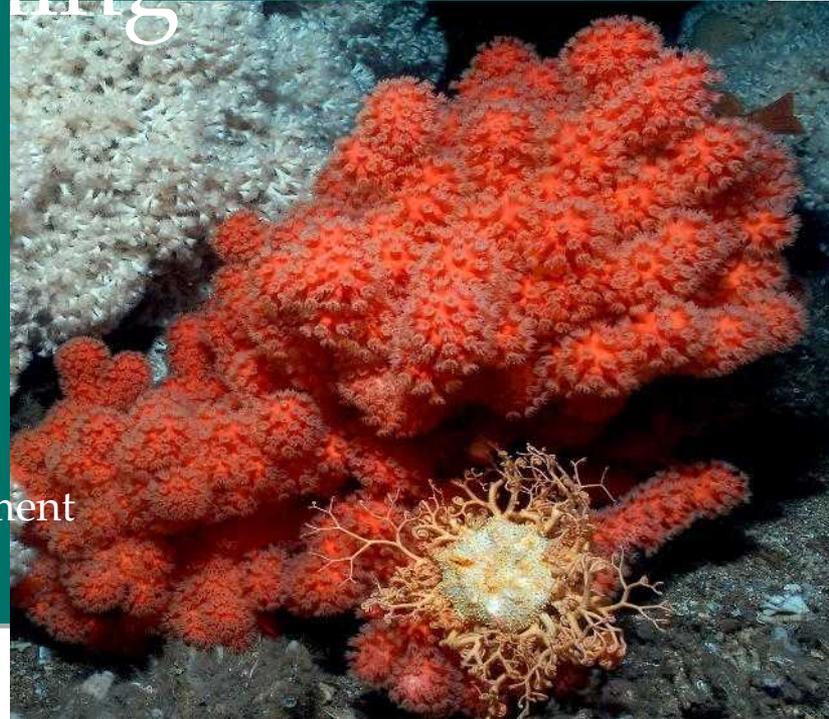
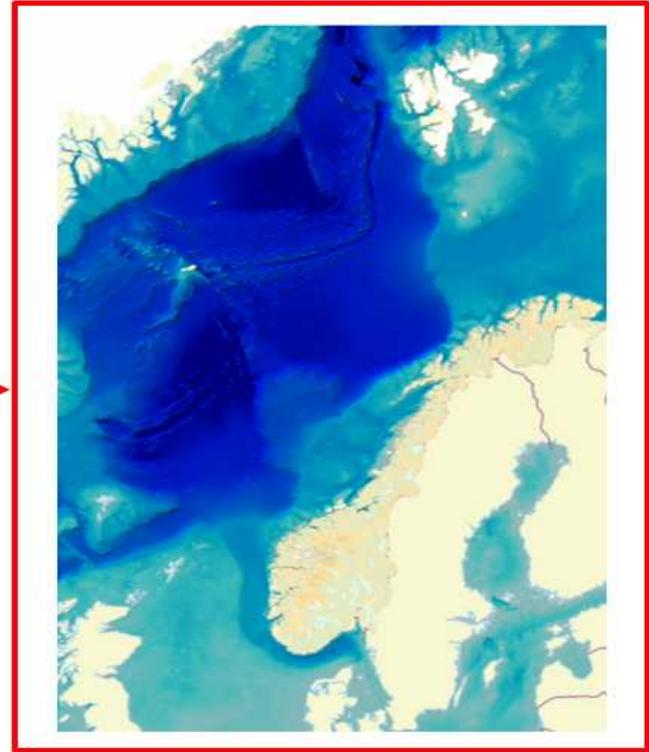
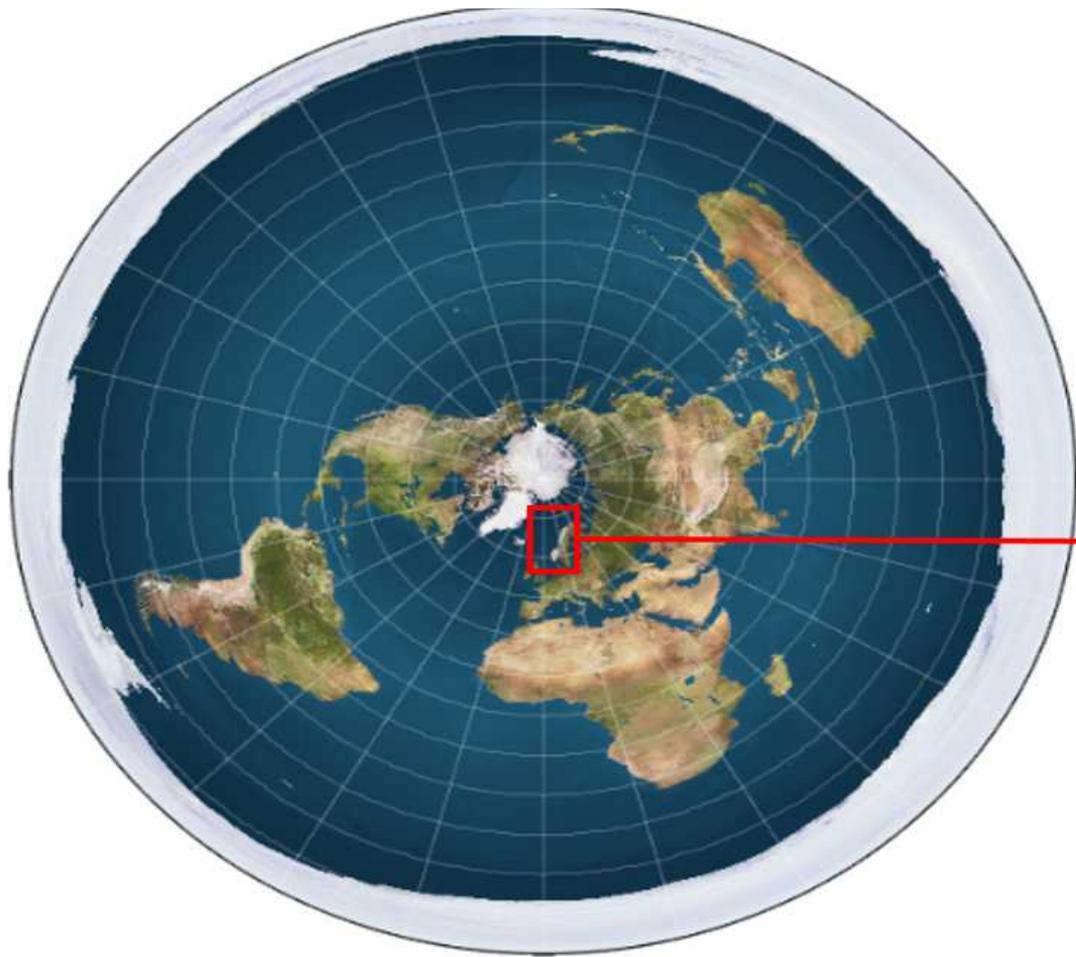


