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CIRCLE CA

Climate Impact Research Coordination for a Larger Europe

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Report on Climate Change Impacts related criteria of the group, prioritised research gaps, and action plan on how to fill them using CIRCLE's approaches.

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1 INTRODUCTION

In accordance with the CIRCLE DoW from September 2005, WP 3 GROUP shall *identify and provide a report on climate change impacts related criteria of the group, prioritised research gaps and action plan on how to fill those using CIRCLE's approaches.*

The Task Groups are the Mediterranean (MED), the Nordic, the Atlantic, the Central and Eastern European countries (CEE), the Mountain and the Developing country group. The strategy for reaching the CIRCLE goals in the Tasks of WP GROUP varies. The CIRCLE MED group and the CIRCLE Nordic group have already issued pilot calls. The CIRCLE Atlantic group started elaborating on possible topics for a joint call, but looking at the MED process it was found that research issues were very similar. For this reason it was decided to postpone the call to 2009. The CIRCLE CEE group will have a series of workshops with participants from eastern countries to learn about their needs and possibilities to collaborate with CIRCLE, but also to exchange experiences between CIRCLE and CEE countries. The CIRCLE Mountain group have provided a basic report as an input to EU FP 7 and finally the CIRCLE developing country group was decided to be postponed according to the administrative troubles.

This report shows difficulties met with in issuing a joint call as well as ways to overcome barriers and restrictions. It may serve as an input for upcoming CIRCLE joint calls (launched e.g. by the Mountain or the Atlantic group). The idea behind this report: future joint calls should profit from lessons learned and experiences made by the pilot calls. The WP GROUP also provides a platform for regional discussions on how to go forward with a larger set of countries, (not restricted to Central East Europe (CEE group)). The CEE group workshops give added information to the forthcoming activities in CIRCLE.

1.1 Aim of the joint pilot calls

The two pilot calls' main aim was to identify possibilities and barriers for future cooperation of funding institutions. Enhancing cooperation regarding climate impacts/adaptation research and finding topics that give added value in being launched jointly than on a national level are important issues.. Moreover a vehicle for the consideration of Science – Policy interaction could be provided.

1.2 Setting for a joint call

The MED group was the first focussing on a call. They provided a series of reports on *Framework for the first pilot CIRCLE-MED coordinated call, Framework for the evaluation of the first pilot CIRCLE-MED coordinated call and CIRCLE-MED first coordinated call.*

Early in the discussion, the joint calls eligibility had to be thoroughly discussed in Israel and Italy and it was not accepted until late in the MED process. Also the

timeline for the availability of the grant varied from country to country: For example: Israel preferred launching the call in spring at the latest, while other countries have other time plans.

The Nordic group started preparing a report (available at <http://www.circle-era.net/>) on key impacts in important sectors in the Nordic countries, including Russia. In the same report, also regional co-operation topics were identified such as possibilities to have (i) web portals / information-brokerage of national research agendas and activities, (ii) opening of national calls for other countries in the region and (iii) pooling resources into joint calls or joint topics with national calls, funding and administration, but with collective regional elements in research activities, stakeholder involvement and research communication. As a first step, it was decided to have a joint call.

1.3 Finding a theme for a joint call

The MED process

For identifying a topic for the joint call, the MED-group, consisting of France, Portugal, Italy, Israel and Galicia, circulated a questionnaire

The following four topics were identified for the MED call (conclusions of the group meeting in Jerusalem):

Theme 1: Desertification in the Mediterranean

Theme 2: Climate change and health

Theme 3: Water and agriculture

Theme 4: Coastal areas

The already existing GICC (the French CIRCLE programme) Scientific Committee provided their priorities considering scientific relevance and the perceived added value in regional co-operation. Other Partners had different rankings.

The MED group had an intense discussion on the proposed topics mainly due to their different interpretation of the suggested themes, and the capacity of the national programmes to fund the topics. According to the French Partner and its research programme, the GICC Scientific Committee, "coastal zones" can be defined as a quite extensive topic that can bring together several disciplines from water to health themes. This opinion was not shared by Israel. Israel was of the opinion that adaptation comprises a narrower field in coastal zones than water resource issues.

