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COST Action ES1309

5th Management Committee meeting,

Limassol, Cyprus, 24th February 2017

Chair Alasdair MacArthur

Friday	**Agenda 24th February OPTIMISE Annual MC meeting 2017**	
09:00-09:15	Introduction to MC meeting by Chair	
09:15- 10:00	Financial Report from Action Manager and Chair	
10:00-10:15	Report on objectives still to be achieved by MAG Leader	
10:15-10:45	WG Leaders' proposals to achieve remaining objectives	
10:45-11:00	Training Leader and Dissemination Leader proposals for final year	
11:00-12:00	Development of W&BP for final year of OPTIMISE incl. final conference	
12:00	Close of MC meeting	

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Propose core group structure for final year
Chair, Alasdair Mac Arthur,
Vice Chair, MaPi Cendrero
Micol Rossini, Final Conference Leader,
WG1 Leader, Christiaan van der Tol, coordinator, Javier Pacheco
WG2 Leader Enrico, Tomelleri, coordinator, Helge Aasen
WG3 Leader Andy Hueni, coordinator, Shari van Wittenberghe
Training Leader, Radek Juszczak
Dissemination Leader, Karolina Sakowska, coordinator Laura Mihai
OPTIMISE BUS Lead, Helge Aasen

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Accounts for 2016/17

3	COST Action number	ES1309						
4	Period	2016-05-01 - 2017-04.30						
5	Date	16.02.17						
6	Grant Budget	140,737.00	EUR					
7								
8		Budget	Actuals	Accruals	Total	Forecast	Total	-under/+over
9		EUR	EUR	EUR	EUR	EUR	EUR	EUR
10		a	b	c	d=b+c	e	f=d+e	g=f-a
11	A.Science Expenditure							
12	A1. Total Meetings	84,440.00	29,385.69	1,793.00	31,178.69	58,760.00	89,938.69	5,498.69
13	A2. Total STSMs	20,000.00	9,880.00	900.00	10,780.00	7,460.00	18,240.00	- 1,760.00
14	A3. Total Training Schools	16,440.00	-	-	-	-	-	- 16,440.00
15	A4. Total Dissemination, publicatio	1,500.00	-	1,500.00	1,500.00	-	1,500.00	-
16	A5. Total OERSA	-	-	-	-	-	-	-
17	Total Science Expenditure (sum:	122,380.00	39,265.69	4,193.00	43,458.69	66,220.00	109,678.69	- 12,701.31
18	B.FSAC (Max. 15% of Science exp.	18,357.00	5,889.85	628.95	6,518.80	9,933.00	16,451.80	- 1,905.20
19	C.Total Costs (=A+B)	140,737.00	45,155.54	4,821.95	49,977.49	76,153.00	126,130.49	- 14,606.51
20								

Underspend due to

- having to cancel training school planned for summer 2016 – UAV flight restrictions imposed at final stages of planning
- Plus number registered for workshop in Cyprus but have not attended

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Dirk Schuettemeyer ESA presentation- notes arising from open floor discussion:
Need to link our measurements to SI Units
Need to consider fiducial measurements
Better links with ICOS
FRM Handbook – ESA to publish
Site requirements – ESA to publish
Collaboration with NASA –Petya Campbell
Opportunity for ongoing living document
H20/20 Sentinel 2 project proposal – Loris Vescovo
Marco Dubbini – interest in thermal imager for sUAVs based on MAIA platform
Dan Sporea – proposal for cal lab for fluorescence measurement spectrometers and imagers
Need to address issues of heterogeneity – Jon Atherton looking at a project
Helge Aasen –develop protocols and procedures to address above OPTIMISE / BUS
RADCAL network in place

