ASSOCIATION OF CARIBBEAN STATES (ACS)

20 th MEETING OF THE SPECIAL COMMITTEE ON DISASTER RISK REDUCTION

Port of Spain, Trinidad-and-Tobago, 22nd-23rd November, 2012

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STRENGTHENING HYDROMETEOROLOGICAL OPERATIONS AND SERVICES IN THE CARIBBEAN SIDS (SHOCS)

Phase II 2013-2015

Partners

- Association of Caribbean States (ACS)
- Finnish Meteorological Institute (FMI)

Funding and Governance

- Ministry for Foreign Affairs of Finland
- Institutional Cooperation Instrument (ICI)
- **Budget: 1 Million Euros**

This presentation is available at http://Knowledge.fmi.fi
(Login as Guest > Caribbean SIDS>SHOCS Final Workshop)

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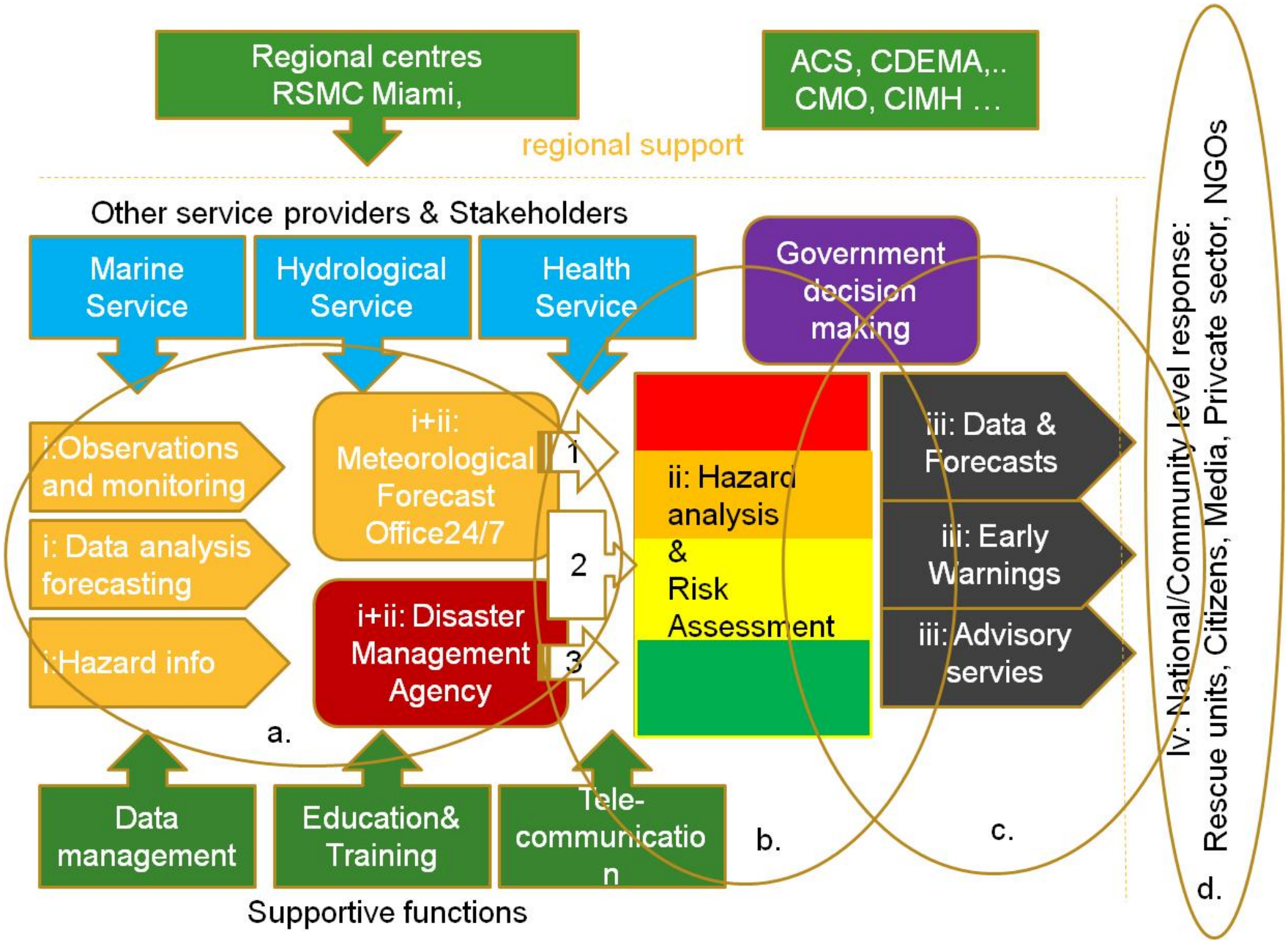
Beneficiaries and stakeholders

Primary Stakeholders: CMO, CIMH, WMO, CDEMA

The local stakeholders are the various organizations within the SIDS involved with MHEWS and DRR, such as Rescue units, NGO's, schools, women's groups and community focal points.

The MHEWS – DRR Process



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Guidance for project planning:

- Acknowledge Finnish Government developing policy, e.g. gender equality, reaching out to communities
- Building on what has been started and achieved
- Create a unique space for the Finnish expertise; complement, but not overlap, with planned/on-going initiatives
- Focus on non-routine activities
- Take into account regional frameworks and strategies (e.g. St. Mark Action Plan , DM, etc.)