# Marine spatial planning

## The concept

Anne E. Langaas Gossé  
Senior Adviser, Coordination of Marine Management





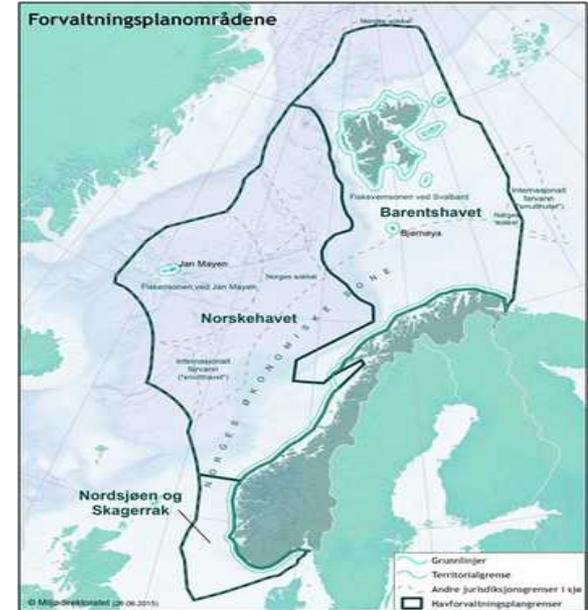
# Coastal vs ocean planning, Norway

## Within baseline plus 1 NM

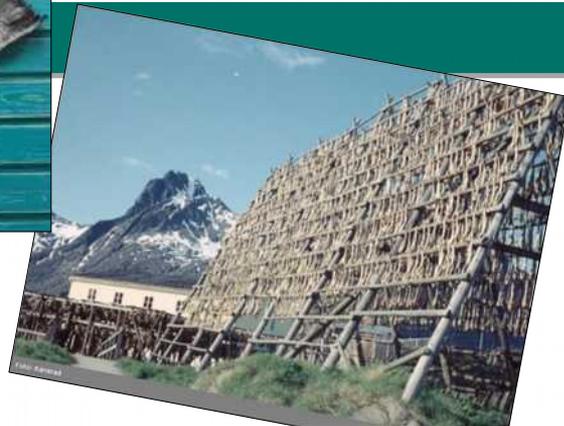
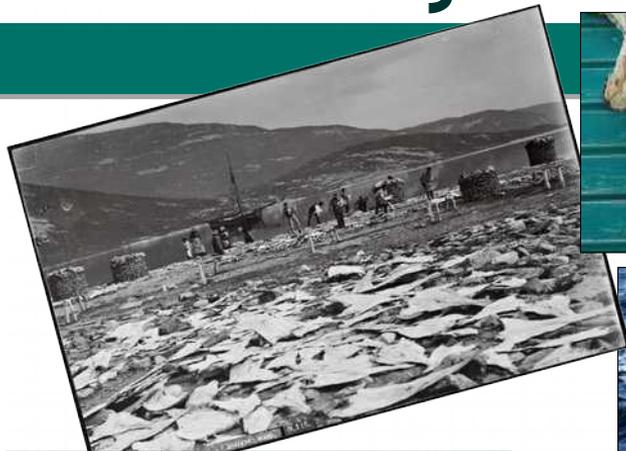
- Legally binding planning, according to The **Planning and Building Act** and the EU Water framework Directive
- decided at the municipality or county level
- Mostly small-scale activities
- Ecological values well defined

## Outside baseline

- Management plans, White papers
- Based on principles of the ecosystem approach
- Large, few and economic important sectors
- Large scale animal migrations
- Implemented by **sector legislations**
- Requires good **cooperation between sectors**



# Do you know the bacalhau?



*Brazil imported 24 000 tons of dried fish from Norway in 2017*

*It is Norway's largest market for dried fish*



<https://www.youtube.com/watch?v=1Uy3xwIawlw>

# The oil also represents huge values



ported 2  
from  
ays large  
dried fish

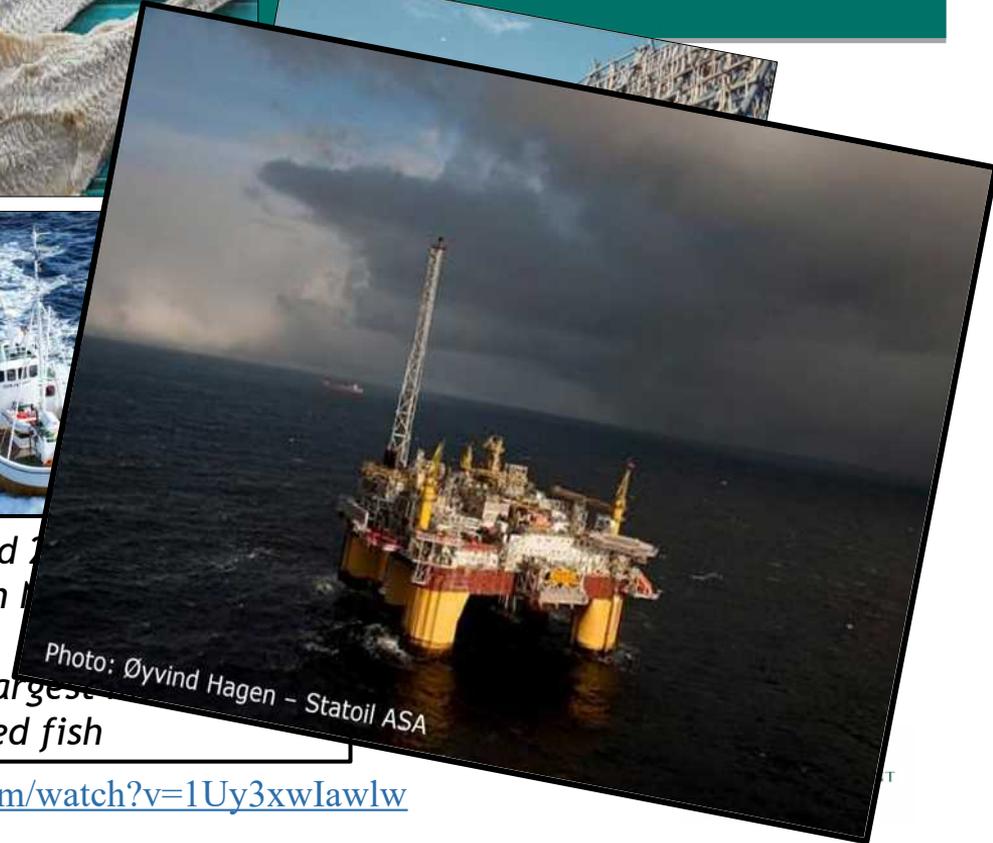
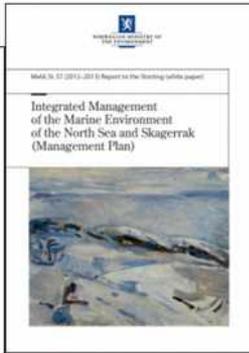
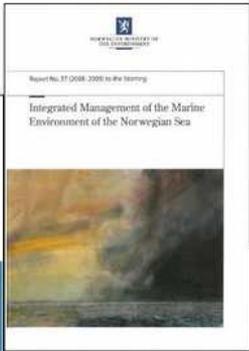
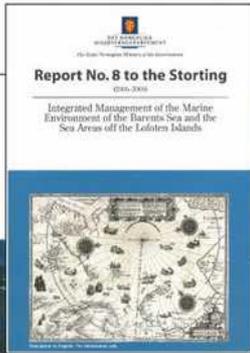
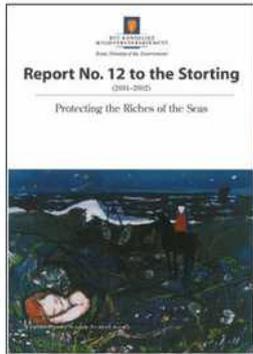


Photo: Øyvind Hagen - Statoil ASA

[www.youtube.com/watch?v=1Uy3xwIawlw](http://www.youtube.com/watch?v=1Uy3xwIawlw)

# Management plans: political framework, and tool for cross-sector cooperation and coordination. White papers 2002-2017



Question:  
Do you know similar challenges in  
your own country?

# What is marine spatial planning?

UNESCO:

Marine spatial planning (MSP) is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.