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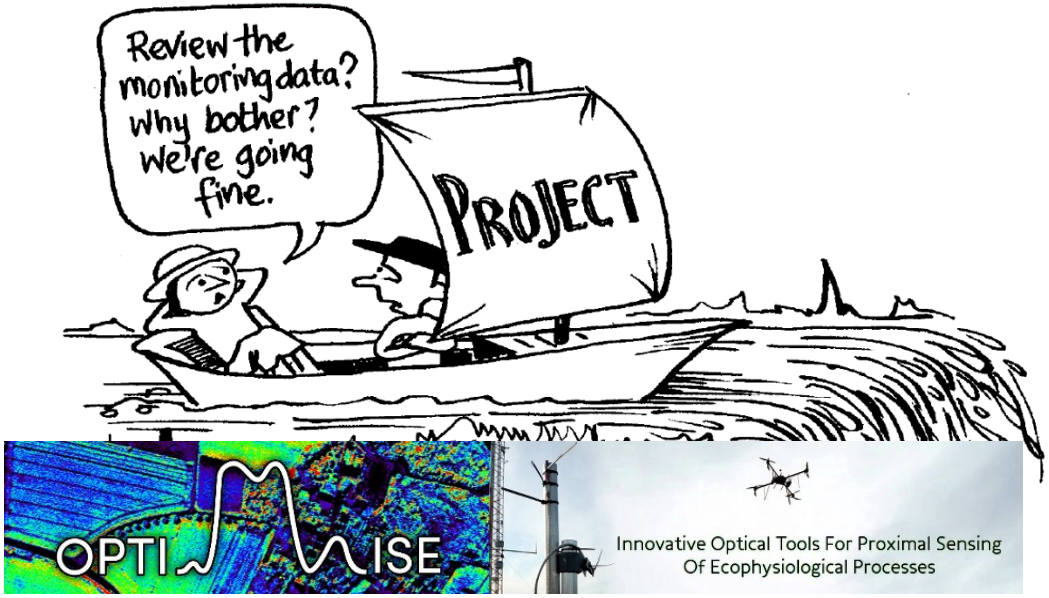
COST Action ES1309 OPTIMISE
Management Evaluation Group



ES1309 OPTIMISE 2017 meeting, 22-24 February, Cyprus

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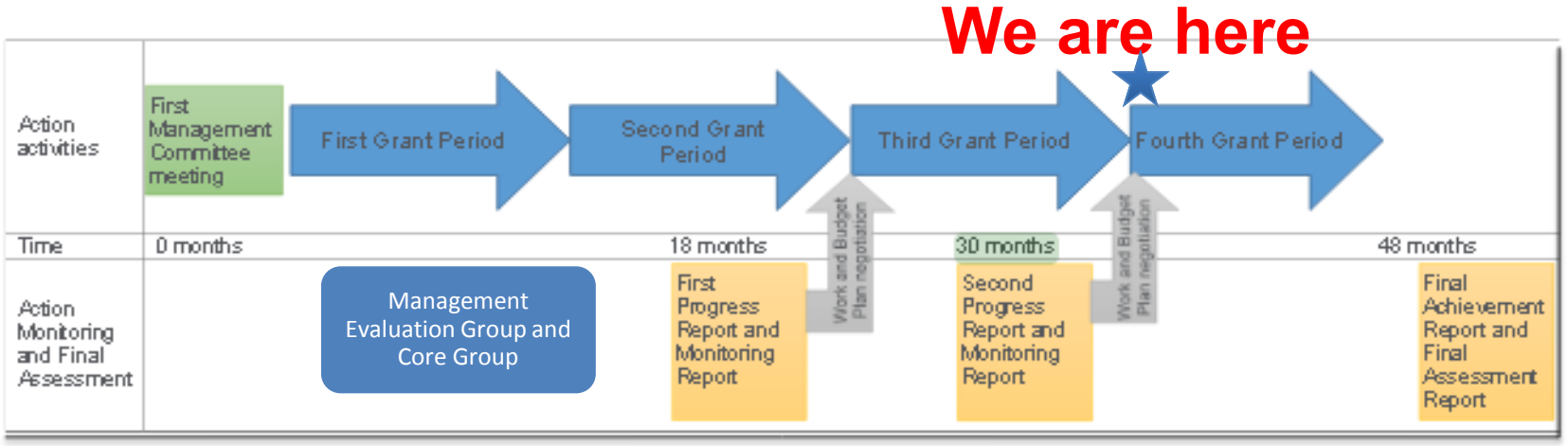
ESF provides the COST Office through a European Commission contract

Monitoring and Final Assessment of Actions



First Progress and Monitoring Report – 18 months

Second Progress and Monitoring Report – 30 months

Final Achievement Report – 48 months (end of Action)

Action Rapporteur reports remotely

A good COST Action …

- Has a high number of active participants
- Is carrying out a high number of fruitful STSMs
- Is involving industries and other stakeholders
- Is including researchers from less research-intensive countries across Europe
- Is writing many (good) Joint Publications
- Good Gender Balance and lots of ESR
- Is developing further research proposals (H2020)

