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European Provision Of Regional Impact Assessment on a

Seasonal-to-decadal timescale

Deliverable D4.4

Organise and deliver first summer school for junior scientists

Deliverable Title	*Organise and deliver first summer school for junior scientists*
Brief Description	*In May 2015 the first climate service master class of EUPORIAS took place at EURAC's headquarters in Bolzano, Italy. The school, aimed at professional and early career climate scientists, hosted students from six different countries. This first master class of the project focused on three key sectors: agriculture, tourism and energy.*
WP number	WP4
Lead Beneficiary	*Alessandro Dell'Aquila, ENEA; Carlo Buontempo, MetOFFICE*
Contributors	*Felicity Liggins, MetOFFICE* *Matteo De Felice, ENEA* *Marta Bruno Coutinho Soares, UL* *Ghislain Dubois, TEC* *Melanie Davis, IC3*
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Dissemination Level/ Audience	PU	*PU - Public*
		PP - Restricted to other programme participants, including the Commission services
		RE - Restricted to a group specified by the consortium, including the Commission services
		CO - Confidential, only for members of the consortium, including the Commission services

Version	Date	Modified by	Comments
1	25/07/2015		
2	27/08/2015	Paula Newton	
3	27/08/2015	Alessandro Dell'Aquila	

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Executive Summary

In May 2015 the first climate service master class of EUPORIAS took place at EURAC's headquarters in Bolzano, Italy. The school, aimed at professional and early career climate scientists, hosted students from six different countries. This first master class of the project focused on three key sectors: agriculture, tourism and energy. Alongside lectures delivered by speakers from across Europe and Australia, the students were tasked with creating three prototype climate services, in answer to real-life end-user requirements. Such a hands-on a formula worked well and we will replicate it in next year's master class.

With this deliverable, the project has contributed to the achievement of the following objectives (DOW, Section B1.1):

No.	Objective	Yes	No
1	Develop and deliver reliable and trusted impact prediction systems for a number of carefully selected case studies. These will provide working examples of end to end climate-to-impacts-decision making services operation on S2D timescales.		X
2	Assess and document key knowledge gaps and vulnerabilities of important sectors (e.g., water, energy, health, transport, agriculture, tourism), along with the needs of specific users within these sectors, through close collaboration with project stakeholders.	X	
3	Develop a set of standard tools tailored to the needs of stakeholders for calibrating, downscaling, and modelling sector-specific impacts on S2D timescales.	X	

4	Develop techniques to map the meteorological variables from the prediction systems provided by the WMO GPCs (two of which (Met Office and MeteoFrance) are partners in the project) into variables which are directly relevant to the needs of specific stakeholders.		X
5	Develop a knowledge-sharing protocol necessary to promote the use of these technologies. This will include making uncertain information fit into the decision support systems used by stakeholders to take decisions on the S2D horizon. This objective will place Europe at the forefront of the implementation of the GFCS, through the GFCS's ambitions to develop climate services research, a climate services information system and a user interface platform.	X	
6	Assess and document the current marketability of climate services in Europe and demonstrate how climate services on S2D time horizons can be made useful to end users.	X	

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1. Report

EUPORIAS has organised the first climate service master class in Bolzano, Italy held from 18 to 22 May 2015. (http://www.euporias.eu/event/masterclass). The event was hosted by EURAC Institute, an associated partner of the EUPORIAS project. The first EUPORIAS climate service master class has been a first step in the direction of co-production where new climate services prototypes could be developed but, more importantly, where new protocol for interaction could be explained and presented in a hands-on fashion.

The master class was organized with general lectures in the mornings and hands-on practical sessions during the afternoons. These sessions focussed on the **Energy, Tourism and Agriculture** sectors. The full programme is reported in Annex 1. All the presentations and related material is available in http://www.euporias.eu/PresentationMasterclass. All the lectures have focused on the fundamental science underpinning the services, the technical aspect of data retrieval and manipulation, but also on the way specific sectors operate and the social aspects of the service delivery. To make the lectures more directly linked to practical problems, part of the training was based on the development of service prototypes targeting specific decisions presented by a panel of "problem holders" present during the school.

Participants worked together in small interdisciplinary groups throughout the week to develop specific prototypes taking advantage of the lessons learnt and the innovative tools developed in the most recent European initiatives. The presence of end-users and local stakeholders further enriches the experience of the students allowing nontrivial interactions and exchanges between the different communities, as expected in the successfully development of an effective climate service.

A few points emerged from the school which we feel are relevant to a boarder community.

1. Whilst there was a great deal of interest from potential participants, especially in developing countries, the final number of attendees was limited by our inability to mobilize suitable funding in time. Identifying a set of easily accessible grants to support junior scientists from developing countries will be a priority for next year.