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SHOCS PB & MFA Guidance (cont'd)

- **Have a built in element of sustainability**
- **Contribute to specific needs of individual countries while at the same time benefit others through a regional component.**
- **Focus capacity building on NMSs and DMAs**
- **Enhance communication between DMAs, NMSs and other key agencies involved**
- **Keep live contact with individual SIDS, establish support and commitment of the directors of agencies involved**

RESULTS OF THE FEASIBILITY ASSESSMENT *Regional Priorities*

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Standardised communications platform with standardized operating procedures

Strengthen capacity of the SRC to provide 24-hours-a-day real time information

harmonized colour-coded visualization system for weather related alerts indicating areas of elevated risk

Training in the principles of Quality Management and Result Based Management

Establish performance indicators and a Caribbean-wide auditing process for QMS certified agencies.

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Expected results:

- **IMPROVED OPERATIONAL CAPACITY OF THE CARIBBEAN SIDS WEATHER AND CLIMATE SERVICES**
- **IMPROVED CAPACITY OF INSTITUTES FOR THE GOVERNANCE OF THE EARLY WARNING PROCESS**

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SHOCS II Specific Objectives:

- **Meteorologists and Disaster Managers will have improved tools for handling and delivering information on extreme hydro-meteorological phenomena.**
- **Hydro-meteorological information and products will be better available for decision makers and the general public.**
- **Information on slowly developing hazards, climate anomalies and climate change will be better demonstrated**

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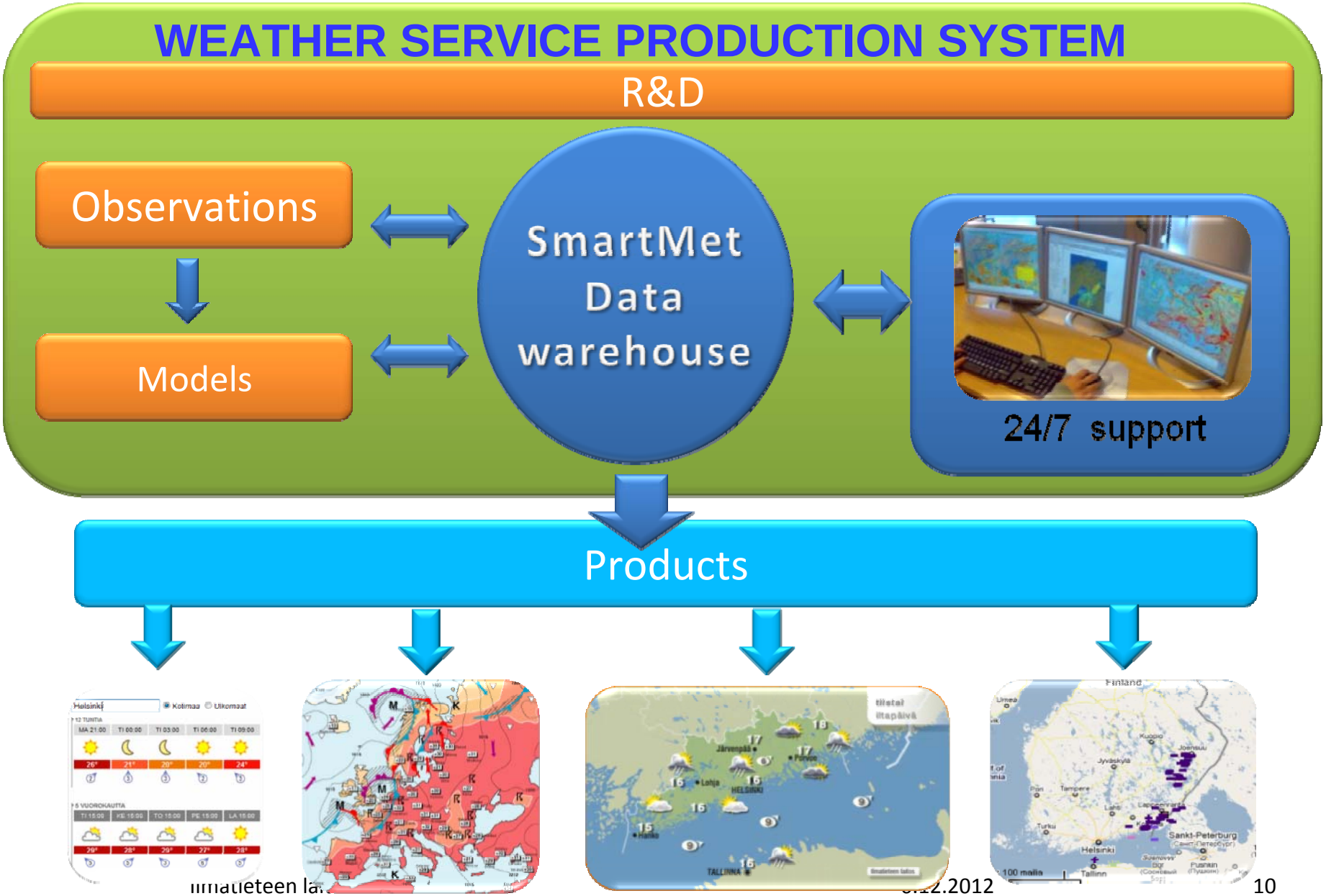
Activity 1.1 *Training and consulting on maintenance and rehabilitation of weather observation stations*

- **Help assembling new AWSs at the selected sites**
- **Maintenance and on-site calibration of AWSs**
- **Finding optimal technical solutions for data retrieval and storage.**
- **Demonstrating and Creating automated and manual QA/QC monitoring procedures for AWS data**
- **Consulting on the purchasing procedures for sensors and rotation of sensors for calibration at CIMH**

Activity 1.2. *Implementation of forecasting tools and production systems at selected NMHSs*