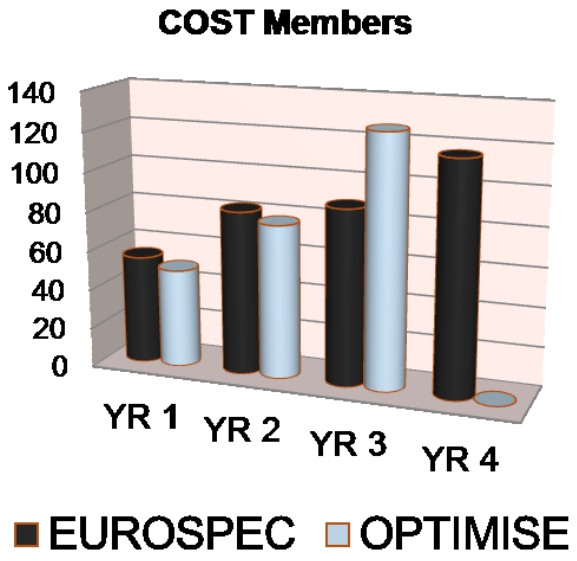
COST Action ES1309 (ES0903)

- Participants increase in 3rd year: 78 to 127 (ES0903: 83)

Members increase: WG1: 21 to 37; WG2: 29 to 44; WG3: 29 to 46

- 29 EU Countries (ES0903: 21)
- Ukraine, USA, Canada, Australia (ES0903: 4)
- + ESA FLEX

Successful support of OPTIMISE network: European Space Agency that the Fluorescence Explorer (FLEX) concept has been selected as the next Earth Explorer mission, with a launch scheduled for 2022



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OPTIMISE
Innovative Optical Tools For Proximal Sensing Of Ecophysiological Processes

COST Action ES1309

STSMs: 17+ (ES0903: 12)

Call 1 – 2014/2015

Javier Pacheco Labrador to be performed at the **University of Milano-Bicocca**

Chao Zhang to be performed at the **University of Helsinki**

Sarah Asam to be performed at the **University of Valencia**

Call 2 – 2015/2016

Outi Meinander to be performed at the **University of Edinburgh**

Peiqi Yang to be performed at the **Forschungszentrum Jülich**

Taras Kazantsev to be performed at **EURAC Research**

Call 3 – 2015/2016

Scott Davidson to be performed at **Utrecht University**

Sheng Wang to be performed at the **Institute for Sustainable Agriculture, Cordoba**

Alasdair Macarthur to be performed at the **Dept. de Física de la Tierra y Termondinámica, Paterna, Spain**

Alex Morales to be performed at **Wageningen University**

Call 4 – 2016

Bruna Oliviera – to be performed at **Max Planck for Biogeochemistry, Jena, Germany:** stsm-report-cost-stsm-es1309-34804

Chiara Torresan – to be performed at **Forschungszentrum Jülich GmbH, Jülich, Germany:** chiara-toresan-report

Karolina Sakowska – to be performed at **Forschungszentrum Jülich GmbH, Jülich, Germany:** stsm-report_sakowska_karolina

Michał Chiliński – to be performed at **EURAC Institute for Applied Remote Sensing, Bozen, Italy:** mich_stsm-es1309-050916-079512-report

Laura Mihai to be performed at **NERC Field Spectroscopy Facility, University of Edinburgh, UK:** report_cost-stsm-es1309-35225_lauramihai

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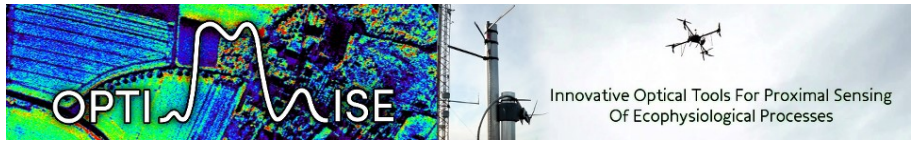