MSP can be seen as a tool for ecosystembased management



# Briefly of the history behind

- 1993: The Convention of Biological Diversity (CBD) signed and applied as multilateral treaty <https://www.cbd.int/>
- 1998: The 12 Malawi principles of the ecosystem approach <https://www.cbd.int/ecosystem/principles.shtml>
- Regional elaborations, e.g. the North Sea Conference OSPAR/HELCOM 2003 [https://www.ospar.org/site/assets/files/1239/5nsc-2002\\_bergen\\_declaration\\_english.pdf](https://www.ospar.org/site/assets/files/1239/5nsc-2002_bergen_declaration_english.pdf)
- 2004: CBD Guidelines to the ecosystem approach <https://www.cbd.int/doc/publications/ea-text-en.pdf>
- UNESCO work → A step-by-step approach to marine spatial planning in 2009 <http://unesdoc.unesco.org/images/0018/001865/186559e.pdf>



# The Malawi principles

Principle 1: The objectives of management of land, water and living resources are a matter of *societal choices*.

Principle 2: Management should be decentralized to the *lowest appropriate* level.

Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on *adjacent* and other ecosystems

Principle 4: Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an *economic context* ....

Principle 5: Conservation of *ecosystem structure and functioning*, in order to maintain ecosystem services, should be a priority target of the ecosystem approach

Principle 6: Ecosystem must be managed within the *limits of their functioning*

Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales

Principle 8: Recognizing the varying *temporal scales and lag-effects* that characterize ecosystem processes, *objectives* for ecosystem management should be set for the long term

Principle 9: Management must recognize the *change is inevitable*

Principle 10: The ecosystem approach should seek the appropriate *balance between, and integration of, conservation and use* of biological diversity

Principle 11: The ecosystem approach should consider *all forms of relevant information*, including scientific and indigenous and local knowledge, innovations and practices

Principle 12: The ecosystem approach should *involve all relevant* sectors of society and scientific disciplines

# UNESCO: Characteristics of effective MSP

- **Ecosystem-based**, balancing ecological, economic, and social goals and objectives toward sustainable development
- **Integrated**, across sectors and agencies, and among levels of government
- **Place-based** or **area-based**
- **Adaptive**, capable of learning from experience
- **Strategic and anticipatory**, focused on the long-term
- **Participatory**, stakeholders actively involved in the process



Illustration: Norwegian Institute for Marine Research



# UNESCO – a step-by-step approach to MSP

- (1) Need & authority
- (2) Financial support
- (3) Pre-planning
- (4) Stakeholders
- (5) Existing conditions
- (6) Future conditions
- (7) Preparing & approving
- (8) Implementing & enforcing
- (9) Monitoring & evaluating
- (10) Adapting



Photo: Nils Øien, Norwegian Institute for Marine Research

# Step 1. Identifying need and establishing authority

## Outputs:

- A preliminary list of specific problems you want to solve through marine spatial planning
  - if possible; indicate the benefits of solving these problems
- A decision about what kind of authority you need for developing marine spatial planning
  - organization (new authority?)
  - legislation (new legislation?)



Question:

Could students have a role in the initiative phase?

If yes, what could that be?

# Step 2. Obtaining financial support

## Outputs:

- A financial plan that:
  - a. estimates the costs of your MSP activities;
  - b. identifies alternative means to obtain financing for those MSP activities

## Possibilities may be influenced by

- the identified need
- identified gains
- what steering level that have decided planning



Photo: MAREANO. Norwegian Institute for Marine Research

Question:

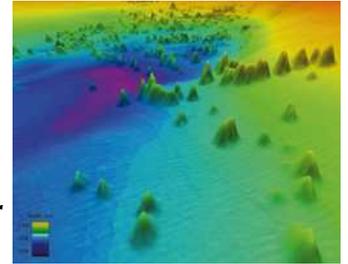
Is it possible to estimate the economic gain from planning?

What role can students play when it comes to financial questions for msp?

## Step 3. Organizing the process through pre-planning...

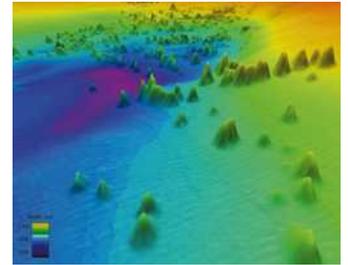
### Outputs:

- Organization of a marine spatial planning team with the desired skills;
  - *Planning skills, leader skills, sector knowledge, cooperative skills?*
  - *Skills and organization model may be closely related/dependent of each other*
  
- A work plan that identifies key work products and resources required to complete the outputs of planning on time, it could be
  - *Facts of the plan area, Sector impact assessments, Assessments integrated across sectors, Knowledge needs, Possible managements measures, Zoning plan, and more...*
  - *Role allocation – who is responsible for what*
  - *???*



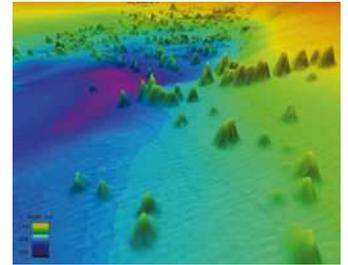
## Step 3. Organizing the process through pre-planning...

- Defined boundaries & time frame for analysis and management
  - *Management boundaries; economic zone, ocean/coast, bio-region etc. May not overlap with ecosystem boundaries. Remember Malawi 3*
  - *Time frame; planning start, how far into the future?*
- A set of principles to guide development of the marine spatial management plan
  - *E. g. ecosystem integrity, integration, public trust, transparency, precautionary, polluter pays*
  - *Malawi principles → EA principles*



## Step 3. Organizing the process through pre-planning

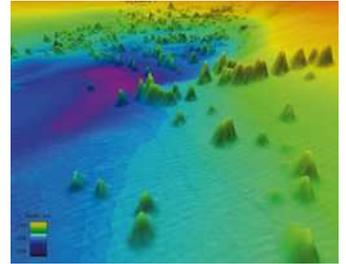
- A set of goals and objectives for the management area
  - Example of overarching goal: *“the plan is a framework for value creation through sustainable use of natural resources and ecosystem services... and maintain the structure, functioning, productivity and diversity of the ecosystems of the areas”*
    - How to transfer this into objectives that can be implemented?
  - The goals/objectives should be in line with international agreements and with other national goals/objectives



## Step 3. Organizing the process through pre-planning

Feel free to add to the list of outputs:

- plan for establishing a knowledge base, which can follow the work all the time, from one revision to another
  - It will save time and money
  - Could include databases and electronic tools for reporting



Question:

What do you believe could be important skills for the planning team?

You know that the knowledge is too weak to make good decisions about management measures – how could this be reflected in the work plan?



# Step 4. Organizing stakeholder participation...

From the stakeholders perspective:

- MSP processes may be complex and confusing
- There may be unclear status of contributions from stakeholders
- Problems with motivation to participate
- Different stakeholders can have very different social and economic possibilities to front their interests





Question:

Other ways than input meetings, hearings, workshops and consultations to involve stakeholders?

Why is local fishermen and -women an important stakeholder group?

How can MSP benefit local fishermen and -women ?

Sustainable fisheries and aquaculture for food security and nutrition <http://www.fao.org/3/a-i3844e.pdf>

# Step 5. Defining and analysing existing conditions...

Output:

- An **inventory and maps of important biological and ecological areas** in the marine management area;  
*Feel free to add under this point:*
  - *An environmental quality status report*
- *Also add: A description of the social and economic situation in the plan area*
- An **inventory and maps of current human activities** (and pressures) in the marine management area;
  - *Remember also to invent and include the pressures from climate change, ocean acidification, long-transported pollution*



# Step 5. Defining and analysing existing conditions

- An assessment of possible conflicts and compatibilities among existing **human uses**
  - *Wise to let the sectors participate in this assessment*
  - *Participation may be more efficient for reciprocal understanding and consideration*
- An assessment of possible conflicts and compatibilities between existing **human uses and the environment**
  - *Also here; Participation promotes understanding and consideration*



# Step 5. Defining and analysing existing conditions

Advice:

Make all reports from the knowledge base available to the public!



