K&C Phase 3 – Brief project essentials

Measuring Effective Conservation in The Northern Andes and South Central America Conservation Program

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JAXA TKSC/RESTEC HQ, Tsukuba/Tokyo, October 17-21, 2011

Project area(s)

Project objectives and schedule

Objective:

The principal activity we intend to do with the ALOS data is measure the effectiveness of the conservation work that we and our partners do, in terms of natural ecosystems protected and restored

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Project objectives and schedule

How you anticipate that PALSAR data may be of use:

Due to the range of our work and the variety of the strategies leading us, we intend to us the ALOS data in three principal ways to measure the effectiveness of conservation work and prioritising of activities.

1. For the protected areas enhancement and creation of new ones, the ALOS data will be mainly used to measure the effectiveness of national parks in the five countries to stop and avoid deforestation
2. Detect riparian and wetland degradation and loss of freshwater ecosystems connectivity in The Magdalena River, Colombia's principal river
3. Establish a relation between forests biomass and ecosystem “health”, in terms of the viability and biodiversity

Project objectives and schedule

How these may support one or more of *the K&C thematic drivers:*

1. **C**arbon cycle science,
2. International **C**onventions,
3. **Environmental Conservation**

Project objectives and schedule

Project milestones from now to March 2014 (the end of Phase 3):

• An assessment of conservation effectiveness of protected areas at the national level (IUCN cat. IV y V), in Costa Rica, Panama, Colombia, Venezuela and Ecuador, to be used as an early warning system to detect forest degradation and deforestation, and using biomass as surrogate for condition.

Milestones

- Year 2.011: provide data for the ALOS product validation improvement for selected protected areas. (TBD).
- Year 2011: 2.006 - 2.010 – 2.014(Year 2014): 4-annual reports of forest and non-forests cover, deforestation and rate, for the dates that ALOS data is available, for the selected protected areas of the five countries.

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Project objectives and schedule

Project milestones from now to March 2014 (the end of Phase 3):

• A protocol for the mapping of riparian forests and wetland vegetation in freshwater ecosystem, using the Magdalena river as a pilot project where SAR data is used to support a watershed management plan that restore biodiversity and provide critical ecosystem services to the people living in its watershed.

Milestones

- Year 2.012: define a protocol to use SAR data for the measuring of connectivity loss among riparian lagoons and rivers channels.
- Year 2.013: use ALOS data as an input for the design of key freshwater ecosystems connectivity for fisheries, flood mitigation and riparian vegetation restoration/protection.
- Year 2.012, 2.013-2.015: 2-annual report of the mangroves and wetlands cover and cover changes for the Magdalena river watershed.

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Project objectives and schedule

Project milestones from now to March 2014 (the end of Phase 3):

• A protocol to determine the success of ecological corridor protection and restoration in productive landscapes, using forest biomass as a complementary variable to species richness in order to measure forests fragments viability and the effectiveness of our conservation work with the cattle ranching and agricultural sectors.