2. The quality of the students and the insightful questions they asked were really impressive. Whilst some mirrored discussions already active within the climate service community others were novel and revealed an interesting junior perspective to the field.

3. We worked on real end-user requirements. It was tough going for some of the groups but we feel there is nothing more instructive than real end-user interactions to fully understand the complexity of climate service development.

The feedback comments from the students are reported in Annex 2.

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The full programme of the First EUPORIAS Climate Services Masterclass is here reported

First Climate Services Masterclass

Energy, Tourism, Agriculture in a changing climate

Bolzano/Bozen, Italy, 18-22 May , 2015

Eurac, Viale Druso, 1 / Drususallee 1

http://www.euporias.eu/event/masterclass

Directors: *C. Buontempo (MetOffice), A. Dell'Aquila (ENEA)*
Organizers: *M. Davis (IC3), M. Bruno Soares, (Uni Leeds), G. Dubois (TEC), S. Schneiderbauer (EURAC), L Radici (EURAC), M Petitta (EURAC) , M. De Felice (ENEA)*
_____

Monday, May 18

Introduction: presenting the people, the topics and the school

11:00:   **Registration - WELCOME**

11:15 :   Introduction: The program, the school, the venue

11:30   ***C. Buontempo(Met Office)***: Climate service overview: the Euporias experience

12:00   ***S. Schneiderbauer (EURAC)***: Eurac presentation

12:30 :   **Lunch break**

14:00   ***Suraje Dessai(Uni Leeds)***: Climate services for society: origins,

institutional arrangements, and design elements for an evaluation

framework

15:00	*Felicity Liggins (Met Office)*: Climate service principles
16:00	**Coffee break**
16:30	**Presentation of the students with their own specific questions** *(reported in the registration form)*
18:00	**Ice-breaker Aperitif**

Tuesday, May 19

Introduction and selection of the problems to be worked on

9:00	*Climate services a multidisciplinary approach: splitting in two routes: 'climate data' / 'user needs'*
9:15	*Antonio Cofino (Uni Cantabria)***:** How to get climate information. Where the users can find and manipulate climate data *Marta Bruno Soares (Uni Leeds), Daniel Funk (DWD), Stefan Schneiderbauer (EURAC):* Vulnerability to climate variability and change. Assessing users' needs with regard to climate information
10:30	**Coffee break**
12:00	*Come back to Plenary: main outcomes of the two routes*
12:30	**Lunch break**

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13:30	***Laurent Dubus (EDF):*** Use of climate predictions in Energy sector
14:00	***Ronald Hutjes (Uni Wageningen):*** Use of climate predictions in the Agriculture sector
14:30	***Ghislain Dubois (TEC):*** Use of climate predictions in the Tourism sector
15:00	**Coffee break**
15:30	**Carousel: presentation of specific problems for each sector (by sector champions, stakeholders...)**
16:30	**Splitting in groups of interest and starting of hand-sessions to develop a prototypal climate service for each sector**
18:00	**Report from each group**
18:30	**End of the day**

Wednesday, May 20

Understanding climate variability and how to deal with it

9:00	***Carlo Buontempo (Met Office)*** Main modes of variability of the climate system
10:00	***Jean-Pierre Ceron (MeteoFrance - WMO):*** Underlying processes, skill and reliability of seasonal forecast. Part I
10:30	**Coffee break**
11:00	***Jean-Pierre Ceron:*** idea of consensus and use of information
11:45	***Silvio Gualdi (CMCC):*** State of the arts in climate predictions model and possible future outlook
12:45	**Lunch break**
14:00	***Daniela Domeisen (MarexSpectron):*** Using seasonal weather

forecasts in commodity trading

15:00	**Coffee break**
15:30	*Hand-on sessions*
18:00	**Report from each group**
18:30	**End of the day**
19:30	**Master class dinner**

Thursday, May 21

Understanding climate change and how to deal with it

|	
9:00	*Clare Goodess (Uni East Anglia)* The changing climate of the Mediterranean Region: Impact on energy and other sectors
10:00	**Coffee break**
10:30	*Andrea Toreti (JRC)***:** The changing climate and related impacts on agriculture sector
11:30	*Alessandro Dell'Aquila (ENEA)***:** Uncertainty in climate model projections (and downscaling)
12:30	**Lunch break**
13:30	*Hand-on sessions*
15:00	**Coffee break**
15:30	*Hand-on sessions*
18:00	**Report from each group**
18:30	**End of the day**

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Involvement the users. The front-end of the services

9:00   *Assuncion Lera St Clare (DNVGL)* Co-production of knowledge
                in climate services development

9:45   *Alberto Troccoli (CSIRO)***:** The ICEM/WEMC experience:
                a multidisciplinary community of users and providers

