Running projects – Team Spectroscopy and Land Degradation

Project (Funding)	Description	Duration	Contact (SLD)
AGRO-DE (BMEL)	AGRO-DE develops a data processing and service cluster for farmers and decision makers active in agriculture processes and policies exploring the capacity of Copernicus data.	2016 - 2020	Uta Heiden, Marianne Jilge, Simone Zepp
CODE-DE (BMVI)	Copernicus Data and Exploitation Platform (Product assurance)	2016 - 2019	Stefanie Holzwarth
CostMAP (ZGeoBW)	Trafficability analyses of coastal zones using airborne and spaceborne imaging spectroscopy data	2015 - 2018	Martin Bachmann
Datapool Forestry (DLR)	Development of a feature data base supporting area-wide tree species mapping in the Bavarian Forest National Park using airborne hyperspectral and LIDAR data; Characterisation of deadwood areas in the Bavarian Forest National Park	2013 - …	Stefanie Holzwarth, Nicole Pinnel
NextGEOSS (EU H2020)	Development of a GEOSS platform for advanced data processing. Biodiversity Pilot development. Data standards and availability for biodiversity studies, prototyping the three-class FCOVER product (photosynthetically active (PV), photosynthetically non-active (NPV) and bare soil (BS)) using imaging spectroscopy data	2016 - 2019	Martin Bachmann, Valentin Ziel Stefanie Holzwarth
DESIS-PAV (DLR/Teledyne)	Development of the Ground Segment for the hyperspectral satellite mission DESIS on ISS (Vicarious calibration of data products); Science Coordination	2014 - …	Martin Bachmann, Valentin Ziel Uta Heiden
EnMAP Ground Segment (BMWi)	Development of the Ground Segment for the hyperspectral satellite mission EnMAP: • System Engineering • Data Quality Control • Application Support	2007 - 2020	Martin Habermeyer, Martin Bachmann, Uta Heiden
GAF FEK (GAF)	Quality control for the results of the Remote Sensing Control of Area-Based Subsidies (INVEKOS) including (1) conformity, consistency, and plausibility checks of data base and checks for correct implementation of	Yearly	Martin Habermeyer

	the rules applied by the subsidy control and (2) evaluation of radiometric and geometric quality of the remote sensing data		
GlobDiversity (ESA)	GlobDiversity is the first large-scale project explicitly designed to develop and engineer Remotely Sensed Essential Biodiversity Variables (RS-EBVs).	2017 - 2019	Uta Heiden, Valentin Ziel
TIMELINE (DLR)	Development of a processing chain for the reprocessing of the 30 year NOAA AVHRR time series: • System Engineering (Scientific Data Processors) • Processor development (L1b processing) • Spectral and radiometric L1b data harmonization		Martin Bachmann
MONEO-WET (BMBF)	Interaction between agricultural activities and impact to wetland systems of the Terraba Sierpe National Parc in Costa Rica; Combined use of imaging spectroscopy data (DESIS) and Sentinel-2 data; Networking		Nicole Pinnel
SOIL-DE (BMEL)	Development of indicators for the assessment of productivity, use intensity and vulnerability of agricultural soils in Germany	2018 - 2021	Simone Zepp
uSCALES (CSC)	Urban Imaging Spectroscopy across Scales	2018 - 2021	Ji Chaonan

Former projects - Team Spectroscopy and Land Degradation

OPUS (STMWI)	OPUS - Operational Platform for Provision and Processing of Sentinel-data in support of Copernicus geoinformation services • Standardisation and certification procedures	2015 - 2018	Stefanie Holzwarth
Opt4Environment (BMWi)	Analysis of the predisposition of forests to stress events	2015 - 2018	Anne Reichmuth, Nicole Pinnel
HyperNEXT (ESA)	HyperNEXT assesses the potential and benefit of an imaging spectrometer as a potential sensor for the Next Generation of Sentinels. It includes a sound analysis of gaps, user needs, observational requirements and the	2016 - 2017	Uta Heiden, Martin Bachmann

