Proposal for a new COST action 2004-2008

Title page:

INTERCAFE : Conserving Biodiversity - Interdisciplinary Initiative to Reduce pan-European Cormorant-Fisheries Conflicts

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INTERCAFE : Conserving Biodiversity - Interdisciplinary Initiative to Reduce pan-European Cormorant-Fisheries Conflicts

Part I: Draft technical annexes

A. Background

The sustainability of European freshwaters, especially fisheries, depends on the interaction of many biological, social and economic factors. There is an urgent need to understand this complex of factors, particularly in relation to the impacts of cormorants on fisheries. A recent (2000-2002) FP5 Concerted Action REDCAFE ("Reducing the conflicts between cormorants and fisheries on a pan-European scale", see also Part IIA) has, for the first time, addressed cormorant-fisheries conflicts on a European scale by establishing a very active network of research institutes across 25 countries. The most important aspect of REDCAFE's work, in relation to the provision of management solutions for cormorant-fisheries conflicts, was to show clearly that such conflicts are complex in terms of their biology but that social and economic issues are equally important: these conflicts are sometimes as much human:human ones as they are human:wildlife ones. It is this interdisciplinary nature of such conflicts and their resolution and the urgent need for coordinated information exchange between stakeholders groups that is at the core of this proposed COST Action.

REDCAFE synthesised previous research and state of the art in relation to cormorant ecology and stakeholders' (commercial fisheries, recreational angling, aquaculture, nature conservation) views on the major conflict issues. European Great cormorant populations have increased dramatically from around 800 breeding pairs (1960s) to over 150,000 pairs (mid-1990s) and the species is now probably more numerous than ever before. The geographical range of these populations has also expanded and cormorants are now present in almost all European countries: breeding (April-September), over-wintering (October-March) or both (year-round). The reasons for such increase and expansion are unclear but populations are not limited by a lack of food or nest sites, and protective legislation (particularly EEC Directive 79/409 on the Conservation of Wild Birds) has been an extremely important factor. Pygmy cormorants are also involved in numerous conflicts and this species is of high conservation (Annex I) status within Europe.

Although considered to be a success for biodiversity conservation, one of the main consequences of the dramatic increase in cormorant populations has been the growing number of conflicts with commercial fisheries, recreational angling interests and conservationists across a diverse range of European aquatic habitats. Cormorants are generalist fish-eating predators taking a wide variety of fishes in shallow coastal seas, freshwater lakes and rivers, and both extensive and intensive aquaculture systems. The nature of the conflicts themselves is also diverse. As well as having major concerns over threats to fish biodiversity, nature conservationists are concerned about nutrient enrichment of aquatic habitats (from cormorant guano), the disturbance effects of cormorant control measures and the drowning of cormorants in commercial fishing gear. For fisheries stakeholders, major concerns include reduced fish stocks and catches, effects on fish biodiversity/conservation, increased recurrent costs (through implementation of cormorant control measures), reduced fishery earnings, subsequent loss of employment and decline in traditional, sustainable livelihoods. Although difficult to quantify, annual financial losses as a result of fish lost to cormorant predation during the winter have been estimated at 163.7 million ECU in relation to recreational angling

(a sport for over 23 million EU citizens) and, based on information provided to REDCAFE by fisheries stakeholders for 105 conflict cases, associated financial losses to cormorants were about 17 million € per year, representing 11% of annual turnover in these systems.

REDCAFE also synthesised information on existing innovative continent-wide and site-specific potential management tools and actions to reduce conflicts with fisheries. Overall, the suitability (i.e. practicability, acceptability and costs) of all techniques used regularly was highly variable and site-specific. Although stakeholders have a long list of possible management actions against cormorants, they have little guidance on their likely suitability at specific sites. Adopting 'new' techniques to reduce cormorant impacts, in whatever habitat, is thus likely to be mostly a case of trial-and-error: there are numerous possibilities for using various techniques in combination or for changing their use in time and/or space as a reaction to changing site-specific conditions. A more quantitative review of successes and failures, and an evaluation of the cost-effectiveness of these trialled management solutions, are lacking at local level – and the implications of such management actions require consideration at national and European levels. Moreover, better assessments of the cost-effectiveness of potential management solutions, and understanding of the financial implications of cormorant conflicts to fisheries are hampered by lack of financial information for specific fisheries.

