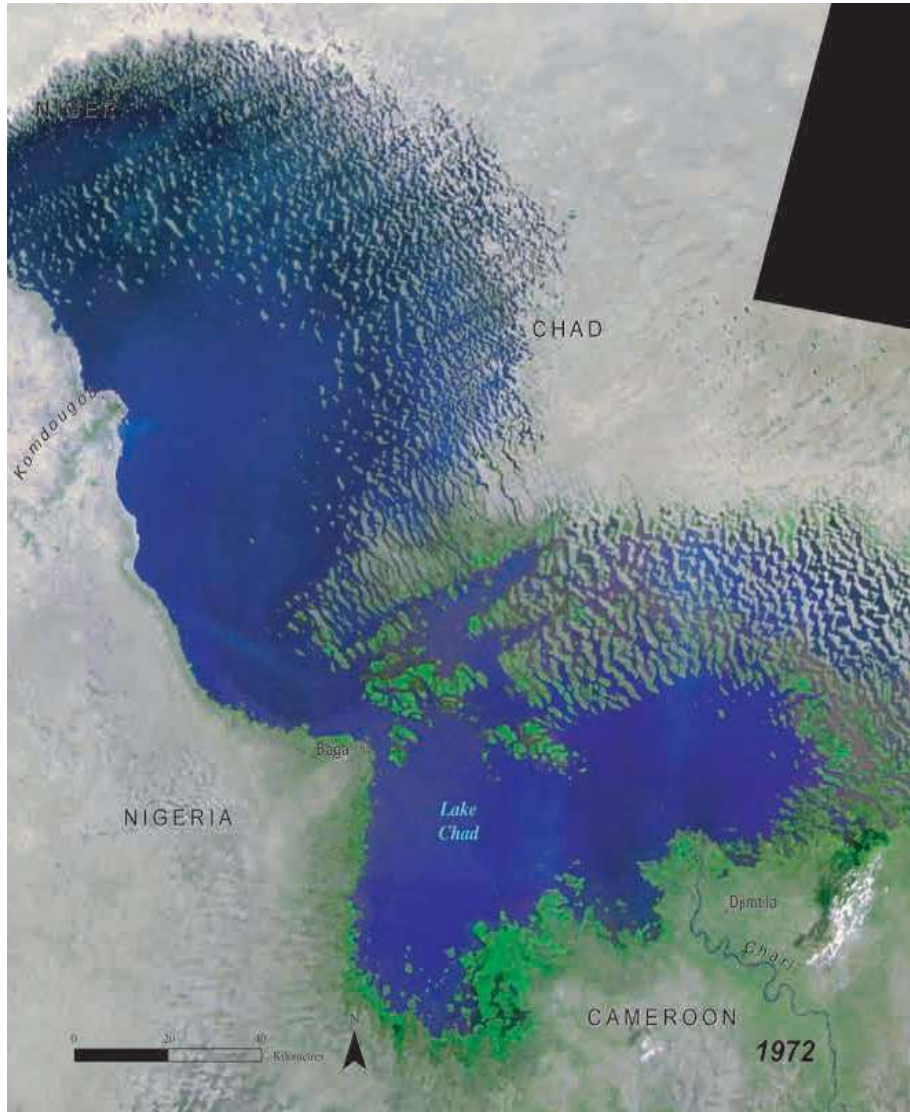


Kilimanjaro, Tanzania – Landsat Images January 1976 and February 2000

Credit: UNEP, Atlas of our changing environment

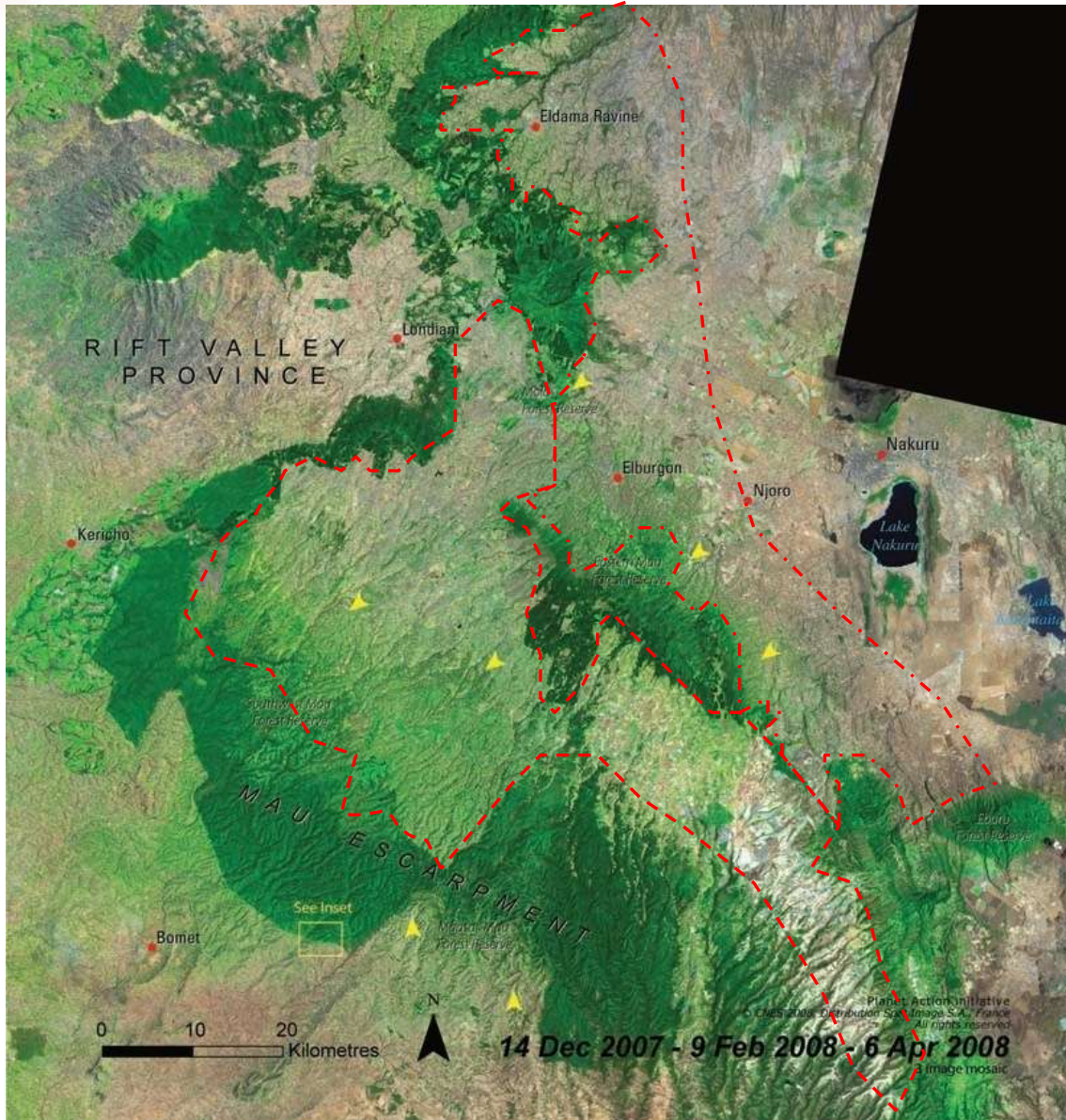
© Spot Image 2007

Witnessing environmental changes



Lake Chad – Landsat Images 1972 and 2001
Credit: UNEP, Atlas of our changing environment

Deforestation in progress



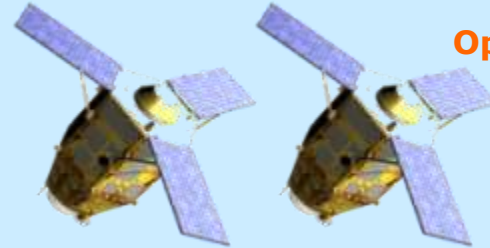
The Mau forest region in Kenya has been subject to a very high deforestation and degradation activity for the last decades

