ClimVar & ICZM Project

Regional Conference on the Evaluation of Socio-economic Impacts of Climate Variability and Change in coastal zones

Kiel, Germany, September 7 - 8, 2015

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Day 1. Practical training on the DIVA model

Agenda items 1, 2 and 3: Welcome addresses, Overview of the project results and products per components and presentation of the training programme

1. The Regional Conference on the evaluation of socio-economic impacts of Climate Variability and Change (CV&C) in coastal zones was held at the Geographic Institute of the University of Kiel, Germany, from September 7 to 8. The meeting was attended by twenty-odd participants, including representatives from Croatia, Libya, Montenegro, Morocco and Tunisia, experts from the Blue Plan, the Med Sea Foundation, the Basque Center for Climate Change and the University of Split, as well as representatives of the University of Kiel and PAP/RAC as conference organizers (a complete List of participants is attached as Annex 2 to this report). The participants were welcomed by the Director of the Excellence Cluster Future Ocean – a network which regroups the Faculties of the University of Kiel, the Kiel Institute of World Economy, the GEOMAR Institute and the Mathesius Institute of Fine Arts into a strongly integrative and multidisciplinary structure.

2. After a brief presentation and review of the activities and products of the ClimVar project per components, provided by Mr. Antoine Lafitte from the Plan Bleu and Mr. Sylvain Petit from PAP/RAC, the DIVA team experts gave an overview of the concepts and history of the DIVA model and explained its structure. The DIVA Team experts then introduced the training procedure, and the participants were divided into working groups to proceed with the computer-based practice. This was an excellent opportunity for them to, with the assistance of students from the University of Kiel, run the model and discuss its components.

Agenda items 4 and 5: Introduction and computer-based training

3. The version of the DIVA model made available for the practical training was an old version of the model. This version is indeed just as accurate as the latest version in order to get a clear idea of the concepts behind the model. Mr. Nassos Vafeidis of the DIVA team, who led the training, insisted on the fact that when considering the results of the model, the number and values are not crucial. He highlighted the need to have the contribution of local experts to read through the results and get a local picture of the model that makes sense.

4. The exercise was organised as a step-by-step discovery of the features of the model. After they had run the model, for random parameters, most of the participants insisted to get a better picture of the structure “behind” the model, to find out how the parameters are set and how to adapt them to specific national or local parameters. Another key question also arose concerning the possibility to downscale the model, namely: “At what point does the model break down when being downscaled?” and also, as pointed out by Ms. Martina Baucic, PAP/RAC Expert, University of Split: “How will one be able to compare the results of the model at a global or regional scale if you adapt it, and modify its core parameters to adapt it to local conditions?”.

5. A lively discussion followed during which the participants could assess in more detail the components and the structure of the model. As mentioned above, some of the limits of the downscaling of the model were highlighted, but by questioning the DIVA experts, the participants got a better glimpse of the concepts and structure behind the model. Due to the short time available and the complexity of the model, most of the participants were eager to follow up with the DIVA team after the meeting to get a clearer picture. The experts of the University of Kiel responded positively to the demands for further exchanges, after the training. They insisted on the added value for the model to get feedbacks from local and multidisciplinary panels of experts, which, as a result, will certainly help improve the latest version of DIVA.

Day 2. Workshop on the evaluation of socio-economic impacts of Climate Variability and Change on coastal zones

6. The workshop was meant to present and discuss some of the key results and products of the ClimVar & ICZM project, in terms of methodologies applied and practical studies at the national and local level. A particular emphasis was given to the cases in Tunisia, and the finalisation of key outputs, such as DIVA Tunisia, evaluation of CV&C impacts on key economic sectors in Tunisia and also the Guidelines for socio-economic evaluation of CV&C impacts on coastal zones in the Mediterranean.

Agenda item 6: The participatory approach in Tunisia – Climagine. ***Mr. Antoine Lafitte (Blue Plan)***

7. Due to the delay of the Tunisian partners the agenda had to be rescheduled and Mr. Antoine Lafitte presented the results of the demonstration project implemented in the Kerkennah Archipelago, in Tunisia. The Tunisian partners participating to the meeting were much aware of these results, as APAL they were representing, was the key national agency in running this activity, alongside with international partners: the Blue Plan, GWP Med and UNEP-Grid Geneva.

8. Most of the discussion that followed was related to the efforts done to bridge the international approach applied, the RiVamp model, with local knowledge. A great effort was invested to gather data at different levels and also to bring local partners to the table through the Climagine workshops during which the risks and possible management measures for the area in the light of the model's latest findings were discussed.