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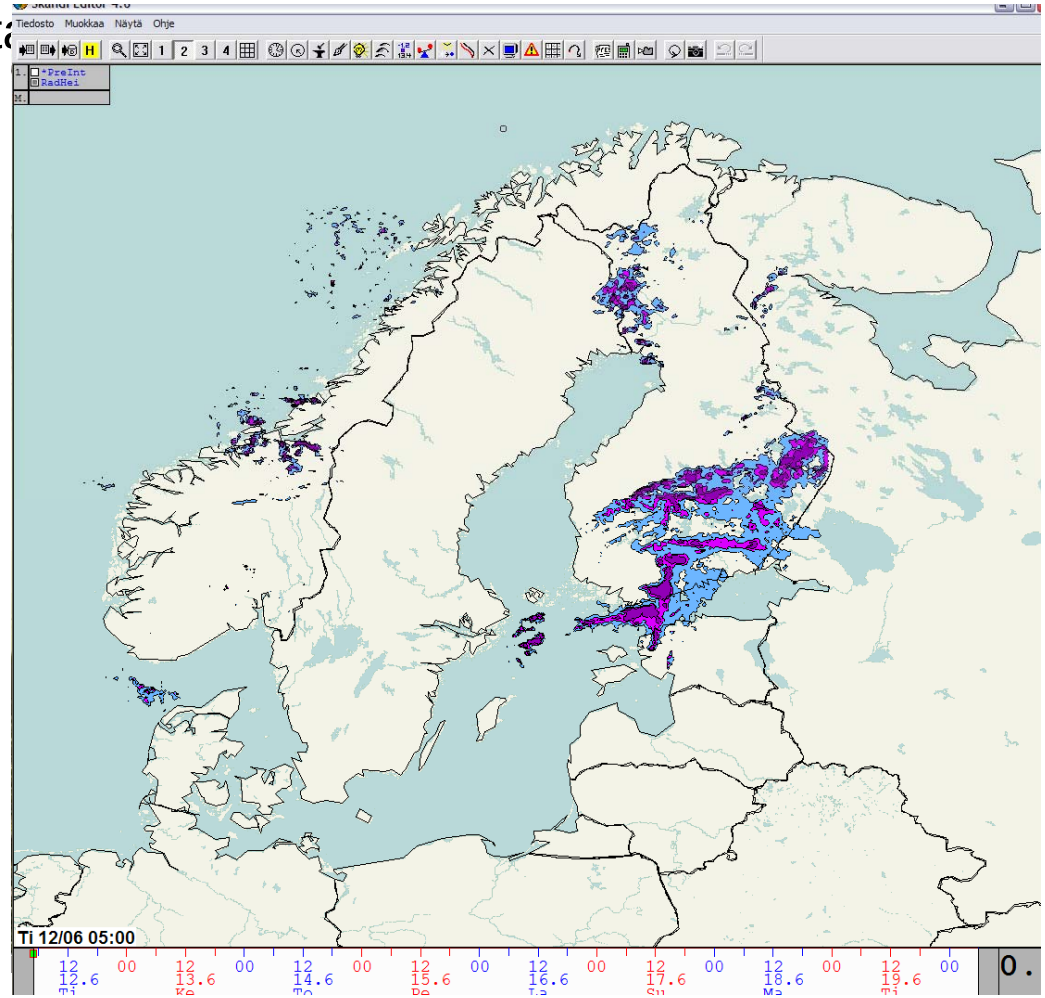
Input data

- Model data: all grid formatted data
- Satellite data
- Weather radar data
- Observation data
- Lightning detection network data
- Data from radio soundings



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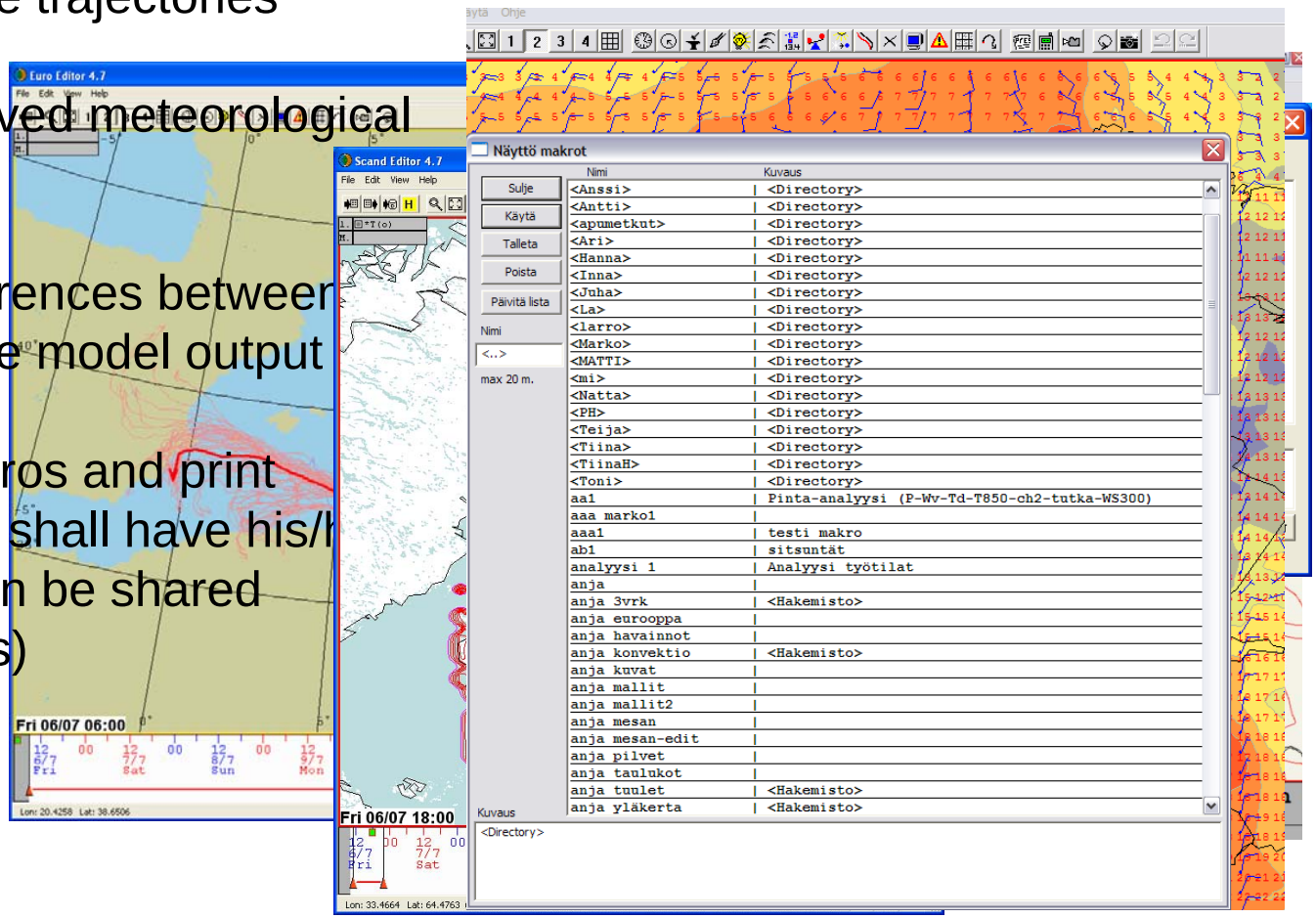
Visualization unique

