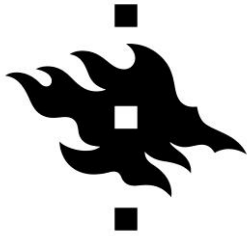


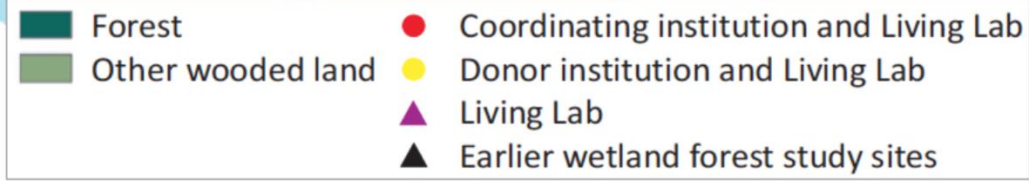
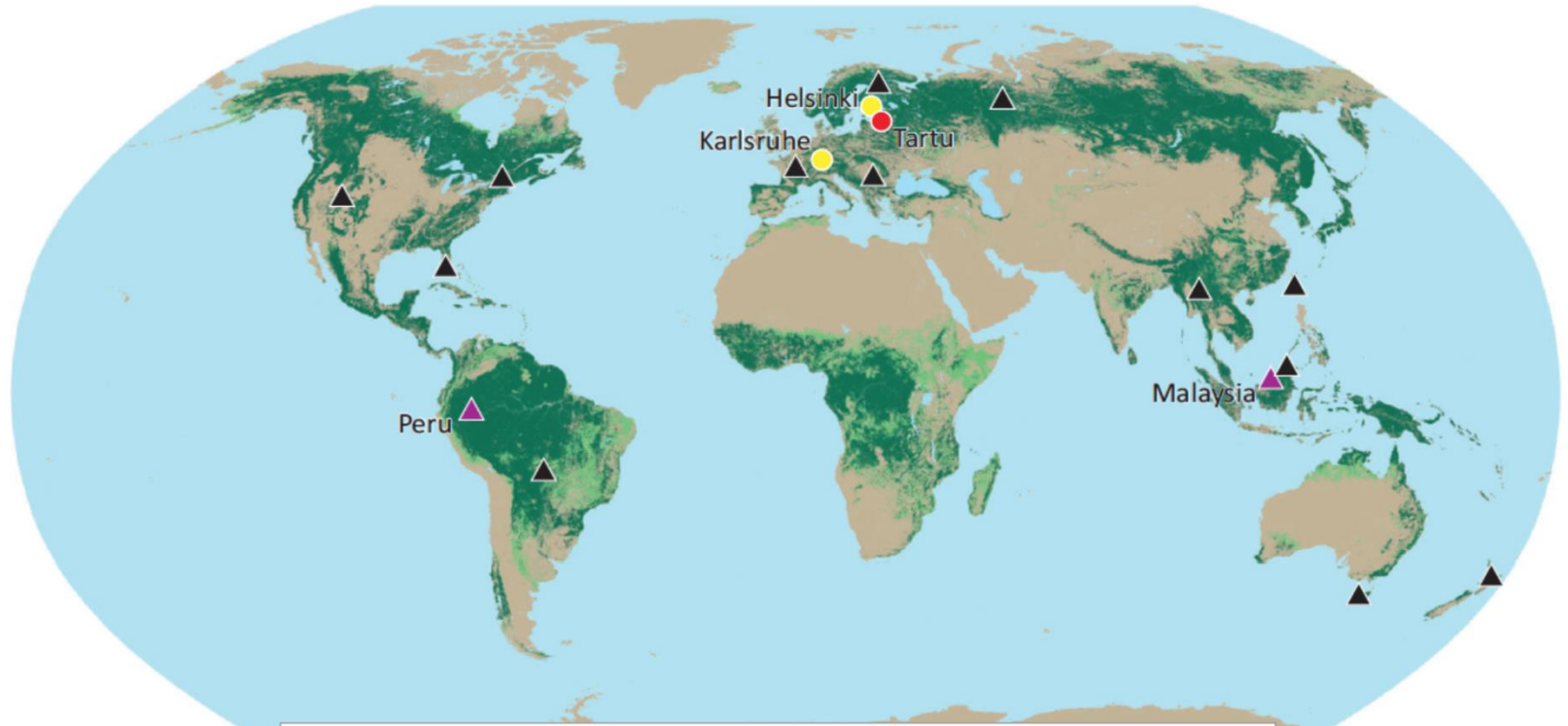
LiWeFor



Living Labs for **Wetland Forest** Research (LiWeFoR)



