



INCO Contract No. 003739

Integrating Multiple Demands on Coastal Zones  
with Emphasis on  
Aquatic Ecosystems and Fisheries  
(INCOFISH)

Instrument:  
STREP

## 1<sup>st</sup> Semi-Annual Report

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Project coordinator: Dr. Rainer Froese

Project coordinating institution: Leibniz Institut für Meereswissenschaften, Kiel, Germany

Rapporteur: Dr. Silvia Opitz, project manager

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## Section 1 – Project objectives and major achievements during the reporting period

### Objectives

According to the Technical Annex to the contract, the goal of INCOFISH is to conduct specifically targeted strategic research suitable to contribute to the goals set by the World Summit for Sustainable Development in Johannesburg, such as restoring healthy fish stocks and ecosystems by 2015.

The scientific and technological objectives of INCOFISH are closely related to the work plan of its 11 work packages and can be summarised as follows:

#### Overcome the 'Shifting Baseline' Syndrome (WP2)

To resolve the “Shifting Baseline” Syndrome in Fisheries, historical data on catch and effort, biomasses, length-frequencies, maximum sizes, size and age at maturity, growth rates, natural mortality, etc. are being assembled, collated and analysed to establish baselines against which the current status and restoration goals of key aquatic resources can be assessed. Likewise, historical data on catch and effort, production, biomasses, predator-prey interactions, flows, and habitat change will be assembled, collated and analysed to establish baselines against which the current status and restoration goals of selected marine ecosystems can be assessed.

#### Provide Authoritative Species Inventories (WP3)

INCOFISH uses biogeographic niche modelling to define the preferred environmental conditions for key marine coastal-zone species. This specific niche information is then being used to create standardised electronic maps of predicted distributions for all coastal zone species. In addition, the niche circumscription of species of interest is being connected with physical and bio-geochemical models thus producing dynamic distribution maps driven by models of forcing functions. This allows exploring changes in distribution of species resulting from natural and anthropogenic environmental changes. The maps and related tools are being made freely available on the Internet with an easy-to-use interface.

#### Provide Ecosystem Models (WP4)

INCOFISH will provide multispecies models as well as the underlying data for more than 10 strategically selected large marine ecosystems with a focus on Asia, Africa and South-America. These models draw on INCOFISH data such as species inventories and biomasses; in return they provide crucial inputs for sizing and siting of protected areas.

#### Assist in Sizing and Siting of Marine Protected Areas (WP5)

INCOFISH will provide best-practice concepts as well as tools for improved planning of MPAs, with a view of reconciling conflicting demands.

#### Provide Framework and Tools for Analysis of Interactions and Flows in the Coastal Zone (WP6)

INCOFISH is developing a framework for compilation and analysis of data relevant to the understanding of interactions, impacts and flows in the coastal zone from mountains to the continental shelf. The ultimate goal is to provide coastal managers with a decision-making framework and communication tool for integrated coastal management.

#### Provide Simple Indicators for Sustainable Resource Use (WP7)

INCOFISH will provide indicators such as degree of resilience to exploitation or natural disturbances. We will focus on simple indicators that allow participation of the public in resource management and that have the potential to end overfishing.

**Valuation of Coastal Ecosystem Services (WP8)**

INCOFISH is using state of the art methodologies to assign values to products and services of coastal ecosystems. This will then allow valuation of sustainable versus unsustainable management regimes and thus provide the public and politicians with the information needed to combat unsustainable management.

**Evaluate Pros and Cons of Ecotourism (WP9)**

INCOFISH is analysing benefits and problems associated with ecotourism in selected MPAs and is producing best-practice guidelines for what may be termed 'sustainable ecotourism.'

**Review Legal Instruments Relevant for Sustainable Coastal Resource Use (WP10)**

INCOFISH is analysing and evaluating the legal framework relevant for sustainable resource use, taking account of legal structures that may increase pressure on resources, relate to the management of the resource, or provide for sharing of benefits from the resource.

**Provide Access to Relevant Data, Tools, and Concepts (WP1)**

Data, tools, and concepts created by INCOFISH or otherwise relevant to integrated coastal zone management are being made accessible through a user-friendly web portal.

**Bringing it All Together (WP11)**

A combination of accommodating coordination with strong leadership ensures that the components of INCOFISH described above come together and form a comprehensive package with the potential to improve integrated coastal zone management.