During the last 20 years, European biological research has clearly contributed much to an improved understanding of cormorant ecology and potential impacts on fisheries and nature conservation interests, at the pan-European scale. However, translation of these scientific achievements into quantification of cormorant impact at fisheries and the resolution of cormorant-fisheries conflicts has been limited. Conceptually, one reason for this lack of success is that these conflicts have too often been misunderstood as primarily a biological conservation issue addressed through such documents as The Bonn Convention, The EU Habitats and Birds Directives, the Ramsar Convention and the Convention of Biodiversity. Obviously, future management of European cormorant populations must accommodate the need for the species' long-term survival and be based on sound scientific findings. However, through dialogue with stakeholders, REDCAFE has also shown that cormorant-fishery conflicts are an issue of major social, cultural and economic concern across Europe and so these essential non-biological factors must also be taken into account when formulating and implementing practical management policies based on scientific findings. It is evident that technical (scientific) solutions alone are not sufficient for environmental conflicts with social and economic dimensions.

REDCAFE offered the first opportunity to apply recognised conflict management techniques to cormorant-fisheries interactions on a pan-European level. These techniques were also applied to a specific case study, that of recreational angling in England. This case study was addressed in a workshop designed to give local and national stakeholders and European biological and social scientists the opportunity to share knowledge and experience. Taking this holistic approach highlighted multiple stakeholder perspectives and facilitated a greater understanding of the inter-relationships between stakeholders. Above all, successful conflict management was shown to be dependent on conflicting parties opening communication channels and developing networks of trust for effective collaboration and dialogue. A formal approach to applying this process to the thousands of other conflict cases across Europe is currently lacking. Furthermore, there is a lack of clear, coordinated information transfer between all stakeholder groups and few, if any, policy-makers are included in current conflict management processes.

The wide geographic range of European cormorant populations and their wintering migration patterns require investigation and monitoring at the continental scale. Similarly, cormorant conservation legislation is defined at the EU level but implemented nationally or regionally. On the other hand, conflicts with fisheries are regional or site-specific and so

management solutions will require implementation at these finer scales. However, due to the migratory behaviour of cormorants, local management strategies could also affect birds at national or continental scales. Thus both policy makers and local stakeholders must be aware of these scale-dependent inter-relationships.

Cormorant-fisheries conflicts are a truly pan-European issue being experienced by a variety of stakeholder groups working in a diverse range of aquatic habitats across the continent. An interdisciplinary approach involving the collaboration of biological and social scientific expertise, economic and political interest and practical local experience is now seen as vital to the development and successful implementation of practical cormorant-fisheries conflict resolution strategies across Europe. Furthermore the challenge is to improve information exchange, dialogue, participation and trust between all stakeholders involved in such conflicts. To take these important steps, the proposed Action would build on the REDCAFE foundation by coordinating biological and social research programmes and integrating cultural, economic and political/policy concerns so that conflict resolution strategies can be devised, through collaboration with local people, that are tailored to the specific needs of local stakeholders and decision makers. Moreover, international coordination of national research efforts through the proposed COST Action will ensure that the opportunities to understand conflicts and learn from experiences elsewhere are exploited as fully as possible across Europe.

The proposed INTERCAFE network should include (i) researchers dealing with cormorant ecology and assessments of breeding/wintering status and distribution and of lethal actions taken against cormorants, (ii) researchers dealing with biological, social and cultural aspects of cormorant-fisheries conflict management (including legal, policy and economic issues) at a variety of spatial scales, (iii) policy makers (from local to international levels), (iv) local and regional end-users in charge of the implementation of conflict resolution strategies.

B. Objectives and benefits

The main objective of the Action is to improve European scientific knowledge of cormorant-fisheries interactions in the contexts of the interdisciplinary management of human:wildlife conflicts and of sound policy formation, so as to inform policy decisions at local to international levels across Europe and to deliver a coordinated information exchange system and improved communication between all stakeholders. To achieve this goal, which requires considerable coordination and synthesis, three specific issues (recently identified through the EU FP5 Concerted Action REDCAFE) must be addressed. First, there is fundamental distrust between the main stakeholder groups and this is further compounded by the current disparate and uncoordinated nature of available sources of information. Second, cormorant-fisheries conflicts are as much a matter of human interests as they are of biology, thus integrated interdisciplinary scientific research (biological, social, economic) is needed to apply these different perspectives to the development of collaborative management strategies. Third, the current lack of an integrated understanding of the interdisciplinary factors at the heart of cormorant-fisheries conflicts precludes the provision of useful and practical recommendations to policy makers. Under INTERCAFE's coordination, all interested parties, from local stakeholders to international policy makers, will have a unique opportunity to address these issues. Project participants will ultimately create a coordinated network and information bank that will be used to develop long-term collaborative management solutions to pan-European cormorant conflicts.

