

EKOREEF - Sub-project 6: Communications

Report D&M 37363.001/6 - RF-98/018

Our reference:	Author(s):	Version No. / date:
DM37363.001/6 RF/771/654463.6	Hovda, J. ² , Aabel, J.P. ² and Cripps, S.J. ¹	Vers. / 26-1-98
No. of pages:	Project Quality Assurance.	Distribution restriction: Open
ISBN:	Client(s):	Open from (date):
82-490-0381-0	Licence PL018 through Phillips Petroleum Company Norway	1-1-2003
Research Program:	Project title: EKOREEF - Sub-project 6: Communicatio	ns

Scope:

The main aim of this report was to present a plan for the discussion of the Ekoreef concept between the current operators and various stakeholder groups. Relevant stakeholder groups were proposed, the roles of the participants were defined, key questions were identified, potential strategies were reviewed and a flexible communications plan was constructed.

The findings of this sub-report are to be summarised and simplified in a main report for the Ekoreef programme.

Key-words:

Ekofisk, artificial reef, rigs to reefs, decommissioning, Ekoreef, communications, stakeholders.

Project Manager - Dames & Moore

Jens Petter Aabel

Project Manager - Rogaland Research

Dr. Simon J. Cripps





EKOREEF - Sub-project 6: Communications

Report D&M 37363.001/6 - RF-98/018

Our reference:	Author(s):	Version No. / date:
DM37363.001/6 RF/771/654463.6	Hovda, J. ² , Aabel, J.P. ² and Cripps, S.J. ¹	Vers. / 26-1-98
No. of pages:	Project Quality Assurance.	Distribution restriction:
18		Confidential
ISBN:	Client(s):	Open from (date):
	Licence PL018 through Phillips Petroleum Company Norway	1-1-2003
Research Program:	Project title: EKOREEF - Sub-project 6: Communica	tions

Scope:

The main aim of this report was to present a plan for the discussion of the Ekoreef concept between the current operators and various stakeholder groups. Relevant stakeholder groups were proposed, the roles of the participants were defined, key questions were identified, potential strategies were reviewed and a flexible communications plan was constructed.

The findings of this sub-report are to be summarised and simplified in a main report for the Ekoreef programme.

Key-words:

Ekofisk, artificial reef, rigs to reefs, decommissioning, Ekoreef, communications, stakeholders.

Project Manager - Dames & Moore

ens Petter Aabel

Project Manager - Rogaland Research

Dr. Simon J. Cripps





CONTENTS

PREI	FACE			iii
GLO	SSARY.			iv
				¥
			COMMUNICATIONS	
	6.2.1		nd and goals	
6.3			akeholders	
	6.3.1		on	
	6.3.2		keholders to be consulted	
	6.3.3		ent Departments and Agencies, Public authorities,	
	6.3.4	Non-gover	rnmental organisations (NGO's)	5
	6.3.5		and educational institutes	
	6.3.6		al public	
	6.3.7		and fisheries organisations	
6.4	Identify goals and strategies for PPCoN			6
	6.4.1		nvolvement	
	6.4.2	Guidelines	s for implementation of the plan	7
6.5	Roles o	Roles of the participants		
	6.5.1	Introduction	nc	7
	6.5.2	Identificat	ion and description of the roles	7
		6.5.2.1	Roles of PPCoN in a communication process	7
		6.5.2.2	Roles of the advisors in a communication process	
6.6	Identifi	cation of ke	ey questions	8
	6.6.1	Introduction	on	8
	6.6.2	Identificat	ion of sensitive considerations	8
	6.6.3	Identificat	ion of general questions	9
	6.6.4	Identification of key questions		
		6.6.4.1	Artificial reefs in the north sea, production potential	9
		6.6.4.2	Fisheries and fishermen's safety	9
		6.6.4.3	Technical considerations	
		6.6.4.4	Social and political considerations	10
6.7	The cor	The communication plan		10
	6.7.1		on	
	6.7.2		on of the concept	
		6.7.2.1	Information	
		6.7.2.2	Presentation and workshop	
		6.7.2.3	Ideas and proposals from workshop submitted	
		6.7.2.4	Presentation of new concept and second workshop	
		6.7.2.5	Public presentation	
6.8	Conclu	sions and F	Recommendations	
6.9	References			

PREFACE

As the oldest exploited oil field in the North Sea, the Ekofisk field is currently approaching the end of production. Various options are being considered by the operators as part of a choice of field cessation plans required by the Norwegian government. One such option is the use of suitable, prepared, planned and located platform components as artificial fish attracting reefs: the Ekoreef option.