COST Action ES1309

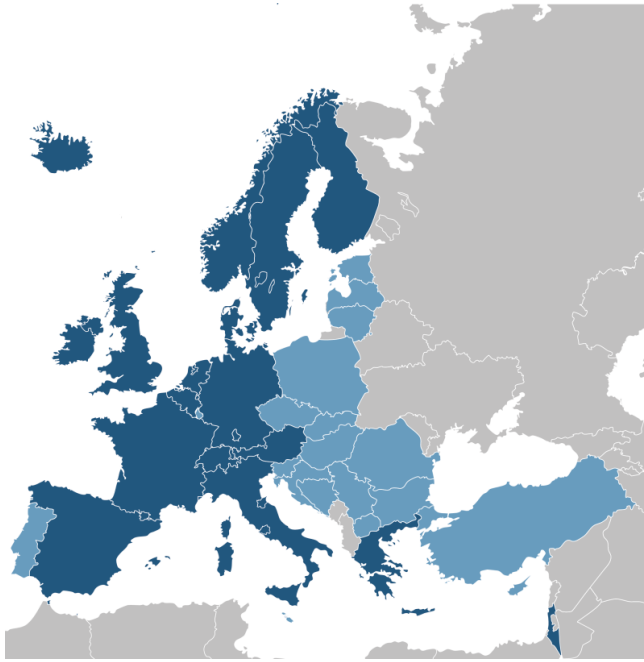
Inclusiveness towards less research-intensive countries across Europe

- ES1309: Cyprus; Czech Republic; Estonia, Croatia; Hungary; Portugal; Bulgaria; Turkey; and Estonia

- Activities are held in inclusiveness countries where possible and a recent ESR organised workshop was held in Estonia
- Collaborative work between U. of Edinburgh, U. of Life Science, Poznan and DLR to establish a Sentinel-2 mission cal/val field site in Poland

- Dubrovnik 2016 meeting (Croatia)

- Today's meeting



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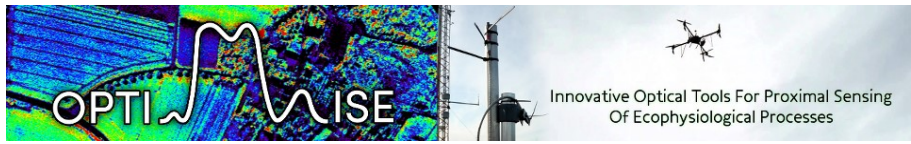

COST Action ES1309 (ES0903)

Gender Balance and Early Stage Researchers (ESRs)


(Above) Group picture taken in front of the *Obrzycko Castle*

Vice Chair ♀

ESRs have been actively encouraged to participate in the Action management, five of the eleven core group members are ESRs, many ESR STMSs

Training Schools: 3 (ES0903: 2)

- ABEL Training School on UAVs and Biogeochemical cycling (Spain)
- Joint OPTIMISE / EUFAR Training Course: SWAMP
- Training Course on "Safe operations and Health and Safety in deployment of unpiloted aerial vehicles (UAVs) for environmental science", April 2016, University of Exeter in the UK (Karen Anderson)

DISSEMINATION GOALS & PHASES

PROJECT

OPTIMISE PHASE I Year 1	OPTIMISE PHASE II Years 2-3	OPTIMISE PHASE III Year 4

TIME

WE ARE HERE

DISEMINATION

-Raise Awareness of project -Establish contacts	-Promote information flow within OPTIMISE and to Stakeholders. -Disseminate results	-Dissemination of results -Synthesis Activities -Continuity