Photo: MAREANO. Norwegian Institute for Marine Research

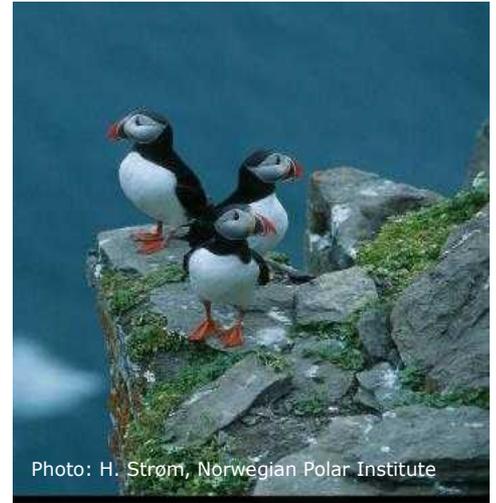
Question:

How accurate does the knowledge need to be,  
in order to put into the knowledge base?

# Step 6. Defining and analysing future conditions

## Output:

- A **trend scenario** illustrating how the MSP area will look if present conditions continue without new management interventions
  - *Use a robust and transparent method*
  - *Agreeing on common and convincing scenarios across sectors might be difficult*
  - *An easy way out: Each sector describes possible scenarios for the coming e. g. 30 years*
    - *What about the sum of all sectors?*



# Step 6. Defining and analysing future conditions

- **Alternative spatial sea use scenarios** illustrating how the management area might look when human activities are redistributed based on new goals and objectives;
  - *Keep in mind that there is no method that gives one correct answer for each alternative*
  - *Still no broadly agreed method for cumulative impact assessments*
- A **preferred scenario** that provides the basis for identifying and selecting management measures in the spatial management plan

Add:

- Do you expect new activities / industries?
- Remember that the knowledge base is useful for spatial and temporal assessment of possible new activities!



# Now, the basic knowledge is in place...

In Norway:

The knowledge base, preferably as consensus, is handed over from the Management group of governmental Agencies to the Steering group of Ministries

**DESCRIBE**  $\neq$  **DECIDE**

Big conference: the knowledge base is presented for the politicians, interest groups and the public. Workshops and discussions in groups on different topics → written comments from the public afterwards

Question:

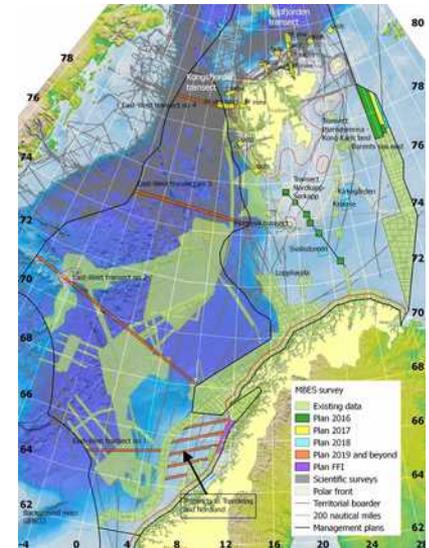
Why could it be beneficial to have a distinct division between the descriptive phase and the decision phase?

What could be the benefits of having different people working with the two phases?

# Step 7. Preparing and approving the spatial management plan

## Output:

- An identification and evaluation of alternative management measures for the spatial management plan;
  - Identification of criteria for selecting alternative management measures;
- A comprehensive management plan, including if needed, a zoning plan





Question:

When a plan is approved, what do you think is needed for it to be followed up?

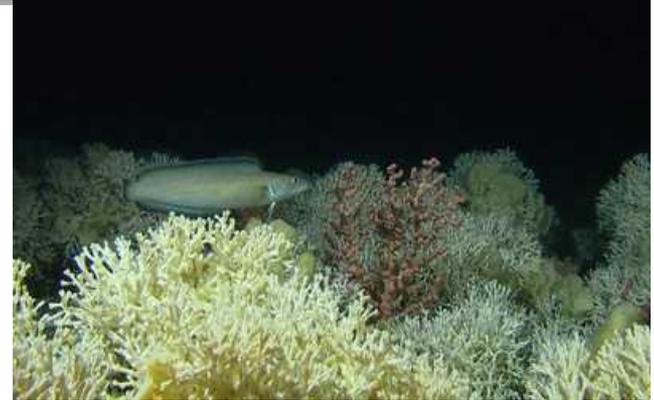
What about stakeholders who have not got what they wanted?

## Step 8. Implementing and enforcing the spatial management plan

### Output:

Clear **identification of actions** required to implement, ensure compliance with, and enforce the spatial management plan

- *Implementation is the process of converting MSP plans into actual operating programs*
- *Actions required should be based on needs*
- *Actions required may be identified already in the adopted plan*



Both photos: MAREANO

## Step 8. Implementing and enforcing the spatial management plan

### Actions to prevent acute oil pollution, example from Norway

The Government will:

- continue its work on maritime safety and oil spill response measures.... These include:
  - establishing a vessel traffic service centre ...
  - establishing mandatory routeing and traffic separation schemes outside territorial waters ..... for traffic that poses a particular environmental risk
  - ...and more

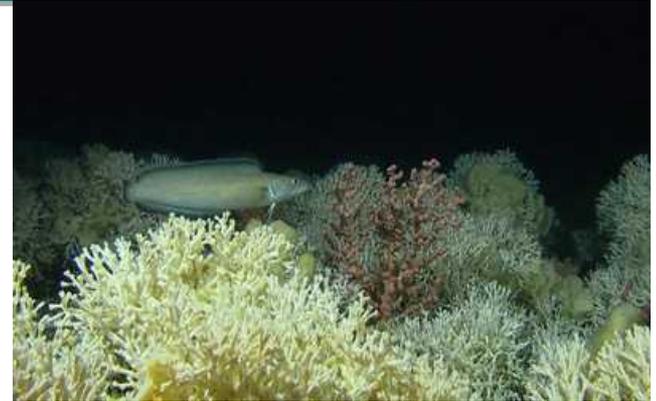


Photo: Frontline

## Step 8. Implementing and enforcing the spatial management plan

### Actions for protection of coral reefs, example from Norway

- The Government will:
  - map known coral habitats so that they can be more effectively protected against damage from fishing operations under existing legislation;
  - lay down strict requirements for demersal fisheries and reporting requirements for such fisheries in order to avoid damage to benthic habitats;
  - introduce restrictions on the use of gill nets and longlines in all coral habitats that are already protected against the use of bottom gear;
  - in 2010, present a national action plan for protection of coral reefs and other vulnerable seabed habitats;



Both photos: MAREANO

Question:

When it comes to measures/actions/restrictions –

why is it advantageous with integration across sectors and agencies, and among levels of government?