This report presents the findings of the sixth project within the Ekoreef programme. A total of 7 main projects have been defined, and will together assist in the planning and estimation of the potential for one or several complex artificial reefs in the Ekofisk area.

The following reports will be delivered through the Ekoreef Programme:

- Present status A recommendation will be given as to which areas (if any), around both 2/4 T and the Greater Ekofisk field, are most suitable for the construction of one or several artificial reefs. An overview of the decommissioned structures available and the general environmental situation, including fishing activities will be presented.
- Configuration Optimal design or designs of a potential Ekoreef will be prepared. These will
 incorporate recommendations for structures to be included in the reef, their configuration,
 location and the rationale used.
- Impacts Likely negative and positive impacts on the environment and associated socioeconomics will be predicted.
- Management A plan for the management of the Ekoreef, including an assessment of its most beneficial uses will be prepared.
- 5. Monitoring A plan for the future monitoring required around the Ekoreef will be proposed.
- 6. Communications A plan for, and assistance with, the presentation of the Ekoreef concept to various groups will be prepared.
- 7. Alternative use suggestions for the multiple, alternative use of Ekoreef components will be listed.

The reports from the projects will be collated into a concise final summary report.

GLOSSARY

Main structures:

1/6A & 2/4F Albuskjell

2/4B & 2/4K Ekofisk B and K 2/4D West Ekofisk

2/4E Tor

2/4H Ekofisk hotel
2/4T Ekofisk tank
2/7B, 2/7A & 2/7FTP Eldfisk
2/7C Edda
2/7D Embla
7/11A Cod

Terminology and acronyms

Benthic Pertaining to the sea floor.

Demersal Living at or near the bottom of the sea.

GIS Geographical Information System.

NGO's Non-government organisations.

NSTF North Sea Task Force.

Pelagic Pertaining to the water column.

6 EKOREEF PROJECT 6: COMMUNICATIONS

6.1 Summary

A plan for communicating the finding of this Ekoreef project is proposed. This Communication project has five main aims:

- To identify and describe different groups that could participate in the communication and decision-making process.
- To identify what goals and participation PPCoN could wish the stakeholders to have in the communication process.
- To identify and describe the role of PPCoN, the advisers and stakeholders.
- To identify and describe key questions with regard to artificial reef creation at the Greater Ekofisk field.
- To propose a communication plan.

Prior to implementation of the main plan, a set of communication exercises, workshops etc. could be arranged. Information transfer and communication could be divided into the following elements:

- An information package to be sent the different stakeholders.
- Invitation to a stakeholders dialogue and seminar discussing all aspects regarding the creation of an artificial reef in the ekofisk area.
- An analysis of the results of the stakeholders dialogue, including adjustments to the original plan.
- A second, follow-up, workshop with the same group of stakeholders.

Based on the results from the communications exercise described above, a strategy for implementing the communication project can be divided further defined and will probably comprise the following elements:

- Preparation of a visual (illustrations and video) presentation.
- Preparation of an interactive cd- rom.
- Liaison with media.
- Presentation of scientific papers.
- Preparation of a brochure.

6.2 Introduction

6.2.1 Background and goals

Assuming that preparation and relocation into a complex reef is technically and economically feasible, the most important factor that will determine if Ekoreef is a viable option, will probably be public perception. A body of open information describing the environmental, social and safety impacts, both negative and positive, of the reef and its likely efficiency, will need to be presented. Three main groups of people will be addressed in this process:

- public authorities;
- non-governmental organisations (NGO's)
- the general public.

This sub-report proposes a communication plan and means to implement the plan. The implementation will depend on what goals or reef option PPCoN decides upon. These options are presented in section 6.4, Identification of goals and options for PPCoN.