1973

2008



Spot Image operates satellites



Operated by Spot Image

Pléiades 1&2

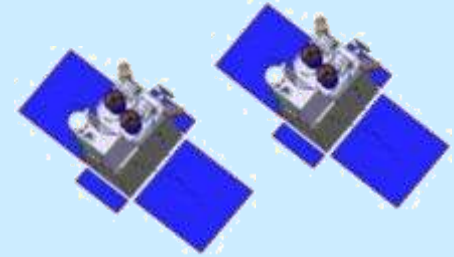
Operated by our partners



Formosat-2

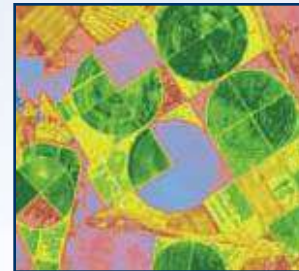


Kompsat-2



SPOT 6 & 7

And delivers products, services and solutions to customers



- Planet Action was launched by Spot Image in June 2007
- **Motivation behind this initiative:** faced with the Climate Change situation, the human and environmental impact, it is urgent to act. Satellite imagery & GIS can help us understand what is currently happening & at what pace
- Earth observation and GIS industries can help with:
 - ⊙ Earth observation services and technologies, frequent revisit capacity
 - ⊙ Vast image archives (20 years/+20 million scenes), time series
 - ⊙ Extensive experience in analyzing and understanding Earth imagery
 - ⊙ GIS software and dynamic users' networks
 - ⊙ A worldwide network of partner operators and receiving stations



- Planet Action is a **non-for profit cooperative social initiative**
- **Who can benefit from Planet Action's support? :** Non-governmental organizations, institutions, universities and research laboratories **engaged in action & addressing** climate change causes, vulnerability, related hazard/disaster risk reduction/management, mitigation, impacts and adaptive solutions/measures
- Planet Action provides **free** satellite imagery, GIS software, image processing software for **selected projects** and helps raising awareness about climate change
- Two main activities:
 - Grants**
Support local projects engaged in action related to climate change
 - Outreach**
Develop and implement global education and awareness activities
- Planet Action is open to **partners**

Planet Action supports projects with a focus on the following fields of activity:

- **Human Issues**
- **Awareness**
- **Water Resources**
- **Ice & Snow Cover**
- **Biodiversity & Conservation**
- **Forest & Deforestation**
- **Oceans & Coast Lines**
- **Threats (e.g., droughts & desertification,...)**

How does it work?

- **NGOs, institutions & research laboratories engaged in action addressing climate change related issues **submit their projects** to Planet Action**

Projects should comply to the following criteria

- ⊙ assess climate change related issues and propose a course of actions;
- ⊙ deal with at least one of the 8 Planet Action focus areas;
- ⊙ have a member who resides in the country where the project takes place (at least for the project duration);
- ⊙ be proposed by a non-profit organisation. Business organisations do not qualify for direct support;
- ⊙ confirm that the project has no commercial objective;
- ⊙ confirm that the project has no religious or ideological content or objective.

- **Planet Action reviews and validates each proposal**
- **Imagery & software are provided**
- **Feedback** is expected for knowledge-sharing

Planet Action: An active network of Partners



Contributing Partners



Outreach Partners



Project Partners



Stéphane Lévin
Planet Action Ambassador

- All projects are submitted on the website
- Validated and active projects are displayed
- Project organizations can upload contents on their projects: works, feedback...
- Forum based on Facebook