UNIVERSITY OF HELSINKI



Base map: FAO 2006



Living Labs for Wetland Forest Research (LiWeFoR)

HORIZON-CSA project No 101079192

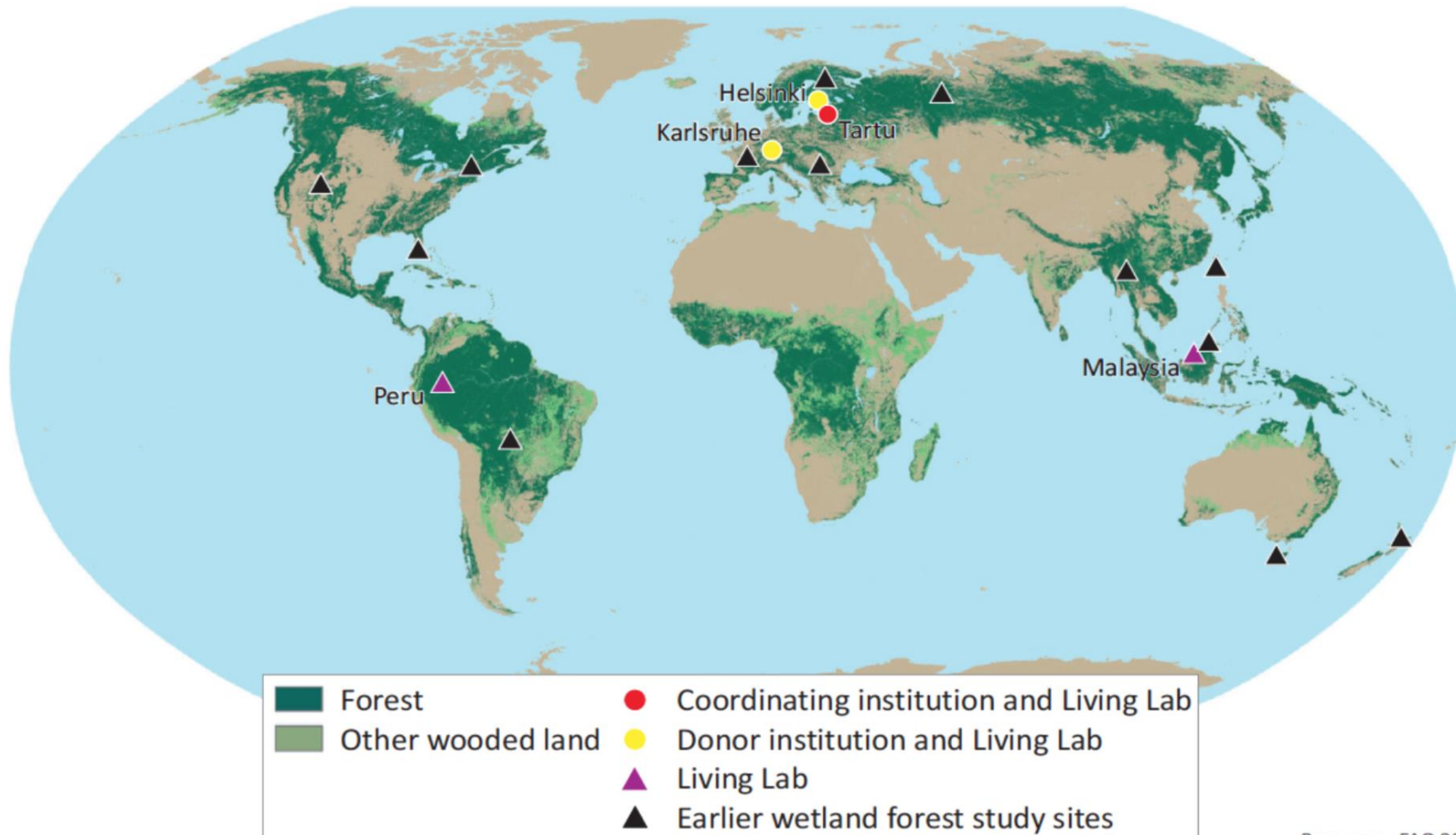
Call: HORIZON-WIDERA-2021-ACCESS-03 (Twinning)