- Interactively create trajectories
- Visualize self-derived meteorological fields
- Visualize the differences between observations and the model output
- Store display macros and print settings (every user shall have his/h own settings that can be shared between other users)

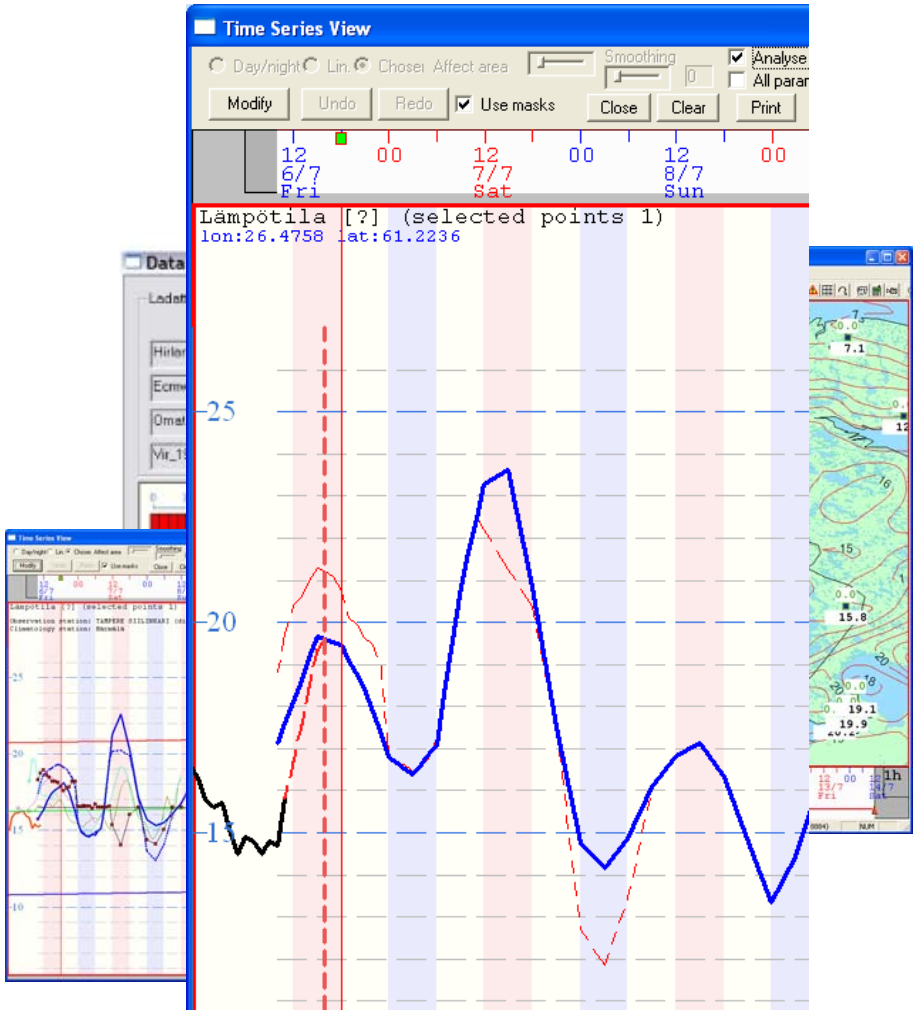


Editing tool modifying

SmartMet enables a user to

- select the forecast model when loading the data
- modify time series
  - e.g. modify directly the parameters of single points (cities) and the tool will spread the changes time and space wise to all grid points

  - e.g. using analysis tool even out like the difference of the observed and forecasted temperature in a given time window



