SESSION DESCRIPTION

ID:

Session title: Using earth observation systems (EOS) to support ecosystem service assessments in forest landscapes

Hosts:

	Title	Name	Organisation	E-mail
Host:(1	Dr.	Melvin Lippe	Thuenen Institute of International Forestry & Forest Economics (TI-WF)	melvin.lippe@thuenen.de
Co-host(s):	PD Dr.	Sven Günter	TI-WF	sven.guenter@thuenen.de
Other organisers (2	MSc.	Ruben Weber	TI-WF	ruben.weber@thuenen.de
	MSc.	Ferdinand Peters	TI-WF	ferdinand.peters@thuenen.de

1) Preferably max 2 per session (1 host and 1 co-host). If necessary you can add more co-hosts but we will only send correspondence to the people listed as Host. Hosts are requested to forward relevant correspondence to the co-hosts, and other people involved in the organisation.
2) Other people involved in the organisation of the session can be listed here (you can add rows as needed);

Abstract:

Forests play an important role in biodiversity conservation, terrestrial carbon cycling, hydrological regimes and other important ecosystem services for humankind. Attempts to preserve forests' role in providing ecosystem services require information on the spatial and temporal distribution at various scales (i.e. patch, landscape, watershed or administrative units) to support environmental management and policy processes such as the Convention of Biological Diversity (CBD), the Sustainable Development Goals (SDGs) or United Nations Framework Convention on Climate Change (UNFCCC). This is important as the share of forest areas designated primarily for nature conservation and water protection is increasing while on the same time, forest biodiversity and carbon stocks are lost due to deforestation, forest degradation and an increasing habitat fragmentation. Ecosystem service assessments are often limited by spatial and spatiotemporal data to which Earth Observation Systems (EOS) has many features to overcome. Despite widespread recognition, in practice only a few ecosystem service studies use EOS. This session

invites studies that shows the link of EOS (i.e. satellite, aircraft, drone, optical, SAR, hyperspectral) and ecosystem service assessments (i.e. experimental studies, field inventories, long-term monitoring, or as part of a citizen science approach) with a particular focus on forest landscapes.

Goals and objectives of the session:

Studies highlight new ways in which EOS can be used to analyze, assess, or monitor ecosystem services at patch, landscape or larger spatial scales. Possible further topics include mapping of ecosystem functions and services under landscape change dynamics, effects of scale on monitoring ecosystem services in conjunction with EOS, and approaches of integrated socio-ecological assessments with a particular focus on EOS.

The session is organized by up to 5 presentations of 12min. followed by 5min. Q&A (ca. 100mins. due to potential online challenges) and a plenary discussion (20min) to discuss on to how to make better use of EOS approaches for forest ecosystem service assessments and policy advice in light of the CBD, SDGs and the UNFCCC.

Planned output / Deliverables:

Selected papers will be invited for a planned special issue in the Journal Remote Sensing.

Voluntary contributions accepted:

yes

Related to ESP Working Group/National Network:

TWG 4 – Mapping ES