TransparentForests

A web-based forest certification infor-mation system

DRAFT

Forest products such as paper, wood and composite materials are used in everything from construction to energy generation, yet they represent a considerable environmental and social impact. Today, knowing the origin and life-cycle of product parts is important for both retailers and consumers. Major corporations do not like to be associated to bad forest management: it is bad for business and for customer relations. Independent certification provides manufacturers with confidence about a product's environmental and social integrity. The standards of Forest Stewardship Council (FSC) are a leading forest product certification system. Yet, it proves far from trivial to ensure forestry certification processes remain efficient, effective and transparent.

Who needs what?

Forest certification faces numerous challenges due to the remoteness, size and variability of the forest resource. Data to support certification is not always independent as it is mainly provided by the forestry companies that are being certified. FSC needs tools to increase operational transparency and brand value while expanding globally across large and small forestry operations. Accredited Certification Bodies require independent spatial and forest management data for more targeted, more cost efficient inspections and stakeholder consultations. Forestry organizations are looking for a more convenient means of submitting data. Small organizations would benefit from an improved certification process such that its reliability is less dependent on forest size. NGO's and supervising stakeholders require better insight into the on-ground details of the certifications.

Challenge

FSC has prioritised raising the standard of, and confidence in, certificates issued through the adoption of technological solutions that improve process reliability and are cost-beneficial. In conventional certification, the main activities are physical field inspection and travel, and the intensity and frequency of certification cannot be increased without an unacceptable increase in costs. FSC needs a transformational, cost effective solution which is acceptable to all stakeholders, raises the quality of information and engages a broader range of participants in the process, thereby reducing brand and reputational risk and maintaining its first mover advantage.

European Space Agency
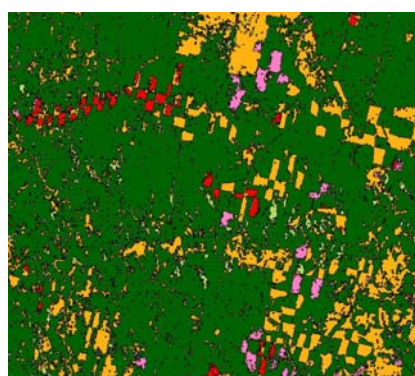
TransparentForests solution

The Consortium, which includes FSC, will design and validate a solution based on the integration of spatial and georeferenced in situ data within a user-friendly Open Source platform accessible through the web from any connected location. To facilitate the certifier's field inspection process, it will combine accurately time-tagged optical and radar satellite imagery (at medium to high resolution) with geo-referenced in-situ forest management data. Outputs will be integrated into the certifier's report, increasing transparency for all stakeholders. TransparentForests will increase certifier independence and the ability of other stakeholders (e.g. forestry organizations, interested stakeholders and NGOs) to monitor forest activity in a more cost effective and participative way.
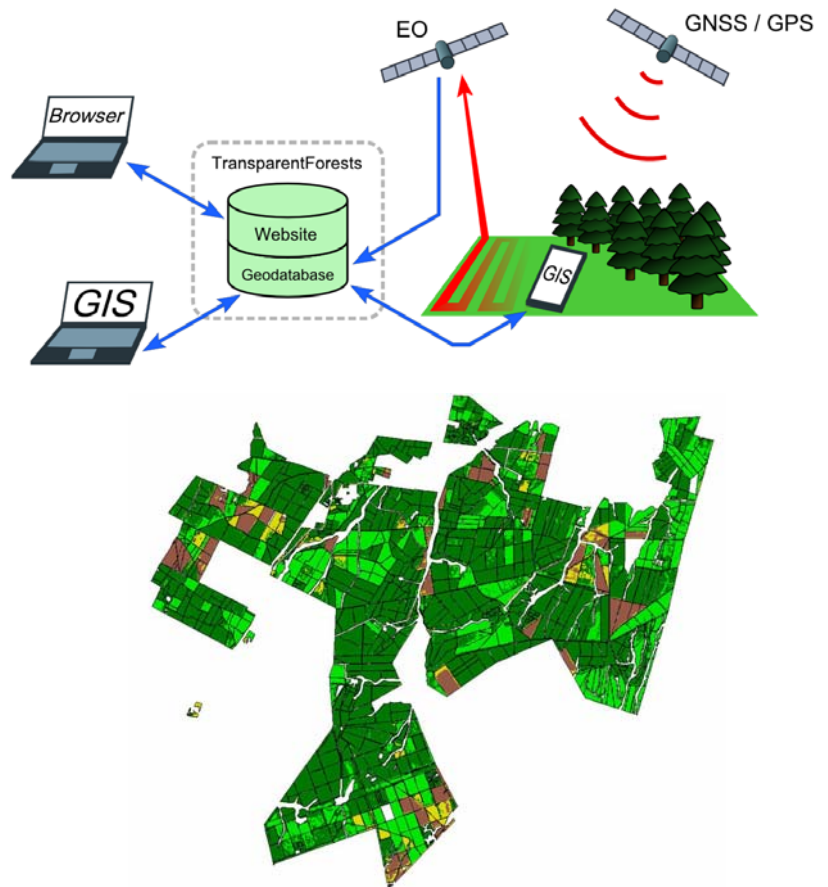
Outcome

A series of projects supported by ESA (EOMD) has already demonstrated the potential of a range of land cover mapping products using derived from EO optical and radar sensors linked to georeferenced in situ data. A prototype open-source GIS platform and plugin has been developed to facilitate visualization of these maps and the in-situ data, for interrogation and data extraction. FSC believes this technology, within an Open Source GIS platform could, if designed specifically for the certification process, provide a cost-effective route to meeting its goal of increasing the safety and value of certification and facilitate the continued global expansion of certification.

Project details

The implementing consortium is led by Eyre Consulting (UK) and includes Lutra Consulting (UK), Sarmap (CH), Environment Systems (UK), University of Nottingham (UK) and the user FSC (D).

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The project is further described on http://iap.esa.int/projects/all

Collaborating with ESA

The Integrated Application Promotion (IAP, or ARTES 20) programme funds feasibility studies and demonstrations. It aims at generating sustainable services which meet the needs of public and private organisations. TransparentForests is just one example of IAP applications. Do you think that space technologies and services such as space imagery, satellite navigation, satellite communication, manned space technologies might help you better address your operational challenges? ESA's IAP programme can make it happen. For further details please contact us at

Email: iap@esa.int

Website: http://iap.esa.int