To identify effective communication and public participation strategies, a plan is developed to help PPCoN to present and to communicate the chosen decommissioning option. The communication plan can help to:

- improve dialogue and reduce unwarranted tension between stakeholders and PPCoN;
- explain the concept more effectively;
- understand public perception and more easily anticipate community response to the artificial reef concept;
- increase the effectiveness of the decommissioning process by potentially involving stakeholders;

To initiate a constructive dialogue process, experience from the Offshore Decommissioning Communication Project (ODCP) may be helpful in many ways. The ODCP report, Rigs to Reefs, Researching the Option, (ODCP, 1997), focuses on the issues to be addressed if an artificial reef should be the preferred option. A communication process between NGO's, government departments, the fishing industry and scientists is regarded as vital for the process. The process is to identify issues and values needed to be taken into consideration before any decision can be made with regards to the creation of an artificial reef. This Communication project has five main aims:

- To identify and describe different groups that could participate in the communication and decision-making process.
- 2. To identify what goals and participation PPCoN could wish the stakeholders to have in the communication process.
- 3. To identify and describe the role of PPCoN, the advisers and stakeholders.
- To identify and describe key questions with regard to artificial reef creation at the Greater Ekofisk field.
- To propose a communication plan.

Communicating the concept is important, but can not replace an effective planning processes. The concept and full understanding of the project, including the eventual inputs from the stakeholders remain with PPCoN.

6.3 Identification of stakeholders

6.3.1 Introduction

Sustainable reefs at the Greater Ekofisk field, should be created and developed according to the precautionary principle. The UK Sustainable Development Strategy argues that, "when potential damage to the environment is both uncertain and significant, it is necessary to act on the basis of the precautionary principle" (Department of the Environment, 1995).

The precautionary principle is important because "prevention" often uses less resources than "cure". A failure to take preventative action may result in long-term damage that is too expensive to correct later.

The different stakeholders may approach this precautionary principle with different viewpoints. Sub-project 1, *Present status*, indicates that Ekoreef is unlikely to produce any significant negative effects on the biological environment. This will though depend on the location(s) of the reef decided upon in Sub-project 2, *Configuration*. In the next section, stakeholder groups and their likely viewpoints are identified.

The artificial reef concept needs to be communicated to:

- the oil and gas industry, including decommissioning and disposal contractors who will
 be primarily concerned with the practicality of the concept in terms of occupational
 health and safety, available technologies and cost;
- other commercial interested parties concerned with the re-use or recycling potential
 of the installation structural materials and/or its component systems and equipment;
- national authorities with jurisdiction in either the structure's current and destination location;
- international authorities (i.e. International Maritime Organisation), that may be
 potentially affected by the decommissioning and disposal activities. National and
 international authorities will be concerned with economic, health and safety issues and
 interference with other legitimate uses, compliance with framework regulatory controls
 for pollution and environmental protection and harmonisation with policy commitments
 such as input reduction objectives;
- other legitimate users of the sea potentially affected by the decommissioning and disposal activities and residual impacts. They will primarily be concerned with the degree/level of interference of the activities and the physical presence of the structure in the context of their current activities or proposed future activities in the area affected;
- NGO's who may express both real and perceived concerns. For example, an acceptable standard derived from a scientific approach may not be considered tolerable by these interested parties.
- the general public who similarly may express concerns that reef and industry specialists may not otherwise have considered.

6.3.2 List of stakeholders to be consulted

Consultation and communication may need to be carried out with various interested parties, including:

(1) Government Departments

- Ministry of Oil and Energy
- Ministry of Environment
- Ministry of Fisheries
- Ministry of Finance

(2) Government agencies

- Norwegian Petroleum Directorate
- Norwegian Directorate for Nature Conservation
- Norwegian Directorate for Fisheries

(3) Local authorities

Different municipalities that might be influenced by the chosen option

(4) Non-governmental groups

- Norges Naturvernforbund
- Greenpeace
- Norges miljøvernforbund
- Bellona
- Natur og ungdom
- World-wide Fund for Nature

(5) Fishermen and fisheries organisations

- Norwegian Fishermen's association
- Norwegian Trawlers association

(6) Research and educational institutes

6.3.3 Government Departments and Agencies, Public authorities,

The authorities will approach the concept of an artificial reef at Ekofisk based on what is the current government policy. The government need to follow up conventions and legal matters.