**Major achievements**

During the reporting period, the INCOFISH consortium has been working on the tasks allocated to each WP. The main achievements of the project by WP were:

**WP1 Data, Tools & Outreach**

-- CRIA as member of WP1 has evaluated several web server tools for GIS and has concluded that the open source MapServer will be best suited for INCOFISH. CRIA is developing a setup that will allow INCOFISH users to display ICZM data on top of various environmental or socio-economic layers.

-- As a result of the discussions at the INCOFISH start-up workshop (see below) FishBase updated the page with 'Treaties and Conventions' signed by a country and added an intelligent link for 'Find more information in Google', which typically gives the home page of the treaty as first hit, plus additional sites with information about the respective treaty. WP1 (Data, Tools & Outreach) will integrate this with the INCOFISH portal and WP10 (Legal Instruments) will update and expand our respective information. See <http://64.95.130.5/Country/CountryTreatyList.cfm?Country=276>.

**WP3 Biodiversity Mapping**

-- At the end of October the INCOFISH coordinator and Project Support personnel organized the 2<sup>nd</sup> International Mapping Workshop on 'AquaMaps in Kiel, as part of the coordinator's Pew project, together with external experts and INCOFISH participants of WP1 and WP3 (Biodiversity Mapping). The workshop was very successful and led to several hundred computer generated distribution maps, most of which look very reasonable. There is an interface for experts to edit these maps online, a deliverable of WP1. This will be made visible through the INCOFISH portal

once more maps have been added and verified for important fishes and for mammals, probably end of December. **(Part of deliverables D1.4 and D3.1)**

## WP 7 Sustainability Indicators

- One of the first products of the INCOFISH “sustainability indicators” work is a fish ruler that shoppers can use to ensure the fish they buy at the market have had a chance to spawn. So far there is a German version of the ruler (der Fisch-Max) available with maturity lengths from the Baltic Sea, and an English version (The FisherMin) with maturity lengths from the North Sea. Species included on the ruler are European Sprat, Herring, Atlantic Mackerel, Plaice, Turbot, and Atlantic Cod (also Sole and Deepwater Redfish on the North Sea version). The ruler is made of flexible and washable plastic material.

The earliest version of the ruler was well received during the *Kieler Woche* (June 2005), and a story was written about it in the *Lübecker Nachrichten* (29/30<sup>th</sup> July, 2005).

We are thus-far only able to offer rulers locally in Kiel, because we lack the financial means to print and distribute a larger number. Remaining rulers are being distributed via the IFM-GEOMAR library and reception desk, and a local bookshop. However, a full scale version of the fish rulers can be downloaded and printed from the INCOFISH web page ([www.incofish.org](http://www.incofish.org) under “fish ruler”). One of our next steps is to find a sponsor who can help us print and distribute a larger number.

It is understood that the work on the Baltic and North Sea are test runs for the principal focus of INCO activities on supporting solution development in partner regions. That also means that indicators should be useful and cost-effective in other parts of the world.

INCOFISH WP 7 would like to produce such rulers for each of the fisheries targeted by its members around the world. Additionally, WP 7 plans to offer a web-based “build-your-own ruler” tool with which users can select the species they buy most and generate a customized, printable, to-scale ruler.

-- FishBase, a partner project of INCOFISH has been chosen as one of only nine European projects to be presented in special 'Media Briefs' to about 300 international journalists at the upcoming conference on Communicating European Research (CER 2005). WP 7 leaders prepared a PowerPoint presentation, a press release, some background information, a CD-ROM with all of that, 300 Fish rulers for the North Sea, plus a fact sheet showing size at maturity and spawning season for the main North Sea stocks (both early products of WP Simple Indicators). This media splash will take place at 14:00h on Monday, 14 November in Brussels.

## WP 8 Valuation of Coastal Systems and Products

-- First paper published: Sumaila, U.R. (2005). Differences in economic perspectives and the implementation of ecosystem-based management of marine resources. *Marine Ecology Progress Series*, 279-282 (Part of **Deliverable D8.6**)

## WP 11 Project Management

-- In May 2005, a project webpage was launched at ([www.incofish.org](http://www.incofish.org)). The page is used as communication tool with the wider public as well as with the project participants. (Part of **deliverable D1.1**).

-- On 4<sup>th</sup> October 2005, the 1<sup>st</sup> Project Steering Committee Meeting took place at the coordinating institution in Kiel, Germany. **(WP Milestone)**.

-- At the same place, on 5-7 October 2005, the INCOFISH start-up workshop was held with 52 participants from 22 countries. This went very well, all workshop objectives could be achieved; see reports at [www.incofish.org](http://www.incofish.org). **(WP Milestone)**.

## Section 2 – Workpackage progress during the first 6 months

A review of the progress within each of the WPs follows.