The immediate benefit of this Action to both biodiversity conservation and sustainable livelihoods will be to add value to ongoing research across Europe by delivering improved scientific understanding of cormorant ecology and management built on independent, national efforts. Specific benefits will be twofold. First, the establishment and maintenance of an information transfer network will facilitate improved communication, dialogue and participation between stakeholders. Second, the development of scientifically founded

management and conservation recommendations is likely to improve policy formation and thus manage cormorant-fisheries conflicts across Europe. Further benefits are expected as the Action is likely to be a model for addressing numerous current human:wildlife conflicts across Europe and those that will arise recurrently if Europe is to recover some of its former biodiversity. Longer-term benefits of the Action will involve further development of both standardised scientific methodology and links between science and society. Results of the research will therefore support the issues and concerns expressed in important European documents such as The Bonn Convention, The EU Habitats and Birds Directives, the Ramsar Convention, and the Convention on Biological Diversity.

This Action will be targeted towards the development of policy aimed at maintaining the favourable conservation status of Europe's cormorant populations whilst enabling the sustainable exploitation of fish stocks in a wide variety of aquatic habitats. Three Working Groups will be installed to achieve this. Each addresses one of the specific issues required to achieve consensus towards practical policy implementation: (1) the spatial and temporal status and distribution of cormorants, (2) assessment and synthesis of site-specific conflict resolution and management strategies, (3) development of best practice procedures. Specifically, these three Working Groups will:

(1) Develop databases detailing both the size and location of European cormorant breeding colonies and winter roosts at the national level and the lethal management actions taken against cormorants at the regional level.

(2) Determine the effectiveness of conflict resolution and management strategies through the production of biological, social and economic assessments of site-specific, regional and national actions and mitigation measures taken to counter predation by cormorants. This will cover the development, testing and monitoring of their efficacy and cost-effectiveness. Collate relevant information on the influence of current policies on such mitigation measures and consider the economic aspects of specific fisheries experiencing conflicts with cormorants.

(3) Promote links between the biological and social scientific communities, local stakeholders and policy advisors to better understand the role of socio-cultural issues in conflicts, their management within legal frameworks, and efforts towards their resolution. Develop a set of scientifically founded conflict management recommendations specifically aimed at improved policy formulation.

WG 1 and WG2 will conduct their research efforts simultaneously. After an initial period of data collection and collation, they will then begin to contribute expertise to WG3 (see Part II D). The information transfer between these groups will be guaranteed through regular joint meetings. Integrating skills and knowledge bases within and between these Working Groups within the scientific programme is crucial to the success of this Action. The project thus include four main integration activities:

Continental integration – Provision of continental information exchange networks to (a) provide empirical data, (b) share practical experiences of the development, testing and monitoring of conflict management activities and (c) disseminate information widely and effectively to all stakeholders.

Vertical integration – Researchers, policy makers and stakeholders will all participate in project meetings, often sharing tasks and duties, thus facilitating active collaboration.

Research integration – Considerable effort will be directed to the effective integration of natural and social science research (and to forging lasting collaborative links with economists,

policy makers and stakeholders) through both the research process and conflict management research and development. Best practices for conflict management will be identified and explored through the examination of a series of case studies from across Europe.

Horizontal integration – Establishment of information dissemination website managed by the COST Action. Establishment of virtual networks for discussions leading up to and after the workshop so that those unable to attend can continue to participate with project activities.

C. Scientific programme

The scientific programme is structured according to the three Working Groups to be implemented:

- WG1: Ecological databases and analyses.
- WG2: Conflict resolution and management.
- WG3: Linking science with policy and best practice

As well as the specific information detailed below, each WG will be tasked with producing a comprehensive library/bibliography of relevant material pertaining to all aspects covered by that WG. This information source will be made widely accessible through the Action's web site.

WG1: Ecological databases and analyses

Addressing the issue of the management of cormorant-fisheries conflicts requires consideration not merely of technical solutions (i.e. site-specific actions and mitigation measures) but also of the ecology of cormorants at the continental level, particularly their temporal and spatial status and distribution and choice of breeding roosting and foraging sites. Analysis of these data at the continental scale in relation to ecological characteristics (e.g. geographical, climatological, biological – size, nutrient status, fish communities etc) through a Geographic Information System will provide better understanding of current cormorant distribution across Europe and could also allow predictions of their future distribution. Furthermore, this improved understanding in relation to ecological system characteristics would enable the investigation of site-choice (i.e. breeding, foraging) by cormorants and could lead to more effective widespread management options. For example, a more effective approach than the widespread killing of cormorants might be to take advantage of density dependence by making the environment less attractive to the birds, thus regulating the population at a lower level. This management option would often be consistent with "limiting the damage rather than the pest" and would be attractive to many stakeholders and policy makers. There is also need to understand the implications, for other species of conservation importance, of making the environment less attractive.