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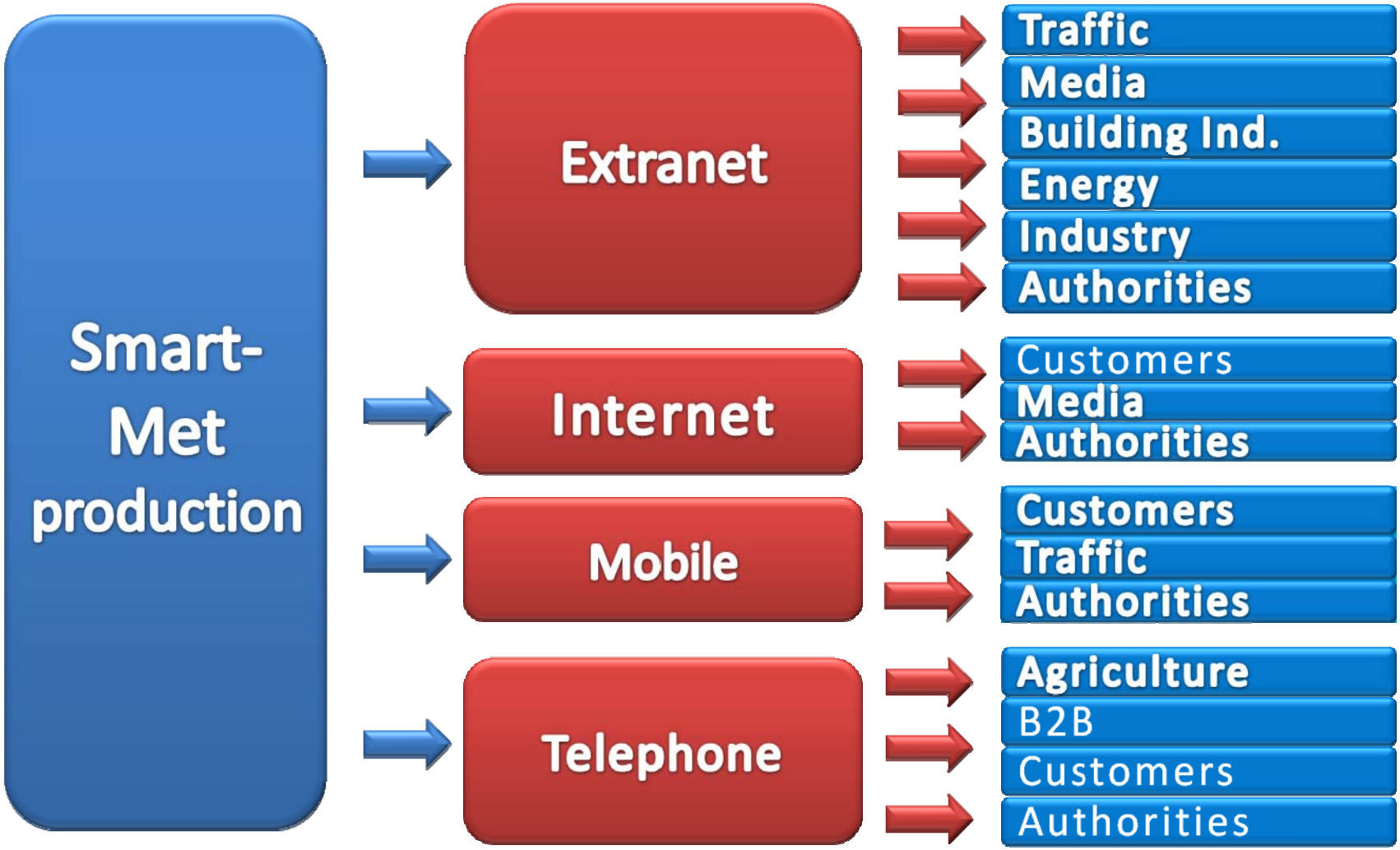
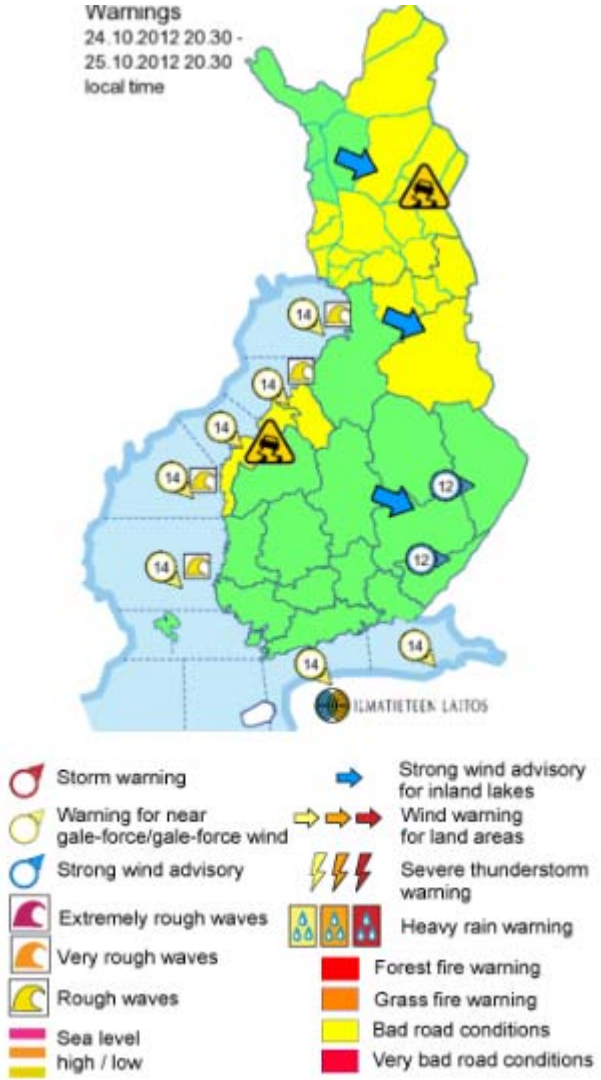
Distribution channels and clients