WP	Data, Tools & Outreach
1	<ul style="list-style-type: none"> <li>▪ CRIA development of mapCria webservice and viewer (<a href="http://www.cria.org.br/mapcria/doc">http://www.cria.org.br/mapcria/doc</a>);</li> <li>▪ Start of WP 1 leader in August 2005</li> <li>▪ Information meeting on INCOFISH for FishBase team, Aug 2005</li> <li>▪ Workshop on INCOFISH for FishBase team, Aug 2005</li> <li>▪ List of items on INCOFISH portal, Aug 2005</li> <li>▪ Development of templates and structure for INCOFISH portal, Sep 2005</li> <li>▪ Production and handout of participant questionnaire on metadata, Sep 2005</li> <li>▪ WP1 presented during INCOFISH Start-Up Workshop</li> <li>▪ 1<sup>st</sup> WP1 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Timeplan for data submissions, Oct 2005</li> <li>▪ Presentation of INCOFISH to EU revisors, Oct 2005</li> </ul>
	<b>Shifting Baselines</b>
2	<ul style="list-style-type: none"> <li>▪ WP2 presented during INCOFISH Start-Up Workshop</li> <li>▪ 1<sup>st</sup> WP2 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Communication discussed, email and word files agreed on, sharepoint to be investigated;</li> <li>▪ Concept of baselines considered, and this topic was agreed on as theme for WS1;</li> <li>▪ WP members proposed LMEs, species and time spans for their study;</li> <li>▪ Agreed on form and extent of historical data and software to be used.</li> </ul>
	<b>Biodiversity Mapping</b>
3	<ul style="list-style-type: none"> <li>▪ Established familiarity with HCAF tables (NRM);</li> <li>▪ WP3 presented during INCOFISH Start-Up Workshop;</li> <li>▪ 1<sup>st</sup> WP3 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Groundplan for collaborative work established through Startup Workshop in October 2005;</li> <li>▪ Framework set up for web maps at NRM server;</li> <li>▪ NRM participated in map programming workshop at IfM-GEOMAR, October 2005;</li> </ul>
	<b>Ecosystems Modelling</b>
4	<ul style="list-style-type: none"> <li>▪ WP4 presented during INCOFISH Start-Up Workshop;</li> <li>▪ 1<sup>st</sup> WP4 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Study areas initially suggested were reviewed to define ecosystems to be modelled; final selection of study cases will be made during the next workshop (February 2006).</li> <li>▪ Discussion on common base modelling tool was developed and some decisions taken. Other alternative tools are under discussion;</li> <li>▪ Information is circulating between WP4 partners to make advantage of time to generate ideas on testing hypothesis;</li> <li>▪ Plans for timescale co-operation between WP4 and WP5;</li> </ul>

	<b>Marine Protected Areas</b>
<b>5</b>	<ul style="list-style-type: none"> <li>▪ WP5 presented during INCOFISH Start-Up Workshop;</li> <li>▪ 1<sup>st</sup> WP5 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Study area sites selected, apart from the China case study. Final selection of China case study to be made at next workshop (Feb 2006);</li> <li>▪ Terms of reference for the report for D5.1 circulated;</li> <li>▪ Data collection for case studies initiated;</li> <li>▪ Plans for the timescale of co-operation between WP4 and WP5 developed;</li> </ul>
	<b>Coastal Transects</b>
<b>6</b>	<ul style="list-style-type: none"> <li>▪ WP6 presented during INCOFISH Start-Up Workshop</li> <li>▪ 1<sup>st</sup> WP6 meeting held during INCOFISH Start-Up Workshop</li> <li>▪ Detailed work plan drafted and agreed</li> <li>▪ Conceptual model developed</li> <li>▪ Initial listing of variables</li> <li>▪ First draft of questionnaire for input data prepared</li> <li>▪ Publications planned</li> <li>▪ Post-doctoral position announced</li> <li>▪ WP website developed at CDC (<a href="http://cdc.fish.ku.ac.th">http://cdc.fish.ku.ac.th</a>)</li> </ul>
	<b>Sustainability Indicators</b>
<b>7</b>	<ul style="list-style-type: none"> <li>▪ 1<sup>st</sup> September: start of WP7 coordinator</li> <li>▪ Criteria for selecting indicators were established</li> <li>▪ WP7 presented at INCOFISH Start-Up Workshop;</li> <li>▪ 1<sup>st</sup> WP7 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Indicators were chosen and possible 'responses' discussed. Indicators will be available on the INCOFISH portal according to schedule (month 7).</li> <li>▪ Species were selected to which chosen indicators should be applied.</li> <li>▪ WP7 members agreed to assemble the necessary length-frequency time series and maturity data on selected species</li> <li>▪ German and English versions of a "Fish Ruler" for the Baltic and North Seas developed, showing the lengths at 90-100% maturity for several commercially harvested species.</li> <li>▪ Northern Europe "fact sheet" on spawning seasons and maturity for several commercially harvested species developed for distribution to fish wholesalers (for more details on the Fish Ruler and Fact Sheet see also Section 1: Major Achievements).</li> <li>▪ Preliminary review of the use of indicators in fisheries management and their usefulness within the context of WP7 written.</li> </ul>
	<b>Valuation of Coastal Systems and Products</b>
<b>8</b>	<ul style="list-style-type: none"> <li>▪ Fish price database development started;</li> <li>▪ Literature review of non-market values started;</li> <li>▪ WP8 presented at INCOFISH Start-Up Workshop</li> <li>▪ 1<sup>st</sup> WP8 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Research associates hired;</li> <li>▪ Relevant and interesting indicators being identified;</li> <li>▪ Definition and operationalization of identified indicators being developed;</li> <li>▪ INCOFISH Project presented at the University of Tromsø's College of Fisheries Science;</li> <li>▪ First WP paper published.</li> </ul>