10:30   **Coffee break**

11:30   *Presentation of Prototypes & discussion*

12:30   **Lunch**

13:30   *Close ceremony and awards*

14:00   **End of the school**

ANNEX 2

EUPORIAS master class feedback form from students

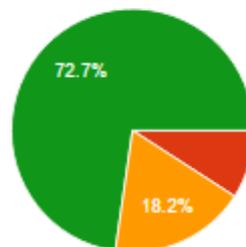**1. How do you rate the overall quality of the school?**
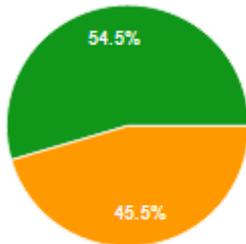
Poor	0	0%
Average	0	0%
Above average	5	45.5%
Excellent	6	54.5%

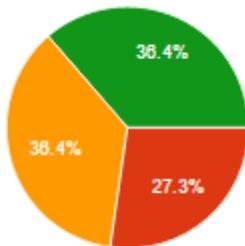**2. How would you rate the general quality of the lectures?**
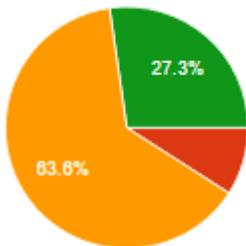
Poor	0	0%
Average	1	9.1%
Above average	7	63.6%
Outstanding	3	27.3%

3. How do you rate the quality of the venue?

Poor	0	0%
Average	1	9.1%
Above average	2	18.2%
It is an outstanding location!	8	72.7%

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4. Has the school addressed your training needs?

Poorly	0	0%
Averagely	3	27.3%
Very well	4	36.4%
Well above my expectation	4	36.4%

5. What is the aspect of the school that you most liked?

Easy interaction with the organizers and the flexibility of the programme.

The prototype were not so organised and it gave us the opportunity to learn from real situation.

The best has been the high availability of all the lecturers and the master class organizers during all or most of the week and the fact that all days were intense and full with interesting talks. Some other training schools loose intensity and interest by the end of the week and here there has been a good balance.

Contact with speakers

Personal contacts

- the team-work on "real" cases, - days 1,2 and 5 lectures, -the interdisciplinary group everyone's involvement, their willingness to share their time, energy and knowledge and build something great together; the impressive quality and variety of participants

very good balance within the different climate services themes

the hands-on sessions, the interest of lecturers and organizers in the whole programme

R tools (and software solutions) to get climate data

- the team-work on "real" cases

6. What would you change?

Registration fee covering lunch expenses: registered students will more likely come after confirming their venue. Easier planning for the staff of the Eurac café.

It could be good if the participants would stay at the same place

Less is more. Less speeches in order to improve interaction within students and speakers

Trade some of the time spent on discussing general concepts for time spent proposing concrete solutions to various problems (e.g., how to interpret probabilistic simulation ensemble results) + associated exercises to test understanding

More time to work in groups

Do not put an entire day of lectures

Days 3 and 4 lectures, in my opinion too specialized and less explicitly linked to the "how to" design climate services

Since the master class has a multidisciplinary vocation, I would have preferred that some of the lectures centred in the scientific content were less focused in the scientific technical details and more centred in giving an overview of the current scientific knowledge on climate services, which are the next challenges being addressed and where should the research move to.

7. How did you learn about this school?
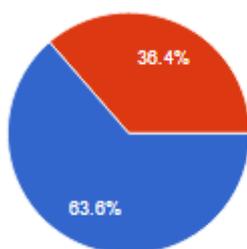
Through a colleague	7	63.6%
Mailing list	4	36.4%
Twitter	0	0%
Altro	0	0%

8. Do you have any suggestions/ideas of other ways of advertising this school to others?

no

More time for the work on prototype.

Actually nothing you are not already doing: school advertising during conferences, workshops and especially making dedicated seminars at different universities or research centre.

Make a short video with footage from Bolzano and the EURAC building (EURAC could provide some from their already edited videos) mixed with footage of the lectures and some pictures. Edit and publish the videos of the lectures and circulate them periodically next year as the date for the new master class gets closer.

Laurence.Touchon@lmd.jussieu.fr : can spread the info to all PhD students on climate and environmental sciences in Ile-de-France (Paris region).

9. Will you recommend this school to a friend/colleague?
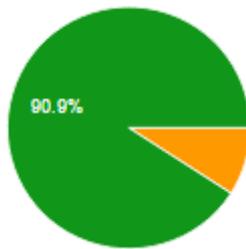
Very unlikely	0	0%
Maybe	0	0%
Likely	1	9.1%
I will certainly do so!	10	90.9%