# Step 9. Monitoring and evaluating performance

## Output:

- A monitoring system designed to measure indicators of the performance of marine spatial management measures
- Information on the performance of marine spatial management measures that will be used for evaluation performance of marine spatial management measures
- Periodic environmental status reports to decision makers, stakeholders, and the public about the performance of the marine spatial management plan



The screenshot shows the 'Havindikator katalogen' (Marine Indicator Catalog) website. The page features a navigation bar with 'mijstatus.no' and various menu items like 'TEMA', 'NASJONALE MÅL', 'MILJØDATA', 'KART', 'DM OSS', 'ENGLISH', and 'MILJØ-INDIKATORLISTE'. Below the navigation, there's a search bar and a breadcrumb trail 'HJEM > TEMA > HAV OG KYST'. The main heading is 'Havindikator katalogen'. On the left, there are filter sections for 'Fritekst' (with a search box), 'Filtrering' (with 'Havområde' and 'Tema' dropdowns), and 'Type indikator' (with a dropdown). Below that, 'Ansvarelig etat' (Responsible authority) is listed with checkboxes for various institutions like 'Annen etat', 'Havforskningsinstituttet', 'Miljødirektoratet', 'NERSC', 'NIFES', 'NGU', 'NILU', 'NINA', 'NIVA', and 'Sorsk Polarinstitutt'. The main content area, titled 'Indikatorer (122 av 122)', displays a list of indicators with their names and responsible authorities. Visible indicators include: 'Temperatur, utholdelighet og næringstoffer i Barentshavet' (Responsible: Barentshavet / s.s. Havklima), 'Transport av sluttavfall i Barentshavet' (Responsible: Barentshavet / s.s. Havklima), 'Havtintetendens i Barentshavet' (Responsible: Barentshavet / s.s. Havklima), 'Blomstere og produksjon av plankton i Barentshavet' (Responsible: Barentshavet / s.s. Plankton), 'Aktiviseringsnivået plankton i Barentshavet' (Responsible: Barentshavet / s.s. Plankton), 'Væsceløsning av plankton i Barentshavet' (Responsible: Barentshavet / s.s. Plankton), 'Aktiviseringsnivået dyreplass i Barentshavet' (Responsible: Barentshavet / s.s. Plankton), and 'Dyreplassbiomasse i Barentshavet' (Responsible: Barentshavet).

# Step 10. Adapting the marine spatial management process

## Output:

- Proposals for adapting management goals, objectives, outcomes and strategies for the next round of planning
  - *Based on the information on performance*
  - *“The road develops while you walk”*
  - *Both goals, measures, organization and more can be adaptively developed*
- Identification of applied research / knowledge needs
  - *Could be mapping, monitoring, research, possibly also technical development*



Question:

For you who do not work directly with MSP – could you see how MSP could benefit your work – or how your work could benefit MSP?

Where are the connections?

**“Adaptive” means that  
you always have a  
possibility to improve**





[www.miljodirektoratet.no](http://www.miljodirektoratet.no)

# Marine spatial planning

## The concept

Anne E. Langaas Gossé  
Senior Adviser, Coordination of Marine Management



Good afternoon everybody!

First of all; congratulations to prof Alexander Turra and his team for arranging this impressive event  
it is an honor to be here - thank you for inviting me!

My name is ALG and I work with ocean management at the Norwegian Environment Agency.

I have worked with the Integrated Management Plans for the Norwegian ocean areas since 2003. My main focus is on valuable and vulnerable areas, and the development of tools for area based management. I also participate in different kinds of international cooperation.

I am a manager, not a scientist, and my basis is a Norwegian ocean management perspective. As both ecology, economy and the social situation differs, I am sure that all countries have some specific challenges. Therefore, I also look forward to have my worldview broadened by you.

My ambition for this lecture about marine spatial planning, is that I want you to see the possibilities that lies in this tool, and also that you reflect on what role you can play.

Do you know marine spatial planning from your own countries?  
Hands up!

Do any of you study msp?



Where is Norway?

## Coastal vs ocean planning, Norway

### **Within baseline plus 1 NM**

- Legally binding planning, according to The **Planning and Building Act** and the EU Water framework Directive
- decided at the municipality or county level
- Mostly small-scale activities
- Ecological values well defined

### **Outside baseline**

- Management plans, White papers
- Based on principles of the ecosystem approach
- Large, few and economic important sectors
- Large scale animal migrations
- Implemented by **sector legislations**
- Requires good **cooperation between sectors**

In Norway: Open ocean management differs from coastal management, and all my examples come from ocean planning, not from coastal planning

### **Within baseline plus 1 NM**

“Traditional msp”, legally binding according to The **Planning and Building Act** and the EU Water framework Directive  
decided at the municipality or county level  
Mostly small-scale activities  
Ecological values well defined

### **Outside baseline**

Management plans, White paper  
Based on principles of the ecosystem approach  
Large, few and economic important sectors  
Large scale animal migrations  
Implemented by **sector legislations**  
Requires good **cooperation between sectors**

**Vis på kartet! Forvaltningsplaområdene, grunnlinja/kystsonen**

# Do you know the bacalhau?

*Brazil imported 24 000 tons of dried fish from Norway in 2017*

*It is Norway's largest market for dried fish*

<https://www.youtube.com/watch?v=1Uy3xwIawlw>

In Norway, our two main ocean based export industries are fish and oil/gas. I believe that here in Brasil, the Norwegian bachalau is quite well known. Verdi av 24000 tonn til brasil – one billion NOK, mer enn 460 mill brasil real. 11 mill usd. Se på bilder, noen få ord. The export of dried cod from the Lofoten islands is suggested to be more than 1000 years old.

The Lofoten spawning area is really the machinery for huge other ocean areas. Let us spend five minutes seeing an explanatory animation about **The Barents sea – and why Lofoten is so important**

Sjekk på forhånd at filmen lar seg vise!

## The oil also represents huge values

*Brasil imported 24 000 tons of dried fish from Norway in 2017*

*It is Norways largest market for dried fish*

<https://www.youtube.com/watch?v=1Uy3xwIawlw>

The total Norwegian export value from oil and gas was 442 billion NOK in 2017

Norway is a relatively small player in a global oil market, accounting for about two percent of the world's global demand for crude oil. But on the other hand, we are the world's third largest exporter of natural gas. Almost all oil and gas produced in Norway is exported, and the export value accounts for about half of total Norwegian exports. This makes oil and gas the most important export goods in Norway.

For now, the area on the map has not been opened for petroleum extraction, but it is known that there are quite large reserves

Management plans: political framework, and tool for cross-sector cooperation and coordination. White papers 2002-2017

This situation “forced” Norway to take a more integrated approach to maritime management

The more northern areas – the Barents sea - are already opened for petroleum, and it was in connection with the opening of these vulnerable areas that the first management plan was initiated.

The plan was finished in 2006

Ta de andre planene kort

Question:  
Do you know similar challenges in  
your own country?

# What is marine spatial planning?

UNESCO:

Marine spatial planning (MSP) is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.

MSP can be seen as a tool for ecosystembased management

Les teksten. Pragmatisk tool

## Briefly of the history behind

- 1993: The Convention of Biological Diversity (CBD) signed and applied as multilateral treaty <https://www.cbd.int/>
- 1998: The 12 Malawi principles of the ecosystem approach <https://www.cbd.int/ecosystem/principles.shtml>
- Regional elaborations, e.g. the North Sea Conference OSPAR/HELCOM 2003 [https://www.ospar.org/site/assets/files/1239/5nsc-2002\\_bergen\\_declaration\\_english.pdf](https://www.ospar.org/site/assets/files/1239/5nsc-2002_bergen_declaration_english.pdf)
- 2004: CBD Guidelines to the ecosystem approach <https://www.cbd.int/doc/publications/ea-text-en.pdf>
- UNESCO work → A step-by-step approach to marine spatial planning in 2009 <http://unesdoc.unesco.org/images/0018/001865/186559e.pdf>

### History behind MSP

On December 29, 1993, the Convention on Biological Diversity (CBD) was signed and applied as a multilateral treaty.