<b>Impact of Ecotourism</b>	
<b>9</b>	<p><b>Ecuador</b></p> <ul style="list-style-type: none"> <li>▪ Introduction of the INCOFISH project to Marine Area stakeholders; the Machalilla National Park Service Director and his tourism policy staff, and the Head of Marine Resources in the Galapagos National Park Service.</li> <li>▪ WP9 presented at INCOFISH Start-Up Workshop;</li> <li>▪ First WP9 meeting during the start up workshop. <b>WP Milestone.</b></li> <li>▪ Contact initiated with local stakeholders in tourism, and non government sectors with local base in Galapagos and Machalilla N.P.</li> <li>▪ ECOLAP now participates as secretary of the Ecuadorian sustainable tourism forum- this is a very important group forming tourism policy, where the INCOFISH project will be introduced to members.</li> <li>▪ Reference literature base under development.</li> </ul> <p><b>Colombia</b></p> <ul style="list-style-type: none"> <li>▪ Action Plan to implement Incofish Project in Malpelo and Gorgona. (Elaborated by Malpelo Foundation and Colombian National Park Authority)</li> <li>▪ Introduction of the INCOFISH Project to other national authorities (Colombia National Army and INCODER - Fisheries National Management Authority)</li> <li>▪ Introduction of INCOFISH to local tourist operators with base in Gorgona and Malpelo</li> <li>▪ Bibliographic Information checked and updated on LAC, Carrying Capacity and VIM</li> <li>▪ Elaboration of the provisional document about criteria and indicators to sustainable marine ecotourist activities, support to the WP9 first working meeting "Concepts and Orientation".</li> </ul>
<b>Legal Instruments for Sustainable Fisheries</b>	
<b>10</b>	<ul style="list-style-type: none"> <li>▪ WP10 presented at INCOFISH Start-Up Workshop</li> <li>▪ 1<sup>st</sup> WP10 meeting held during INCOFISH Start-Up Workshop. <b>WP Milestone.</b></li> <li>▪ Agreement on outlines for country reports</li> <li>▪ First elements of D 10.1 (Database on international and national legal commitments to sustainable marine fisheries) completed</li> </ul>
<b>Project Management</b>	
<b>11</b>	<ul style="list-style-type: none"> <li>▪ 1<sup>st</sup> May 2005 the coordinator and Project Support Team (PST) started to take up work.</li> <li>▪ In May 2005, the co-ordinating team (CO, consisting of project co-ordinator and PST members) launched a project webpage at (<a href="http://www.incofish.org">www.incofish.org</a>).</li> <li>▪ At the same time, the CO finalized contract negotiations with the Commission (by end of May 2005), and organized the procedure of contract signature in co-operation with the administration of IfM-GEOMAR.</li> <li>▪ The CO furthermore prepared an agreement for the INCOFISH consortium containing additional issues not mentioned in the contract. The consortium agreement has been signed by all partners except for contractor 39, University of Aberdeen. A copy with signatures has been forwarded to the European Commission by the administration of IfM-GEOMAR.</li> <li>▪ In July, the INCOFISH manager presented INCOFISH at the 1<sup>st</sup> PASARELAS Symposium in Corte, Corsika, France, and explored synergy effects with this INCO partner project.</li> <li>▪ The first pre-payment arrived in August 2005 at the account of the coordinating institution and was immediately transferred to the accounts of all INCOFISH contractors by the administration department. At the end of this reporting period, the CO had received confirmations of receipt from all participants except from contractor 13,</li> </ul>