Topic: HORIZON-WIDERA-2021-ACCESS-03-01

- Duration: 01.01.2023 – 31.12.2025
- Participants
 - Coordinating institution: University of Tartu
 - Prof. Ülo Mander (Main contact person), Prof. Maarja Öpik, Assoc. Prof. Kaido Soosaar, Assoc.Prof. Mikk Espenberg, Assoc.Prof. Jaan Pärn; Dr. Aleksander Väljamäe, Dr. Kristina Sohar, MSc Anastasiia Väljamäe, MSc Laura Tomson, MSc Eveli Kuuse;
PhD students: Reti Ranniku, Sharvari S. Gadegaonkar, M. Kamil Sardar Ali , Sandeep Thayamkottu, Fahad A. Kazmi, Hanna Vahter, Laura Kuusemets
 - Partner institutions
 - Karlsruhe Institute of Technology (KIT): Prof. Butterbach-Bahl (Main contact person), Prof. Ralf Kiese, Dr. Clemens Scheer, Dr. Carolin Boos
 - University of Helsinki: Prof. Mari Pihlatie (Main contact person), Prof. Ivan Mammarella, Dr. Annalea Lohila, Ms. Asta Laasonen, Mr. Mikko Skogberg
 - Living Labs associated partners:
 - Instituto de Investigaciones de la Amazonía Peruana (IIAP), Peru; Contact person: Dr. Lizardo Fachín Malaverri
 - Universidad Nacional de la Amazonía Peruana (UNAP), Peru; Contact person: Dr. Richer Ríos Zumaeta
 - Sarawak Tropical Peat Research Institute (TROPI), Malaysia; Contact Person: Prof. Lulie Melling

Living Lab (LL) sites for the current project and earlier study sites.

The virtual framework of LL embraces sites in Europe, Peru and Malaysia, and earlier study sites uniting it via open data repository. The earlier study sites were part of a survey of GHG fluxes and potentially controlling environmental variables at peatland sites globally, conducted between 2011 and 2018. The wetland forest (i.e., with vegetation height <0.5 m), including both natural and artificially drained sites, were identified throughout the rainy tropical, subtropical, temperate, and boreal climate zones. The hydrology and trophic status of the natural sites ranged from groundwater-fed swamps to rain-fed peat bog forests.