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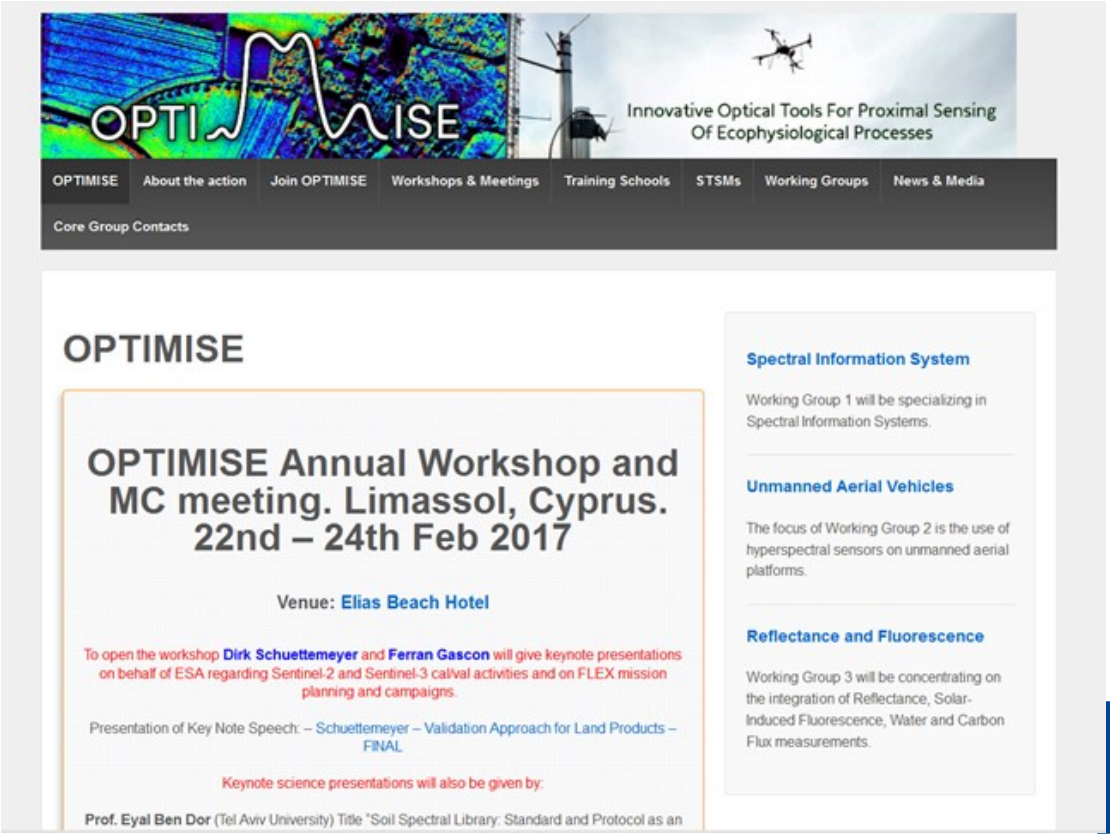
Programme Horizon 2020

DISSEMINATION GOALS & PHASES

- Information on STSM Calls, Workshops, Schools, Progress Reports, Newsletters, and Publications being regularly updated.



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II. Conference Communications

- Remote sensing of fluorescence, photosynthesis and vegetation status, FLEX 2017, Frascati. OPTIMISE Poster presented (Mc Arthur et al.)
- …
- Recent papers? (Note to participants, when you get an OPTIMISE related paper accepted please send it to webmaster/dissemination leader)

- Several synthesis papers in preparation:

a) Three papers on best practices in the measurement and retrieval of sun induced fluorescence: Pacheco-Labrador et al, Cendrero-Mateo et al., Aasen et al

b) Paper on UAV methods and protocols: Aesen et al.

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IV. Newsletters

- Second Newsletter (June 2016)


OPTIMISE

Newsletter 2, 10 June 2016

OPTIMISE COST ACTION, NEWSLETTER 2

In This Issue:

3rd Plenary Meeting, WG1 Workshop and ST MSs.

Update of Activities and Future Plans

Editorial

We are happy to share with you the second issue of the OPTIMISE COST Action (ES1309) Newsletter. The goal of these Newsletter series is to regularly compile and disseminate the main highlights accomplished during OPTIMISE Cost Action. In this issue we summarize the outcome from the 3rd Plenary Meeting and WG1 Workshop that took place in Dubrovnik last February. We also introduce the early-career scientists that have so far conducted an OPTIMISE Short-term scientific mission and learn about their work and their feelings after their STSMs. Last of all, we present an overview of general activities and plans for the upcoming months by the Chair.

- Third Newsletter (Spring 2017). Updates on recent workshops, WG meetings and activities

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Budget for 2017/18

€138.65k = €119.065 for networking, dissemination, STSM, and trainin activities and €19.59 for GH management and website maintenance

Strategy of remainder of Action (last activity March. 2018)

- Manage budget to maximise network, STSM and dissemination activities
- Increase activities in inclusiveness countries
- Increase ESR participation & continue to consider gender balance
- Hold themed workshops and encourage ESR Think Tanks
- Raise profile of OPTIMISE network and activities with ESA & ICOS
- Continue development of OPTIMISE BUS
- Increase utilisation of OPTIMISE website
- Complete WG1, WG2 and WG3 objectives
- Work towards a SI in an international journal
- Work towards a final OPTIMISE International Conference

EU 13:
Bulgaria
Croatia
Cyprus
Czech Republic
Estonia
Hungary
Latvia
Lithuania
Malta
Poland
Romania
Slovakia
Slovenia