To make a useful and convincing presentation about the concept to this group, there will be a need to define an artificial reef with respect to existing dumping conventions. It is assumed that reef creation will be considered a new use of the existing structures rather than the installations being considered subject to regulations of "disposal" as defined in the London Dumping Convention and the IMO guidelines.

6.3.4 Non-governmental organisations (NGO's)

Several NGO's, have shown an interest in decommissioning issues. An example of this was Greenpeace's, involvement in the Brent Spar debate. It would be advisable for an operator to address these concerns as they may mirror public opinion in some quarters. This would require integration of a consultation process into the procedure for the assessment the options, including both government organisations and other interested parties. This communication process can also evaluate to establish the extent to which NGO's and the public should or could be involved in future decisions and consultation processes combined with PPCoN's strategy.

6.3.5 Research and educational institutes

It will be necessary to distinguish between positive and negative effect. Obviously, one group may think the proposed alternative is a positive idea for them, while another group will oppose the same idea based on the same set of premises. In any case it will be necessary to clearly demonstrate the actual benefits and negative impacts. As described several times during this Ekoreef study, there is a severe lack of research and hard scientific evidence relating to rigs-to-reefs in the North Sea. What information there is needs to be brought into the discussion by these groups, and they could also assist in obtaining missing data.

6.3.6 The general public

People in seven European countries were asked about decommissioning. The survey was conducted during September and October 1995. The main Norwegian results are as follows (Mori, 1995).

- 31 % of Norwegians understood the relative risks and benefits of alternative ways of disposing of offshore installations.
- When asked which of the three options they preferred: disposal at sea, disposal on land, or each on own merits, a clear majority across Europe (61 %), and Norway (67 %) said that each case should be judged on its own merit.
- With regard to communication about decommissioning platforms to the public, the oil industry and environmental groups were compared against each other. 84 % of the public in Norway (66 % in Europe) thought that the environmental groups communicated effective. 70 % (only 31 % in Europe) of the public in Norway thought that the oil industry communicated effective.
- In Europe 30 % people thought the risk of decommissioning offshore oil installations was lower on land than at sea.
 12 % thought they were greater on land while 26 % thought the risk were about the same on land and at sea.
 32 % did not know.

These investigations show that there may be a need to improve information transfer.

6.3.7 Fishermen and fisheries organisations

As legitimate users of the shared resource of the North Sea the views of fishermen must be taken into consideration. As practical experts in the behaviour and catching of fish, and in the marine environment as a whole, the views of this group would be a valuable addition to the decommissioning and reef creation discussion.

6.4 Identify goals and strategies for PPCoN

6.4.1 Level of involvement

The communication plan can be described in several ways. It is necessary to identify the degree of stakeholders involvement in the communication process. The degree of involvement and participation of the public is presented in Figure 6.1 below.

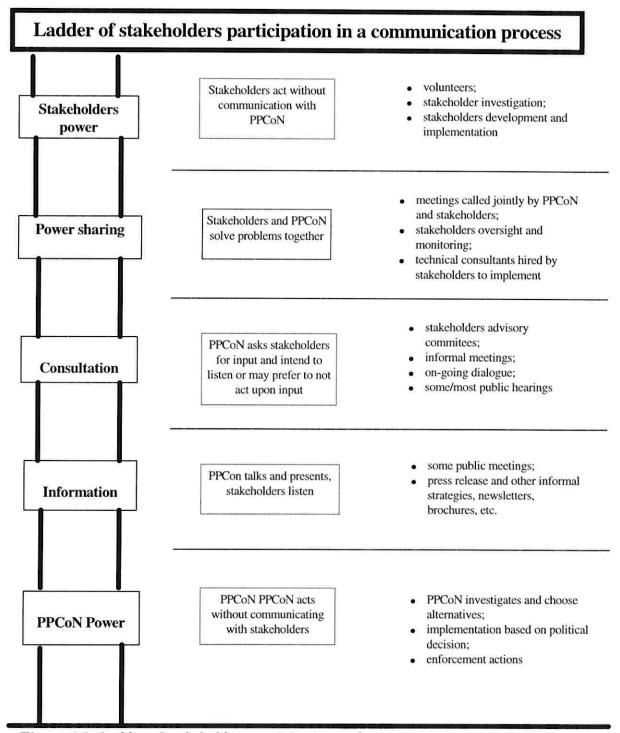


Figure 6.1: Ladder of stakeholders participation and communication strategy (Consept from Chess et al. 1988).

