Dr. Algis Kucinskas, Planet Action, Spot Image Individual Partner
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)
Examples of Climate Change Related Issues

- Glacier melting
- Natural hazards
- Agriculture resources
- Deforestation
- Loss of biodiversity
- Threat on human & cultural sites
Satellites witnessing environmental changes

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
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 ....

- SPOT2
- SPOT4
- SPOT5

- SPOT 6 & 7
- Pléiades 1&2
- Formosat-2
- Kompsat-2

Operated by Spot Image
Operated by our partners

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
The Planet Action website

- 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
Almost 400 projects have been selected
More than 300 projects have already received images or software
Pan-Tropical REDD Project in Uganda, WHRC

**Satellite images and findings**
- Identified reference fields areas.
- Developed a campaign to survey tree diameter, height and density.
- Developed a methodology for mapping carbon from satellite imagery.

**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 through technology 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
Reducing Flood Risks in Philippines, GTZ

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

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.

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)
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’Espace, 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
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
As a conclusion...

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, planers, 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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