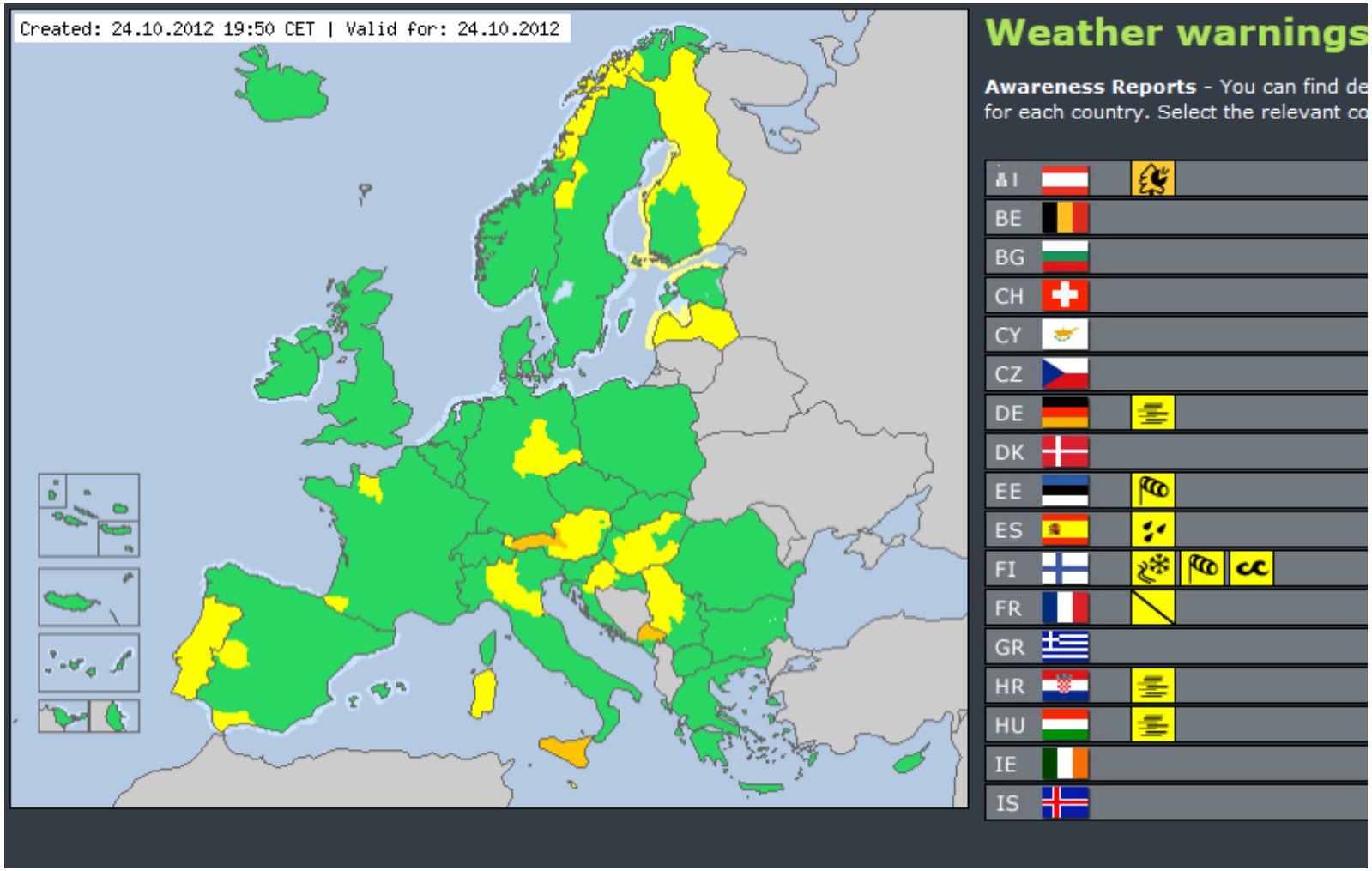


Activity 1.3 Solutions for common presentation and communication of early warnings

- **Software to create web pages showing weather alerts and warnings**
- **Reactivate and rehabilitate the use of <u>Weather Information Network</u> (EMWIN)**
- **Introducing and implementation of the <u>Common Alert Protocol, CAP</u>**



Region wide harmonization of alert information with agreed colors and symbols indicating the level of risk



Example: http://www.meteoalarm.eu

Allow for detailed local information and use of local languages

Weather warnings: Keminmaa

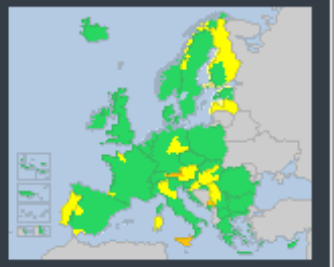
valid from 24.10.2012 18:42 CET **Until** 25.10.2012 18:42 CET
Wind Awareness Level: **Yellow**

Keminmaa: Sisävesillä liikkuvia varoitetaan aluksi voimakkaasta lännen ja luoteen välisestä tuulesta. (Varoitus kattaa seuraavat 24 h. Se annetaan ajanjakson suurimman vaaratason mukaan.) Keminmaa: De som rör sig på insjöarna till en början varnas för den kraftiga västliga till nordvästliga vinden. (Varningen gäller upp till 24 timmar enligt den högsta nivån.) Keminmaa: Advisory of strong west to northwest winds on inland lakes at first. (Warning covers the next 24 h. It is based on the highest awareness level during the warning period.)