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- In August / September 2005 the CO team prepared the INCOFISH start-up workshop, scheduled for beginning of October, 2005.
- In August / September 2005 it furthermore prepared the 1<sup>st</sup> Project Steering Committee Meeting, scheduled for beginning of October, ahead of the start-up workshop.
- On 4 October the 1<sup>st</sup> Project Steering Committee Meeting was held at IfM-GEOMAR (WP leaders, coordinator, manager, EC scientific officer). **WP Milestone.**
- From 5-7 October 2005 the INCOFISH start-up workshop was organized at IfM-GEOMAR (52 participants from 22 countries). See Section 1: "Major achievements" for details. **WP Milestone.**
- On 7<sup>th</sup> October, the project manager (supported by admin personnel of IfM-GEOMAR) gave a 3 hours briefing session on important administrative issues in INCOFISH.
- 26-28 October mapping workshop was organized by the coordinator and part of the PST. See Section 1: "Major achievements" for details
- From 24-28 October the project manager presented INCOFISH at the ECOST initial meeting at FAO headquarters in Rome, Italy, and explored synergy effects with this INCO partner project as well as with CENSOR, the third INCO partner project.

### **Section 3 - Other Issues**

#### **Rider to the contract**

During the first six months of the project, the following issues emerged that might require a rider or even an amendment to the INCOFISH contract:

- Change of contractor: Dr. Maria Gasalla, main contact person of INCOFISH contractor no. 3 Instituto de Pesca (IP) signed a new contract with Instituto Oceanografico Universidade de Sao Paulo. As IP does not have personnel to replace Dr. Gasalla, IP agreed to resign from the INCOFISH contract and shift tasks and budget to the new employer. Dr. Gasalla will soon present the necessary documentation for the modification to Commission representatives

- Shift of funds: During the 1<sup>st</sup> Project Steering Committee Meeting (see previous chapter at WP 11), it was decided to organize a Mid-Term Conference for presentation of results and adjustment of project schedule, provided the Commission agrees to a shift of funds set aside for audit certificates. Due to special clause 39 of 28<sup>th</sup> April, 2005, the amount needed for audit certificates is considerably less than what has been set aside.

During the same meeting, the funding of a book project by WP6 was approved provided that the Commission agrees to a shift of funds within the project.

Furthermore, WP 10 asked for additional funding of 15 000 Euro. This additional funding will be used by members of WP10 to update and expand the "Treaties and Conventions" database provided by FishBase for inclusion in INCOFISH and by contractor 43 to produce a study on legal instruments for sustainable fisheries in Kenya. This additional funding depends on the permission of the Commission to allocate audit money to WP10.

#### **Communications**

Responsibility for flow of communications lies with the Project Co-ordinator (to and from the Commission, and to/from the Workpackage Leaders), and with the Workpackage Leaders (to/from the relevant members of the workpackage). This flow is being maintained by regular meetings, by an electronic portal established for the project, used both for a project-wide repository of documents (including agendas, minutes and technical documents) and for a repository and commentary on the timetable of meetings, milestones and deliverables.

INCOFISH participants communicate mainly by e-mail and through the INCOFISH website ([www.incofish.org](http://www.incofish.org)) that was established at the start of the project.

The Project Steering Committee, meeting once per year, met for the first time on 4<sup>th</sup> October, 2005 (see previous Section at WP11). If necessary, decisions can be taken by e-mail between meetings.

There are other specific WP meetings that partners and members will attend. The complete list of past and future meetings is attached as Annex II.

#### **Use and dissemination of knowledge**

All data, tools and concepts developed by INCOFISH are considered public goods and are made available through the INCOFISH web portal ([www.incofish.org](http://www.incofish.org)). Members of INCOFISH have volunteered to archive data and continue to make tools available beyond the duration of this project. Consortium partners accept and authorise that the Commission disseminates relevant project information, including summaries and public project results, names and contact details of consortium partners through visual, oral and electronic media.

Incoming day-to-day information on subjects considered to be of interest to INCOFISH objectives is being distributed to participants by the management team via e-mail.

A monthly newsletter was initiated in October, informing INCOFISH participants on major achievements and working success within the project.