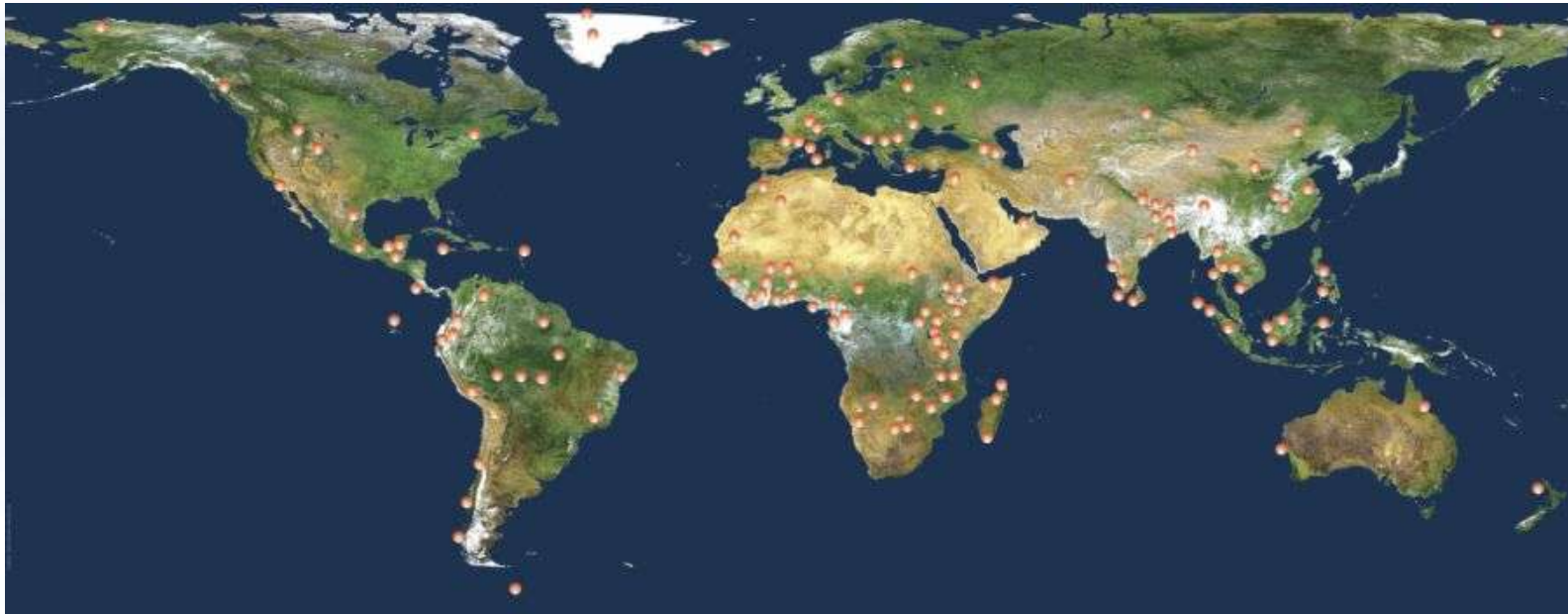


Project-related activities

A large community of projects supported by Planet Action



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- Almost 400 projects have been selected
- More than 300 projects have already received images or software



Satellite images and findings

- Identified reference fields areas.
- Developed a campaign to survey tree diameter, height and density.
- Developed a methodology for mapping



Issues

WHRC wants to strengthen the participation of developing countries in the emerging carbon markets for avoiding or reducing emissions from deforestation and degradation (REDD).

Objectives

- Generate forest and biomass cover.
- Develop carbon monitoring systems.
- Build national and regional capacity transfer.



Outreach Activities

4 REDD campaigns around the world: Ecuador, Colombia, Bolivia, and Vietnam were conducted.

“ The collaboration between the WHRC and the Planet Action Program is a great success. Capacity building would have been very difficult without the use of SPOT 2.5 imagery ”

Nadine Laporte, Project Leader





Issues

As Climate Change is causing more rain and flooding, land cover maps will serve as basis for interventions reducing the water flow and improve land use planning.

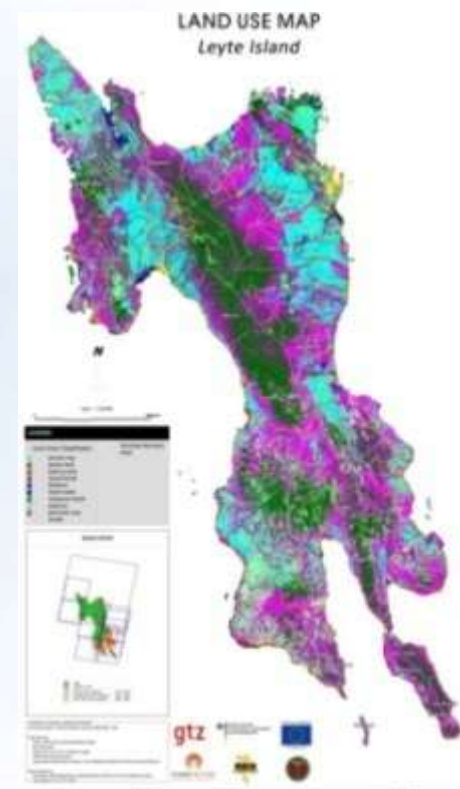


Objectives

- Establish flood early warning systems.
- Enable the population to take action before a flood hits.
- Produce land cover maps of six watershed areas.