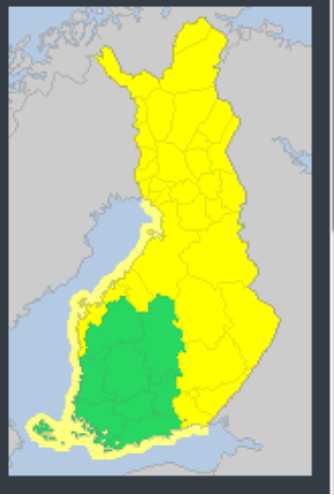
valid from 24.10.2012 18:42 CET **Until** 25.10.2012 18:42 CET
Snow/Ice Awareness Level: **Yellow**

Keminmaa: Ajokeli on huono lumisateen ja tienpintojen jäätymisen vuoksi. (Varoitus kattaa seuraavat 24 h. Se annetaan ajanjakson suurimman vaaratason mukaan.) Keminmaa: Väglaget är dåligt p.g.a. snöfall och tillfrysning av vägytor. (Varningen gäller upp till 24 timmar enligt den högsta nivån.) Keminmaa: Road conditions are bad because of snow and ice-covered roads. (Warning covers the next 24 h. It is based on the highest awareness level during the warning period.)

Back to Europe:

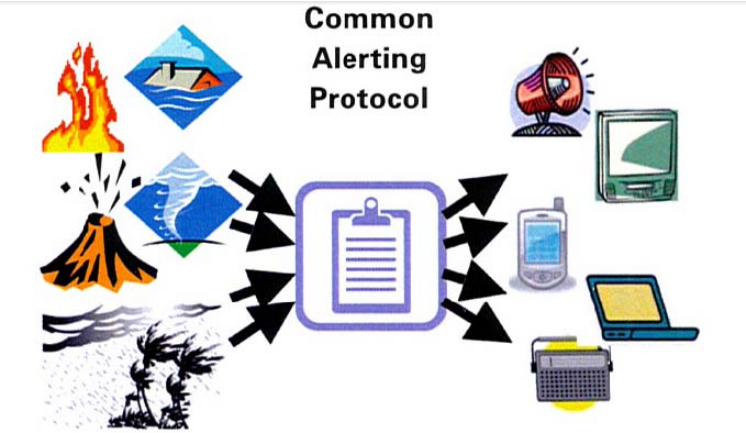


Back to Finland:



Common Alerting Protocol (CAP),

- **CAP is an international standard format, endorsed by WMO, for emergency alerting and public warnings.**
- **CAP is applicable for all hazard types, including hydro-meteorological hazards.**
- **CAP also applies to various media channels/platforms such as such as sirens, cell phones, fax, radio, TV and various internet based communication networks.**



CAP serves as a "universal adaptor" for alert messages

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Activity 2.1 Capacity building on institutional governance through Quality Management

- Consultation to complete the QMSs
- Organize training for QMS auditors
- Demonstrate and promote Result Based Management (RBM); setting and measuring targets)

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Activity 2.2 Enhancing presentation skills - Training on a TV broadcasting solution

- One full installation of a TV- presentation hardware and software associated with training of technical staff and meteorologists from the local Institute.
- Two training courses using the acquired tools and lasting 5 weekdays, with a participation of 6 SIDS (travelling) SIDS Experts will be organized.

Activity 2.3 Enhancing communication of climate information to the Caribbean communities

- Demonstrate present temporal and spatial variability of climate.
- Provide climate outlooks
- Provide climate scenarios
- Demonstrate strength and impacts of extreme phenomena (hurricanes, tropical storms, drought, flooding etc.) based on documentation

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Work Plan:

- **Organization of a team (FMI, CIMH, CDEMA, …)**
- **Available data sources assessedPotential users contacted including local communities**
- **A technical plan of the portal prepared**
- **A demonstration version made ready**
- **Test user feed back**
- **Implementation of a test portal**

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Example: http://ilmasto-opas.fi/en/

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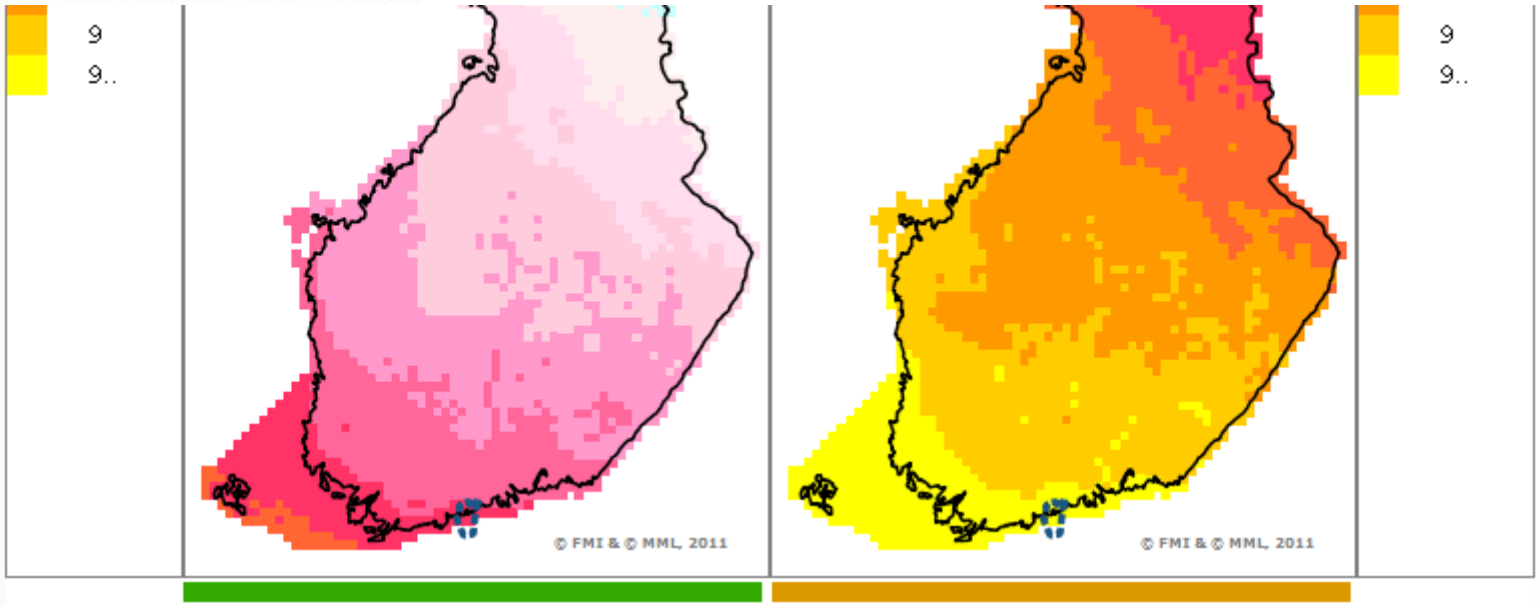

