



**MEETING REPORT  
INTERCAFE @ Lisbon, 28-30 January 2005**

**“Organisation, management and integration of  
Work Groups within INTERCAFE”**

**INTERCAFE Meeting Report, Lisbon, Portugal, January 2005**

**D.N. Carss & M. Marzano (Editors)**

This full report of the meeting (see Appendix I for agenda and participants list) is in three parts: (1) Welcome and social science presentations; (2) interdisciplinarity discussions; (3) reports from three Work Groups. All remaining aspects of the meeting are covered in further Appendices: (II) Sub-group details, (III) current Management Committee/Work Group coordinates for INTERCAFE (COST 635).

**(1a) WELCOME (DNC)**

DNC welcomed participants to this, the first INTERCAFE scientific meeting, including INTERCAFE (and former REDCAFE) participants not present at the kick-off meeting in Brussels (September 2004), Leila Ben Habeje and Markus Knoflacher (representing COST) and six social scientists new to the Action (see below).

There followed a brief overview of the planned agenda for the meeting and an overview of INTERCAFE's three Work Groups. Special attention was paid to the Action's interdisciplinary nature, the need for clear communication within the Action and between disciplines, and the need for communication with both local people and policy-makers.

The Centre for Ecology & Hydrology had given DNC funding for Scott Jones to act as interdisciplinary facilitator for the first 4 scientific meetings. Scott played an invaluable role in REDCAFE, particularly during the WP4 Conflict Management Workshop in Waltham Abbey. Participants should consider other sources of funding for Scott's contributions after the first year of the Action.

**(1b) SOCIAL SCIENCE PRESENTATIONS**

Presentations were given by Sandra Bell (UK), Juhani Kettunen (Finland), Pekka Salmi (Finland), Faustas Stepukonis (Lithuania), Ketil Skogen (Norway), Thomas Olesen (Denmark). Presentations were approx. 5 minutes and were general introductions to the researchers and their areas of interest/expertise.

## (2) INTRODUCTION TO INTERDISCIPLINARY WORKING WITHIN INTERCAFE (SJ)

We should ask ourselves the following questions:

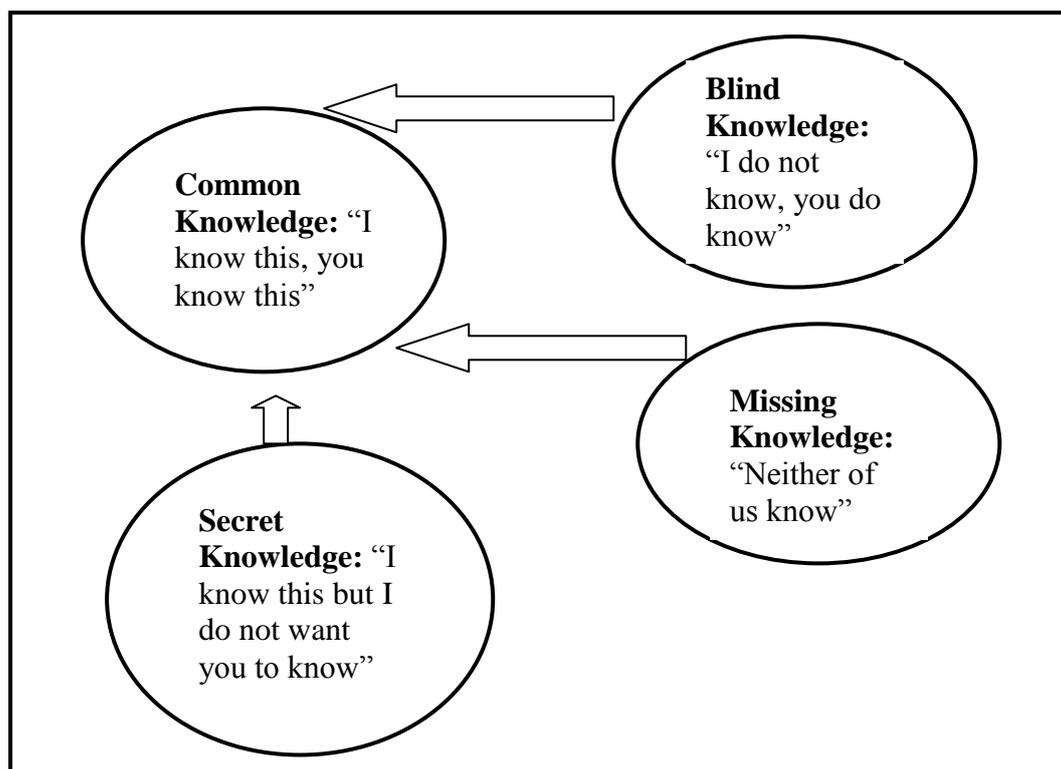
- Where do we see ourselves at the end of the project?
- How do we *structure* this project? What will the mechanisms be? (Hardware)
- How do we do this? What are the *relationships*? (Software)

We are starting out with a strong structure – in the form of the original proposal. We need to develop/complete it together and together develop good rules for working. The context for the work involves: fisheries sustainability, cormorant conservation status, and EU/national/regional policy.

It may be helpful to consider these points describing the process:

- Where are we (you) now?
- Where do we (you) want to be?
- How will we (you) get there? (Activities)
- What will stop us (you) getting there? (Risks)
- How will we (you) know when we (you) have got there? (Indicators of success and the criteria behind them).

Interdisciplinarity involves the transfer of knowledge (or *knowledges* – according to the Johari Window)



In INTERCAFE we want to move some things into ‘Common Knowledge’, e.g. science, culture, social needs, interests, law, pressures, history resources, etc. We should constantly be aiming for a complete mix of scientific, social and cultural elements in our work.

Paraphrasing the original project submission, INTERCAFE work has three main elements:

(a) Maintaining cormorant conservation status while sustainably exploiting fish stocks.

(b) Biological and social research programmes... offering management strategies ... for the benefit of local people and decision-makers.

(c i) Establishment and maintenance of an information transfer network to facilitate improved communication, dialogue and participation amongst stakeholders.

(c ii) Develop scientifically based management and conservation recommendations.

We should use this framework when considering the three Work Groups: (WG1) Ecological databases and analyses, (WG2) Conflict resolution and management, (WG3) Linking science with policy and best practice.

Using the project document, earlier discussions, informal dialogue and MC feedback (see Appendix II), Work Group activities should focus on the following questions and issues:

- (i) What is this Work Group about?
- (ii) What activities would be like to do?
- (iii) What are the goals for the next meeting?
- (iv) Communicate this information to the other Work Groups

It was suggested to Work Group co-ordinators that they should *delegate* tasks to other members of the group if appropriate, participants should help each other out and share *roles and responsibilities*. Some potential ‘*tools*’ for thinking and prioritising we offered:

- **Brainstorm:** positive, negative, interesting, cluster
- **Prioritising/ranking:** vote, limited voting, pairwise ranking, other ranking tools, facilitated consensus.
- **Top-slice:** take the top three, hold the rest (do not discard them).

We had a number of *resources* available to us:

- **Formal:** finance for publications, STSMs, Training Schools, ESF-COST relationship.
- **Informal:** leverage, people power, own networks.

- **External:** other potential sources of funding.
- **Personal:** each other as INTERCAFE participants

The three-day meeting was planned as a mixture of Work Group activities (both formal and informal), plenary presentations/discussions, (informal) Steering Committee progress reviews each evening. In addition, time was also allocated for the formation/work of a number of sub-groups. Participants were to feel free to discuss any project matters (in confidence) with SJ as he held a unique position in INTERCAFE: being a key participant but also an independent agent.