Most European countries report the lethal control of cormorants as a management measure. Although these actions are usually legal (requiring a derogation under the Birds Directive), they are seldom coordinated. Reports suggest that 41-43,000 fully grown birds were shot in Europe in the winter of 2001/02 and that at least 4,500 breeding birds are also shot each year. Cormorants are migratory over the winter period so there is the potential for lethal management actions undertaken in one region to affect birds breeding in another. There is thus a clear need to collate information on lethal actions carried out against cormorants.

All stakeholders involved in cormorant-fisheries conflict management require regularly updated information on cormorant status, distribution and lethal control. Thus data from WG1 will be made available via electronic databases. These data will also be made available to WG2 researchers.

Cormorant population models are required to predict both the ultimate size of the European cormorant population and the likely consequences of large-scale control activities. The predictive power of such models depends on the input of the most up to date information – both on bird status and distribution but also ecological habitat data. The data collected in WG1 on cormorant population status and distribution, and on the numbers of birds killed, would provide just such input and would lead to improved predictive models.

It is also important to understand the migratory patterns of cormorants particularly during the winter. There are currently over a dozen cormorant colour-ringing programmes across Europe. Through careful analyses, these could provide much needed information on cormorant movements and, perhaps, site-choice at local scale.

Useful information could be gained from closer examination of the legal frameworks/policies operating in relation to the killing of cormorants. Legislation allows the derogated killing of birds in cases of "serious damage" to fisheries, after other non-lethal techniques have been tried and shown to fail. What is unclear is how serious damage is defined in each country and what is the process for testing/judging non-lethal techniques. It would be extremely valuable to understand these matters, as it may lead to greater consistence in application, or understanding as to why the apparent lack of consistency is appropriate.

Ultimately, the information collected, collated and analysed in WG1 could form the basis for future coordinated research into cormorant foraging site choice based on predictive behaviour-based models of bird foraging and population dynamics.

WG2: Conflict resolution and management

Due to the site-specific nature of cormorant-fisheries conflicts, conflict resolution and management must be assessed on a case-by case basis. WG2 will thus coordinate biological, social and economic assessments of actions and mitigation measures at local to national scales. WG2 will also examine more closely the legal frameworks operating in relation to actions and mitigation measures (linked closely with WG1) and consider economic aspects of specific fisheries. Coordination of this research, and the application of interdisciplinary assessments of management actions will build on the synthesis of potential tools undertaken by earlier researchers and will provide stakeholders and policy makers with much needed information on the use of management tools in real world situations.

The main objective of WG2 is thus to conduct interdisciplinary research into site-specific actions and mitigation measures taken to manage cormorant-fisheries conflicts. Furthermore this research will also be linked to legal frameworks and economies operating at regional to national scales. The research community in collaboration with local stakeholders and policy makers will analyse and evaluate the success or failure of various actions and mitigation measures applied to cormorant-fisheries conflicts across Europe in relation to biological, social and economic factors. The use of interdisciplinary research skills to assess the success or failure of site-specific mitigation measures will greatly improve understanding of their practical application and usefulness to stakeholders. European coordination will ensure the standardisation and harmonisation of this research and allow for meaningful comparisons to be made across a diverse range of fisheries. The interaction of biological, social and economic factors is an important consideration in designing successful management strategies. Thus, linking this field research to policy making and existing legal frameworks through WG2 will assist in the development of policies to support best practice and allow policy makers and end users both to evaluate the impact of existing policies and to examine the potential formulation of new policies. The interdisciplinary overview of conflicts produced by WG2 will be presented as a 'generic framework' for the management of Cormorant-fisheries conflicts.

The formation of an information exchange network is urgently needed by European stakeholders as a tool to facilitate the rapid transfer of ideas, experiences, management techniques and actions, their implementation and subsequent outcomes. The establishment of such a network in WG2 would also offer stakeholders opportunities for discussion and could provide them with clear information on the actual costs (both invested and saved) of specific techniques.

