

Programme of
Sentinel Potential Science Products for Cryosphere, Ocean,
Land and Solid Earth Research
Assessment & Consolidation Workshop

Organized by
European Space Agency (ESA)
&
SEN4SCI consortium

Where: ESA-ESRIN, Frascati, IT
When: 22nd March (from 12.00) – 24th March 2011 (until 12.00)
Workshop Goal: To discuss scientific priorities and potential Sentinel science products

Tuesday, March 22, 2011

13.00

**Welcome address - Volker Liebig, Director of ESA's Earth Observation Programme
Objectives of the workshop and logistical information - Michael Berger (ESA)**

13.20 to 14.40

**Plenary Opening Session – Programmatic background and implementation status of the GMES
Space Component (GSC)**

Chair: *Josef Aschbacher (ESA)*

GMES Space Component - Status and Prospects
Josef Aschbacher (ESA)

The Sentinel-1 mission
Malcolm Davidson (ESA)

The Sentinel-2 mission
Philippe Martimort (ESA)

The Sentinel -3 mission
Craig Donlon (ESA)

14.40 to 15.00

Coffee Break

15.00 to 16.30

GMES space component ground segment concept and operational products

Chair: *Henri Laur (ESA)*

GMES Space Component Ground Segment
Eric Monjoux (ESA)

GMES Service component
Hervé Jeanjean (EC)

GMES in-situ component
Karla Acosta (EEA)

17.00 to 20.30

Posters session and Welcome reception at ESRIN

The demonstration of the ESA Research and Service Support environment will take place during the poster session.

Wednesday, March 23, 2011

9.00 to 10.00

Plenary meeting

Chair: *Josef Cihlar (ZEMKON)*

SEN4SCI project: objectives and current status
Josef Cihlar (ZEMKON)

Synergies among Earth Explorer missions and implications for Sentinel products
Malcolm Davidson (ESA)

EOP Research and Service Support infrastructure and tools
P.G. Marchetti (ESA)

Organisation of Splinter Sessions

10.15 to 13.35

Land & Solid Earth Splinter: Priorities and discussion on potential products

Chair: *Richard Fernandes (NRCAN)*

Reporters: *Rasim Latifovic (CCRS) and Mathias Disney (UCL)*

Land cover and change attributes
Martin Herold (Univ. of Wageningen)

Biophysical variables and generic Sentinel products and synergies
Frédéric Baret (INRA)

11.35 - 12.15

Break

Earth observations of water cycle - Land hydrology observations
Massimo Menenti (Univ. Delft)

Results from the Preliminary Gap Analysis - SEN4CI project
Glenda García-Santos (Univ. of Zürich)

10.15 to 13.35

Ocean Splinter: Priorities and discussion on potential products for Coastal and Open Ocean Waters

Chairperson: *Roland Doerffer (GKSS)*

Reporters: *Daniel Odermatt (Univ. of Zürich) and Astrid Bracher (AWI)*

Applications of Sentinel data for physical oceanography

Johnny Johannessen (NERSC)

Applications of Sentinel data (Ocean colour) for the marine ecosystem
Shubha Sathyndranath (Plymouth Marine Laboratory)

11.35 - 12.15

Break

Applications of Sentinel data in climate studies and climate modelling
David Antoine (Observatoire Océanologique de Villefranche)

Results from the Preliminary Gap Analysis - SEN4CI project
Zbyněk Malenovský (Univ. of Zürich)

10.15 to 13.35

Cryosphere Splinter: Priorities and discussion on potential products

Chair: *Wolfgang Dierking (AWI) and Helmut Rott (ENVEO)*

Reporters: *Kim Partington (Polar Imaging) and Markus Heidinger (ENVEO)*

Satellite products for snow cover monitoring and research
Jouni Pulliainen (Finnish Meteo Inst.)