### **(3) REPORTS FROM WORKING GROUPS**

#### **(i) WG1 Ecological Databases and Analyses: a summary of actions, plans and discussions.**

**Participants:** Stefano Volponi, Stef van Rijn, Mennobart van Eerden, Botond Kiss, Catarina Vinagre, Henri Engström, Josef Trauttmansdorf, Zeev Arad, Mikael Kilpi, Marijan Govedic, Jean-Yves Paquet, Svein Lorentsen, Ivailo Nikolov, Linas Ložys, Thomas Bregnballe, Janis Baumanis, David Kortan

#### **Goals, purposes, outputs**

WG1 aims to produce an overview of relevant ecological knowledge concerning cormorants and to carry out the analyses towards an integrated ecological framework (on EU scale). WG1 started the process of collecting ‘missing’ ecological knowledge, collating this knowledge from participants and setting out tasks to be done between meetings.

WG1 concentrated on:

- (1) Devising the future working program (what needs to be done),
- (2) Identifying and implementing a working strategy (who can do it and how) to carry out WG1 tasks.

Definition of tasks of WG1 (What information and how to obtain it):

- Who will get information (identify participants roles; find 1-2 persons as referents to collect data for each country or selected topics; find contacts and sources of data/info outside the INTERCAFE)
- Identify problems to be overcome (e.g. define database structure for each data set; choose a common system of geographical coordinates or a system that can be easily converted so that we can overcome difficulties raised by national grid systems)

## **Needs, interests, hopes from the group**

- standardised methods (diet, counts, etc.) (see proposal for a cormorant manual workbook)
- conflict/damage description (ecological)
- thematic EU-wide charts
- case studies
- lethal actions
- choice of breeding, roosting and feeding sites (habitat quality)
- movements described from colour ringing programmes
- how is serious damaged defined in each country
- predation model (foraging ecology)
- population development (demography) roost/colony
- developments in aquatic habitats (nutrients, production, secchi depth, flow regime, depth, compartmentalisation)
- definition of optimal vs. suboptimal habitat (e.g. for wintering)

## **Main messages**

- Bird information ok, fish information scarce. Lack descriptive information on fish ecology (density, stocks, biomass...)
- The group is biased towards bird ecologists
- We need extra funding to reach some of the goals
- Collecting data and building a database needs time, but later working on database analysing information and elaborate scenarios will needs much more time and perhaps, specific expertise and/or dedicated people
- Need to consider the potential problem of work with unpublished data both as a source but especially as collector of data gathered from different sources

## **Aims for this year**

Start collecting available data from participants and implementing plans to collect further data on:

### **A. National cormorant status/distribution data (current/historical):**

- Breeding colonies (distribution, size, reproductive output, disturbance)
- Winter distribution (IWC counts, roost counts)
- Data from literature and unpublished reports
- Project European census 2003
- Numbers of bird shooting in winter/summer (e.g. egg removal/oiling)

**B. Integration of cormorant ecological data with other relevant datasets e.g. fish status distribution, water quality, wider environment-temperature.**

**C. Integration with WG2 Ecological/management dataset from the REDCAFE project e.g. site with conflict (with additional sociological information from WG3); management options (e.g. reimbursement, shooting)**

**D. Identify and discuss new projects that will have an impact on WG1 e.g. colony census in 2006; winter count in 2007.**

## **Goals to reach till/in Gdansk**

- (a) Presentation of 2003 roost count results (Rosemarie Parz-Gollner, Loic Marion)
- (b) Presentation of updated water system database (Stef van Rijn, Mennobart van Eerden).

During the last session WG1 divided into a number of subgroups to work on a number of tasks and either start to provide answers or implement a plan to collect relevant information. Full details of these subgroups are given in Appendix II.

## **(ii) WG2 Conflict Resolution and Management: a summary of actions, plans and discussions.**

**Participants:** Thomas Keller (Chair), Kareen Seiche (Co-chair), Daniel Gerdeaux, Jonathon Harari, Ger Rogan, Savas Kazantzidis, Linas Lozys, Bruno Broughton (Minutes), Ian Russell, Ion Navodaru, Robert Gwiazda, Petr Musil, Timo Asanti, Redik Eschbaum; part only - Szymon Bzoma, Susana Franca, Christian Dieperink, Mindaugas Dagys.

### **Key points for discussion were;**

- the role of WG2
- how we can build on REDCAFE?
- WG2 programme in the next four years
- WG2 relationship with WG1 & WG3

The intention was meet three times a year, using country visits for the collection of data on case studies, with regular plenary sessions to exchange information (particularly with WG3).

### **The role of WG2 was seen as:**

- To provide WG3 with information on the use of management tools in ‘real world’ situations – to include legal & economic frameworks at regional & national level, as well as ‘best practice’ manuals for stakeholders & policymakers
  - To revisit the areas of conflict – are they still valid?; have some disappeared?; are there new conflicts?
  - To identify & analyse management strategies that mitigate against cormorant damage

However, it was noted that there will be time constraints because group members may not have much time to devote to inter-meeting work!

### **Relationship with other WGs:**

- **WG1** Ecological database and analyses - provide basic cormorant and fish biology, and ecology data.

**WG3** Linking science with policy and best practice - analysing social, cultural, political and economic reasons.

**WG2** Actual ‘management’ and decisions in relation to environmental management (biological, ecological, and technical side & legal and economic frameworks on regional & national levels).

The group felt that it was vital to consider, understand & define a number of key terms, including:

- *Favourable conservation status*
- *Sustainable exploitation of fish*
- *Serious damage*
- *Successful (conflict resolution)*

This work may result in suggestions for a re-definition of the overall goal of INTERCAFE.

### **Initial analysis of principle issues:**

Group members were each invited to identify the main issues that they felt should be addressed in WG2 to provide a framework for conflict resolution.

However, it was acknowledged that (i) further issues may arise as the work proceeds, (ii) some of these tasks may have to be transferred to other WGs, and (iii) other WGs may have identified issues that should rightly be transferred to WG2.

The responses were re-ordered and collated under four main headings:

#### **(A) Biological**

- More actual case studies were required (but be aware that techniques/outcomes may not be applicable elsewhere)
- Needed better ecological monitoring & evaluation of the economic impacts on fish and fisheries, with real costings
- It was vital to improve monitoring of ‘success’ (or failure) to inform future management strategies
- Cormorant dietary data could be improved – more accurate, transferable qualitative and quantitative information
- Needed better information on breeding colonies

#### **(B) Technical and Managerial**

- Important to revisit REDCAFE findings & undertake objective evaluation of potential conflict management strategies
- Needed suites of practical, non-lethal measures - with risk information - that provided medium and long-term options, as well as short-term alternatives
- Identify & evaluate existing, new and altered cormorant management strategies
- Work towards practical management plans/pan-European strategy
- There were specific issues with fish-rearing ponds abandoned or converted to other uses because of cormorant damage – such ponds were also important for nature conservation
- Conflicts were often complicated – main constraint on resolution may be money/funding!