Mr. Lafitte's presentation is available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGgB6GZt7pgHM9y0PDV21a?dl=0

Agenda item 7: Presentation of the DIVA results : (i) Croatia, (ii) Tunisia. ***Mr. Nassos Vafeidis, DIVA team***

9. Following the training and presentations of Day 1, Mr. Vafeidis gave an overview of the results produced by the DIVA model downscaling in the two pilot countries, Croatia and Tunisia. He emphasised the value of exchanges with local experts in Croatia as a real added value to the model. In parallel, he called for more exchange with the Tunisian partners in order to refine the results. Both the Croatian and Tunisian reports are now being finalised.

Mr. Vafeidis's presentations are available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGgB6GZt7pgHM9y0PDV21a?dl=0

10. The Croatian partners insisted on the need to pursue the efforts in integrating local feedbacks in order to wrap up the results of the model in the most accurate manner. Mr. Adel Abdouli, Director of the Coastal Observatory - APAL, recalled that the Coastal Observatory (APAL) shared Shape files with the DIVA team as valuable information in terms of description of the coast and its characteristics. He insisted on the importance of the integration of such data in the model and welcomed the possibility of further exchange of expertise between APAL, the Tunisian institutions and the Excellence Cluster Future Ocean.

11. Particular attention was paid by the participants to the different outputs of the model, graphics, maps, tables, and above all, the importance of interaction between model experts and local practitioners.

Agenda item 8: Role of the Tunisian National Agency for Planning and Protection of the Coast (APAL) in the project. Future Tunisian commitments towards CV&C. *Mr. Adel Abdouli (APAL)*

12. Mr. Adel Abdouli, APAL, gave a detailed overview of the role of APAL in implementing the ClimVar project activities in Tunisia, both at the national and local level. He insisted on the facilitating role played throughout the project, especially regarding data collection and analysis.

13. He highlighted the commitment of Tunisia in tackling erosion, submersion and in building better planning schemes for coastal development by integrating to the process, considerations about CV&C impacts. Tunisia is willing to continue with the research and participatory approach implemented in Kerkennah in other areas as well. Also, the Tunisian experts are eager to further discuss the DIVA results and capacity building options.

14. In the near future, a project financed by UNDP in Tunisia will step forward in the same direction as ClimVar & ICZM, with the principal objective to bridge science and decision making, and to build sound adaptation measures to CV&C in coastal zones.

Mr. Abdouli's presentation is available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGqB6GZt7pqHM9y0PDV21a?dl=0

Agenda item 9: Analysis of the Tunisian data for the realisation of the study on the impacts of CV&C on key coastal economic sectors in Tunisia. *Ms. Nabila Halouani. (APAL-PAP/RAC Expert from Tunisia)*

15. Ms. Nabila Halouani, APAL and PAP/RAC Expert from Tunisia, provided a clear and detailed overview of the Tunisian institutions, organisations, research centres which provided data and information for the realisation of Mr. Markandya's study on the impacts of CV&C on key economic sectors in Tunisian coastal zones. She explained her work as a consultant to gather and analyse the data needed. She emphasised the value of data available, but insisted on the difficulty she had to overcome. A lot of negotiation was needed when contacting institutions and organisations to get the data. Moreover, she had to carry out her mission in a short time available and to collect a large amount of data expected.

16. She concluded that the Tunisian authorities, and most organisations dealing with coastal planning, were very much interested in enhancing their capacities in innovative researches as Mr. Markandya and the DIVA team have proposed. These tools have been recognised as crucial for the harmonisation between different structures, particularly in data collection and management, a vector of synergy to cope with arising challenges related to CV&C and also, in the end, for the implementation of new management plans.

Ms. Halouani's presentation is available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGqB6GZt7pqHM9y0PDV21a?dl=0

Agenda item 10: Study on the impacts of CV&C on key coastal economic sectors in Tunisia. Guidelines for the evaluation of CV&C socio-economic impacts in coastal zones*. Mr. Anil Markandya (BC3 Basque Centre for Climate Change)*

17. Mr. Anil Markandya from the BC3 Basque Centre for Climate Change presented both the methodology and the result of his study in Tunisia. He recalled the participants of the methodology to evaluate the impacts of CV&C on key economic sectors implemented in various areas within the ClimVar project, e.g. in the Buna-Bojana transboundary area between Albania and Montenegro, and in the Sibenik-Knin County in Croatia. This specific exercise principally aims to valorise local and available data, to put them in perspective with international data and recognise CV&C scenarios (E.G. IPCC 5) worldwide in order to propose some adaptation measures.