EU Candidates:
fYR Macedonia
Republic of Serbia
Turkey

EU Potential Candidate:
Bosnia and Herzegovina

EU Countries targeted by EC
Luxembourg
Portugal

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MoU deliverables

OPTIMISE objectives
i. support and enlarge the global spectral sampling network and enhance our understanding of reflectance and fluorescence
ii. harmonize instruments and measurement protocols adopted across different ecosystems
iii. promote the use of a common 'smart' on-line spectral *i*nformation system to share and standardized proximal sensing data and products
iv. develop a consolidated ecosystem specific metadata and spectral data QA framework
v. bridge the remote sensing scaling gap by integrating UAV-based proximal sensing and modelling ecosystem functioning at differing spatial and temporal scale
Status/action • Workshop/dissemination meeting needed to bring together the achievements of OTIMISE for Final Report and publications

MoU deliverables

WG1:
Definition of a mandatory metadata set, aligned with current international efforts in the spectroscopy community **Status/action** • EcoSYS and SPECNET collaborations ongoing • ecosystem specific metadata definitions need to be developed further (also for input to ESA)
Develop an on-line instance of a spectral information database to serve as demonstration and testing platform for data sharing and information building **Statusction** • majorly complete
Develop a wireless automated dataflow from in-situ and UAV sensor for the database system **Status/action** • Nearing completion. The auto ingestion to SPECCHIO for be tested as proof of concept
Definition and implementation of data pre-processing and metadata augmentation algorithms and routines including quality checks and flagging and data assimilation **Status/action** • In progress but nearing completion
Definition and implementation of system interfaces and algorithms for data retrieval allowing the building of products using sources such as biogeochemical modelling, flux data specialisation and space-sensed data **Status/action** • complete

MoU deliverables

WG2
Review and report on the challenges for optical sensing in up-scaling biophysical properties of vegetation and test different UAV platform/measurement instruments setups **Status/action** • will be summarised in final OPTIMISE Report – this will be a review of OPTIMISE activities and outcomes
Development of a footprint tool for optimal placement of fixed spectrometers and for combination of EC measurements with UAV-based spectral data **Status/action** • An experts workshop was held for integrating the footprint tool by Prof. N. Kljun with Remote Sensing data. February 2017
Liaise with industry representatives to improve accuracy of GPS (industry has moved ahead **Status/action** • industry has moved ahead of OPTIMISE but should invite industry to a workshop (invite to Belgium practical workshop)
Definition of new methods for scaling up functional relationships between optical properties and ecosystem processes from in-situ to landscape scale by means of UAVs, including identification of adequate radiative transfer models to be coupled with biogeochemical models for linking biogeophysical properties of vegetation with its optical properties (UAV spatial sampling and observation scaling needed for different ecosystems) **Status/action** • Work has begun (Bolzano workshop and AP/JA Hyytiala project but more effort needed • Opportunity for workshop in Belgium ESA/VITO/Faculty of Science, Antwerp/OPTIMISE

MoU deliverables

WG3
Review and report on the methods and instruments used to estimate the solar-induced fluorescence from passive remote measurements **Status/action** • OPTIMISE BUS and questionnaire on going
Definition of the technical requirements and acquisition protocols for reflectance and fluorescence measurements from UAV and ground-based instruments **Status/action** • Tartu think tank workshop + Romanian proposal Sporea/MacArthur • Practical spectrometer calibration workshop needed
Database of reflectance, fluorescence and productivity data for later use in models and applications **Status/action** • SWAMP and ABEL to be available online database included, deliverable majorly complete but more data needed (Belgium practical workshop)
Integration of ground and UAV measurements with biochemical model outputs to better understand the links between photosynthesis, plant stress, growth and physiology with the temporal dynamics of reflectance and fluorescence **Status/action** • further work needed (Belgium practical workshop) plus uncertainties

The following countries offered or are available to host activities:
Final Conference: Sofia, Bulgaria;
MC meeting: Larissa, Greece or COST Office Brussels.
Science workshops: Luxemburg; Larissa, Greece; Samsun, Turkey;
Bucharest, Romania or COST Brussels.

- The MC requested that capital cities with direct access be favoured for OPTIMISE activities
- The following was propose and accepted unanimously by the MC

Science budget €119K		
Workshop1 UAV practical workshop	Belgium	€15K
Workshop2 Lab cal practical workshop	Romania	€7K
Workshop3 Ecosystem metadata workshop	Luxemburg	€7K
Workshop4 Final Report and dissemination workshop	Greece (?) or Toulouse (?)	€15K
STSMs		€15K
Final conference	Sofia, Bulgaria	€60k
	total	€119k
All discussions need to include consideration of gender and geographic balance and ESRs		

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Thanks you for attending!

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