## **(C) Communication**

- Far better communications & information dissemination were required at all levels, especially to ‘ground level’ (where conflicts were actually occurring)
- Needed simple, practical, non-scientific guides/booklets setting out effective options for managing cormorants & fisheries (Bruno Broughton to provide INTERCAFE with copies of UK ‘Moran Committee’ booklet)
- Suitable one or two-page leaflets or ‘fliers’ may help engender co-operation between stakeholders

## **(D) Other issues**

- Ensure that reported bird:fish/fisheries conflicts were based on actual problems - beware of conflicts which arise because of other influences (e.g. poor water quality, degraded habitat)
- Conflicts may be multi-layered – at ecological **and** human levels - & resolution may require compromises by stakeholders & legislators
- The most problematic conflicts can occur on large, natural water bodies – little real current management, restricted options for future action
- May be necessary to realise that a ‘one solution fits all’ approach is unhelpful - distinct types of water body (small ponds, reservoirs, small stream, large rivers, etc.) may require different approaches

Action Programme: Lisbon – Gdansk

### **Sub-Group: REDCAFE Report**

- analyse & evaluate REDCAFE findings on technical measures
- work towards preparation of a short leaflet/flier

**Members:** Bruno (lead), Thomas, Ian, Kareen & Savas

### **Initiative 1: Legal Framework**

- compile lists showing interpretation of the legal framework for cormorant control in different countries and regions, with historical & recent changes
- prepare a chart/matrix showing current situation (and identifying gaps)

**Members:** Daniel (lead) & all to contribute via email

### **Initiative 2: Definitions**

- produce draft definitions of key words
- circulate to members for consideration & comment

**Members:** Ian (lead) & all to contribute via email

### **Initiative 3: Case Study Homework**

- all members to bring to next meeting examples of management actions – successful or otherwise – with attempts to assess damage caused by cormorants

**Members:** all group members

#### **Initiative 4: Fish/Aquaculture Ponds**

- compare & contrast pond management strategies; examine problems & identify possible solutions compatible with nature conservation & other key factors

**Members:** Kareen (lead), Daniel, Tamir, Jonathon, Robert, Petr

#### **Initiative 5: Task Priorities**

- to list agreed WG2 tasks and attempt to rank them in order of priority

**Members:** Bruno (lead) & all to contribute via email

#### **(iii) WG3 Linking Science with Policy and Best Practice: a summary of actions, plans and discussions.**

**Participants:** Sandra Bell, Mariella Marzano, Dave Carss, Rosemarie Parz-Gollner, Michael Anderson, Juhani Kettunen, Emmanuil Koutrakis, Peter Mohnert (temporary attendance), Faustas Stepukonis, Nickolay Kissiov, Pekka Salmi, Vilju Lilleleht, Erik Peterson, Renata Martincova, Tamir Strod, Ana Afonso Polyviou, Ketil Skogen, Thomas Oleson.

WG3 at the Lisbon concentrated on:

- (1) Deciding the role of WG3 and using the interdisciplinary nature of WG participants to create a more holistic perspective of cormorant conflicts.
- (2) Start the process of building up a picture of the Cormorant situation – placing it in the wider context which includes historical and legal analysis as well as a better understanding of people's livelihoods and attitudes.

To do this WG3 will be looking at ways/methodologies for investigating conflicts and the importance of case studies.

This **first session** focussed on introductions leading into discussions which outlined (1) what participants hoped they would learn as members of the group and (2) their major concerns (both with the work group objectives and with cormorant conflict in general).

#### **(1) Learning outcomes**

- Developing tools for handling cormorant conflicts.
- Getting others' experiences with human:wildlife conflicts involving seals and wolves.
- Learning about social and natural science.
- Integrating with Work Group 2 & 1.
- Learning more about human:human conflicts.
- Better understanding of conflict management.

## (2) Concerns

- Cormorants are a problem in some countries (such as Denmark). The problem should not always be highlighted as one of 'perception'.
- It seems difficult to separate Work Group 2 & 3 at the moment.
- How integration will be achieved between Work Groups.
- The overall aim of the project should not be to maintain the conservation status of cormorants.
- Concerns over lack of experience and knowledge about social or natural science.
- That dialogue between scientists and stakeholders is achieved.
- Concerns with sustainability of natural environment.
- How to achieve the goal of making appropriate policy recommendations.
- Need to get a 'better' picture of what is happening (in context of Cormorants) in the Baltic and across Europe.
- Finding ways to protect fisheries without shooting cormorants.
- How to make interdisciplinarity work.
- In some countries there are no anthropologists/sociologists that work in the field of cormorant conflicts. This is necessary.
- Problems of dissemination-how to bring all of the information to all people.
- People don't know enough about how the cormorant 'works'.

**The second session:** The group split up into sub-groups and participants were asked to discuss their conflict example. They were encouraged to ask each other 'contextual' questions (e.g. where, what, why, how). This was aimed at giving a better understanding of the situations people have come across and allow people to air their perspectives. Case studies were given by natural scientists, social scientists, policy-makers and angling stakeholders. Groups to come together to discuss results.

## Summary of presentations

### **Subgroup 1: summary of case studies in Bulgaria and Germany** (Nickolay Kissiov and Peter Mohnert)

In Southern **Bulgaria** - warm water reservoir used for cooling a power station (about 1000 hectare). In the past decade small mussels from the Black sea have been introduced into the reservoir (via birds). The mussels are dangerous for the power station so black carp were introduced to eat the mussels. There is no natural spawning of fish in these areas. Cormorants are eating the black carp. When there is a cold winter in e.g. Austria, Slovenia, Romania and Northern Bulgaria, this reservoir is sometimes the only one not to freeze so Great Cormorants, Pygmy Cormorants, pelicans and other birds flock to this area. The birds winter here (although there are some Pygmy Cormorant nests). The reservoir is artificially stocked with all kinds of carp so there is a conflict between cormorants and fishermen. Fishermen would like to shoot all cormorants. There are also human-human conflicts. Environmental NGOs focus on the conflicts between fishermen and cormorants but there is a feeling that they do not understand fishermen and fish farmers. They almost 'speak a different language'. The Bulgarian Government is now trying to encourage artificial spawning through hatcheries but these are costly. This winter was warm so there were not many

Cormorants. Locals think that scaring through shooting will remove the cormorant problem but it just shifts the Cormorants to another area.

In **Bavaria, Germany** Cormorants are selective in what they eat and can dive up to 11 metres. They are in conflict with fish stocks. They stop the natural reproduction. The conflict is over 6-8 different types of fish. From an angling perspective, it is not possible to speak to pro-conservationists. Some ornithologists in Germany think that the Cormorants should be controlled. In Bavaria Cormorants are shot but numbers are increasing. It is felt that shooting is not effective so another solution is to decimate eggs.

**Subgroup 2: summary of case studies in Norway, Finland and Estonia** (Erik Peterson, Pekka Salmi, Vilju Lilleleht)

In **Norway** there are conflicts with Geese. The Geese migrate across N.E. Norway and eat farmers' crops. They destroy large areas of farm land. It is legal to shoot the Geese but only in the Autumn. Farmers want more freedom to shoot the birds. There is not limit to the numbers of birds you can shoot but there is a problem finding enough hunters to do the shooting. A number of methods have been tried such as scaring and compensation schemes but these have not worked.

In **Finland** there are conflicts between fisheries and aquaculture and the Grey Seal. Along the Baltic coast, seals take fish from the nets of fisheries. Seal populations have increased because of less pollution and conservation efforts in the last 5 years. Fishermen have not been involved in management decision-making regarding seals although there has been lots of government intervention. Fishermen want to kill and scare more seals in their fishing grounds. There have been some solution offered such as making fishing gear seal proof but fishermen are not convinced. Fishermen need to be trained as they have forgotten how to hunt. There is a question as to whether seals can become a resource such as income generation from shooting licenses or seal meat. Fishermen are very sceptical about environmental and conservation issues. A national management plan is currently being set-up and this process includes public seminars where people are free to express their views.