Satellite images and findings

GTZ developed a land cover map of Leyte Island that helped to characterize the watersheds and flood prone area. This serves as an aid to target the intervention measures and to determine vulnerabilities in the hazard prone areas.



Oceans & Coastlines

Coral Reef Bleaching, Guadeloupe



Issue

Impact of Global warming on Coral health and all this specific ecosystem

On-going work

Detect and map Coral Reef condition and bleaching phenomenon



Example of coral reef located
In the area of interest
(Quickbird Image)

Ice & Snow Cover and Human Issues

GLOF Risk Assessment, Nepal



Issues

Glaciers are retreating rapidly due to Climate Change and causing glacial lakes susceptible to outburst floods (**GLOFs**) with the potential to cause widespread destruction in India, China and Nepal.

Objectives

- Monitor the development of glacial lakes.
- Assess the risk of potential glacial lake outburst flood in the river basin.

Results

- GLOF modeling and inundation mapping.
- GLOF impact assessment for risk management.
- Production of visibility materials and dissemination.



Outreach and education activities

Planet Action outreach activities: raising awareness about Climate Change, the benefits of Earth observation imagery & GIS and the role of NGOs and scientists as they tackle these issues

- **Each Planet Action project tells a story**
 - These stories can be told in schools, once adapted to any age
 - Young people are a key to raising awareness

- **Planet Action is actively cooperating with Outreach partners**
 - Stéphane Lévin, Explorer, as an Ambassador
 - Young Explorers of the Pangaea Expedition
 - National Geographic
 - Cité de l'Esace, a first-rate science museum.

- **Possible Planet Action outreach initiatives include:**
 - Training for teachers to use PA projects in the classroom
 - Publications, poster presentations

- **Other ideas for outreach and raising awareness...**
 - Planet Action for Kids/Planet Action for Teens
 - "Sister Schools"
 - E-learning...

Awareness

Education on Climate Change, Togo



Issue

Need to educate people on Climate Change local impacts and the sustainable management of natural resources

Work/Activities

- Raise awareness about the protection of natural resources, namely water
- Develop a GIS database using satellite images to illustrate local impacts of Climate Change
- Over 80 public sessions conducted
- TV and radio programs...





- Exhibit in Toulouse displays Planet Action supported projects
- Available training kit for schools



Awareness action with Stéphane Lévin Planet Action ambassador

- Planet Action and Stéphane Lévin have met the Green Belt Movement in Kenya
- Video produced to develop awareness on this remarkable action on the ground





- **The Planet Action (PA) Programme brings useful support (RS EOS imagery, GIS, expertise) to local projects, big & small, dealing with Climate Change (CC) issues (causes, mitigation, vulnerability, impact assessment, adaptation) and associated multihazard-related disaster risk reduction & management (DRRM).**

- **Evaluation of PA project-related activities has demonstrated that the Programme works and creates value for all the partners involved . Especially appreciated by concerned communities & users (scientists, students/educators, planners, policy & decision-makers) is project/case study feedback & posting of results on the PA website.**

- **The Way Forward:**
 - PA will be supporting more projects this year (Call for Projects & all year long)
 - Education/outreach activities may be expanded (consider e-learning?)
 - New partners are always welcome!
 - Continue to support Communication, Coordination & Cooperation within & between project teams, local communities & global organisations using satellite imagery and GIS as a link.
 - In particular, contribute to the development of coordinated efforts between the closely linked CC and DRRM communities.



Thank you for your attention

Spot the Impacts. Engage in Action.

www.planet-action.org

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