Public participation is envisaged mainly through the INCOFISH web portal where lay-persons can upload data such as observations of species or pollution events, attach their own web sites if relevant to INCOFISH, or discuss issues with experts in the relevant forum. Public awareness is also being raised through traditional means such as regular press releases demonstrating success stories and guiding lay-persons to the INCOFISH web portal. Involvement of stakeholders or the public in general is an essential part of work packages 3, 5, 6, 7, 8 and 9. (For early examples of success see Section 1 – Major achievements).

### Synergies with INCO Partner Projects

INCOFISH has established contact with other INCO Projects such as CENSOR, ECOST and PASARELAS. Links to CENSOR and PASARELAS products have been added to the project webpage at [www.incofish.org](http://www.incofish.org). The project manager introduced INCOFISH to members of partner projects at initial meetings of PASARELAS (July 2005 in Corte, Corsica) and ECOST (October 2005, Rome, Italy).

### Synergies with other Projects or Initiatives per Work Package

WP	Synergies per Work Package
1	<ul style="list-style-type: none"> <li>▪ <i>FishBase</i>: In data collation and database building</li> <li>▪ “<i>Sea Around Us</i>” (SAUP) project: In data collation and database building</li> <li>▪ OBIS and GBIF for data</li> <li>▪ Google on outreach</li> <li>▪ FIN, CRIA and <i>Worldfish</i> cooperation on outreach publications and actions on (EC-CAB) small scale fisheries and perhaps MPA development;</li> <li>▪ FIN, CRIA, <i>WorldFish</i> and <i>Allfish</i> cooperation on outreach publications and actions on historical data.</li> </ul>
2	<ul style="list-style-type: none"> <li>▪ Strong synergies exist between INCOFISH WP2 and <i>HMAP: the History of Marine Animal Populations</i> project [a component of the <i>Census of Marine Life</i> program]</li> <li>▪ MARBEF (EU Network of Excellence)</li> </ul>
3	<ul style="list-style-type: none"> <li>▪ Web mapping to be done sharing resources/competence with <i>GBIF-Sweden</i> and <i>CSIRO-Australia</i>.</li> </ul>
4	<ul style="list-style-type: none"> <li>▪ To be identified during the next workshop (February 2006).</li> </ul>
6	<ul style="list-style-type: none"> <li>▪ Synergy with SAUP on coastal habitat database and small-scale fisheries database.</li> </ul>
7	<ul style="list-style-type: none"> <li>▪ <i>FishBase</i>; (additional ones to be determined later)</li> </ul>
8	<ul style="list-style-type: none"> <li>▪ SAUP</li> </ul>
9	<ul style="list-style-type: none"> <li>▪ The Nature Conservancy, DED (Deutscher Entwicklungsdienst), Jatunsacha NGO.</li> <li>▪ US-AID Project “Zonification of the Galapagos Marine Reserve” Tourism component</li> <li>▪ CDF representation within the Galapagos Participatory Management Committee - Development of sustainable businesses in a multi-use marine reserve.</li> <li>▪ WP 9 INCOFISH process is expected to help strengthen the Galapagos National Park Service Tourism Unit.</li> <li>▪ “Seascape Project” UNESCO, CI, Malpelo Foundation, Colombia National Parks Authority.</li> </ul>
10	<ul style="list-style-type: none"> <li>▪ Envisaged contacts with <i>Zentrum für Marine Tropenökologie (ZMT, Center for Tropical Marine Ecology)</i> Bremen</li> </ul>