In **Estonia** there are more than 9,000 breeding pairs of cormorants and their numbers are increasing. This has caused conflicts with local people. Fishermen have firm views. They feel that human populations are decreasing in coastal areas as there are not fish left. Those people who have stayed are struggling. The area is less prosperous and they blame cormorants. Rumours play a big part in the conflicts. People ask why environmentalists protected the cormorants when they arrived in the 1980s. The Government has been accused of doing nothing. People feel they cannot discuss problems. Officials say that the favourable status of fish fauna must be restored but it is not enough to set additional restrictions on fishermen if cormorants are acting freely and their catches are higher than fishermen's. Lack of cormorant management encourages illegal actions. There have been counter-arguments – for example, if there are no fish, why are cormorant populations increasing? Surely they would have nothing to eat and decrease!

**Subgroup 3: summary of case studies in Denmark and Greece** (Thomas Oleson and Emmanuil Koutrakis)

In **Denmark** there are 40,000 breeding pairs. Cormorants are everywhere. Fishermen have been complaining for 20 years. As a result of the complaints, a management plan was devised in 1992. The intention was to resolve conflicts and protect cormorants

from lethal methods of killing. Since 1994 there are no new colonies to be established but this is only for public land, not private. However, the Management Plan is ineffective as there are not enough funds for effective prevention. Net coverings are a method used but fishermen claim they have failed as they are costly and take time to set up (there is no increased yield to compensate for the effort expended). Other methods include oiling, deterrent activities to protect smolts, experimental hunting (limited number of hunters to shoot cormorants in a limited geographical area), protective hunting extended to 1km from fishery. The conflict is now diversifying. A recent study has shown that salmon stocks are being harmed by cormorant predations. These results have caused some conflicts with lots of people questioning the results but it is the first new research to come out in years and rightly or wrongly, it vindicates fishermen's observations/experiences which then open's up dialogue. So far, many fishers do not recognise the importance of scientific documentation. Ornithologists/environmentalists now agree that cormorants may be causing a problem. Scientists now believe they need to engage more with rigorous scientific methods to get results. Nevertheless, there are other environmental issues of concern such as salinity.

In **Greece** we focus on lagoons in Northern and Western Greece which are managed by cooperatives. There are around 8,000-10,000 wintering Cormorants. Here fishers do not fish with nets but use traditional methods of trapping to catch fish during migration. In winter, small fish are kept in channels which have good temperatures to keep the fish alive during cold months. This is an easy place for cormorants to fish. At present it is not known what the impact of cormorants are. Fish populations are decreasing whilst cormorants are increasing. In some cases Cormorants become scapegoats. Still, it is not known how much fish decline is down to other environmental factors. Protective measures include gas cannons. Where the cooperative is strong and have money, they protect the channels with nets but these nets are expensive and are easily damaged. The cooperatives feel that they need support in terms of financial support for nets and licenses to shoot birds. People are migrating out to urban areas. To stem the flow they are encouraged to diversify from fishing into agriculture

**Subgroup 4: summary of case studies in the Czech Republic, Israel and Austria**  
(Renata Martincova, Tamir Strod, Rosemarie Parz-Gollner)

In the **Czech Republic** there are cormorant conflicts in fish ponds as Cormorants specialise in feeding on a certain size of fish. They can remove a whole year class and so fishermen can remove a whole year's income.

In **Israel** there are also conflicts in fishponds (Hula Valley). People used fireworks as a scaring strategy moving the cormorants to the Sea of Galilee where Cormorants have had a good impact on water quality. Fishermen were willing to accept that professionals should do all the shooting-they don't want to do it themselves.

In **Austria** there are numerous conflicts with Cormorants. Most of the problems focus primarily on small river habitats and anglers' interests. Various regulations exist that allow the shooting of cormorants along defined river sections with the aim of reducing the impact on salmonid species like brown trout and grayling. Ornithologists or nature conservationists argue that simply killing cormorants is fighting the symptoms and not solving the problems. If cormorants are killed to support locally endemic fish species, anglers should also refrain from fishing grayling in these same river sections to see whether shooting has an effect on the amount of fish surviving

and/or population structure. However, anglers pay for their annual fishing licences so they want to go out and catch their permitted amount of fish. Questions concerning additional stocking (amount, species, quality) make the situation even more complicated.

**Session 3:** Group brainstorming to think of ways have been able to contextualise problems

Participants were encouraged to go more 'indepth' by extending the context of the conflict. The group focussed on the information they would need, the questions they should ask and problems they expect to encounter e.g.

1. Background: Are anglers interested in improving ecological conditions i.e. water quality?
2. Scientific evidence e.g. Cormorant diet
3. What are the legal/management/policy obstacles to a 'unified solution'?
4. Is the above question necessary?
5. Does the idea of a pan-European solution lead to 'no solution at all'?
6. How can you compare ecology/sociology in some countries (e.g. Austria's 9 provinces)?
7. Similarly, how can one reconcile the 'top-down' imposition of legal frameworks with their local/regional-level implementation?
8. Is there a trend towards site-specific solutions?
9. How can knowledge of local people be helpful? Are ecologists interested?
10. Who are the relevant stakeholders? What are their preferences?
11. Who has the power?
12. How can stakeholders be involved in the solution?
13. Is the number of cormorants relevant?
14. Do stakeholders have the same/different goals?
15. What links stakeholders goals?
16. How does hydrology impact on issues?
17. Do people involved in hydro-electrics have a part to play?
18. Do birdwatchers believe cormorant have an impact on other bird species?

#### **Session 4**

A case study was presented by Thomas Olesen (WG3 participant) on doing social research into Cormorant conflict and the results of this research.

**The Danish management of cormorants:** *why are conflicts unsolved after a decade with management plans?*

The first cormorant management plan in Denmark was implemented a decade after the cormorants became protected. As the population of cormorants started to increase following the protection so did the conflicts with primarily commercial pound net fishers, which resulted in the creation of a management plan. However, after a decade of management plans the problems are basically still the same.

The presentation will elaborate on the findings from part of a study of cormorant management in Denmark\* investigating how different stakeholders perceive the

management of cormorant. Twenty-one interviews were carried out with stakeholders representing different interests and experiences. From the analysis of these interviews a detailed picture of the conflict emerged as perceived by different stakeholders. Several interesting findings add to the explanation of why cormorant related conflicts are still unsolved. One finding was that despite opposing views about management needs and policy instruments, a majority of stakeholders agreed that the main instruments in the management plan do little or nothing to resolve the conflict. Another important aspect of the conflict is the role that knowledge plays. Scientific knowledge is a prerequisite for modern environmental management, but in the Danish cormorant case some stakeholders have easier access to scientific production and documentation of knowledge than others. This has to some degree biased management and has affected how the management is supported by some stakeholders. A third important issue is mechanisms that contribute to the reproduction of the conflict like the role of generalisations and distorted arguments used by stakeholders. Lastly, the focus of the cormorant conflict in Denmark has recently been shifting from being a conflict with commercial fisheries towards an ecosystem oriented conflict, and this shift has implications for all stakeholders.

\*The findings on problems in the Danish management of cormorants presented at the INTERCAFE workshop derive from a study of cormorant management in Denmark. This study is part of FRAP, a European study of conflicts between protection of fish eating species and fisheries interests.

The study I have been responsible for consists of three parts:

Analysis of the legal and institutional management basis

Analysis of socio-economic impact of the conflict

Analysis of different stakeholders' perceptions of management in general and specific policy instruments.

The presentation is based on the analysis of stakeholder perceptions.

### **Plans for Gdansk meeting**

Do more indepth investigations into selected case studies:

Bulgaria (reservoir); Czech Republic (ponds); Denmark (marine); Austria (rivers).