18. He presented the results obtained in the following key economic sectors: agriculture, fisheries, tourism, forests, health and energy. In order to achieve a better analysis, Mr. Markandya pointed out the lack of quantitative analysis and studies available, and some key sectors where updating of data is needed, e.g. regarding the water resource and energy consumption.

19. The participants pointed out tourism as a sector to face many issues when considering CV&C impacts in the future, all around the Mediterranean. Connections were discussed for further researches regarding the role of the banking and insurance sectors, as well as the need for stronger interlinks between private and public sectors.

20. The results, and in particular the adaptation measures proposed for Tunisia will be commented, corrected and updated by the Tunisian partners before the end of September, under the supervision of the National Focal Point of the project. The study will then be finalised by Mr. Markandya.

Mr. Markandya's presentation is available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGqB6GZt7pgHM9y0PDV21a?dl=0

Introduction to the Evaluation of the socio-economic impacts in the coastal zone of the Sibenik-Knin County, Croatia, for the realisation of the local ICZM Plan. *Mr. Anil Markandya (BC3 Basque Centre for Climate Change)*

21. Mr. Markandya gave a brief overlook of the work done in the Sibenik-Knin County in Croatia. A thorough evaluation of the socio-economic impacts of CV&C was undertaken there, involving a large range of local, national and international experts and participatory workshops (including the Climagine) which led to major recommendations for the integration of CV&C considerations into the ICZM Plan for the County.

Mr. Markandya's presentation is available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGqB6GZt7pgHM9y0PDV21a?dl=0

Agenda item 11: GIS vulnerability analysis: Evaluation of climate change impacts in the coastal zone of the Sibenik-Knin County, Croatia, for the development of the ICZM plan. *Ms. Martina Baucic, PAP/RAC Expert* (*University of Split, Faculty of Civil Engineering, Architecture and Geodesy, Croatia)*

22. The vulnerability study presented by Ms. Martina Baucic, PAP/RAC Expert, University of Split, Croatia, was a key component to the work done within ClimVar & ICZM project implementation in the Sibenik-Knin County in Croatia. She introduced to the participants the work done insisting on the

efforts invested to make the vulnerability study as clear and transparent as possible for decision makers and the public. In comparison, she pointed out the lack of transparency behind the DIVA process for the end users.

23. She highlighted the fact that this vulnerability mapping approach was a strong tool to influence public opinion and decision makers, especially some of the features displayed, such as the overlapping of key cultural heritage sites with identified vulnerable areas. The participants welcomed the efforts done in building a tool that really helps integrate CV&C impacts into spatial planning decision making in coastal areas.

Ms. Baucic's presentation is available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGgB6GZt7pgHM9y0PDV21a?dl=0

Agenda item 12: Application of a Multi-Scale Coastal Risk Index at Regional and Local Scale in the Mediterranean. ***Mr. Alessio Satta (Med Sea Foundation & Blue Plan Expert)***

24. In order to complete the overlook of the ClimVar project activities, Mr. Alessio Satta, Med Sea Foundation & Blue Plan Expert, presented the research work done in order to establish a regional vulnerability index, a sort of a main index on the topic, considering approaches such as the DIVA. The index aims at highlighting major vulnerability hot spots in the project countries, and does not intend to propose adaptation measures.

25. After a detailed presentation of how the index was built, questions were raised on some of the parameters taken into consideration, arguing their accuracy, for example the touristic seasonal pikes. Mr. Satta explained that the index as variables that are adjusted regarding the level of the details depended on the data shared by the participating countries. Moreover, as it was the case in the RiVamp modelling approach at the local level in the Kerkennah Archipelago, when working on a global index, on site verifications are needed. For example, according to the feedback provided by countries, which was the case on the Palestinian coast in Gaza, some local vulnerability studies confirm the results of the index, which Mr. Satta argued as very encouraging.

26. Many questions aroused but, because of shortage of time, it was agreed that Mr. Satta would answer individually the participants who wish to find out more on the index and its results.

Agenda item 13: Introduction to the Field Trip – Coastal management in Germany. ***Mr. Horst Sterr (Christian-Albrechts University Kiel, Germany)***

27. The meeting was closed by a very enthusiastic and detailed presentation by Mr. Horst Sterr, the Christian-Albrechts University from Kiel, who introduced the German coastal zones with a special emphasis on the Baltic Sea. He explained a precise analysis of the morphology of the coasts, the risks at stake, the state-of-the-art in terms of research and the adaptation approaches implemented through history until nowadays.