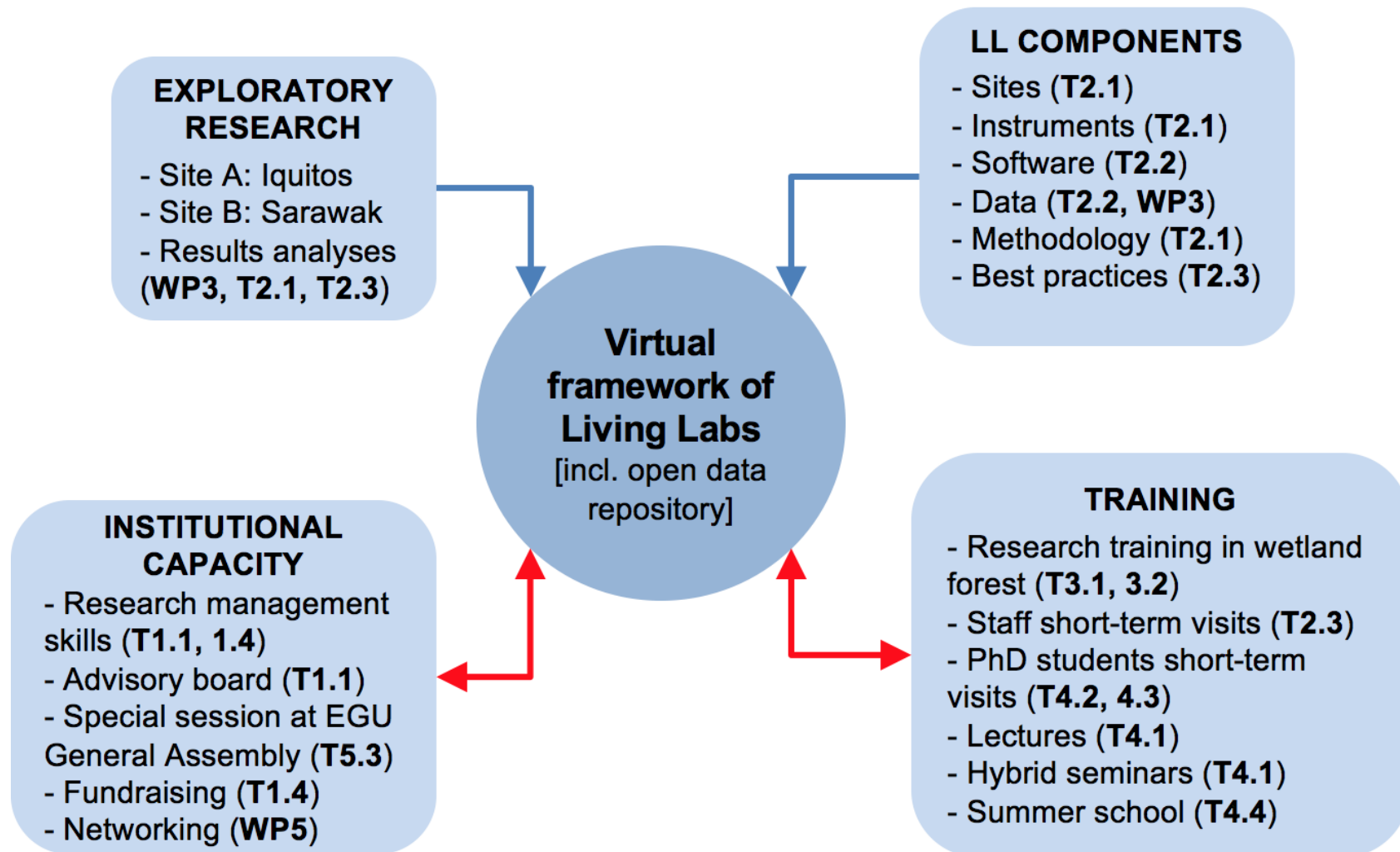


Main aim and objectives

- The overall aim of LiWeFor is to establish and develop a global network of Living Labs of wetland forest research, education and management.
- Specific objectives (OB) are :
 - OB1 Demonstrating a proof-of-concept for global Living Labs network that integrates a number of multiple wetland forest education and research stations
 - OB2 Creating and developing research capacity in tropical swamp forests in Amazon and Borneo in cooperation with UH and KIT to improve our understand of its role in climate regulation
 - OB3 Constructing a virtual framework of Living Labs including an open data repository of GHG measurements and environmental factors in the wetland forests
 - OB4 Strengthening research and development capacity of the UT team
- As a driving vehicle of the project, four joint field campaigns to global greenhouse gas emission hotspots in tropical wetland forest regions (Peru and Malaysia) will enforce educational knowledge transfer.

Conceptual scheme of the LiWeFoR's methodology.

The blue arrows show the inputs to the virtual framework of LL. The red arrows indicate of virtual framework LL outputs and feedbacks.