This will fit into the overall goals of WG3 to:

- Synthesise social/ecology side of Cormorant conflicts
- Place Cormorant conflicts in a wider context
- Develop a management tool box



## Appendix I: Lisbon agenda and participants list

INTERCAFE @ Lisbon, January 2005

Program of the meeting

### THURSDAY 27<sup>th</sup>

Most participants arrive during the day/evening

### FRIDAY 28<sup>th</sup> (DAY ONE)

09.00-09.30 **Dave Carss (Chair)- Welcome:** Welcome/short address/explain this meeting – where we are now. Highlight agenda for the meeting. Any apologies. Introduce ‘new’ people who have joined INTERCAFE (primarily social scientists). Introduce the aim of Work Groups again. Introduce new website.

09.30-10.30 **Short presentations (10 minutes) from social scientists** introducing themselves and their work. Dave Carss will chair this session. Short presentations from:

Dr Sandra Bell (U.K.): Dr Pekka Salmi (FIN): Dr Faustas Stepukonis (LITH): Dr Ketil Skogen (NO): Dr Thomas Oleson(DK).

10.30-11.0 Coffee

11.00-11.30 **Scott Jones:** Introduction to the philosophy of INTERCAFE- why it needs to be interdisciplinary and what this means. Introduces methods for getting work groups to plan their programme of work over the next four years. Introduces ground rules for project management, organisation of work groups, communication strategies, how INTERCAFE participants are expected to behave etc.

11.30-13.00 **Session led by Scott Jones:** Interdisciplinary exercises. Work Groups are formed to start planning the programme of work (within the meetings and between meetings).

13.00-14.00 Lunch

14.00-15.30 **Work Group Activities**

15.30-16.00 Coffee

16.00-16.45 **Work Group activities continued**

16.45-17.45 **Plenary session** – Dave Carss and Scott Jones will act as chairs for this Plenary. Work Groups report back on their activities over the day, programme of work for the next year and strategies for integration with other groups. There will be room for questions and then a group discussion on interdisciplinary interactions between natural and social scientists

17.45-18.00 **Dave Carss/Scott Jones:** Summing up of day's activities and preparation for next day

## **SATURDAY 29<sup>th</sup> (DAY TWO)**

09.00-10.30 **Management Committee Meeting** (Dave Carss: Chair; Rosemarie Parz-Gollner: Vice Chair)

1. Welcome to participants (on Day Two)
2. Adoption of agenda (standard COST format)
3. Minutes of last meeting
4. Report from the Scientific Officer (Leila Ben Habeje)
  - News from the COST office
  - Status of the Action
  - Number of Signatories
  - Budget Status, budget allocation process
5. Year Budget status and planning
6. STMS status, applications
7. Publications, annual report
8. Evaluations

10.30-10.45 Coffee

10.45-12.30 **Management Committee Meeting**

9. Request for new members (e.g. Slovakia)
10. Non-COST participations (e.g. Ukraine)
11. Updates of Co-ordinates MC/WGs etc.
12. Web update
13. Progress report of working groups
14. Long terms planning
15. Time and place of next meeting
16. AOB

13.00-18.00 **Excursion:** Lisbon Oceanarium

## **SUNDAY 30<sup>th</sup> (DAY THREE)**

09.00-09.30 **Dave Carss** and **Scott Jones**: Review of activities over past two days and introduction to the activities for today which will involve continuation of Work Group activities, more interdisciplinary integration and the setting up of sub-working groups.

09.30-10.30 **Work Group activities**

10.30-11.00 Coffee

11.00-13.00 **Work Group activities continued**

13.00-14.00 Lunch

14.00-15.30 **Session led by Scott Jones**: A set of integrating activities which will build on the interdisciplinary exercises carried out on Day One and will encourage Work Groups to focus on how the work carried out at this meeting can inform the research/planning of other Work groups. Focus on integrating outputs from all Work Groups

15.30-16.00 Coffee

16.00-17.30 **Formation of sub-groups** to investigate harnessing the potential and support of COST. Subgroups will be asked to plan and implement activities in relation to (a) searching and applying for sources of research funding (b) STSMs, (c) Training (d) Managing the website (e) publications

17.30-18.00 **Dave Carss**: Summary of meeting and looking forward to the future. Decision to be made on the 'themes' (e.g. conflicts between Cormorants and recreational fisheries) for the next three meetings. Discussion on inviting 'experts' to next meeting

## **MONDAY 31<sup>st</sup>**

Participants leave

### **List of Participants @ Lisbon (N = 55)**

#### **(1) UNITED KINGDOM**

Dave Carss, Mariella Marzano, Sandra Bell, Scott Jones, Ian Russell, Bruno Broughton

#### **(2) PORTUGAL**

Susana França, Catarina Vinagre

#### **(3) GERMANY**

Thomas Keller, Kareen Seiche, Peter Mohnert

#### **(4) ITALY**

Stefano Volponi

**(5) THE NETHERLANDS**

Mennobart van Eerden, Stef van Rijn

**(6) ROMANIA**

Botond Kiss, Ion Navodaru

**(7) SWEDEN**

Henri Engström, Erik Petersson

**(8) FRANCE**

Daniel Gerdeaux

**(9) POLAND**

Robert Gwiazda, Szymon Bzoma

**(10) ESTONIA**

Redik Eschbaum, Vilju Lilleleht

**(11) AUSTRIA**

Josef Trauttmansdorf, Rosemarie Parz-Gollner,

**(12) ISRAEL**

Zeev Arad, Tamir Strod, Jonathon Harari

**(13) FINLAND**

Mikael Kilpi, Timo Asanti, Pekka Salmi, Juhani Kettunen

**(14) SLOVENIA**

Marijan Govedic

**(15) GREECE**

Savas Kazantzidis, Emmanuil Koutrakis

**(16) BELGIUM**

Jean-Yves Paquet

**(17) NORWAY**

Svein Lorentsen, Ketil Skogen

**(18) IRELAND**

Ger Rogan

**(19) BULGARIA**

Nickolay Kissiov, Ivailo Nikolov

**(20) LITHUANIA**

Linus Ložys, Mindaugas Dagys, Faustas Stepukonis

**(21) DENMARK**

Thomas Bregnballe, Thomas Oleson, Christian Dieperink, Michael Anderson

**(22) LATVIA**

Janis Baumanis

**(23) CZECH REPUBLIC**

Renata Martincova, Petr Musil, David Korten

**(24) CYPRUS**

Ana Afonso Polyviou

**COST REPRESENTATIVES**

Leila Ben Habeje (COST Office, Brussels)

Markus Knoflacher (COST Rapporteur)



## Appendix II: INTERCAFE Sub-groups

### Sub-group 1 (WG1) Cormorant Manual

Responsible person: **to be confirmed**

Also Josef Trauttmansdorf, David Kortan, Szymon Bzoma, Marijan Govedic, Botond Kiss, Thomas Bregnballe, Svein Lorentzen, (Stuart Newson), Mennobart van Eerden, Jean-Yves Paquet, Stef van Rijn, Rosemarie Parz-Gollner, Reinard Haunschmid (proposed): David Kortan, Stefano Volponi, Marijan Govedic.

There is an urgent need to devise a 'recipe book' to be used as a collection of standard methods to deal with cormorant issues. WG1 recognises that working with cormorants implies the use of a set of techniques that are described in a large number of scientific papers but are not easily available to some researchers, particularly amateurs or novices. The need for a set of recommended common techniques, with details on advantage/disadvantage of different methods, was recognised as a means of standardising results to make them more comparable. This was also seen as a special opportunity considering the availability within Cost of funding specific publications.