The French Partner meant that impacts & adaptation environment issues cannot be addressed by a specific Ministry alone such as agriculture, transportation, but they are rather issues that have transboundary impacts and possibly solutions as well. This broad field was seen as being difficult to bring into the first call, which is a pilot operation on adaptation, where much of the work has to rely on available results on impacts.

The key questions to be solved in the MED call referred to costs and economics such as:

1. What are the additional costs of the impacts of climate change in such or such domain?
2. What are the socio-economic costs of mitigation of impacts, adaptation, and remediation?
3. Taking into account the various associated policies, what is the most economic one? What are the political and societal consequences? Are they acceptable? If not, are there any other solutions and which ones?

A theme (Annex 1) was finally decided on and the call text was formulated by an expert team composed by the different national contacts with their own experts. One important feature was to connect sea and rivers in coastal zones.

The Nordic process

In the beginning of the discussions two Swedish Partners took part, but FORMAS pulled out when they did not see the theme being in line with their aims. Denmark was not ready for a joint call, while they were developing a new research programme. Iceland was on their way out of their energy related research and felt not ready and also Russia wanted to wait and see. Finally, the three countries Finland (AKA), Norway (RCN) and Sweden (SEPA) decided to go for a joint call on their own.

In the outline for the Nordic group co-operation, also discussed in the background paper, several steps were identified. Meetings with scientists and stakeholders were on the agenda for identifying research topics. The WP SPREAD offered to be a facilitator in this process. However, it became clear rather early that this way was not possible due to Partners normal procedures.

AKA, which is governed by the research society, was free to have an open call within climate change. SEPA's research grant aims at giving the organisation a better basis for the environmental work and therefore the approach in formulating research questions is partly delegated to the users in the organisation, to secure the usefulness of research results in the policy process. At this time SEPA took a step aside from these rules and decided that the interest in the adaptation research was already in place since the national adaptation programme CLIMATOOLS recently had been decided on and could serve as the backbone for SEPA to take part in the call.

RCN had already three main themes running, which they had difficulties go around. As a consequence it was elaborated on their three themes and how to meet the other two partners' interests. The three topics that RCN had to stay within were quite broad and due to the fact that AKA did not have any restrictions while SEPA's main topics are within policy, tools and measures for implementing climate strategies, it was possible to come to an agreement for a call theme within the RCN topics (below).

- 1. Research on consequences of climate change for ecosystems and on trades/industries based on biological resources.** Basic and process-oriented research, to make it possible to develop predictive models with respect to ecological responses to climate change. This will mostly be natural science (ecology) research. Regarding industries using biological resources, the most relevant ones would be fisheries, forestry or reindeer husbandry/grazing. Natural science, social science and economics are relevant. *(Comment: Forestry and reindeer husbandry could meet common Nordic research aims).*
- 2. Nationally coordinated projects combining research on consequences of climate change and adaptation to climate change.**

- **Climate change in the northern areas**, consequences for important sectors and industries, options for adaptation. Research activity in a Nordic context is mentioned explicitly. ERA-net cooperation has already been mentioned. (Comment: *This could have been a fruitful starting point, but sectors and groups in society where there is common interest of having research done should be elaborated on*).
 - **The significance of climate change for development of climate policy.** How climate change alters the premises and options for policy in relevant sectors, planning needs etc. Comparative studies are mentioned. (Comment: *This was the theme that finally became a call, Annex 2*).
3. **Feedback processes in the climate system.** Natural science research on more specific processes in the atmosphere-ocean, atmosphere-biosphere linkages and so on. (Comment: *This is not a relevant topic under CIRCLE as it falls outside of the scope of research on impacts and adaptation*).

2 CALL MANAGEMENT

At the EBM meeting in Toulouse 2006, parallel sessions with the groups MED and Nordic took place and one Nordic represent also followed the MED group to seek common approaches.

2.1 Organisation

The MED group set up a secretariat consisting of one person (France) and a virtual secretariat (secretariat-Med@circle-era.net) consisting of 5 persons, one per partner. A Call Steering Committee (CSC) was also set up. It acted on behalf of the Partners (the CIRCLE participants taking part in the call) to manage the Coordinated Call, using its operating framework (available at <http://www.circle-era.net/research-calls/circle-med-call/>). The CSC constituted of one representative of each Partner in the ERA-NET CIRCLE-MED involved in this funding initiative. The key role of the CSC was to manage the purpose, scope, and duration of the programme, and specifically:

- To manage the proposal evaluation process;
- To appoint an International Scientific Advisory Board;
- To create a ranking list of project proposals according to scientific quality and political relevance;
- To decide the funding of projects within the framework of the available budget and partners' possibilities to fund research projects.
- To send to all applicants information on the evaluation results within one month after its decision.