The importance of communication with the public will depend on what alternative PPCoN chooses as a strategy for presentation of the concept. PPCoN will need to decide how high up the ladder they want participation from the public.

6.4.2 Guidelines for implementation of the plan

When interacting with the stakeholders, it is important to have some guidelines if PPCoN decide upon a power-sharing option, these guidelines can be considered (Chess *et al.*, 1988):

- Recognise the importance of stakeholders input.
- To the extent possible, involve the stakeholders in the decision making process.
- Identify and respond to the need of the different stakeholders.
- When appropriate, develop alternatives to public hearings.
- Recognise that stakeholders values and feelings in relation to environmental issues, concerns may convey valuable information.
- Prepare responses to personal question from the stakeholders about the concept.
- Stakeholders concern need to be communicated to PPCoN's staff, not only through media
- Choose carefully those who represent PPCoN and provide appropriate support

These guidelines may serve as general guidelines for PPCoN, when the communication plan is implemented, and the concept becomes more open.

6.5 Roles of the participants

6.5.1 Introduction

In an Environmental Impact Assessment, public participation is included as an important aspect to consider (Erickson, 1994). Participation may generally be based on specific executive, legislative, or judicial definitions of various rights of the public, including the right of access to information gathered during the assessment process, the right to contribute information to the assessment process, and the right to challenge decisions made in the progress of or in light of the assessment effort. In many cases, assessment or communication teams unfortunately view the public more as an adversary than as a partner in the assessment process.

It is necessary to define how much participation from stakeholders is necessary or desirable in this communication process. Communication is more than a simple transmission of information from one group to another, it is an active and constructive exchange of information, meaning, and opinions.

6.5.2 Identification and description of the roles

6.5.2.1 Roles of PPCoN in a communication process

PPCoN's role in the communication process must be defined prior to any implementation of the concept presentation. The ladder of stakeholders participation may help PPCoN define what role they may have. A set of key questions may help PPCoN to identify concerns and problems that can hinder the communication process.

Advisors can conduct the communication process on behalf of PPCoN, as long as the company's strategy is clearly defined, but representatives from PPCoN must be part of the communication implementation team.

6.5.2.2 Roles of the advisors in a communication process

The advisors may face a conflict between a loyalty to the scientific method and existing scientific results and the political decisions (Nichols, 1990). Basically, the consultants need to communicate science, including uncertainties. From the other side to capture the public's attention, they also, together with PPCoN, have to communicate with media. This is the dilemma: "the double ethical bind for communicating science to the public and for the scientist to find an appropriate balance between being an effective agent for the new concept and being honest about the limitations of the state of knowledge" (Schneider, 1990).

6.6 Identification of key questions

6.6.1 Introduction

In Offshore Decommissioning Communication Project (ODCP), Rigs to Reefs: Researching the option, several key questions were identified (ODCP, 1997). Similar questions are likely to arise during the communication process. The purpose of the ODCP workshop was partly to identify issues and concerns for the purpose of further research. Again, different groups may ask different questions based on their viewpoint. The main purpose of this section, is to predict some of the questions that can be expected and to indicate if it is currently possible to answer them.

6.6.2 Identification of sensitive considerations

Different stakeholders will have different priorities when evaluating plans for an artificial reef. Fishermen may consider accessibility to the area, and/or the potential minimised fishing effort together with a better catch. On the other hand, organisations like Greenpeace may take into consideration subjects like marine mammals and the heavy metal accumulation in demersal fish. A general list of sensitive issues is presented below:

- contaminants;
- accumulation of contaminants in the food chain;
- benthic communities;
- dissolved organic nutrients;
- fishing effort and catch sizes;
- spillage of hydrocarbons;
- discharge of drill cuttings, resuspension;
- marine mammals;

- ecosystem;
- fish stocks:
- sea and shore birds;
- heavy metals;
- navigation;
- existing production;
- · dredging and dumping;
- · accessibility.