WG3: Linking science with policy and best practice

REDCAFE work has shown that cormorant-fisheries conflicts can be human:wildlife ones, human:human ones or be situated somewhere in between. Thus, research has first to identify the true nature of such conflicts and then look to the most appropriate solutions. The major aim of WG3 is to promote links between the biological and social science communities, local stakeholders, economists and policy advisors to better understand the role of socio-cultural issues in conflicts, their management within legal frameworks, and efforts towards their resolution. These links will be forged through the interdisciplinary investigation of a series of conflict case studies chosen (based on WG2 knowledge) to be representative of cormorant-fisheries conflicts across Europe. Case study selection will take into account various factors: for example, geographic location, habitat types, stakeholder groups, fishery type, and current and potential mitigation actions. Case studies will be investigated through Workshops that concentrate on issues operating at two spatial scales. First, local stakeholders will provide key site-specific inputs providing ecological, social, economic and policy contexts. Second, input from other participants, particularly ecologists (for example, through direct input from WG1) and policy makers, will enable all to appreciate the specific case study in both national and international contexts. Thus, Workshops will enable all participants to take a 'holistic' view of specific case studies.

Through close links to WG2, WG3 will develop, through collaboration with local people, a set of scientifically founded, and policy relevant, best practice manuals for stakeholders. As part of this process, WG3 will also crucially offer practical examples of cormorant-fisheries conflicts and their management to policy makers. Through the collaborative process of 'working through' specific cases, resulting experiences will produce a series of recommendations specifically aimed at improved policy formation, at a variety of spatial scales, across Europe. Dissemination for this WP will be especially coordinated to take account of the needs of specific stakeholders and policy makers (see G). The possibility of an EAA publication describing the results of WG3 (and including brief but comprehensive overviews of the remainder of INTERCAFE's work) will be explored – in the first instance, with colleagues in the EAA's Strategic Development and International Collaboration programme.

D. Organisation and Management

A Management Committee (MC) including the elected Chairperson, Vice-Chairperson, Working Group (WG) coordinators and representatives appointed by the Signatories of the MoU will be set up following the signing of the appointed numbers of signatories to the MoU. The MC will work out its rule of operation at its first formal meeting in accordance with existing COST regulations. The partners will elect a Chairperson and a Vice-Chairperson who will be responsible for coordinating activities and ensuring that the Action direction meets the overall objectives.

The following three WGs will be formed:
WG1: Ecological databases and analyses.
WG2: Conflict resolution and management.
WG3: Linking science with policy and best practice.

Each WG will elect a Coordinator who will assist the Chairperson and Vice-Chairperson in ensuring that the work is of a high standard. Overseeing the activities of each WG will be the responsibility of the MC. The Chair, Vice-Chair and WG coordinators, together with advisors representing end users, will form a steering committee to ensure the development of an integrated programme across the three WGs.

The organisational structure is shown in Figure 1. An inaugural MC meeting prior to the first Annual Workshop will elect Coordinators for the WGs.

Chairperson, Vice-Chairperson and WG coordinators will form a Steering Committee to ensure collaboration between WGs and other national and international research groups. They will meet during the annual workshops. If needed, small group meetings will be organised.

A website for the Action will be set up. It will be used as a communication platform for participants, act as a vehicle for publicising the aims and achievements of the Action to a wider scientific community and ensure dissemination to other groups such as policy makers and stakeholders.

Employment of STSMs: For each of INTERCAFE's three WGs, short-tem scientific missions will be employed where appropriate to involve young scientists.

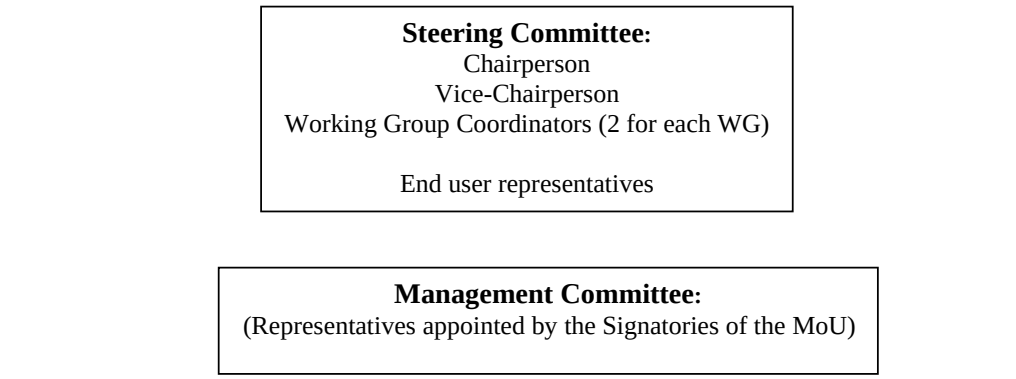

Figure 1: Organisational structure.