Pilot study sites



**Temperate drained
peatland forest (Estonia)**



**Peruvian Amazon
Tropical peat swamp forest**

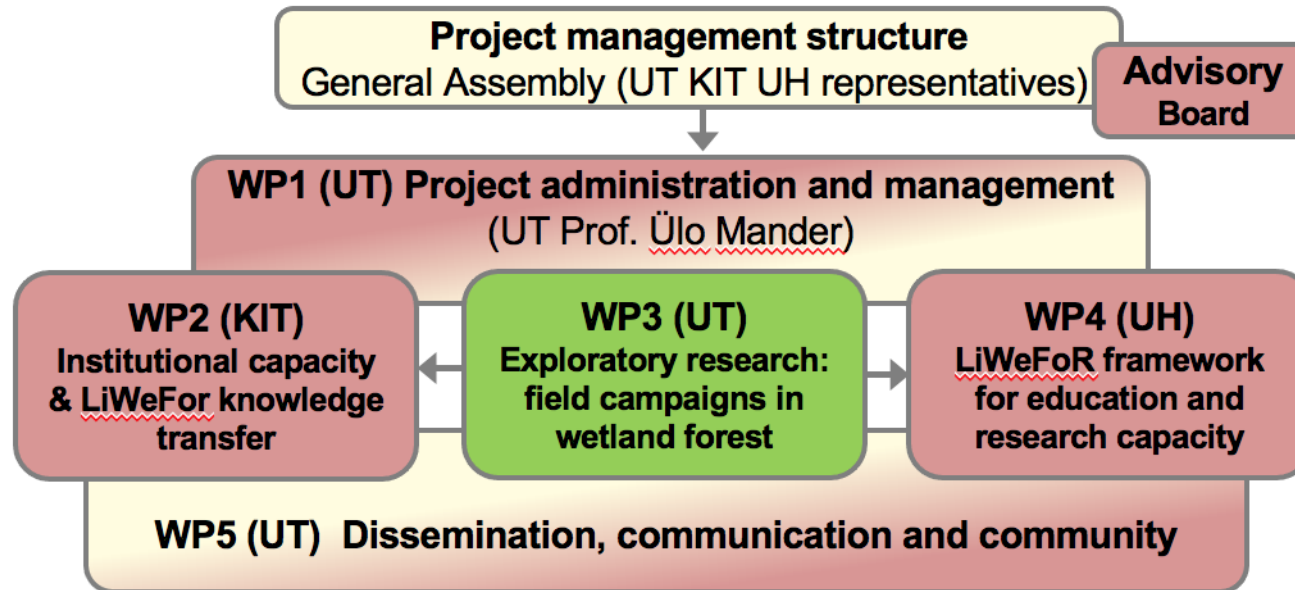


Sarawak, Borneo



**Oil palm plantation
(Borneo)**

Organisational structure of LiWeFor work packages



Advisory Board members

- Prof. **Angela Gallego-Sala**, University of Exeter, College of Life and Environmental Sciences, UK (Professor in Ecosystems and Biogeochemical Cycles)
- Prof. **Dennis Baldocchi**, UC Berkeley, Department of Environmental Science, Policy and Management, USA (Professor of Biometeorology)
- Prof. **Josette Garnier**, Sorbonne Université, France (Professor, Research Director at the National Center of Scientific Research (CNRS) in the field of Biogeochemistry of River Basins)
- Prof. **Christoph Müller**, Justus Liebig University Giessen, Institute of Plant Ecology, Germany (Professor of Experimental Plant Ecology)
- Dr. **Lulie Melling**, Sarawak Tropical Peat Research Institute, Director, Sarawak, Malaysia
- Dr. **Lizardo Fachín**, Instituto de Investigaciones de la Amazonía Peruana (IIAP), Peru
- Prof. **Rodil Espinoza**, Universidad Nacional de la Amazonía Peruana (UNAP), Peru

GANTT chart detailing timing of the project and allocation of the person months (task leaders in bold)

Workpackages and tasks	Objectives	UT-R	UT	KIT	UH	Total pm	YR1:2023				YR2:2024				YR3:2025			
		15	39	25.2	36	115.2	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
WP1 Project administration and management		0	13.8	3	5.5	22.3												
T1.1 Management of the consortium	all		3.8	1	2	6.8				D1.3a				D1.3b				D1.4
T1.2 Internal project administration	all		4			4				D1.3a				D1.3b				D1.4
T1.3 Data, ethics and IPR management	OB3		1	0.5	1	2.5	D1.2a											D1.2b
T1.4 Strengthening research management skills	OB4		2	1	2	5				D1.3a				D1.3b				D1.4
T1.5 Project evaluation, quality assurance and progress	all		3	0.5	0.5	4	D1.1											
WP2 Institutional capacity & LiWeFor knowledge transfer		5	5.2	7.2	7	24.4												
T2.1 Establishing LiWeFor virtual living labs framework	all		2	1	1	4	D2.1a								D2.1b			
T2.2 LL open data repository and its updates	OB3	1	3.2	0.7	2.5	7.4				D2.2a				D2.2b				D2.2c
T2.3 Knowledge and skills transfer to UT	OB4	4		5.5	3.5	13									D2.3			D2.4
WP3 Exploratory research: field campaigns in wetland forest		8	8	8	8	32												
T3.1 Study site A, training and research in Iquitos	OB2	3	3	3	3	12				D3.1				D3.3				
T3.2 Study site B, training and research in Sarawak	OB2	3	3	3	3	12					D3.2				D3.4			
T3.3 Wetland forest research generalization & guidelines	all	2	2	2	2	8											D3.5	D3.6
WP4 LiWeFoR framework for education and research capacity		2	6	5	10.5	23.5												
T4.1 Lessons and hybrid seminars	OB3, 4		2	2	5.5	9.5				HS1	HS2			HS3, D4.1	HS4			D4.2
T4.2 Short-term training visits to KIT	OB1,4	1	1	2		4	STV1			D4.3a		STV2		D4.3b			STV3, D4.3c	
T4.3 Short-term training visits to UH	OB1,4	1	1		4	6		STV1	D4.4a		STV2		D4.4b				STV3, D4.4c	
T4.4 Summer school & lectures from AB members	OB4		2	1	1	4								SS, D4.5				
WP5 Dissemination, communication & community		0	6	2	5	13												
T4.1 Strategic planning	OB4		2	1	1	4				D5.2a								D5.2b
T4.2 Dissemination & communication of project's objectives and results	all		2	1	2	5	D5.1											D5.3
T4.3 Organisation of stakeholder events & final high-visibility event	OB4		2		2	4				SE1	SE2			SE3	SE4	FE		D5.4

Color code: Research (green), Skills and Education (red), Generic support activity (yellow)

OB - Objective, D - Deliverable, M - Milestone, HS - Hybrid Seminar, STV - Short Term Visit, SS - Summer School, SE - Stakeholder Event, FE - Final event at EGU conference