28. Finally, Mr. Sterr presented the itinerary scheduled for the afternoon field trip and described briefly the areas to be visited. The field trip was an opportunity for Mr. Sterr to add more details and answer many questions related to German coastal engineering, adaptation and management planning.

Mr. Sterr's presentation and pictures from the field trip are available at the following link:
https://www.dropbox.com/sh/ja3i4bishvy7olp/AADeGgB6GZt7pgHM9y0PDV21a?dl=0

Note to the participants:
All the documents mentioned in the Report, as well as the results and products to the ClimVar & ICZM project, will be available at the PAP/RAC and/or Plan Bleu websites.

Annex 1: Agenda

DAY 1. Practical training on the DIVA model, by an expert team from the University of Kiel

8h30 – 9h00	Registration of participants.
09h00 – 09h30	Welcome addresses (with the presence of the Director of the Future Ocean Excellence Cluster, Prof. Dr. Martin Visbeck).
09h30 – 10h00	Overview of the ClimVar project activities related to the evaluation of socio-economic impacts of climate variability and change on coastal zones: ➢ Project components in the Sibenik-Knin County, Croatia (Mr. Sylvain Petit PAP/RAC); ➢ Project components in the Kerkennah Archipelago, Tunisia (Mr. Antoine Lafitte – Blue Plan).
10h00 – 11h00	Presentation of the training programme (DIVA team).
11h00 – 11h30	*Coffee break.*
11h30 – 12h30	Introduction & computer-based training.
12h30 – 14h00	*Lunch.*
14h00 – 16h00	Computer-based training (cont.).
16h00 – 16h30	*Coffee break.*
16h30 – 18h00	Computer-based training.

DAY 2. Workshop on the evaluation of socio-economic impacts of Climate Variability and Change on coastal zones

09h00 – 09h15	Registration of the participants.
09h15 – 09h45	Presentation of the DIVA results : (i) Croatia, (ii) Tunisia. *(Mr. Nassos Vafeidis, DIVA team)*
09h45 – 10h00	Analysis of the Tunisian data for the realisation of the study on the impacts of CV&C on key coastal economic sectors in Tunisia. *Ms. Nabila Halouani (APAL-PAP/RAC Tunisian Expert)*
10h00 – 10h30	Study on the impacts of CV&C on key coastal economic sectors in Tunisia. Guidelines for the evaluation of CV&C socio-economic impacts in coastal zones. *(Mr. Anil Markandya, BC3 Basque Centre for Climate Change)*
10h30 – 11h00	Discussion.
11h00 – 11h15	*Coffee break.*
11h15 – 11h30	The participatory approach in Tunisia – Climagine. *(Mr. Antoine Lafitte, Blue Plan)*
11h30 – 11h45	Role and national perspectives of the Tunisian National Agency for Planning and Protection of the Coast (APAL) in the project. Future Tunisian commitments towards CV&C. *(Mr. Adel Abdouli, Director of the Coastal Observatory - APAL)*
11h45 – 12h15	Introduction to the Evaluation of the socio-economic impacts in the coastal zone of the Sibenik-Knin County, Croatia, for the realisation of the local ICZM Plan. *(Mr. Anil Markandya, BC3 Basque Centre for Climate Change)* GIS vulnerability analysis: Evaluation of climate change impacts on coastal zone in Sibenik-Knin County, Croatia, for the development of the ICZM plan. *(Ms. Martina Baucic, PAP/RAC Expert, University of Split, Faculty of Civil Engineering, Architecture and Geodesy, Croatia)*

12h15 – 12h45	Application of a Multi-Scale Coastal Risk Index at regional and local Scale in the Mediterranean. *(Mr. Alessio Satta, Med Sea Foundation & Blue Plan Expert)*
12h45– 13h00	Introduction to the field trip – Coastal management in Germany. *(Mr. Horst Sterr, Christian-Albrechts University Kiel, Germany)*
13h00	Meeting closure.
13h00 - 14h00	*Lunch.*
14h00 – 18h00	Field trip. Baltic Sea actors and coastal and marine adaptation measures to CV&C.

Annex 2: List of participants

Regional Conference on evaluation of socio-economic impacts of CV&C on coastal zones
(University of Kiel, Germany, 7-8 September 2015)

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