The 'Manual' will deal with techniques/approaches for counts, diet study, ringing, identification, ageing, sexing, measuring, recognise fish wounds, etc.

During the meeting, several people were appointed to start collecting available materials and organise contents:

- (a) Diet: Josef Trauttmansdorf, David Kortan, Szymon Bzoma, Marijan Govedic, Botond Kiss
- (b) Colonies: Thomas Bregnballe, Svein Lorentzen
- (c) Breeding success: Botond Kiss, (Stuart Newson)
- (d) Sex and age: Mennobart van Eerden, Jean-Yves Paquet, Stef van Rijn (live birds), Rosemarie Parz-Gollner (dead birds)
- (e) Fish density indicators: Reinard Haunschmid proposed by Rosemarie Parz-Gollner
- (f) Indicators of damage (wounds, injured, scars on fish): David Kortan
- (g) Environment on European scale: Stefano Volponi, Marijan Govedic, Mennobart van Eerden, Stef van Rijn

### Sub-group 2 (WG1) Water System Database

Responsible person: **Stef van Rijn**,

Also Mennobart van Eerden, Jean-Yves Paquet, Catarina Vinagre, Mikael Kilpi

The subgroup aims to update the water system database, which was set up during REDCAFE. The existing data are biased to certain parts of countries and some countries are not included. Catarina will take care of the missing information of Portugal. The subgroup will send an email to every participant in each country in order to find information on some specific/important (parts of) water systems.

During the next meeting in Gdansk, the update can be presented and everybody can comment on it and advise what is still missing or what can be improved.

### **Sub-group 3 (WG1) Historical Database of Breeding Colonies**

Responsible person: **Stefano Volponi**

Also Thomas Bregnballe, Henri Engström, Marijan Govedic, Josef Trauttmansdorf.

The subgroup considered the need to collate a geo-referenced database of available information on distribution and size of *P. carbo* breeding colonies in Europe. The subgroup recognized the need to identify (for each country holding breeding colonies) a national coordinator (inside or outside INTERCAFE) appointed to look for published/unpublished information and relationships with the subgroup coordinators (Stefano Volponi and Thomas Bregnballe). Before the next meeting in Gdansk it is intended to: (1) arrange a list of national coordinators, (2) submit data already available to be used as a starting point for the dataset to be filled and updated.

### **Sub-group 4 (WG1) Status of Breeding Colonies in 2006.**

Responsible person: **Thomas Bregnballe**

Also Stefano Volponi, Svein Lorentsen, Stef van Rijn.

This subgroup is aimed at promoting counts of nests in breeding colonies throughout Europe in the breeding season of 2006. The aim is to reach a good estimate of the size and distribution of the breeding population of cormorants in Europe. The subgroup will have 3-4 regional coordinators with contact to a national coordinator in all European countries holding breeding populations of cormorants. So far, the subgroup has discussed which types of information to collect and the contents of the letters that will be written to the national coordinators. Before the next meeting in Gdansk it is intended to: (1) send the first letter to potential national coordinators, (2) get an overview of the needs for supporting funding.

### **Sub-group 5 (WG1) Ecology of Pygmy Cormorants**

Responsible person: **Zeev Arad**

Also Ivailo Nikolov, Savas Kazantzidis, Stefano Volponi, Botond Kiss.

Background: The Pygmy cormorant is an endangered species that in many places is co-existing with the Great cormorant. Therefore, any action suggested for the resolution of the Great cormorant conflicts with fisheries should account for the Pygmy cormorant as well. Yet, a lot is unknown as to the Pygmy cormorant's ecology, breeding biology, distribution, food preference etc.

Mission: To accumulate the existing data on the Pygmy cormorant in the countries concerned, in parallel with the database that is built for the Great cormorant.

First steps identified:

- (1) All representatives will initiate the Pygmy cormorant database.
- (2) We are already considering a training mission for counting Pygmies in the Danube Delta. We plan to apply for the short-term scientific mission exchange program and send a group of graduate students from the participating countries to help Botond Kiss accomplishing a Pygmy (and Great) count in May 2006.
- (3) Try to establish connections with other possible countries such as Hungary, Croatia, Ukraine.

#### Appendix:

All countries concerned should provide the available data on the Pygmy cormorant:

1. Breeding and roosting numbers.
2. History of populations.
3. Movements of populations.
4. Colony distribution.
5. Type of colony, e.g. single species, mixed with the great cormorant, mixed with other species such as herons etc.
6. Type of breeding sites.
7. Habitat preferences for breeding and/or roosting.
8. Known food preferences.
9. Known damages to fisheries.
10. Description of conflict, if applicable.
11. Legal status.
12. Numbers killed.

#### **Sub-group 6 (WG2) Production of REDCAFE Report/Leaflet**

Responsible person: **Bruno Broughton**

Also, Thomas Keller, Kareen Seiche, Ian Russell, Savas Kazantzidis, Dave Carss, Mariella Marzano.

#### Aims

1. to analyse & evaluate REDCAFE findings on technical measures (short-term)
2. to work towards preparation of a short leaflet/flier summarising REDCAFE findings

#### Work

Work on Aim 1 individually & communicate by email. Hope to collate/finalise everything by Gdansk

Work on Aim 2 - will depend on and lead from output from Aim 1.

#### Funding (not researched yet)

Aim 1. should be achievable through email & at no cost.

Aim 2. will depend on format, length, number of copies, distribution, etc.

#### **Sub-group 7 (WG1) The Baltic Sea Leaflet**

Responsible person: **Timo Asanti**

Also Mindaugas Dagys, Linas Lozys, Mikael Kilpi, Henri Engström, Szymon Bzoma, Thomas Bregnballe, Redik Eschbaum, Henri Engström, Eric Petersson, Janis Baumanis, Thomas Olesen, Vilju Lilleleht.

General aims. To produce a leaflet "Cormorant versus Fisheries" for the Baltic countries. Target group: general public, stakeholders etc.

The subgroup will contact Russia and Germany to invite them to become involved. At least one participant is required per country. Short-term Funding: From COST 635 as much as possible and national funding (?).

A leaflet was produced in Denmark in 2001, Thomas Bregnballe has asked the Ministry for copies of the printed folder, copies will be available in Gdansk. It is also available on-line at:

<http://www.sns.dk/publikat/2001/skarvfolder.htm>

For the forthcoming Gdansk meeting Timo Asanti will try to produce some kind of provisional lay-out for the leaflet.

#### **Sub-group 8 (WG1) Baltic Sea Research**

It is not clear yet whether this is going to be a real group. We hope so.

Responsible person: **Thomas Bregnballe**

Also Mindaugas Dagys, Linas Lozys, Mikael Kilpi, Henri Engström, Szymon Bzoma, Thomas Bregnballe.

Plans: Describe the expansion of cormorants in the Baltic Sea region. Identify some of the factors that appear to limit numbers and distribution?

Funding: Maybe short term scientific missions. May try funding at the Nordic Council for analyses and writing up.

#### **Sub-group 9 (WG2) Reducing Cormorant Conflict at Carp-ponds**

Responsible person: **Kareen Seiche**

Also Petr Musil, Robert Gwiazada, Daniel Gerdeaux, Tamir Strod (Renata Martincova will probably join later).

**Abstract:** Fishponds with carp (*Cyprinus carpio*) as a main crop are common in a few countries in the EU and in Israel. The great cormorant is considered as a major pest to fishponds in those countries. A successful cormorants-fishponds management was developed and carried out in the Hula Valley, Israel during the last 4 winters. The success had expressed in (1) cormorant damage reduction and, (2) annual costs of management, both by ca. 90%. Thus, we may say that this management resolved 90% of the conflict between cormorants and carp growers in that area. The management was based on scientific knowledge, coordinated cooperation of all stakeholders, and use of non-lethal means.