The ecosystem approach grew out from the biodiversity convention, and some years later, in 1998, a guideline with 12 principles and a description of the ecosystem approach

This is a good checklist, for all the principles should be taken into account.

The principles were later elaborated further to become more targeted for ocean management, for instance through the work of for example OSPAR in 2002

[https://www.ospar.org/site/assets/files/1239/5nsc-2002\\_bergen\\_declaration\\_english.pdf](https://www.ospar.org/site/assets/files/1239/5nsc-2002_bergen_declaration_english.pdf)

# The Malawi principles

Principle 1: The objectives of management of land, water and living resources are a matter of *societal choices*.

Principle 2: Management should be decentralized to the *lowest appropriate* level.

Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on *adjacent* and other ecosystems

Principle 4: Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an *economic context* ....

Principle 5: Conservation of *ecosystem structure and functioning*, in order to maintain ecosystem services, should be a priority target of the ecosystem approach

Principle 6: Ecosystem must be managed within the *limits of their functioning*

Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales

Principle 8: Recognizing the varying *temporal scales and lag-effects* that characterize ecosystem processes, *objectives* for ecosystem management should be set for the long term

Principle 9: Management must recognize the *change is inevitable*

Principle 10: The ecosystem approach should seek the appropriate *balance between, and integration of, conservation and use* of biological diversity

Principle 11: The ecosystem approach should consider *all forms of relevant information*, including scientific and indigenous and local knowledge, innovations and practices

Principle 12: The ecosystem approach should *involve all relevant* sectors of society and scientific disciplines

## 4. ...Any such ecosystem-management program should:

- a. Reduce those market distortions that adversely affect biological diversity;
- b. Align incentives to promote biodiversity conservation and sustainable use;
- c. Internalize costs and benefits in the given ecosystem to the extent feasible.

The principles are not only about the ecosystem itself, actually not, and they recognise that human beings are part of the ecosystem

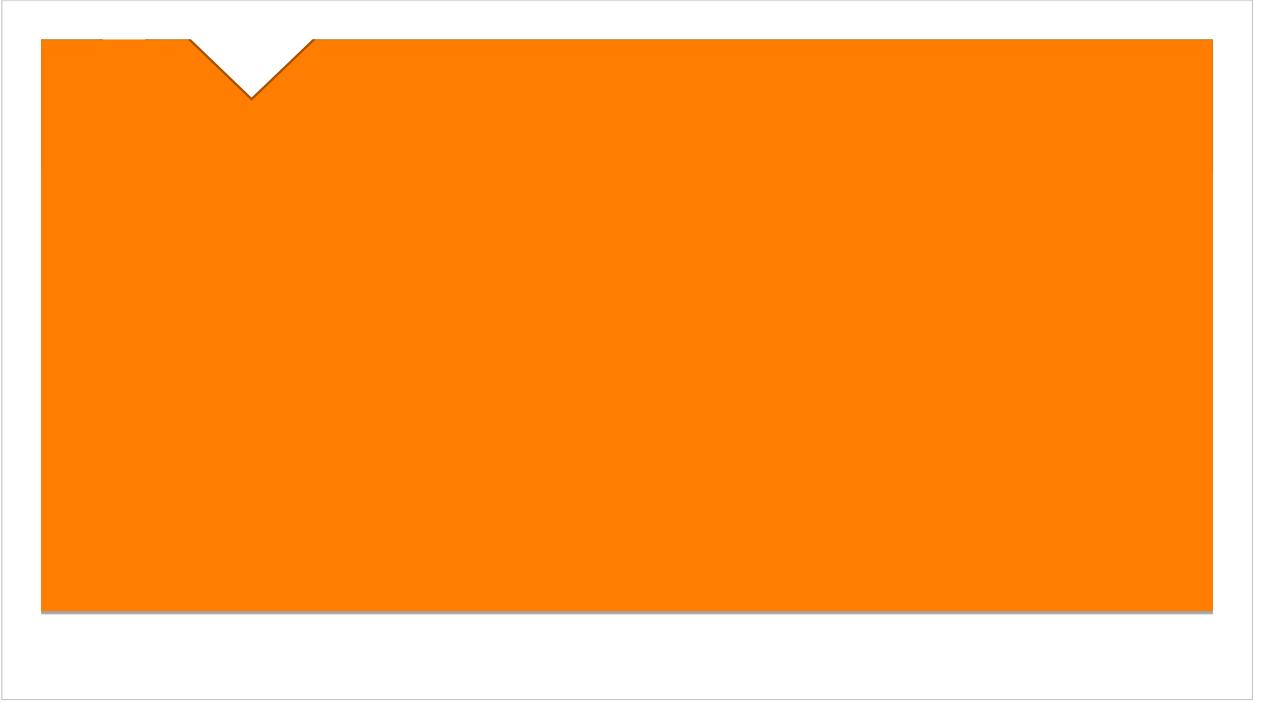
## UNESCO: Characteristics of effective MSP

But we want to go closer into the concept of msp.... and

Unesco has given these characteristics for effective msp:

It should be...

Ta lista



# UNESCO – a step-by-step approach to MSP

- (1) Need & authority
- (2) Financial support
- (3) Pre-planning
- (4) Stakeholders
- (5) Existing conditions
- (6) Future conditions
- (7) Preparing & approving
- (8) Implementing & enforcing
- (9) Monitoring & evaluating
- (10) Adapting

We shall now go into the step-by-step approach. The guide is written by the guru Charles Ehler and Fanny Douvère. It is very helpful and gives lots of examples. But it must also of course be adapted to the conditions in which it will be used

## These are the steps:

UNESCO step-by-step approach to msp:

- (1) Identifying need and establishing authority
- (2) Obtaining financial support
- (3) Organizing the process through pre-planning
- (4) Organizing stakeholder participation
- (5) Defining and analyzing existing conditions
- (6) Defining and analyzing future conditions
- (7) Preparing and approving the spatial management plan
- (8) Implementing and enforcing the spatial management plan
- (9) Monitoring and evaluating performance
- (10) Adapting the marine spatial management process

Does not replace single sector planning, as details are planned within each sector.

## Step 1. Identifying need and establishing authority

Outputs:

- A preliminary list of specific problems you want to solve through marine spatial planning
  - if possible; indicate the benefits of solving these problems
- A decision about what kind of authority you need for developing marine spatial planning
  - organization (new authority?)
  - legislation (new legislation?)

List of problems:

Specify existing problems or conflicts, show in details how these can be solved by msp. If possible, also show the benefits

This will help to keep the efforts focused throughout the process.

Authority:

Who shall plan? Who shall implement? Do you need new legislation?

This cannot contrast the national government and steering principles,

When it comes to

### **Organization.**

I would say that In Norway, msp in ocean areas would not be possible without all relevant authorities participating in the planning phase. The fisheries, energy, environment and shipping sectors and others (coastal guard, nuclear authority m fl) participate equally in the work. This is the case both at the agency level and the ministry level. The work is lead by the environment authorities, because these have no economic interests.

So for us, this step is about establishing the responsible groups:

Steering group, management group, monitoring group. I will go more detailed into this in the next session.

### **Legislation**

When it comes to planning by New Legislation or not, I would refer to the guide. Both choices have pros and cons, and the guide

Question:  
Could students have a role in the  
initiative phase?

If yes, what could that be?

Identify need, pressure group?

## Step 2. Obtaining financial support

Outputs:

- A financial plan that:
  - a. estimates the costs of your MSP activities;
  
  - b. identifies alternative means to obtain financing for those MSP activities

Possibilities may be influenced by

- the identified need
- identified gains
- what steering level that have decided planning

This is an important step, because msp can stop without resources. Both participation and building up knowledge costs money.