	definition of potential algorithms for product development in various application fields. DLR is responsible for: • Soil degradation • Urban areas		
EUFAR – HYLIGHT (EU FP7)	Integration of airborne hyperspectral imagery and laser scanning data to improve image processing and interpretation	2014 - 2017	Martin Bachmann
EUFAR - N7SP (EU FP7)	The EUFAR Networking Activity - Standards and Protocols (N7SP) is tasked with creating recommendations for standards and best practices within the field of airborne hyperspectral imaging	2014 – 2017	Stefanie Holzwarth
EnFusionMAP (BMWi)	Development of methods and products for the interpretation of spaceborne imaging spectroscopy data (EnMAP) of urban areas and fusion with multispectral data (Sentinel-2)	2015 - 2018	Marianne Jilge, Uta Heiden
CEOS Feasibility Study for an Imaging Spectrometer for Aquatic Ecosystems (non-oceanic)	A feasibility assessment of the benefits and technological aspects of a hyperspectral satellite mission focused on aquatic ecosystems: inland, estuarine, deltaic and near coastal waters - as well as mapping bathymetry, macrophytes, macro-algae, seagrasses and coral reefs - at significantly higher spatial resolution than 250m	2016 - 2017	Nicole Pinnel
MONROSA (BMBF)	Knowledge and student exchange between German and Costa Rican Partners to understand the complexity of ecosystems and the environmental issues in Costa Rica towards the development of future joint research activities	2014 - 2017	Derek Rogge
iTERI (HGF)	Assessing the ability of EnMAP satellite data to derive baseline information; improving calibration, validation and information extraction approaches for emerging satellite products using wireless sensor networks	2014 - 2016	Derek Rogge
VitTree (LWF)	Automated assessment of forest vitality using spaceborne optical	2014 - 2016	Nicole Pinnel

	remote sensing data		
FastResponse (LWF)	Development of a remote sensing based fast response systems for monitoring calamities in forests	2014 - 2016	Nicole Pinnel
FireBird Wissenschaft DFD/FE (DLR)	Application Development using thermal TET and BIROS data: • Support of validation and calibration of TET data • Development of data and application products	2010 - 2017	Uta Heiden
ARES	Procurement and algorithm development for a combined reflective and thermal airborne hyperspectral sensor system. Contact: Stefanie Holzwarth		
CCI „Burnt Area"	Advanced pre-processing of (A)ATSR and MERIS (ESA, 2011-2014). Contact: Martin Bachmann		
CHICO	Innovative Techniques for the Exploration, Extinction and Monitoring of Coal Fires (BMBF 2007-2010). Contact: Christian Fischer		
DeMinTIR	Detection of Mineral Surface Parameter and Vegetation status from Airborne Thermal Infra-Red Imagery (EUFAR - TNA, 2011-2012). Contact: Christian Fischer		
DeSurvey	A Surveillance System for Assessing and Monitoring of Desertification (FP6, 2005-2010). Contact: Martin Bachmann		
DRAGON-2	Detection, Analysis and Risk Assessment of Coal Fires in Northern China (ESA-MOST, 2008-2012). Contact: Christian Fischer		
EO-Miners	Earth Observation for Monitoring and Observing Environmental and Societal Impacts of Mineral Resources Exploration and Exploitation, (EU, 2010-2013). Contact: Christian Fischer		
EOS-1	Derivation of plant functional types and soil parameters in Namibia (HGF, 2006-2009). Contact: Martin Bachmann		
EOS-2	Quantification of soil organic carbon and other soil constituents (HGF, 2009-2011). Contact: Martin Bachmann, Derek Rogge		
ESA ALOS AVNIR	Development of a prototype atmospheric correction (ESA, 2007-2009). Contact: Martin Bachmann (Rudolf Richter)		
ESA Senti-2	Development of a prototype atmospheric correction (ESA, 2008-2010). Contact: Martin Bachmann (Rudolf Richter)		
Hyper-I-Net	Marie-Curie Training Network for hyperspectral Earth Observation (FP7, 2007-2010). Contact: Martin Bachmann		
HyQuaPro	Development of data quality indicators for airborne hyperspectral data (FP7, 2009-2013). Contact: Martin Bachmann		
HYRESSA	Investigation of the user needs of the European hyperspectral remote sensing research community (FP6, 2007-2008). Contact: Stefanie Holzwarth		
OpAiRS	Development and operation of an ISO-9001 certified service for airborne hyperspectral data incl. campaign management and pre-processing (DLR, 1995-2014). Contact: Stefanie Holzwarth		
TreeIdent	Bavarian-wide mapping of tree species, (LWF, 2012-2014). Contact: Uta Heiden		

Flight campaigns:

ESA-SPARC, ESA-DAISEX, CEOS Tuz Golu (2009), HyEurope.
Contact: Stefanie Holzwarth, Martin Bachmann

Contact

Dr. Uta Heiden
Head of the Team "Spectroscopy and Land Degradation"
German Aerospace Center (DLR)
German Remote Sensing Data Center (DFD)
Oberpfaffenhofen
82234 Weßling
Tel.: +49 8153 28-3282
Email: uta.heiden@dlr.de