The sub-group aims to study similar management in 4 areas of carp-ponds in Europe. The members of the group will need to: (1) modify the above-mentioned management in each of the areas and, (2) monitor it during 2006-2008 using similar monitoring techniques, as that used in the Hula Valley.

The project suggested here will involve short meetings in each of the areas.

#### **Proposed activities:**

- (1) overview of available published and unpublished literature (by April meeting in Gdansk). Subsequently, try to collect literature from 'missing' countries (possibly in time for Saxony meeting, September 2005)
- (2) Select a restricted case study area (and a preferable fish pond landscape).
- (3) Collect baseline data (see table below) by April 2005.

Pond habitat data	Status of protection, value for nature protection, (percentage of reeds) Waterbird numbers, bird species (protected and endangered species), surrounding landscape, alternative feedings ground with a short description, distance, etc., size of ponds (medium size, total size), water depth, water visibility, water plants
Pond management	Annual cycle of production, fish species, fish density, fish sizes, percentage of non-commercial and unused fish
Other predators	For example heron, otter, gulls
Cormorant data From 1990- 2004	Number of breeding pairs + number of non-breeding birds during breeding season, number of feeding birds/ month in feeding grounds
	Resting birds (number of roosting sites, number of birds)

**Sub-group 10 (WG1, 2, 3) External Sources of Funding**

Involvement offered from Dave Carss, Mennobart van Eerden, Jouhani Kettunen,  
Thomas Bregnballe.



## Appendix III: Current Management Committee/Work Group coordinates for INTERCAFE (COST 635)

January 2005: (24 countries, 58 participants, SC = Steering Committee)

### (1) UNITED KINGDOM

- (1) **Dave Carss: Management Committee:** Yes (Chair), **Work Group:** 3, **SC**  
Centre for Ecology and Hydrology  
CEH Banchory, Hill of Brathens  
Banchory, Aberdeenshire, AB31 4BW
- (2) **Mariella Marzano: Management Committee:** Yes, **Work Group:** 3 (co-coordinator), **SC**  
Department of Anthropology  
University of Durham  
43 Old Elvet, Durham, DH1 3HN
- (3) **Sandra Bell: Management Committee:** No, **Work Group:** 3 (Coordinator), **SC**  
Department of Anthropology  
University of Durham  
43 Old Elvet, Durham, DH1 3HN
- (4) **Phillip Scott Jones: Management Committee:** No, **Work Group:** 1, 2 & 3, **SC**  
Heart of Burton Partnership  
73 Horninglow Road, Burton on Trent  
DE14 2PT
- (5) **Ian Russell: Management Committee:** Yes, **Work Group:** 2  
The Centre for Environment, Fisheries & Aquaculture Science  
CEFAS Lowestoft Laboratory, Pakefield Rd,  
Lowestoft, Suffolk, NR33 OHT
- (6) **Bruno Broughton: Management Committee:** No, **Work Group:** 2  
Independent Fisheries Consultant  
Trenchard, Lower Bromstead Road, Moreton,  
Newport, Shropshire, TF10 9QD

### (2) PORTUGAL

- (7) **Susana França: Management Committee:** Yes, **Work Group:** 2  
University of Lisbon  
Departamento de Zoologie e Anthropologia/ Instituto de Oceanografia  
Faculdade de ciencias da Universidade de Lisboa  
**R.Ernesto de Vasconcelos, 1749-016**
- (8) **Catarina Vinagre: Management Committee:** Yes, **Work Group:** 1  
University of Lisbon  
Departamento de Zoologie e Anthropologia/ Instituto de Oceanografia  
Faculdade de ciencias da Universidade de Lisboa  
**R.Ernesto de Vasconcelos, 1749-016**

### (3) GERMANY

- (9) **Thomas Keller: Management Committee:** Yes, **Work Group:** 2 (Coordinator), **SC**  
Bavarian State Ministry of the Environment, Public Health and Consumer Protection

Ref. 65  
Rosenkavalierplatz 2, D-81925 Munich

(10) **Kareen Seiche: Management Committee:** No, **Work Group:** 2 (co-coordinator), **SC**  
Saxon Ministry Environment  
Archivstrasse 1, 01097 Dresden  
Germany

(11) **Volker Hilge**  
\*\*Postal address to be confirmed

(4) ITALY

(12) **Stefano Volponi: Management Committee:** Yes, **Work Group:** 1 (Coordinator), **SC**  
Istituto Nazionale Fauna Selvatica  
Via Ca' Fornacetta, 9, 460064 Ozzano Emilia BO  
Italy

(5) THE NETHERLANDS

(13) **Mennobart van Eerden: Management Committee:** Yes, **Work Group:** 1  
Institute for Inland Water Management and Waste Water Treatment  
RIZA, Directoraat-General Jijkswaterstaat, PO Box 17, NL-8200,  
Lelystad, The Netherlands

(14) **Stef van Rijn: Management Committee:** Yes, **Work Group:** 1 (co-cordinator), **SC**  
Institute for Inland Water Management and Waste Water Treatment  
RIZA, Directoraat-General Jijkswaterstaat, PO Box 17, NL-8200,  
Lelystad, The Netherlands

(6) ROMANIA

(15) **Botond Kiss: Management Committee:** Yes, **Work Group:** 1  
Danube Delta Institute  
Str Babdag, Ro8800, Tulcea, Romania

(16) **Ion Navodaru: Management Committee:** Yes, **Work Group:** 2  
Danube Delta Institute  
Str Babdag, Ro8800, Tulcea, Romania

(7) SWEDEN

(17) **Henri Engström: Management Committee:** Yes, **Work Group:** 1  
Evolutionary Biology Centre/Population Biology  
Uppsala University  
Norbyvägen 18D  
SE-752 36 Uppsala  
SWEDEN

(18) **Erik Petersson: Management Committee:** Yes, **Work Group:** 3  
National Board of Fisheries  
Institute of Freshwater Research  
Stångholmsvägen, S-178 93, Drottningholm, Sweden

(8) FRANCE

(19) **Daniel Gerdeaux: Management Committee:** Yes, **Work Group:** 2  
Institute of Lacustrine Hydrobiology  
Institut National de la Recherche Agronomique  
Station d'Hydrobiologie Lacustre, BP R11

75 Avenue de Corzent, F-74203, Thonon-Les-Bains, France

- (20) **Loic Marion**  
University of Rennes,  
Campus Beaulieu,  
35042 Rennes Cedex,  
France

(9) POLAND

- (21) **Robert Gwiazda: Management Committee: Yes, Work Group: 2**  
Institute of Freshwater Biology, Polish Academy of Sciences  
Slawkowska 17, Krakow, PL-31-016, Poland
- (22) **Szymon Bzoma: Management Committee: Yes, Work Group: 2**  
Department of Fish Resource  
Sea Fisheries Institute  
Kollataja St. 1, PL-81-332, Gdynia, Poland

(10) ESTONIA

- (23) **Redik Eschbaum: Management Committee: Yes, Work Group: 2**  
Estonian Marine Institute, Viljandi Road 18B,  
11216 Tallinn, Estonia
- (24) **Vilju Lilleleht: Management Committee: Yes, Work Group: 3**  
Estonian Agricultural University  
Institute of Zoology and Botany  
Riia 181, EE51014 Tartu, Estonia

(11) AUSTRIA

- (25) **Josef Trauttmansdorf: Management Committee: No, Work Group: 1**  
Otto Koenig Institute, A-2000, Stockerau, Austria
- (26) **Rosemarie Parz-Gollner: Management Committee: Yes,  
Work Group: 3 (Vice Chair), SC**  
Inst. fuer Wildbiologie und Jagdwirtschaft  
Univ. f. Bodenkultur Wien, PeterJordanstrasse 76,  
A-1190, Vienna, Austria
- (27) **Reinhard Haunschmid: Management Committee: Yes, Work Group: 1**  
Bundesanstalt fuer Wasserwirtschaft,  
Inst. f. Gewaesseroekologie, Fischereibiologie und Seenkunde,  
Scharfling 18, A-5310 Mondsee, Austria.