## Annex I

## INCOFISH Publications planned (so far) per Work Package

WP	Publications planned
1	<ul style="list-style-type: none"> <li>• P1.1 Web portal development for INCOFISH project (month 24);</li> <li>• P1.2 Data base development for INCOFISH project (month 24);</li> <li>• P1.3 Web software and tools development for INCOFISH project (month 30).</li> <li>• P1.4 Web-based Electronic maps development for INCOFISH project (month 30);</li> <li>• P1.5 Publication of INCOFISH Outreach strategy (month 35)</li> <li>• Outreach publications and actions on Coastal Transects, FIN, CRIA, WP6 and PASARELAS cooperation</li> <li>• Outreach publications and actions on small scale fisheries and MPA development, FIN, CRIA, Worldfish cooperation(EC-CAB)</li> </ul> <p>Outreach publications and actions on historical data: FIN, CRIA, Allfish cooperation.</p>
2	<ul style="list-style-type: none"> <li>• H Ojaveer &amp; B MacKenzie (eds) <i>Fisheries Research Special Issue</i> (Feb 2007)</li> <li>• J Pinnegar &amp; S Mackinson, <i>Ecopath Analyses of the North Sea in 1880 and 1990 Compared</i></li> <li>• G Pierce, <i>Fish Stocks in Scottish Coastal Waters, 1950-2004</i></li> <li>• J Phillips (ed) <i>Shifting Baselines</i> (papers Presented at WP2 Workshop 1)</li> <li>• E Washburn, <i>Comparative Analysis of the Ecosystems of the Wadden Sea and Gulf of Maine</i></li> <li>• S Banks, <i>Sustainability Indicators in the Galapagos</i></li> <li>• Camilo Bernardo García, <i>Shark Stocks in the Colombian Caribbean</i></li> </ul>
3	<ul style="list-style-type: none"> <li>• Validation of HCAF as compared to other ecological niche modeling methods.</li> <li>• The power of museum collections to predict distributions.</li> <li>• Global marine biodiversity assessment part 1. Actual records summarised.</li> </ul>
4	<p>To be properly defined during the next workshop (February 2006) since some study cases are being under discussion. Some aspects are, however of interest: ecosystems comparisons, network analysis, ecosystem based fisheries management, patterns of response within ecosystems and as meta-analysis, among others</p>
5	<ul style="list-style-type: none"> <li>• Reviews of existing MPA operation and effectiveness. It was noted that many such reviews have been recently published (highlighting the topical nature of WP5). However reviews are sparse for the Campeche Bank Ecosystem and the China Seas, also the geographical spread of the study areas suggested potential for a significant comparison.</li> <li>• Where mathematical models are developed alongside the development of Ecopath models, the new models maybe have results worthy of publication.</li> <li>• The MPA scenarios run on each of the ecosystems are expected to be worthy of publication in each case. A further comparative paper was suggested to examine similarities and differences between the three systems when the results from these are available.</li> </ul>

6	<ul style="list-style-type: none"> <li>• Roles and importance of stakeholders in ICZM: a comparison between Namibia, Scotland and Thailand (submission date: May 2006)</li> <li>• Visualising the coast: coastal typology and cross-sections (submission date: August 2006)</li> <li>• Coastal transect analysis: an analytical framework for tracking interactions and flows in coastal areas (submission date: May 2007)</li> <li>• Coastal decision making using coastal transects (submission date: February 2008)</li> <li>• A comparative analysis of interactions and flows in the coastal areas of Scotland and Thailand (submission date: February 2008)</li> </ul>
7	<ul style="list-style-type: none"> <li>▪ Relationship between “optimum” harvest size for individuals and length at 90-100% maturity.</li> <li>▪ Using simple indicators in fisheries: review and applications for INCOFISH.</li> <li>▪ Use of simple indicators in ecosystem based management.</li> <li>▪ Estimating maximum size from size at first maturity.</li> </ul>
8	<ul style="list-style-type: none"> <li>▪ Values from marine ecosystems;</li> <li>▪ Habitat-fishery interactions and values;</li> <li>▪ Discounting &amp; future generation values;</li> <li>▪ Ecosystem models that explore the consequences of ineffective management;</li> <li>▪ Socio-economic indicators of ineffective fisheries management ;</li> <li>▪ Policy paper: On how to manage fisheries for the benefit of both current and future generations.</li> <li>▪ Global cost of overfishing (with Rainer Froese).</li> </ul>
9	<ul style="list-style-type: none"> <li>• Concept MS with global perspective and summaries/ comparisons between case study reserves.</li> <li>• Participatory processes for developing indicators with stakeholders.</li> <li>• User perceptions and socio-economic considerations</li> <li>• Outreach materials for Reserve managers and local communities etc.</li> </ul>
10	<ul style="list-style-type: none"> <li>• Promotion and management of fisheries in the EU in comparison to other selected countries</li> <li>• International agreements and private law contracts providing for access to resources and benefit sharing between the EU and third countries (to be published at the end of the project)</li> </ul>