A preliminary assessment of environmental and socio-economic impacts is described in sub-project 3, *Impacts*. It is important to communicate and inform the different stakeholders so they are familiar with the terms.

6.6.3 Identification of general questions

There will be a set of general questions from people without any knowledge of what an artificial reef may be or how it will function. Typical questions may be:

- What is an artificial reef?
- What does an artificial reef look like?
- Where will these reefs be located?
- Why do we want to make artificial reefs?
- When will these reefs be made?

Once these questions are answered, more specific questions may be asked:

- Can implementation increase the risk of accidents, i.e. oil-spills, etc.?
- Will the contamination accumulated around platform have a negative effect on the ecological system at the reef?
- What other alternatives are there to creating artificial reefs at the platforms?

Environmental literacy in regards to an artificial reef is an important goal in a communication process. As noted previously, a well informed stakeholders will be better able to formulate opinions and make balanced choices. The understanding of a concept can be systematically achieved by good presentations in various media.

6.6.4 Identification of key questions

Based on the experience of the ODCP stakeholders dialogue, the key questions will probably be (ODCP, 1997):

6.6.4.1 Artificial reefs in the north sea, production potential

- 1. Will they significantly increase productivity and biomass?
- 2. How do we determine if the proposed reefs have merit in their own right, irrespective of use of platform?
- 3. What are the best material, structures and spatial deployments and monitoring methods?
- 4. How does it improve fishing opportunities and yields (including local economy)?
- 5. Effects on fisheries equipment. How to deal with conflicts?

6.6.4.2 Fisheries and fishermen's safety

- 6. How can different user groups be consulted and their interests reconciled?
- 7. How might fishermen be compensated for loss of access and by whom?
- 8. Are there economic/environmental/social benefits and how to maximise them?
- 9. What is the appropriate management system?

6.6.4.3 Technical considerations

- 10. Site evaluation, environmental/technically feasibility.
- 11. Drill cuttings issue, link with other research.
- 12. Management and monitoring of a life cycle reef study.

6.6.4.4 Social and political considerations

- 13. What are the criteria for success of artificial reefs?
- 14. How can the objectivity and independence of the research be assured?
- 15. How can we measure direct and indirect benefits compared with other options?
- 16. How could we have rigs to reefs without setting a precedent for general dumping?
- 17. How to ensure dialogue process continues with all parties and active participation in existing regulatory process and management issues?
- 18. Who would own artificial reefs and who would be responsible or liable in perpetuity?

6.7 The communication plan

6.7.1 Introduction

A general, preliminary communication plan will serve as a useful tool for PPCoN to present and implement the artificial reef concept. To reduce the number of potential alternatives described in section 6.4, the communication plan will focus on the consultation and power-sharing options presented in Figure 6.1. Hence the goals for PPCoN in a communication plan may be:

- to establish contact with public authorities, NGO's and the general public,
- to present and disseminate the concept of Ekoreef;
- to communicate (two way) with all groups, to improve and discuss alternatives;
- extensive local consultation and communication with interested parties;
- disseminate agreed solutions to the public through media.

A presentation and communication process based on the consultation or power sharing option may need more resources to obtain a positive result. A presentation to different stakeholders may potentially be implemented in 5 stages:

- 1. Submit information.
- Presentation of concept and 1st workshop.
- 3. Ideas and proposals from workshop incorporated.
- Presentation of new concept and 2nd workshop.
- Presentation to the public.

6.7.2 Presentation of the concept

6.7.2.1 Information

Short, informative and concise presentation to all groups, either through personal communication and/or directly sent to the most important public authorities and NGO's. This stage is mainly to inform important participants about the concept and invite them to attend a workshop.

6.7.2.2 Presentation and workshop

A seminar to present the concept in more detail. Questions, comments, concerns, new ideas and discussions will be on the agenda. Closer connection to different groups are established. The method will be useful since it creates a good environment for communication between the different parties. This method allows the participants to move away from confrontational arguments and creates productive positive discussions.