In addition to identifying costs, it would be good to identify the benefits of msp – how much could be gained by planning the ocean areas? Could valuating ecosystem services help to describe the benefits in a long term perspective?

When decided on a high steering level, it may be easier to have financing.

Actors **who** can see that they have a lot to gain on ocean planning will be most interested in paying for it. Therefore, it is also very important to describe the benefits in a way that is well understood.

Sometimes, like in Norway, the motivation may be to build up knowledge in order to have new **areas opened for utilisation**. When the oil industry wanted to go into the vulnerable north, the expansion stopped because of lack of knowledge and potential conflicts with fisheries and environment. To open the northern areas, it was necessary to build up knowledge on for example seabirds and seabed, and two large mapping programs were established → mareano and seapop. To run these programs, the industry or sector authorities have to find funding.

Remember also that **collegiate will** – e.g the will in each sector to cooperate in the planning – is a resource that may save a lot of money. The thought of long-term cooperation on an equal basis

Question:

Is it possible to estimate the economic gain from planning?

What role can students play when it comes to financial questions for msp?

Describe economic benefits of msp, value ecosystem services... describe the ecosystem and important ecosystem functions for the economists

## Step 3. Organizing the process through pre-planning...

### Outputs:

- Organization of a marine spatial planning team with the desired skills;
  - *Planning skills, leader skills, sector knowledge, cooperative skills?*
  - *Skills and organization model may be closely related/dependent of each other*
  
- A work plan that identifies key work products and resources required to complete the outputs of planning on time, it could be
  - *Facts of the plan area, Sector impact assessments, Assessments integrated across sectors, Knowledge needs, Possible managements measures, Zoning plan, and more...*
  - *Role allocation – who is responsible for what*
  - *???*

## This very important step has five important outputs:

1. Organization of a marine spatial planning team
2. A work plan that identifies key work products and resources
3. Defined boundaries & time frame
4. A set of principles to guide development
5. A set of goals and objectives

### 1. Start with the planning team:

What are the desired skills? Planning skills? Leader skills? Or sector knowledge? Cooperative skills? Or the will to carry out the work? I do not think that all countries would agree on the same skills. For us in Norway, independent of skills, it is very important that all sectors can participate on an equal basis. That has to do with the legitimacy of the plan. So, the planning team consists of people from all relevant sectors. Each sector decides what kind of competence they want to have in the group

### 2. What work products? For example

Facts of the plan area; environment, status of industries, social and economic situation

Sector impact assessments

Assessments integrated across sectors; included conflicts between sectors

Knowledge needs

## Step 3. Organizing the process through pre-planning...

- Defined boundaries & time frame for analysis and management
  - *Management boundaries; economic zone, ocean/coast, bio-region etc. May not overlap with ecosystem boundaries. Remember Malawi 3*
  - *Time frame; planning start, how far into the future?*
- A set of principles to guide development of the marine spatial management plan
  - *E. g. ecosystem integrity, integration, public trust, transparency, precautionary, polluter pays*
  - *Malawi principles → EA principles*

**Malawi 3:** *Ecosystem managers should consider the effects (actual or potential) of their activities on **adjacent** and other ecosystems*

## Step 3. Organizing the process through pre-planning

- A set of goals and objectives for the management area
  - Example of overarching goal: *“the plan is a framework for value creation through sustainable use of natural resources and ecosystem services... and maintain the structure, functioning, productivity and diversity of the ecosystems of the areas”*
    - How to transfer this into objectives that can be implemented?
  - The goals/objectives should be in line with international agreements and with other national goals/objectives

It is a big job to develop the goals and objectives. From the totally overarching goal:

*The purpose of the management plans is to provide a framework for **value creation through the sustainable use of natural resources and ecosystem services** in the sea areas and at the same time **maintain the structure, functioning, productivity and diversity of the ecosystems** of the areas.*

.. to the operationalised objectives is a long way. I will give you examples when we come to the practical session.

## Step 3. Organizing the process through pre-planning

Feel free to add to the list of outputs:

- plan for establishing a knowledge base, which can follow the work all the time, from one revision to another
  - It will save time and money
  - Could include databases and electronic tools for reporting

My experience: stable and acceptable structure secure more support in the future. Very important!

Forutsigbarhet, må følges i hver ny oppdatering/revisjon

Question:

What do you believe could be important skills for the planning team?

You know that the knowledge is too weak to make good decisions about management measures – how could this be reflected in the work plan?

1. Planning skills? Leader skills? Or sector knowledge? Cooperative skills? Or the will to carry out the work? Important that all sectors can participate on an equal basis? Each sector decide what kind of competence they want to have into the group?
2. Shorter periods before updating/revision, describe knowledge needs and why this is important for management, sectors must make EIAs, ...

## Step 4. Organizing stakeholder participation...

### Output:

- A plan indicating who, when and how to involve stakeholders throughout the marine spatial planning process
  - *Remember Malawi 11 and 12*
  - *Transparency, predictability, respect, empowerment...*

### *Malawi 11 and 12:*

*Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices*

*Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines*

**Who:** keep it open, so that all stakeholders who think that they have interests should be invited to give inputs in a variety of settings

**When:** It is important for stakeholders to know when it is their turn to contribute, so that they have the possibility to be properly prepared

**What:** The organizers should have a clear understanding of what is expected from the stakeholders, and a recognition of their contributions. A clearly defined and communicated plan for the work help to give understanding and overview.

**How:** The stakeholders must be sure that that their engagement can make a difference, whether it be in the status description or the result.

As plans are regularly updated, a predictable process with timetables and a clear role allocation. Firm organisation structures and transparency contribute to trust.

## Step 4. Organizing stakeholder participation...

From the stakeholders perspective:

- MSP processes may be complex and confusing
- There may be unclear status of contributions from stakeholders
- Problems with motivation to participate
- Different stakeholders can have very different social and economic possibilities to front their interests

## Step 4. Organizing stakeholder participation

The Norwegian model:

- All sector authorities participate equally in the planning
- Stakeholders who do not participate directly are invited for defined tasks and stages, according to a timetable
- Stakeholder participation has been improved based on evaluation

In the Norwegian model, all stakeholders in an official position (eks directorates, sector authorities) are at the table and work equally and directly with the plan. Why "official positions"? Because they know very well the interests and the administrative frames for their respective sectors, they have administrative responsibility and authority to take action, and they also have the possibility to allocate their working time for this.

But, to remember the previous slide, about different social and economic possibilities to front their stakes... brings me over to....Some of the theses I have seen, for example by both Regina and Ana Emilia, describe deep poverty and even starvation between local fishermen and their families.

Question:

Other ways than input meetings, hearings, workshops and consultations to involve stakeholders?

Why is local fishermen and -women an important stakeholder group?

How can MSP benefit local fishermen and -women ?

Sustainable fisheries and aquaculture for food security and nutrition <http://www.fao.org/3/a-i3844e.pdf>

Other ways than hearings: Go directly to the group and make sure to bring them in. find out what they need

oppgavene til Regina og Ana Emilia, begge skriver om fattigdom blant lokale fiskere.

Small-scale fishery is important, but underestimated

A FAO Fisher Report estimates that about 600 million people - both women and men - receive a share of their income from small scale fish.