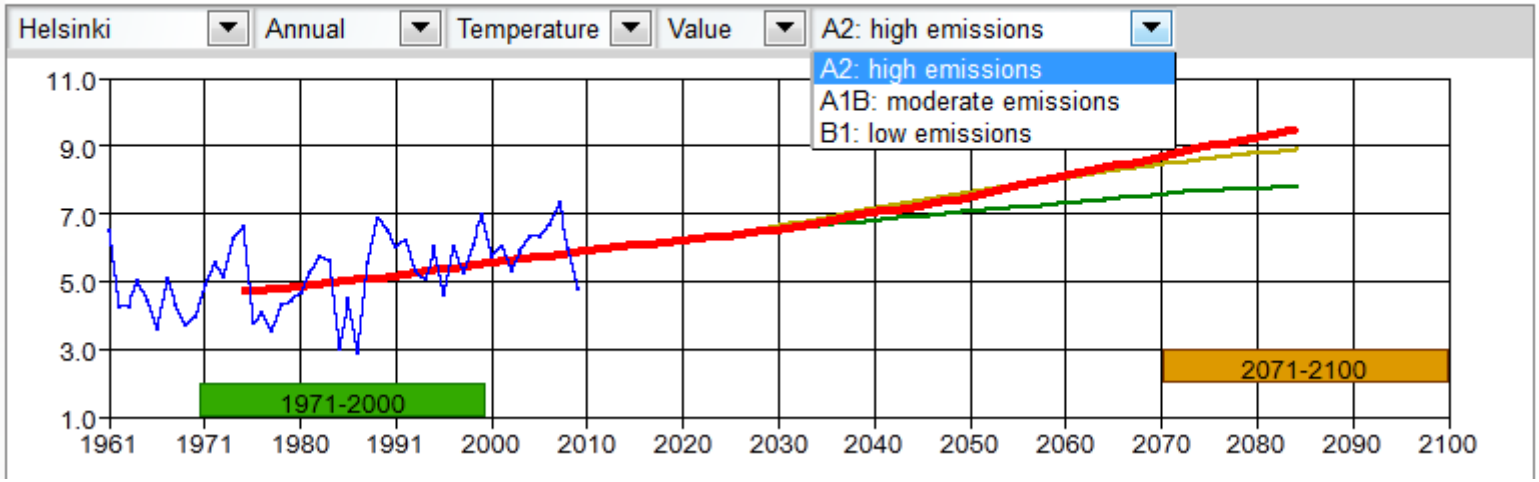

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Activitites and budget

Activity	Total
A1.1 Training on solutions to improve AWS performance and to mobilize observational data regionally	201 375 €
A1.2 Implementation forecasting tools and production systems at selected NMHSs	294 105 €
A1.3 Development and implementation of solutions for common presentation and communication of early warnings	63 300 €
A2.1 Capacity building on institutional governance through Quality Management	104 450 €
A2.2 Enhancing presentation skills or Early Warning information to the general public and communities - Training on a TV broadcasting solution	165 625 €
A2.3 Enhancing communication of climate information to the Caribbean communities	122 870 €
A2.4 Project meetings	27 550 €
Contingency	20 725 €
	1 000 000 €

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SHOCS Phase II: Budget

					% of Total		
Cost Element	**Cost of unit**	**Units**	**Unit**	**Total**		**A1.-A8.**	**A5.-A7.+ B+C**
A1. Work	450-845 €	605	days	**362 215 €**	36 %	70 %	
A2. Travels	1 400 €	68	#	**95 200 €**	10 %		
A3. Accommodation	110 €	360	days	**39 600 €**	4 %		
A4. Allowances	70 €	391	days	**27 370 €**	3 %		
A5. Travels	600 €	112	#	**70 000 €**	7 %		45 %
A6. Accommodation	110 €	440	days	**48 400 €**	5 %		
A7. Allowances	70 €	495	days	**34 650 €**	3 %		
A8. Subcontracted work				**20 000 €**	2 %		
B. Administrative				**25 000 €**	3 %		
C. Fixed Assets		50.8		**268 640 €**	27 %		
D. Contingency				**8 925 €**	1 %		
Grand Total				**1 000 000 €**		**704 635 €**	**424 890 €**

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Way forward of SHOCS II

- Submit ACS Project Concept document
- Submit ICI Project Proposal to MFA
- SHOCS Final Work Shop 21-22 Nov 2012
- Seek approval at the ACS SC DRR meeting 23rd Nov 2012
- Submit ICI Project Document to MFA
- Approval and assignment by MFA
- MoU signed
- Project start

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