Satellite products for sea ice research
Stein Sandven (Nansen Center)

11.35 - 12.15

Break

Satellite products for ice sheet and glacier research
Andrew Shepherd (Univ. Leeds)

Results from the Preliminary Gap Analysis - SEN4CI project
Helmut Rott (ENVEO)

13.45 – 15.00

Lunch

15.00 to 18.10

Land & Solid Earth Splinter: Research priorities and discussion on potential products, algorithms and validation schemes

Chair: *José Moreno (Univ. of Valencia)*

Reporters: *David Smal and Glenda García-Santos (Univ. of Zürich)*

Overview of research priorities and monitoring requirements for the Earth system in the next decade

José Moreno (Univ. of Valencia)

Understanding and tracking global and regional carbon cycles with emphasis on role of terrestrial ecosystems

Heiko Balzer (Univ. of Leicester)

16.20 - 16.50

Break

Solid Earth space observations: Research priorities, monitoring requirements and synergies

Ramon Hanssen (Univ. Delft)

Observation and product priorities for Solid Earth studies

Stuart Marsh (British Geological Survey)

15.00 to 18.10

Ocean Splinter: Research priorities and discussion on potential products, algorithms and validation schemes for Coastal and Open Ocean Waters

Chair: *Carsten Brockmann (BC)*

Reporters: *Jim Gower (Institute of Ocean Sciences) and Peter Land (Plymouth Marine Laboratory)*

SLSTR for mapping sea and lake surface temperature

Christophe Merchant (Univ. of Edinburgh)

Radar altimeter for sea level rise, currents and waves

Paolo Cipollini (NOC, Southampton)

16.20 - 16.50

Break

Synergies of space borne instruments for ocean products

Steve Groom (Plymouth Marine Laboratory)

Applications of the Sentinel missions for Marine Core Services

Frédéric Adragna (Mercator Ocean)

15.00 to 18.10

Cryosphere Splinter: Research priorities and discussion of potential products, algorithms and validation schemes

Chair: *Jouni Pulliainen (Univ. of Helsinki)*

Reporters: *Markus Heidinger (ENVEO) and Ian Brown (Stockholm Univ.)*

Global snow cover and climate change

Richard Essery (Univ. of Edinburgh)

Ice sheet mass balance and dynamics

Benoît Legresy (CNRS LEGOS, France)

16.20 - 16.50

Break

Sea ice processes and feedbacks

Wolfgang Dierking (Alfred-Wegener-Institute, GE)

Satellite observations and products for permafrost and frozen ground

Annett Bartsch (TU Vienna, AT)

20.00

Workshop Dinner (Frascati)

The demonstration of the ESA Research and Service Support environments will take place during the breaks.

Thursday 24 March 2011

09.00 to 10.30

Land & Solid Earth Splinter: Summarise discussions from the previous day on Land and Solid Earth

Chair: *Michael Schaepman (Univ. of Zürich)*

Reporters: *Rasim Latifovic (CCRS) and Glenda García-Santos (Univ. of Zürich)*

Summarise discussions from the previous day, prioritize Land and Solid Earth products and prepare conclusions for closing plenary session

09.00 to 10.30

Ocean Splinter: Summarise discussions from the previous day on Coastal and Open Ocean Waters

Chair: *Carsten Brockmann (BC)*

Reporters: *Daniel Odermatt and Zbyněk Malenovský (Univ. of Zürich)*

Summarise discussions from the previous day, prioritize Ocean products and prepare conclusions for closing plenary session

09.00 to 10.30:

Cryosphere Splinter: Summarise discussions from the previous day on Cryosphere

Chair: *Kim Partington (Polar Imaging Limited)*

Reporters: *David Small and Michael Zemp (Univ. of Zürich)*

Summarise discussions from the previous day, prioritize Cryosphere products and prepare conclusions for closing plenary session

10.30 –11.00

Break

11.00 to 13.00

Plenary Session: Summary and Conclusions on Land and Solid Earth, Ocean, and Cryosphere products, algorithms and validation schemes

Chair: *Maurice Borgeaud (ESA) and Josef Cihlar (ZEMKON)*

Reporters: *Michael Schaepman and Zbyněk Malenovský (Univ. of Zürich)*

Summary presentation for scientific Land and Solid Earth products, algorithms and validation schemes

Richard Fernandes (NRCAN)

Summary presentation for scientific Oceans products, algorithms and validation schemes

Roland Doerffer (GKSS)

Summary presentation for scientific Cryosphere products, algorithms and validation schemes

Helmut Rott (ENVEO)

Conclusions and Closing remarks

Josef Cihlar (ZEMKON) and Maurice Borgeaud (ESA)

13.00

End of workshop