E. Timetable

The duration of the Action is planned for four years. Coordination of the Action is achieved by means of annual workshops. An inaugural MC meeting will take place prior to the first annual Workshop. The MC will meet twice a year to review progress. Working Groups will meet twice a year. Some meetings may be organised in cooperation with, or

include invited individuals from, allied groups such as the Concerted Action BioForum, Integrated Management of European Wetlands (IMEW) and the FP6 project ALTER-Net.

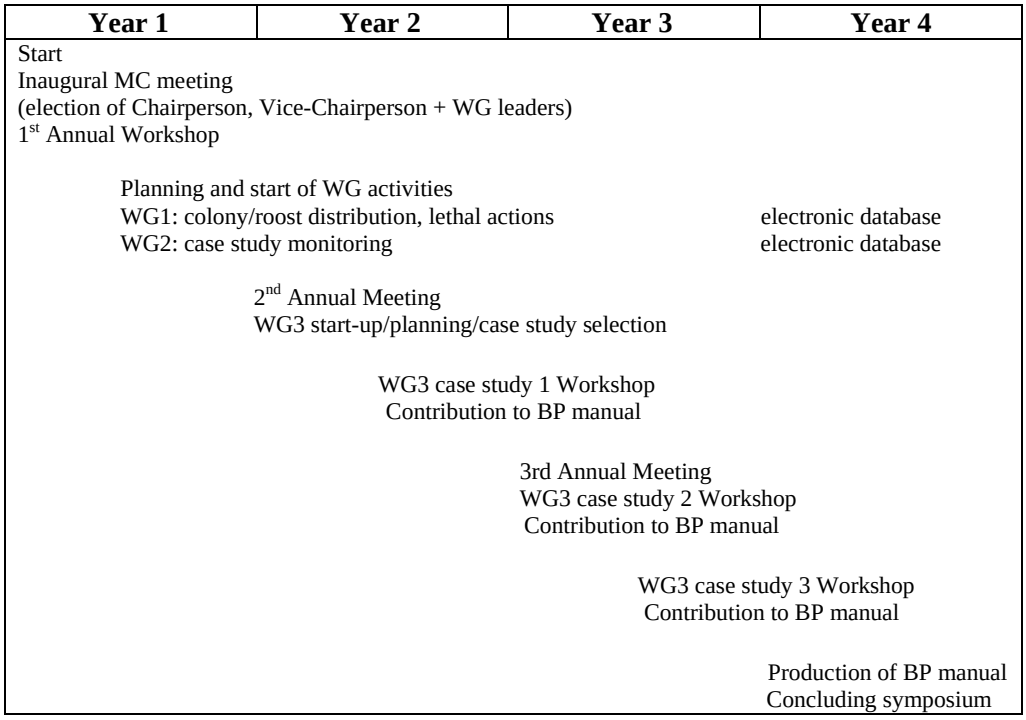

Figure 2: Timetable for the Action

F. Economic dimension

The following COST states (or co-operating states* and states with participating Institutions **) have actively participated in the preparation of the Action or otherwise indicated interest: (1) Austria, (2) Belgium, (3) Bulgaria, (4) Czech Republic, (5) Denmark, (6) Estonia, (7) France, (8) Finland, (9) Germany, (10) Greece, (11) Ireland, (12) Israel*, (13) Italy, (14) Latvia, (15) Lithuania, (16) The Netherlands, (17) Norway, (18) Poland, (19) Portugal, (20) Romania, (21) Slovenia, (22) Spain, (23) Sweden, (24) Switzerland, (25) United Kingdom and (26) Ukraine**.

On the basis of national estimates provided by the representatives of these countries, the economic dimension of the activities to be carried out under the Action has been estimated, in 2001 prices, at roughly 6.9 million euro. The figure is based on estimates of numbers of researchers working on cormorant-fisheries issues in each country (and averaged where necessary) with a notional cost of Euro 75 000 per-person-year for a full-time research position: Austria (2), Belgium (4), Bulgaria (3), Czech Republic (4), Denmark (2), Estonia (1), France (5), Finland (3) Germany (4), Greece (1), Ireland (3), Israel* (1), Italy (10), Latvia (4), Lithuania (2), The Netherlands (3), Norway (4), Poland (3), Portugal (4), Romania (3), Slovenia (4), Spain (3), Sweden (2), Switzerland (4), United Kingdom (10) and Ukraine (3).

This rough cost estimate is valid under the assumption that all the countries mentioned above but no other countries, will participate in the Action. Any departure from this will change the total cost accordingly.