The Nordic group also set up a Virtual Secretariat (VS), consisting of two persons from AKA, 2 persons from RCN and 1 person from SEPA. One of the first issues to deal with was to formulate a Memorandum of Understanding (MoU) as a principle for

the work, which was also signed by the Partners. Some flexibility had to follow in that ERA-NET implies new issues arising which have to be taken into account underway.

The key role of the Nordic VS was regulated in the MoU, and following this, a Call Steering Committee (CSC) was appointed including two members from each of the Nordic Partners, one scientist from the AKA Board, one scientist from Norway's Research Council Board and the Director of the Research Secretariat at SEPA plus one member from each of the Partners Virtual Secretariat. The CSC's mandate was to make, on the basis of the scientific rating, a ranking of consortia-and proposals of projects to be funded by the Nordic Partners. All other issues were dealt with by the VS.

2.2 Applications

The MED group launched its call at the same time except Israel which did it one month later. The common application form was in English and in the national languages but Portugal used only the English form. The MED call was put on line of the different partner's Internet sites and on the CIRCLE Internet site. Then the applications were submitted to the virtual secretariats' address (submission-Med@circle-era.net).

Also the Nordic call was launched at the same time on the CIRCLE Internet site and on the Partners websites in the three countries, taking note of the time difference in Finland. Applications were submitted via the new CIRCLE on-line submission tool (<http://www.circle-era.net/research-calls/online-submission/>) As a safety measure, in case the online submission tool or the internet would have technical problems, there was also a possibility for proposes to the Nordic call to be sent via traditional Email (submission-nordic@circle-era.net) with form and proposal as attached files. For that purpose, the secretariat in Austria created this special address for eventual problems. Fortunately all went fine and the back-up address did not have to be used.

The application form was developed as a test by Portugal and the Finnish partner for the coming call in 2009. It was merely based on the CIRCLE-MED form, since they were ahead in the process, but with some amendments agreed by the Nordic Partners.

2.3 Evaluation

The MED group used an international Scientific Advisory Board (SAB), two experts per Partner, acting as external experts. Evaluations were performed by 33 Peer Proposal Reviewers (PPR) selected from a nomination list provided by SAB and CSC. The SAB and PPR met and rated the projects along with purely scientific criteria (including theme relevance). Neither the SAB experts nor the PPR were remunerated for their work.

The funding Partners and the SAB (CSC) took into account the scientific rating made by the SAB (the President of the SAB took part in the meeting) including also user comments by the Blue Plan, a Regional Activity Centre of Mediterranean Action Plan, dealing with sustainable development in the Mediterranean region, established under

UNEP (<http://www.planbleu.org/planBleu/cadreInstitutionnelUk.html>). The funding available and cross-financing capacities were also taken into account. A meeting of senior representative's was organised, aimed at finding some specific solutions that matched with national rules, but following as much as possible the SAB rating in order to ensure scientific excellence.

Evaluation criteria (below) were rated from 1 to 5 (5 is best)

1. Relevance (threshold 3/5; weight 1). The extent to which the proposed project addresses the objectives of the call.
2. Potential impact (no threshold; weight 1). The extent to which the proposed project is likely to have an impact on solving societal problems *in integrated coastal zone and water management*.
3. Scientific excellence (threshold 4/5; weight 1). The extent to which the objectives represent clear progress beyond the current state-of-the-art.
4. Quality of the consortium. (threshold 3/5; weight 1)
5. Prospects for success with regard to mobilisation of resources (threshold 3/5; weight 1)
6. Quality of the management (threshold 3/5; weight 1)
7. Added value in scientific and regional bridging capacity. (threshold 3/5; weight 1)

The overall evaluation were rated, its maximum being 35

The evaluation criteria and procedures for the Nordic call were put together on the basis of the three funding organisations national criteria. The criteria were specified in the call text and the project evaluation procedure and guidelines document that was sent to the evaluators. An international scientific expert panel carried out the scientific evaluation of the joint research proposals.