6.7.2.3 Ideas and proposals from workshop submitted

As a result of the communication in the first seminar, account is taken and new/better alternatives are worked out. New proposals and alternatives are sent to all groups. Invitation to a second, follow-up seminar/work-shop is submitted.

6.7.2.4 Presentation of new concept and second workshop

Revised ideas and proposals are presented and discussed. The method presented above and used at the ODCP meeting can be implemented. Results from this seminar can be used to identify the alternative that is the most likely to be implemented. The second workshop also indicates to the stakeholders that their views have been given due consideration.

6.7.2.5 Public presentation

Information to the public through advertisements, newspaper articles and visual techniques. General information that is agreed from the second seminar will be incorporated. Continuing communication with all relevant groups to secure well defined information that is agreed on. Follow up of the ideas by PPCoN and stakeholders.

The presentation can be as follows:

- Plan for dissemination of information and exchange of knowledge:
 exchange of knowledge of issues that are of importance to the different parties.
- Preparation of a visual (illustrations and video) presentation: possible configurations and scenarios should be presented.
- Preparation of an interactive CD- ROM:
 including illustrations and text for the reef configuration and all available information
- Liaison with media:
 set up documentaries with newspapers/TV explaining the concept
- Presentation of scientific papers:

presentation at seminars, conferences
presentation in industry and specialist magazines, illustrating the concept

Preparation of a brochure
creation of an easily read brochure summarising the conclusions of the study
assessment of the feasibility of a platform reefs policy in the North Sea.

6.8 Conclusions and Recommendations

The following groups were identified and considered suitable for participation in the communication process: government departments; government agencies; local authorities; NGO's; research and educational institutes, fishermen and fisheries organisations.

Identification of what strategy PPCoN want to use in a communication process will assist PPCoN to identify its role in the presentation of the concept. This will also help to identify the role of the advisers and stakeholders attending in the communication process

By identification of sensitive considerations, general questions and key questions, PPCoN have a better idea of how to present the artificial reef concept.

Before implementing the main communications plan, a set of communication exercises and workshops should be arranged. Information and communication activity should be divided into the following elements:

- An information package to be sent the different stakeholders.
- Invitation to a stakeholders dialogue and seminar.
- Analysis of the conclusions from the stakeholders dialogue, making adjustments to the plan where necessary.
- A second workshop with the same group of stakeholders.

A detailed plan for reef establishment may be necessary. This will help both PPCoN to present the concept and the stakeholders to better understand platform reefs. This may be a good base for a successful presentation and communication process.

6.9 References

- Chess, C., B.J. Hance, and P.M. Sandman. (1988). Improving dialogue with communities a short guide for government risk communication. Environmental Communication Research Program, New Jersey Agricultural Experiment Station. Cook College, Rutgers University, 122 Ryders Lane, New Brunswick, NJ 08903.
- Dames & Moore (1996). Final Report. Dismantling and recycling of steel installations topsides and jackets. Dames & Moore Project 34559-001.
- Department of the environment (1995). A guide to risk assessment and risk management for environmental protection. UK Department of the Environment, HMSO, 1995, 41-45.
- Erickson, P. A. (1994). A practical guide to environmental impact assessment. Academic Press Inc. 525 B Street, Suite 1900, San Diego, California 92101-4495. 164-165.

- Gaisford, R. (1995). Why abandon at all? Other alternatives to total removal. *In:* Abandonment of North Sea platforms. Euro Forum conference 22-23 June 1995. 14 Bowden Street, London SE11 4DS, UK.
- Mori (1995). Public attitudes towards decommissioning. Highlights of Mori independent public research. Unpublished briefing paper.
- Nichols, A.B., (1990). In Search of an Earth Ethic. Water Environment & Technology. March 1990, 36-42.
- ODCP (1997). Rigs to Reefs: Researching the option. Workshop hosted by the Offshore Decommissioning Communication Project 29 Sept. 1997 in Brussels. Produced by the Environmental Council 21 Elizabeth Street, London SW1W9RP, UK.
- Schneider (1990). Global warming: are we entering the greenhouse century? *In*: Nichols, A.B., (Ed.) In Search of an Earth Ethic. **Water Environment & Technology**. March 1990, 36-42.