In recent years, the world's total catch of wild fish has spent about 90 million tons of fish per year. 40 million tons have been fished by small-scale fishermen in the south and 95% of

## Step 5. Defining and analysing existing conditions...

Output:

- An **inventory and maps of important biological and ecological areas** in the marine management area;  
*Feel free to add under this point:*
  - *An environmental quality status report*
- *Also add: A description of the social and economic situation in the plan area*
- An **inventory and maps of current human activities** (and pressures) in the marine management area;
  - *Remember also to invent and include the pressures from climate change, ocean acidification, long-transported pollution*

**Socio-economic ... Remember previous point:  
Poverty among specific groups using the  
sea areas**

## Step 5. Defining and analysing existing conditions

- An assessment of possible conflicts and compatibilities among existing **human uses**
  - *Wise to let the sectors participate in this assessment*
  - *Participation may be more efficient for reciprocal understanding and consideration*
- An assessment of possible conflicts and compatibilities between existing **human uses and the environment**
  - *Also here; Participation promotes understanding and consideration*

The msp guide shows a matrix of human use compatibility/incompatibility., which is very fine. It must also be taken into account the possibility to have mitigation measures.

It is also possible to have a textual description by each sector, what problems do we have with the other sectors and is coexistence or mitigation measures possible?

## Step 5. Defining and analysing existing conditions

Advice:

Make all reports from the knowledge base available to the public!

### **Important!**

In addition, there should be a description of the social and economic situation in the plan area. This is important, especially if the plan has goals and objectives of a social nature.

And an environmental quality status report

Question:

How accurate does the knowledge need to be,  
in order to put into the knowledge base?

## Step 6. Defining and analysing future conditions

Output:

- A **trend scenario** illustrating how the MSP area will look if present conditions continue without new management interventions
  - *Use a robust and transparent method*
  - *Agreeing on common and convincing scenarios across sectors might be difficult*
  - *An easy way out: Each sector describes possible scenarios for the coming e. g. 30 years*
    - *What about the sum of all sectors?*

## Step 6. Defining and analysing future conditions

- **Alternative spatial sea use scenarios** illustrating how the management area might look when human activities are redistributed based on new goals and objectives;

*– Keep in mind that there is no method that gives one correct answer for each alternative  
– Still no broadly agreed method for cumulative impact assessments*

→ A **preferred scenario** that provides the basis for identifying and selecting management measures in the spatial management plan

Add:

- Do you expect new activities / industries?
- Remember that the knowledge base is useful for spatial and temporal assessment of possible new activities!

my experience is that this is a difficult step...

The first and simplest step is to ask every sector to describe what is the expected and the desired development within the sector in the coming 30 years. This must describe possibilities and opportunities, both technical and when it comes to the need of space or specific areas.

The next step may be to assess the environmental impact of this development, and how it is affected by climate change and ocean acidification etc

It is important to add

Do you expect new activities / industries?

Remember that the knowledge base is useful for spatial and temporal assessment of possible new activities!

## Now, the basic knowledge is in place...

In Norway:

The knowledge base, preferably as consensus, is handed over from the Management group of governmental Agencies to the Steering group of Ministries

Big conference: the knowledge base is presented for the politicians, interest groups and the public. Workshops and discussions in groups on different topics → written comments from the public afterwards

### Is it finished?

This is a fun phase, as the working group who has laboured with the knowledge base and the descriptions gets its reward...

Question:

Why could it be beneficial to have a distinct division between the descriptive phase and the decision phase?

What could be the benefits of having different people working with the two phases?

*High efforts, good descriptions*

*Reduce competition and territory marking.*

*Easier to cooperate within the management group after the decisions have been made, than if the negotiations had to be done within the group*

*Better understanding between stakeholders, more horizontal integration*

*May be the knowledge base becomes more objective → more useful also for other purposes*

## Step 7. Preparing and approving the spatial management plan

### Output:

- An identification and evaluation of alternative management measures for the spatial management plan;
  - Identification of criteria for selecting alternative management measures;
- A comprehensive management plan, including if needed, a zoning plan

Alternative management measures could be described in the knowledge base  
Criteria for selecting; according to the need

## Step 7. Preparing and approving the spatial management plan

Examples of goals that could be met by measures:

- Area-based management, where activities and measures are adapted to the ecological characteristics of the areas.
- Protect the most valuable and vulnerable areas from negative impacts, including acute oil pollution.
- Reduce the input of pollutants
- Strengthen the fisheries management
- More coordinated and systematic environmental monitoring.
- Strengthening the knowledge base through, among other things, better mapping and expanded research.

Strengthen the fisheries management (precautionary limits for commercial fish stocks, counteract illegal, unreported, unregulated fishing, assessing measures against by-catched seabirds + destruction of bottom habitats)

Question:

When a plan is approved, what do you think is needed for it to be followed up?

What about stakeholders who have not got what they wanted?

If it is by law, ...

Planning authorities who control..

Without planning authorities:

Plan must have legitimacy

Loyalty from the sectors

Stakeholders who did not get... They must see that their views have been taken in the knowledge base,,,

if it is politically decided it can be changed next time...

Easier to accept then if it was decided by the people they had direct contact with

## Step 8. Implementing and enforcing the spatial management plan

Output:

Clear **identification of actions** required to implement, ensure compliance with, and enforce the spatial management plan

- *Implementation is the process of converting MSP plans into actual operating programs*
- *Actions required should be based on needs*
- *Actions required may be identified already in the adopted plan*

Ideally, actions should give highest priority to the strongest needs. But **this is not a matter of course, because it may also be the least expensive measures that will be prioritized**

In Norway, identification of actions is to a large degree done before the management plan is approved, and many of the actions are therefore decided by the government. This is good if it costs money, because the government has then decided that the budget has to have this in mind....

## Step 8. Implementing and enforcing the spatial management plan

### **Actions to prevent acute oil pollution, example from Norway**

The Government will:

- continue its work on maritime safety and oil spill response measures.... These include:
  - establishing a vessel traffic service centre ...
  - establishing mandatory routing and traffic separation schemes outside territorial waters ..... for traffic that poses a particular environmental risk
  - ...and more

Implementing and enforcing require actions

## Step 8. Implementing and enforcing the spatial management plan

### **Actions for protection of coral reefs, example from Norway**

- The Government will:
  - map known coral habitats so that they can be more effectively protected against damage from fishing operations under existing legislation;
  - lay down strict requirements for demersal fisheries and reporting requirements for such fisheries in order to avoid damage to benthic habitats;
  - introduce restrictions on the use of gill nets and longlines in all coral habitats that are already protected against the use of bottom gear;
  - in 2010, present a national action plan for protection of coral reefs and other vulnerable seabed habitats;

Question:

When it comes to measures/actions/restrictions –

why is it advantageous with integration across sectors and agencies, and among levels of government?

It may be easier to accept restrictions/measures/actions when the provisions are based on an overall picture that all sectors and levels have been involved in

## Step 9. Monitoring and evaluating performance

### Output:

- A monitoring system designed to measure indicators of the performance of marine spatial management measures
- Information on the performance of marine spatial management measures that will be used for evaluation performance of marine spatial management measures
- Periodic environmental status reports to decision makers, stakeholders, and the public about the performance of the marine spatial management plan

## Step 10. Adapting the marine spatial management process

### Output:

- Proposals for adapting management goals, objectives, outcomes and strategies for the next round of planning
  - *Based on the information on performance*
  - *“The road develops while you walk”*
  - *Both goals, measures, organization and more can be adaptively developed*
  
- Identification of applied research / knowledge needs
  - *Could be mapping, monitoring, research, possibly also technical development*

It is a rolling wheel...

Question:

For you who do not work directly with MSP – could you see how MSP could benefit your work – or how your work could benefit MSP?

Where are the connections?



**"Adaptive" means that  
you always have a  
possibility to improve**

[www.miljodirektoratet.no](http://www.miljodirektoratet.no)