The scientific evaluation of the proposals was co-organised by the Partners. The Scientific Panel constituted comprised of one scientist from each: Canada, UK and Germany. The gender balance of the Panel was 2+1. They used a new on-line review tool (only accessible by selected reviewers, after a call is closed) that Austria had in place. After individual reading they had a meeting for discussing a common rating. Their role was to give a common rating for the CSC to have as a basis for their prioritisation for decision. An additional reviewer had to be asked to give comments on the proposals since expertise on one of the issues in the call was not sufficiently covered.

The evaluation criteria (rated 1 to 5 – best) of the proposals were:

1. Scientific quality (originality, clearly formulated goals and hypotheses, appropriate use of relevant theory and methodologies)
2. Qualifications of project leader and project consortium (relevant scientific competence, qualifications for project leadership)
3. Feasibility, project completion (time frames and budget)

4. International cooperation (added value of Nordic cooperation beyond coordinating separate projects)
5. Communication plan (dissemination of results and communication activities with stakeholders, policy-makers and the public)
6. Relevance (in relation to the aims and objectives of the call for proposals)

The normal procedure of the three Partners is to remunerate all the costs that arise for evaluating proposals and also provide a smaller fee for the work. Also all costs such as travel costs, dinner at the Panel meeting is paid for.

The CSC Senior group met for discussions on agreement on funding. The basis was the Scientific Panel, but due to some problems of eligibility, some adjustments had to be done.

3 FUNDING

3.1 Funding levels

The level of funding varied between the Partners in the MED group from 50 000 € to about 1M€. Depending on topics, Israel had to be prepared to seek co-funding from other (non-CIRCLE) organisations to co-fund the research calls. Funds in Portugal needed to be used in 2007.

In the Nordic group, the aim was to have a similar level of funding. There were though some difficulties to overcome to reach an agreement on the budget size. AKA's research proclaimed a two year project, while the SEPA contribution only covered one year. The problem has its ground in the fact that AKA fund solitary projects, while SEPA do not fund solitary projects but whole programmes, which normally run for 4-6 years. RCN fund projects within a frame of a programme. Also here SEPA took a step aside from its normal rules, while the international consortium was seen as a program itself and SEPA being a co-funder to that.

It was agreed to fund 2-4 joint projects with a maximum of two years at the amount of 100 000 Euros per organisation.

3.2 Funding Mechanisms

The minimum number of countries involved was set to be three, with one Southern partner for the MED group. The possibility of funding foreign participants of a project varied between the MED countries. France could fund a foreign partner and also Portugal if the partner works in collaboration with a Portuguese Institution (e.g. subcontracting), while Israel and Italy may not fund research outside its country. In most cases, the candidates are financed by their own country. The projects have to be administrated according to national financial rules.

Nordic Partners only fund domestic researchers or scientists associated to a national university. The final funding decisions were made independently by each Nordic Party, and in accordance with their respective rules, regulations and practices, but based on the mutual agreement in the CSC Senior. If one of the consortia partners project failed in the evaluation, then the whole consortium failed, since it was clearly stated in the call text that all three countries had to be present in the winning consortia.

3.3 Contracting

The contracting in the MED group is more complex and requires a couple of months to be completed.

The Nordic Partners sent, after final decision, a common letter to the Nordic Consortium Leaders. Each Partner established the contact and contracting between themselves and the national partners in the consortia, using their ordinary rules and system for funding. The decision is international, but the funding is national. The procedure took one month.

3.4 Monitoring and Reporting

Reporting on the projects will be carried out in accordance with the Partners normal procedures and within the CIRCLE rules.

The MED group will have a kick off meeting in November 2008, a midterm meeting in 2009 and a final meeting in 2010.

The Nordic Partners will have personal contacts as a follow up with the national project leaders during autumn 2008 and a meeting with the consortia in 2009.