(12) ISRAEL

- (28) **Zeev Arad: Management Committee: Yes, Work Group: 1**  
Department of Biology, Institute of Technology  
Technion- Israel Institute of Technology-Faculty of Biology  
Technion City, IL-32000, Israel
- (29) **Tamir Strod: Management Committee: No, Work Group: 3**  
P.O.B 1116, Mazkeret-Batia 76804, Israel  
For: Border Collie Rescue, Inc.  
886 State Road 26, Melrose FL 32666-3137 United States
- (30) **Simon Nemtzov: Management Committee: Yes, Work Group: 2**

Wildlife Ecologist and Scientific Authority for CITES  
Israel Nature and Parks Authority  
3 Am Ve'Olam Street  
Jerusalem 95463, Israel

- (31) **Jonathon Harari: Management Committee: No, Work Group: 2**  
The Hula Nature Reserve  
P.O.B. 340 Yesud Hamaala, 12105, Israel

(13) FINLAND

- (32) **Mikael Kilpi: Management Committee: Yes, Work Group: 1**  
ARONIA Environment  
Åbo Akademi University & Sydväst Polytechnic  
Raseborgsvägen 9, FIN-10600 Ekenäs  
Finland
- (33) **Timo Asanti: Management Committee: Yes, Work Group: 2**  
Finnish Environmental Institute  
Nature and land Use Division, Kesäkuu 6, PO Box 140  
FIN-00251, Helsinki, Finland
- (34) **Pekka Salmi: Management Committee: No, Work Group: 3**  
Finnish Game and Fisheries Research Institute  
Saimaa Fisheries Research and Aquaculture  
Laasalantie 9, FIN-58175 Enonkoski, Finland
- (35) **Juhani Kettunen: Management Committee: No, Work Group: 3**  
Finnish Game and Fisheries Research Institute  
PO Box 2  
FIN-00791 Helsinki, Finland

(14) SLOVENIA

- (36) **Marijan Govedic: Management Committee: Yes, Work Group: 1**  
Center za kartografijo favne in flore  
Centre for Cartography of Fauna and Flora  
Antoliciceva 1, SI-2204 Miklavz na Dravskem polju, Slovenija  
podružnica Ljubljana  
Zemljemerska 10, SI-1000 Ljubljana, Slovenija
- (37) **Miha Janc**  
Fisheries association of Slovenia  
Trzaska cesta 132  
Slovenia

(15) GREECE

- (38) **Savas Kazantzidis: Management Committee: Yes, Work Group: 2**  
Forest Research Institute  
National Agricultural Research Foundation  
GR-57006 Vassilika, Thessaloniki, Greece
- (39) **Emmanuil Koutrakis: Management Committee: Yes, Work Group: 3**  
Fisheries Research Institute  
National Agricultural Research Foundation  
640 07 Nea Peramos, Kavala, Greece

(16) BELGIUM

- (40) **Jean-Yves Paquet: Management Committee: Yes, Work Group: 1**  
Central Ornithologique Aves, Rue de Blacet 1,  
5530 Yvoir, Belgium

(17) NORWAY

- (41) **Svein Lorentsen: Management Committee: Yes, Work Group: 1**  
Norwegian Institute for Nature Research  
Tungasletta 2, N-7485 Trondheim, Norway
- (42) **Ketil Skogen: Management Committee: No, Work Group: 3**  
NINA, Unit for Human-Environment Studies,  
Fakkeltgarden, N-2624 Lillehammer, Norway
- (43) **Nils Røv**  
**Norwegian institute for Nature Research**  
Tungasletta 2, N-7485 Trondheim  
Norway

(18) IRELAND

- (44) **Ger Rogan: Management Committee: Yes, Work Group: 2**  
Marine Institute, Salmon Management Services, Furnace,  
Newport, Co. Galway, Ireland

(19) BULGARIA

- (45) **Nickolay Kissiov: Management Committee: Yes, Work Group: 3**  
Bulgarian Fisheries and Aquaculture Association  
j.k. "Levski-g" bd. 10-7-132, 1 836 Sofia, Bulgaria
- (46) **Ivailo Nikolov: Management Committee: Yes, Work Group: 1**  
BALKANI Wildlife Society  
67 Tsanko Tserkovski St./3, 2nd floor, apt.3, Sofia 1421

(20) LITHUANIA

- (47) **Linus Ložys: Management Committee: Yes, Work Group: 1**  
Laboratory of marine Ecology, Institute of Ecology,  
Alademijos 2, LT-2600, Vilnius, Lithuania
- (48) **Mindaugas Dagys: Management Committee: Yes, Work Group: 2**  
Laboratory of marine Ecology, Institute of Ecology,  
Alademijos 2, LT-2600, Vilnius, Lithuania
- (49) **Faustas Stepukonis: Management Committee: No, Work Group: 3**  
Klaipeda University,  
H. Manto 84, Klaipeda,  
Lithuania

(21) DENMARK

- (50) **Thomas Bregnballe: Management Committee: Yes, Work Group: 1**  
National Environmental Research Institute  
Dept. of Coastal Zone Ecology, Kaloe, Genaavej 12, DK-8410,  
Roende, Denmark
- (51) **Thomas Oleson: Management Committee: No, Work Group: 3**  
Institute for Fisheries Management and Coastal Community Development  
The North Sea Centre, Willemoesvej 2, PO Box 104,

DK-9850 Hirtshals, Denmark

(52) **Christian Dieperink: Management Committee: No, Work Group: 2**  
Waterframe, Hejnaesvej 4, DK-8680 Ry, Denmark

(53) **Michael Anderson: Management Committee: No, Work Group: 3**  
Danish Fishermen's Association  
H.C. Andersens Boulevard 37, PO Box 403  
DK-1504, Copenhagen, Denmark

(22) LATVIA

(54) **Janis Baumanis: Management Committee: Yes, Work Group: 1**  
Institute of Biology, Laboratory of Ornithology, Miera st. 3, LV-2169,  
Salapils, Latvia

(23) CZECH REPUBLIC

(55) **Renata Martincova: Management Committee: No, Work Group: 3**  
Czech Environmental Inspectorate  
Na Brehu 267, Praha 9, 19000  
Czech Republic

(56) **Petr Musil: Management Committee: Yes, Work Group: 2**  
Charles University, Prague, Department of Zoology, Faculty of Sciences,  
Vini ná 7, Praha 2, CV-128 44, Prague, Czech Republic

(57) **David Kortan: Management Committee: Yes (subject to final agreement with CZ COST Office), Work Group: 1**  
Institute of Landscape Ecology, Academy of Sciences of the Czech Republic,  
Na Sádkách 7  
370 05 Ěeské Budějovice, Czech Republic

(24) CYPRUS

(58) **Ana Afonso Polyviou: Management Committee: Yes, Work Group: 3**  
Fish Health Management Consulting Services  
6 Egnatias, 2057 Nicosia (strovolos), Cyprus