G. Dissemination plan

The major objective of this COST Action is to improve understanding of the causes and consequences of cormorant-fisheries conflicts, assess the effectiveness of actions and control measures used to resolve these conflicts and to provide models of best practice for policy makers and stakeholders. Thus the plan for disseminating this mutually developed knowledge has to address all interest groups involved in such conflicts. Therefore, the design of the dissemination plan has to meet three requirements:

(a) The geographical level of dissemination (i.e. local, regional, national, European). Cormorant-fisheries conflicts are also very common in both North America and Asia, thus some information produced through this Action will require dissemination at the global level.
(b) Specific demands of the different user groups (scientific communities, commercial fishermen, recreational anglers, aquaculturists, nature conservationists, policy makers).
(c) Regionally and culturally distinct information and communication practices.

For all user groups, an important media for information dissemination will be the internet (web site managed by the COST Action), written publications and workshops. However, dissemination activities will also have to be adapted to the demands of user groups.

Participants in the COST Action are themselves members of scientific communities and so well established instruments such as scientific workshops, conferences and seminars organised by the MC will be employed. Publications in relevant peer-reviewed scientific journals will be organised as a result of on-going research programmes within the COST Action and specific workshops and conferences as a result of it. COST participants will also present their results at international conferences organised by other scientific organisations. The web site of the COST Action will serve as a permanent information source for the scientific community.

Many user groups are well organised on the European level (e.g. commercial and recreational fishermen, aquaculturists and nature conservationists) and these communities will be accessed through appropriate channels. However, the most challenging aspect of dissemination will be to make information available to stakeholder groups and individuals at the local level. Language boundaries as well as cultural, administrative and organisational structures in different countries and regions will require a local approach to information dissemination. Furthermore, best practice information regarding cormorant-fisheries conflict management has to be regionally, or even locally, adapted which means that the knowledge to be disseminated differs from region to region. The carefully chosen case studies investigated under WG3 by natural and social scientists, policy makers and local stakeholders will act as a means of iterative learning and knowledge generation. Thus the workshops will be both a means of information dissemination and research activities in their own right. Representatives from other places will be present at these meetings and transfer their experiences to their respective regions and countries. Another important means of knowledge dissemination addressing local stakeholders will be realised through the production of best practice manuals provided in the appropriate language and format and adapted to region-specific issues.

Political decision making affects cormorant-fisheries conflict management on continental, national, regional and local levels across Europe. The successful pan-European management and resolution of such conflicts thus requires effective interaction with policy makers on all

geographical levels. However, research programmes in other areas has shown that confronting policy makers with scientific results is not the most effective means of improving policy. A much more effective way would be for policy makers to be involved from the very beginning of the research process. Therefore policy makers will be invited to attend all meetings administered under this COST Action in order to facilitate effective knowledge transfer between all those involved in cormorant-fisheries conflicts. Specific discussions will take place with the European Environmental Agency to help achieve more effective cormorant-fisheries conflict management through the provision of targeted information to policy makers.

Part II: Additional Information

A. History of the proposal

The proposed COST Action builds on the success and accumulated expertise of the EU-funded Framework 5 Concerted Action REDCAFE ("Reducing the conflict between cormorants and fisheries on a pan-European scale"). Prior to REDCAFE, although there were several national and/or international Cormorant management plans aimed at reducing cormorant-fisheries conflict across Europe, there was no co-ordinated implementation at the international level and, in practice, and certainly for many affected by the 'cormorant problem', these plans appeared ineffectual. The REDCAFE project (December 2000 – November 2002) was designed to complement and develop previous work through synthesising available information on cormorant conflicts and aspects of cormorant ecology leading to them, through identifying methods of reducing the current Europe-wide conflict between cormorants and fisheries interests and collating expert evaluations of their practical use. The project also addressed a specific cormorant-fisheries conflict case study involving recreational angling in S. E. England.

REDCAFE took a novel interdisciplinary approach to cormorant-fisheries conflicts by, for the first time, bringing together avian, fisheries and social scientists and many other relevant stakeholders to discuss and report on these issues in a rigorous, co-ordinated and equitable manner. With these aims in mind, a pan-European network of project participants was established comprising 49 people representing 43 organisations from 25 countries and including seven main stakeholder groups: commercial fishermen, recreational fishermen, aquaculturists, avian/wetland conservationists, fisheries scientists, avian ecologists and social scientists.