3.5 Summary of the process of implementing a joint call

see also Annex 3

The Med group	The Nordic group
<ul style="list-style-type: none"> • A questionnaire was sent out to all partners who were considering participation (end 2006) • GICC Scientific Committee evaluated the proposed topics, meeting in Jerusalem spring 2007 • Call text writing team • MED group provided common application forms and evaluation forms • Call text available in mid July 2007 • The Peer Proposal Reviewers (PPR) was designed by the international expert group. The members of this group were nominated by the national authority involved in the MED Call, meeting in Toulouse in October 2007 • Rating of projects, Scientific Advisory Board (SAB) meeting in Paris January 2008 • Ranking of the proposals, CSC with advice of regional environmental policy body (Blue plan) meeting in Paris January 2008 • Set up the national contracts, end of June • Start in November 2008 	<ul style="list-style-type: none"> • A first step towards a joint Nordic call was taken in the autumn 2006. Much of the discussions took place via email • Discussion on level of funding, draft call text etc., meeting in Stockholm January 2007 • The theme was decided at a telephone meeting after many emails, June 2007 • Elaboration on call text, application form, evaluation criteria and form etc., meeting in Stockholm late August 2007 • A MoU was signed in October 2007 by the three organisations before the final decision on a joint call was made • Eligibility check, meeting in Oslo December 2007 • Rating of proposals, Evaluation Panel and Virtual Secretary meeting in Helsinki February 2008 • Ranking of proposals, CSC and seniors from the Research Boards of the organisations, meeting in Stockholm April 2008 • Contracting and start of research June 1st

4 DISCUSSION

The first pilot calls have successfully been launched. There are some steps in the procedure that, even though they are to some extent similar for the different Partners, still needs some adjustments if a joint process shall be smooth to handle. Flexibility is required and preparedness to revise organisational rules, when needed, would be helpful. It seems that some countries or organisations are able to be more flexible than others. Partner's differences in the organisational rules and national laws, as well as possibility to bend have to be investigated well before a joint call to avoid difficult situations. When a process already has started, time mostly is limited for taking balanced decisions. Therefore it is important to find out and agree in advance which organisational rules can be adjusted to the call and for which the partners need to follow their original regulations. For a coming joint call these questions should be investigated more thoroughly.

Problems mainly relate to the different timetables for availability of grants, when decisions in the different Scientific Boards are taken etc. That cause delaying at different stages in the process, including also postponing project starts.

Cross-cutting with other WPs

The idea of cross-cutting between the CIRCLE WPs was not easy to follow. The WP SPREAD offered the Nordic Partners support in the process of finding a theme, but due to the Partners own procedures for their research funds, it was not possible to involve other Partners in the process. This is an important issue when planning for a continuation of CIRCLE, also taking into account the role and participation of the Advisory Board.

Applications

However, there was indeed some co-operation between WPs. The application form was developed as a test for the coming call in 2009 by the Finnish partner (AKA) that is responsible for WP FULFILL together with the Portuguese Partner (FCT and FFCUL). The form was merely based on the CIRCLE-MED form, since the MED group was ahead in the process, but some amendments was added by the Nordic Partners.

It showed that many rules are very similar to the national ones, but also that some Partners have an in depth list of questions that shall be answered. In this call these Partners could go along for a more simplified form, if the call was managed outside their own on-line tools.

The application form may serve as a good basis for a coming call. It might though be necessary to make adjustments when new combinations of funding organisations and their demands will steer in a coming call.

Evaluation

While the Nordic applications were evaluated and rated by a purely scientific international, non-Scandinavian Panel, the MED applications were evaluated by the Partners' own experts with comments from an organisation dealing with the Mediterranean region as a sector expert. CIRCLE should deliberate on which approach should be taken in the call 2009.

Remuneration

The normal procedure of the three Nordic Partners is to remunerate all the costs that arise for evaluating proposals and also provide a smaller fee for the work. Also all costs such as travel and hotel costs at the Panel meeting is paid for. The Nordic evaluators were only three, while there were 33+ experts evaluating the MED applications. Of course that makes a difference when it comes to budgetary issues. At this stage of CIRCLE, joint calls are refundable via the CIRCLE budget share of the countries partaking in a respective call, but there may be difficulties to attract external experts for reviewing a common call in 2009 if there is no remuneration. The three Nordic Partners shared all the costs equally relating to the review process. All other costs were held by each Partner itself.

Funding foreign partners

The participation and funding rules are country dependent and defined by top level public funding regulations. In most cases, the candidates are financed by their own country, with some exceptions amongst the MED Partners. The projects have to be administrated according to national financial rules, regulations and practices.