Milestones

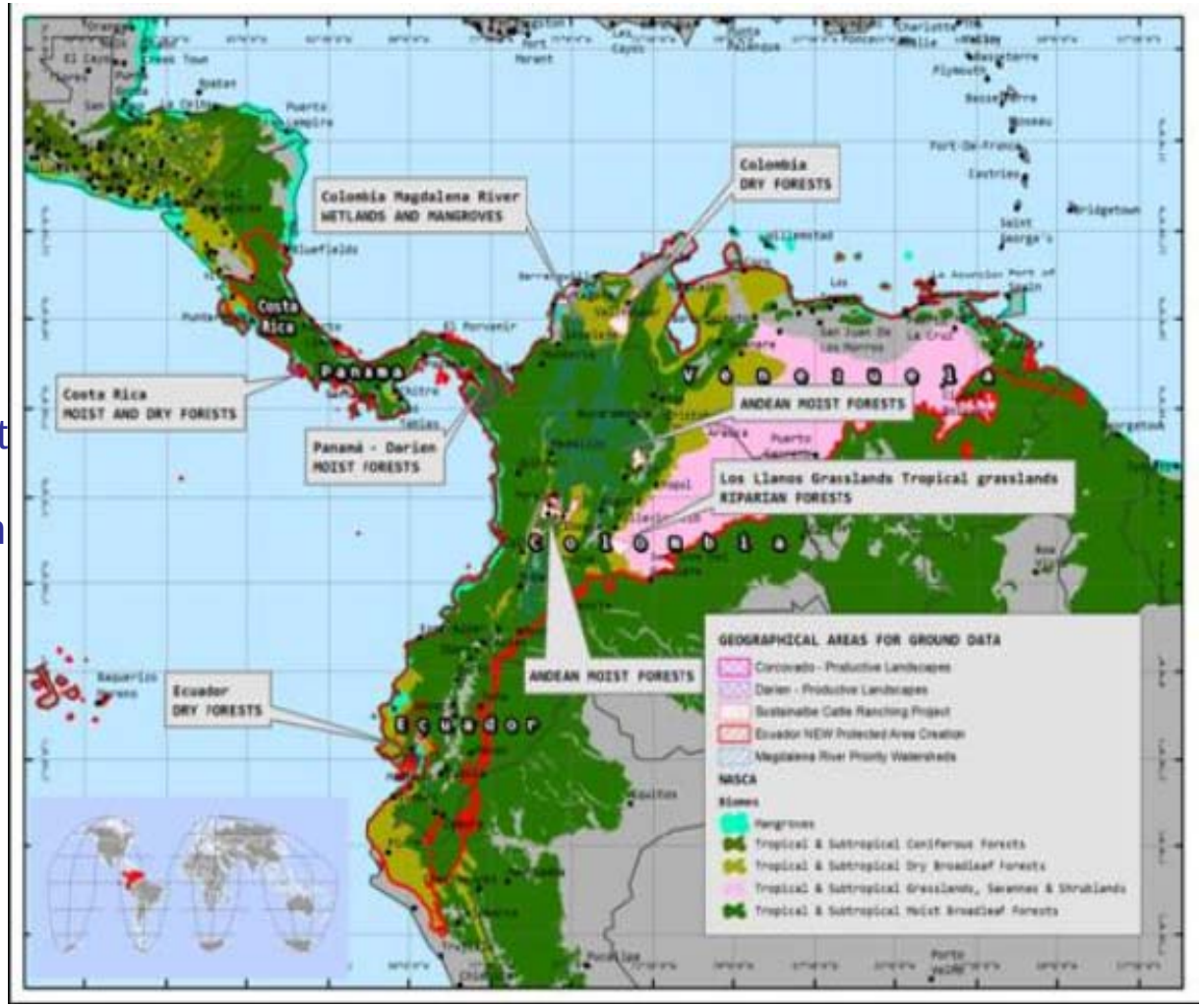
- Year 2.012: provide data for the ALOS global Biomass map for different ecosystems types while relating biomass data with forests structure and condition.
- Year 2.012: use ALOS data on forests and forests biomass as an input for ecological corridor design, prioritizing high biomass forests patches in fragmented landscapes to focus conservation and restoration activities.
- Year 2.013: determine a protocol on the relation between ALOS data, biomass and forests structure and biodiversity, that provides the adequate guides to use ALOS data to monitor forests condition.
- Year 2.012 – 2.015: use ALOS data to track forests biomass gain along restored corridors trough natural regeneration and silvo-pastoral cattle ranching systems

Support to JAXA's global forest mapping effort

Describe how your project can support JAXA's global forest mapping effort – and in which regions - and help improve and validate the JAXA forest cover maps.

Using World Wildlife Fund (WWF) Biomes and Ecoregions of the world to give context the geographical regions where we expect to provide JAXA with data for the validation and improvement of data are:

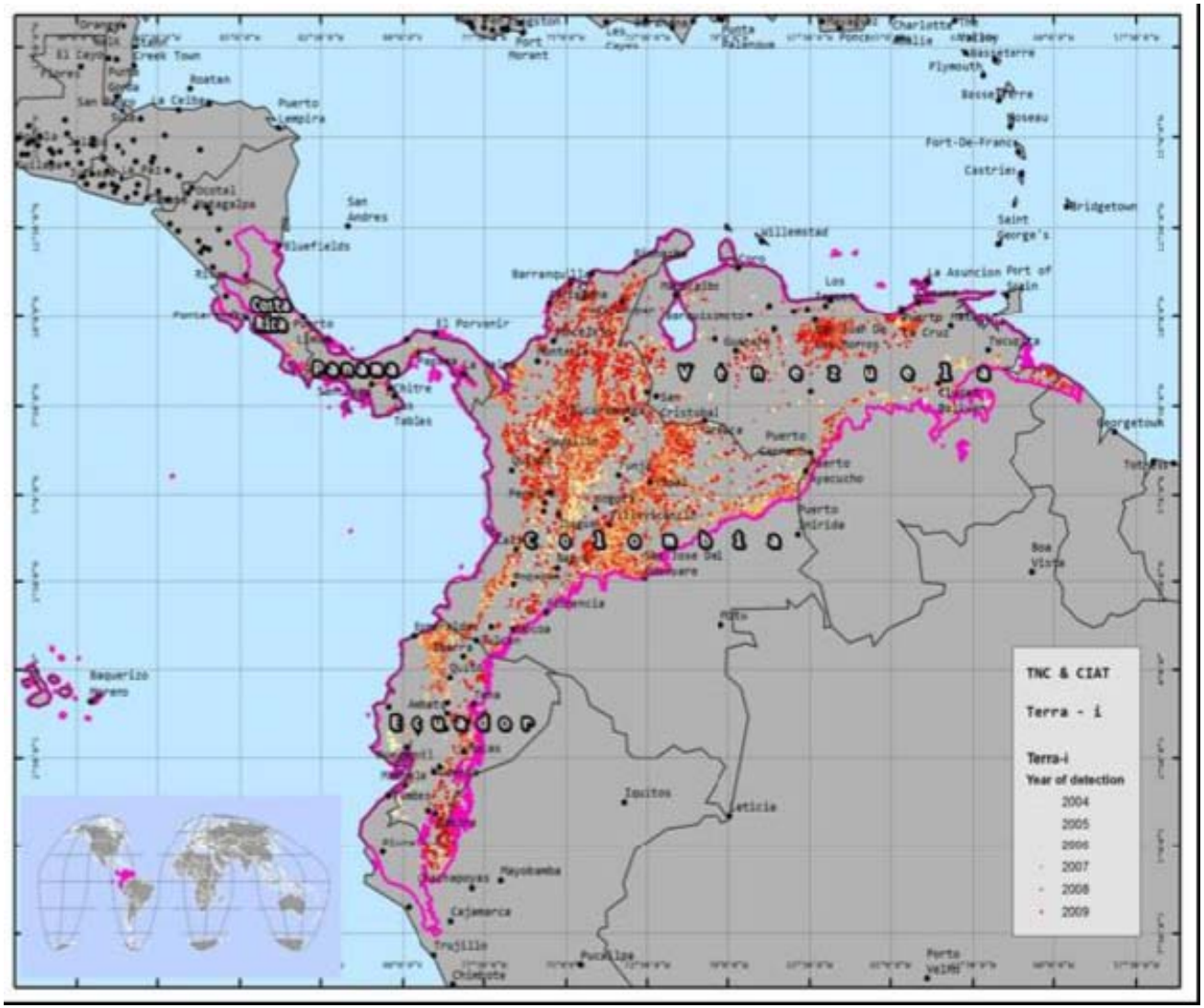
1. Tropical dry broadleaf forests of Colombia, Ecuador and Costa Rica.
2. Andean moist forests of Colombia
3. Wetlands of the Magdalena River in Colombia
4. Riparian forests in savannah ecosystems in Los Llanos – Orinoco River tropical grasslands
5. Tropical moist forests in Costa Rica and Panama Darien.



Support to JAXA's global forest mapping effort

C.1 Support to K&C products.
Although right now we do not have the technical capacities to support the improvement of any classification algorithm for SAR data, we are really interested in the development of an algorithm for the use of ALOS data to the mapping of superficial lotic and lentic freshwater bodies (white water, black water and clear water rivers and lakes)

We also are in the capability of provide JAXA with ground verification data of forests cover and landcover change for whole Latinamerica, from our Terra-I near real-time deforestation mapping project (www.terra-i.org).



Support to JAXA's global forest mapping effort

Ground truth data on biomass and more detailed analysis could be shared and provided for the following areas:

1. Several locations in Colombia, within the Magdalena river basin, in dry forests and moist tropical forests, and in the Llanos – Orinoco tropical grassland.

- Type of data: ground truth data on forests structure and other field measures realated with biodiversity
- Approximately 25-50 points of data, equally distributed among the geographical locations mentioned above.
- Data formats: as required by JAXA*
- Restrictions: NONE

2. Several locations in Panama and Costa Rica, within moist tropical forests

- Type of data: ground truth data on forests structure and other field measures realated with biodiversity
- Approximately 10-25 points of data, equally distributed among the geographical locations mentioned above.
- Data formats: as required by JAXA*
- Restrictions: NONE

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Thanks!

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