The proposed COST action uses REDCAFE as a foundation and up-scales this work to become more interdisciplinary by including economists, policy makers and a broader range of social scientists. Moreover, the proposed Action builds on the information/data synthesis process at the heart of the REDCAFE Concerted Action by switching the emphasis of pan-European research coordination to addressing the current and future the needs of local stakeholders and policy makers.

Cormorant-fisheries conflicts are a highly relevant environmental issue across Europe, and one that could act as a model for numerous other human:biodiversity conflicts across the continent. This proposal was suggested by TCE after the submission of the 1 page summary of the proposed Action in March 2003.

B. List of potential participants

Experts who have been consulted during the drafting of the proposal and have already expressed interest in the Action.

Name	Institute	E-mail	Country
Rosemarie Parz-Golner	Inst. fuer Wildbiologie und Jagdwirtschaft, BOKU, Vienna		A
Josef Trauttmansdorff	Otto Koenig Institute		A
Jean-Yves Paquet	Central Ornithologique Aves		B
Ivailo Nikolov	Bulgarian Ornithological Centre		BG
Nikolay Kissiov	Bulgarian Fisheries & Aquaculture Association		BG
Petr Musil	Charles University		CZ
Renata Martincova	Charles University		CZ
Thomas Bregnballe	National Environment Research Institute		DK
Christian Dieperink	WaterFrame		DK
Michael Andersen	Danish Fishermen's Association		DK
Vilju Lilleleht	Estonian Agricultural Institute		EE
Redik Eschbaum	Estonian Marine Institute		EE
Timo Asanti	Finnish Environmental Institute		FIN
David Grémillet	Centre for Ecological & Physiological Energetics		F
Loic Marïon	University of Rennes		F
Daniel Gerdeaux	Institute of Lacustrine Hydrobiology		F
Thomas Keller	Bavarian Bureau of Environmental Protection		D
Harald Kleisinger	Bavarian Bureau of Environmental Protection		D
Kareen Seiche	Saxon ministry of`Environment		D
Savas Kazantzidis	Forest Research Institute		GR

Ger Rogan	**Marine Institute**		**IRL**
Russell Poole	**Marine Institute**		**IRL**
Stefano Volponi	**Instituto Nazionzle Fauna Selvatica**		**I**
Ido Izhaki	**University of Haifa**		**IL**
Gadi Katzir	**University of Haifa**		**IL**
Zeef Arad	**Institute of Technology – Technion**		**IL**
Jonathan Harari	**The Hula Nature Reserve**		**IL**
Tamir Strod	**The Hula Nature Reserve**		**IL**
Janis Baumanis	**Institute of Biology**		**LV**
Linas Ložys	**Institute of Ecology**		**LT**
Mennobart van Eerden	**RIZA**		**NL**
Stef van Rijn	**RIZA**		**NL**
Willem Dekker	**RIVO**		**NL**
Nils Røv	**NINA**		**N**
Svein Lorentsen	**NINA**		**N**
Robert Gwiazda	**Polish Academy of`Sciences**		**PL**
Szymon Bzoma	**University of Gdansk**		**PL**
Catarina Vinagre	**University of Lisbon**		**P**
Susana Franca	**University of Lisbon**		**P**
Botond Kiss	**Danube Delta Institute**		**RO**
Miha Janc	**Fisheries Association of Slovenia**		**SI**
Carlos Garcia de Leaniz	**Institute of Freshwater Fisheries**		**E**
Angel Serdio	**Institute of Freshwater Fisheries**		**E**
Sofia Consuegra	**Institute of Freshwater Fisheries**		**E**
Erik Petersson	**National Board of Fisheries**		**S**
Henri Engström	**Uppsala University**		**S**
Erik Staub	**European Inland Fisheries Advisory Commission**		**CH**
David Carss	**Centre for Ecology & Hydrology**		**GB**
Ian Winfield	**Centre for Ecology & Hydrology**		**GB**
Morten Frederiksen	**Centre for Ecology & Hydrology**		**GB**
Scott Jones	**University of Wolverhampton**		**GB**
Mariella Marzano	**University of Durham**		**GB**

Sandra Bell	**University of Durham**		**GB**
Bruno Broughton	**European Anglers Alliance**		**GB**
Julian Hughes	**RSPB/BirdLife International**		**GB**
Ian Russell	**Centre for Environment, Fisheries & Aquaculture Services**		**GB**
Ivan Rusev			**Ukraine**
Anatoli Korzyukov	**Odessa National University**		**Ukraine**
Mykhailo Zhmud	**National Academy of Science of Ukraine**		**Ukraine**

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D. Annex: INTERCAFE organisational flow diagram