Monitoring and communication

The MED group has a plan for monitoring of the project running. The Nordic group has not set up a scheme for monitoring, but communication with a running programme is mandatory for research funded by SEPA. Since the Nordic consortia will only be active for one year, a mid-term report will not be asked for. Possibly a seminar will be in place instead of that.

5 CONCLUSIONS

The first pilot calls have successfully been launched. Many issues that appear as obstacles in the beginning were relatively easy to overcome. There are though some issues that should be checked carefully:

- Eligibility issues
- Level of funding, what problems arise when the amount differs between the funding organisations
- Timetables for the availability of the grant to avoid mismatch with funding periods
- Timelines for decision making
- Panel or peer review experts; internal or outside the countries involved in the call

6 ANNEX 1

The ERA-NET CIRCLE MED call

Integrated Coastal Zones and Water Management

INTRODUCTION

Climate change in countries bordering the Mediterranean Sea is becoming a major problem in terms of development policies, quality of life and environmental protection. Its effects can be felt in terms of temperature, precipitations, and sea level, either through mean trends or extreme events patterns. The Intergovernmental Panel on Climate Change (IPCC) (2007) documented for the first time wide ranging impacts of changes in current climate such as *“retreating glaciers, longer growing seasons, shifts of species ranges, and health impacts due to heat waves. The observed changes described above are consistent with those projected for future climate change.”*(Part WGII-AR4 of the IPCC document) Still according to the IPCC, Southern Europe, already vulnerable to climate variability, will be mainly negatively affected from future impacts of climate change: more frequent high temperatures, more frequent droughts, more frequent heat waves. Finally IPCC stressed the need to promptly conduct impact studies and implement *“proactive climate change risk management adaptation plans.”*

II – CONTEXT

a) Specificities of the Mediterranean Regions

The Mediterranean regions have been developing mainly in coastal zones as outlets for more continental regions, through the settlement of industries and services, rapid population growth in big cities, intensive urbanization of rural coastal areas, and important tourism development. All of these factors generated considerable difficulties in environment preservation. Hinterland zones support food security and recreation activities for urban peoples they provide ecosystem services vital for many activities: their contribution to water resources is major through watershed functions.

b) Water resources in the Mediterranean region

The Mediterranean region is highly vulnerable to climatic extremes, which can affect water resources and harvests. A major climate change can add vulnerability and raise serious questions about the sustainability of the region. Water scarcity is a constant issue for the development of these regions. Water is not only a fundamental resource necessary for the livelihood of our societies; it is also a production factor in industry, agriculture and services, and a major factor in the preservation of coastal ecosystems. In recent times, the intensification of agriculture through new crops (fruit, vegetable, early produce), large technical works (dams, irrigation networks) and management innovations for organizing irrigation networks helped meet food security needs and promoted new food consumption patterns in urban areas. Climate change adaptation through water resources management concerned essentially agriculture,

the highest consuming sector for water. High water demand (for the development of industrialization, growth of large cities, maintaining good urban sanitary conditions and fulfilling other human needs) is a source of potential conflicts, and therefore creates a need for high-level planning processes and institutions. Water has clearly become a strategic factor in the viability and development of the Mediterranean region. The first impacts due to a small rise of global surface temperature in the Mediterranean region will be felt in the water resource system. Reductions in water availability would hit the southern Mediterranean countries. Some countries are particularly more vulnerable, such as Egypt, Libya, Lebanon, Tunisia, Algeria, Morocco, Syria, and Malta where water availability already falls below, or approaches 1,000 m³ per person per year, which is the common benchmark for water scarcity. Even technologically advanced countries, such as Spain, France, Italy, Greece and Israel, could suffer more frequent regional water shortages due to the twin problems of climate change and rising water-demand. Some water supplies could become unusable due to the penetration of salt water into rivers and coastal aquifers as sea level rises. Water pollution, which is already a major health hazard in the region, would worsen as pollutants become more concentrated with reductions in river flow. Adaptation strategies of Mediterranean regions to these threats require an optimization of water management for each use, as well as efficiency improvements. But it is widely acknowledged that these strategies will not be sufficient: new tradeoffs between different uses are drastically needed and are a key for continuing development and diminishing tensions between classes, communities, regions and nations in the Mediterranean region.

c) Coastal zones:

The impact of a higher average sea level on coastal areas may be increased during high tides and storms. Higher average sea level means higher tides and coastal storm flooding and storm surges covering more area. Larger areas of coastal lands could potentially be flooded and damaged. The coastal ecosystems particularly at risk include saltwater marshes, coastal wetlands, sandy beaches, coral reefs, river deltas, coastal archaeological sites, coastal cities towns and resort areas. Changes in these ecosystems and infrastructures would have major negative effects on tourism, freshwater supplies, and biodiversity. Over most of the Mediterranean basin, a possible sea level rise could affect some low-lying coastal areas, which will be lost through flooding or erosion, while rivers and coastal aquifers would become more salty. The worst affected areas will be the Nile Delta, Venice and Thessaloniki where local subsidence can also play a role. With increasing temperatures many valuable Mediterranean ecosystems could be lost as species fail to cope with the shift in climatic boundaries. Wetland sites will face the dual threats of drying out and sea level rise. Most wetland sites in southern Europe could disappear with a 3 to 4 °C rise in temperatures, affecting also biodiversity, such as food plants and in fisheries. Most expected climate change impacts on the coastal zone (e.g., on water temperature, sea level, turbulence and surface currents, tides, floods, etc.) behave as direct ecological drivers that control and impact on ecosystem structure (e.g., species composition and abundance) and function (e.g., food web dynamics, biogeochemical fluxes rates), both in marine and transitional habitats. We can hence expect that climate change will cause a thorough departure from the 'good ecological status'

demanded by the Water Framework Directive (2000/60/E). Consequently adaptation measures will need to consider this issue. Understanding the functional relation between those climate change drivers, the ecosystems processes and the provision of goods and services by aquatic ecosystems is necessary to properly assess the status of surface waters, and to foresee the ecological consequences of different adaptation strategies in terms of ecosystem structure and functioning.

III - RESEARCH CALL

In accordance with the aforementioned context, this call will focus on the following topics:

1. Adaptation Strategies in the Water Sector and Coastal Zones

The following issues can be considered:

Urban zones: Maintaining recharge areas in the urban environment to cope with extreme storms and facilitate recharge of aquifers, optimize reclamation of wastewater in a sustainable manner. How to design sewage networks in ways that are sustainable for society and that preserve or improve human health. More specifically, the problem of water-borne diseases provoked by the dysfunction of marshy and coastal waters should be dealt with.

Agriculture: new production schemes, efficiency improvements in plant water use, techniques of precise transport of water to plants. Utilization of treated waste water. Industries: improving techniques for optimal use of water in industrial processes may derive from more severe constraints on water availability. Tourism: consequences of new sea-resorts on the human-environment system, importance of sea water quality in natural preserved zones. Climate change and coastal ecosystems/water resources management: estuaries, lagoons, terrestrial ecosystem structure, processes and services affected by climate change and related changes in water resources.

Coastal zone/marine ecosystems and water management, which include:

- Studying the impact of climate change '*drivers*' on the coastal zone through scenario simulations;
- Determination of the changes in the surface water and the coastal area's environmental conditions subject to such drivers;
- Determination of the changes in the organisation and functioning of biological communities and ecosystems subject to such drivers;
- Determination of the role that natural ecological processes and structural complexity play for the resistance of aquatic ecosystems to such drivers, and for the supply of genetic resources needed for a long-term adaptation;

- Estimation of the impacts on natural resources and human activities in the coastal area;
- Proposal of management solutions and investment plans

2. A New Equilibrium in the Integrated Management of Water Resources and Coastal Resources

a) How to rationalize, govern and put into action the trade-off between different water uses in the perspective of climatic change (IPCC scenarios give good frameworks for guiding the conceptualization of this question).

b) Regulation between regions, spatial heterogeneity of the resource and the importance of watersheds in creating or regulating this heterogeneity may be important and could transform the way we think about collaboration and competition between zones; in some cases, trans-boundary problems may shift the equilibrium between nations.

c) In all cases, at the planning level, innovative actions are to be elaborated for all kinds of resource allocation managements.

IV – GENERAL CONSIDERATIONS

- Multi-disciplinary approaches should play an important role in the different research fields mentioned above; a good balance between biotechnical sciences (from hydrogeology to agronomy) and social sciences is expected at the project level.

- Adaptation strategies call for early collaboration with decision makers in order to effectively disseminate recommendations from the call to policy practitioners. Research projects should aim at identifying and providing information to help solve practical adaptation problems.

Bilateral or trilateral collaborations between nations are important ancillary parameters for providing a better European and Mediterranean collaboration.

7 ANNEX 2

The ERA-NET CIRCLE Nordic call (Excerpt from the CIRCLE homepage)

Research on consequences of climate change for policy making in the Nordic countries

The ERA-NET CIRCLE (Climate Impact Research Coordination in a Larger Europe) is a network of public-sector research funders, including research institutes, ministries and regulatory authorities. CIRCLE aims at achieving better research coordination in Europe in the field of consequences of and adaptation to climate change.

The aim of this call is to enhance Nordic research cooperation in the areas specified below. This is a Nordic pilot call under the CIRCLE ERA-NET. The funding organisations of the call are: the Academy of Finland, the Research Council of Norway and the Swedish Environmental Protection Agency.

The research conducted within this call should increase knowledge of options, premises and barriers for climate change adaptation including the relationship between adaptation and mitigation.

The theme for project proposals is research on consequences of climate change for policy making in important sectors in the Nordic countries, e.g.

- **What are the synergies and trade-offs between adaptation and mitigation to climate change in policy making?**
- **How do the Nordic countries compare and differ with respect to adaptation needs and implementation ability?**

Additional value of Nordic cooperation should be clearly addressed and will be one of the evaluation criteria.

The call will have a total maximum budget of 400 000 euros, with a maximum of 100 - 200 000 euros from each funding organisation.

Eligible activities:

Funding is for either existing research activities or for starting up new ones. Funding can be applied for:

- Salaries and grants
- Travel expenses (climate friendly)

- Seminars and workshops

Equipment costs will not be funded.

Formal requirements:

Each proposal shall be submitted by a trans-national consortium including partners from all three countries. Others may also participate as partners of the consortia, but must be independently financed. Funding can be applied for researchers/research teams in the universities and research institutes in countries funding the call (Finland, Norway, and Sweden). Applicants must also meet the national eligibility criteria. Maximum duration of projects is 2 years.

Decision making procedure

CIRCLE Nordic will appoint a Call Steering Committee (CSC), consisting of two representatives from each of the funding organisations. The CSC will manage the call and give a recommendation for funding to the national funding organisations. Proposals will be evaluated by an expert panel, which submits its evaluation to the CSC.

The evaluation criteria are:

- scientific quality
- qualifications of the consortium
- feasibility
- cooperation
- communication plan
- relevance to the call

The objective of the evaluation process is to select trans-national research proposals, which meet the needs of both CIRCLE and the national funding organisations. The final decision on funding will be made in the national funding organisations.

The call was open between October 19 2007 to December 10 2007 17:00 CET. Applications received after this time will be excluded from the evaluation process. The projects of the consortium should be ready to begin on 1 May 2008.

The call will have a single stage application procedure. One joint application should be submitted by the project leader on behalf of the whole consortium. Submission requires the consortium to complete a common electronic application form and a project description of maximum 10 pages including each subproject (see guidelines). The language of the application is English. For information on national eligibility criteria, see information on the web pages of the national contact points.

Applications should be submitted to **submission-nordic@circle-era.net**.

Download

Application form with Guidelines for project description

Evaluation criteria

National contact points

8 ANNEX 3

Timetable for the MED group

- The joint call was launched on July 12th and its deadline was October 12th 2007
- The scientific evaluation by PPR was carried out and ending on December 15th 2007
- The SAB met on January 15th 2008 for rating the proposals
- The CSC met on January 31th 2008 for ranking the proposals
- Final funding decisions by the national organisations during March
- National grants by the end of June 2008
- Kick off meeting to be held in Roma November 2008)
- Mid-term meeting in Portugal (fall 2009)
- Final meeting in South France (end 2010)

Timetable for the Nordic group

- The joint call was open between 15th of October 2007 to the 10th of December 2007*
- The scientific evaluation was carried out during one month ending with a panel meeting 25th to 26th of February 2008
- The CSC and members of the organisations Scientific Boards met 7th of April for ranging the proposals
- Funding decisions by each national organisation during May
- The joint research projects started in June 2008
- Midterm meeting in spring 2009
- Final meeting in autumn 2009 or early 2010

*AKA had to prepare a pre-announcement of the call already in August, according to their rules.