**Annex II**

**INCOFISH workshops and meetings per work package with envisaged date, participants, and results**

WP	Workshop No.	Type (workshop/meeting/conference)	Date	Participants	Results
1	6	WS	May 2006, Philippines	All WPL and add.tech WP staff, FB team	
2	2	WS	Month 11 (3-4 Mar 2006)	WP 2 members and additional interested parties	Progress review, adjustments, definition of baselines
	3	WS	Month 27 (July 2007)	WP 2 members and additional interested parties	
3	2	WS	April 2006	All WP3, some WP1	Review data body, perform gap analysis. Training in use of ecological modelling tools and associated hardware and software, test analysis of data, and evaluation of existing data. Assignment of further work tasks.
	3	WS	2006/2007	All WP3, and other interested WPs	Review maps, tools, and outcome of analyses; decisions on dissemination and interfaces
4	2	WS	February 2006	WP4 and WP 5 plus	Progress report on definition of ecosystems to be modelled and identify those models intended an approach to MPAs (further interaction with WP5) and which will emphasize on testing hypothesis <sup>3</sup> . Explore and identify testing hypothesis.
	3	WS	July 2006 <sup>1</sup>	WP 4	Progress report of models construction and preliminary results on testing hypothesis. Advances on spatial modelling and definition of strategies to initiate formal interaction with WP5 on MPAs. Start service functions with other WPs,
	4	WS	January 2007 <sup>1</sup>	WP 4	Progress report on spatial models construction. Advances on MPAs approaches and testing hypothesis (considering both temporal and spatial modelling) .
	5	WS	October 2007 <sup>1</sup>	WP 4	Progress report with main conclusions on: ecosystem modelling, MPAs approaches, testing hypothesis (including meta-analysis)
<sup>1</sup> to be confirmed during the February 2006 workshop <sup>2</sup> Members of other WPs (or external scientists) will be invited depending of the needs identified <sup>3</sup> In this context meta-analysis hypothesis are included					

5	2	WS	February 2006	WP4 and WP5 participants.	Progress report on D5.1. Study ecosystems selected, and timetable for co-ordination between WP4 and WP5 agreed.
	3	WS	?????	WP5	Progress review, indentification of common themes in analyses.
	4	WS	?????	WP5	Progress review, indentification of common themes in analyses.
6	2	M	Month 8 (January 06), Aberdeen	WP6	Software, model and database development plan finalize
	3	WS	Month 12 (April 06), Thailand	WP6, WP8, WP1	Progress review, coastal transects software review and modify, implementation plan for next steps
	4	WS	Month 24 (April 07), Namibia	WP6, WP8, other related WPs	Progress review, revision of decision framework based on the test done in Thailand, model test in Namibia, planning for next steps
7	2	WS	Month 20 (end of 2006)	WP 7 members and additional interested parties	Progress review, adjustments, coordination of indicator implementation and testing.
8	1	WS	Between April to May 2006, Thailand	WP 8 members; WP 6 members; Representatives from WP 9.	Present database, and report on progress with the various analyses
	2	WS	Between April to May 2007, Namibia	WP 8 members; WP 6 members; Other WP collaborators	Present findings for feedback
9	2	Meeting between Ecuadorian based partners in Galapagos	Oct 25 <sup>th</sup> to Nov 3 <sup>rd</sup> , 2005	FCD - ECOLAP	Bibliographic review, co-organization for future Workshops in Galapagos Islands and Machalilla National Park.
	3	WS1	Colombia, Jan 23 <sup>rd</sup> to 27th 2006	FCD, ECOLAP Galápagos National Park Service (?) Malpelo Foundation, Colombian National Park authority	Concept and Orientation: "Creating adaptive management mechanisms for ecotourism."; Planned event – provisional agenda defined.
	4	WS2	Galapagos, Ecuador, November 2006	FCD ECOLAP Galápagos Nacional Park Service (?) Malpelo Foundation, Colombian National Park Authority	"Evaluation, cost/benefit and reciprocation mechanisms towards conservation values" Planned event
	5	WS3	Machalilla, Ecuador Sept 2007	FCD ECOLAP Galápagos Nacional Park Service (?) Malpelo Foundation, Colombian National Park Authority	"Management process and future steps" Planned event

<b>10</b>	2	WS	Planned for month 13/14, depending on additional funding	WP 10 members, subcontractors, Joe Ryan (WP 7), Nyawira Muthiga (WP 3)	Coordination of country reports
	3	WS	Planned for month 20, combined with Mid-Term Workshop	WP 10 members, subcontractors, Joe Ryan (WP 7), Nyawira Muthiga (WP 3)	Discussion towards overall synthesis
<b>11</b>	1	1 <sup>st</sup> PStC Meeting	4 <sup>th</sup> October 2005, Kiel, Germany	Coordinator, Manager, WP leaders, Scientific officer	Get to know each other and decide on INCOFISH matters.
	2	Start-Up WS	5 <sup>th</sup> – 7 <sup>th</sup> October 2005, Kiel, Germany	Participants of all WPs, representatives of ECOST and PASARELAS	Get to know each other, produce harmonized agenda for WPs and project as a whole.
	3	2 <sup>nd</sup> PStC Meeting	15/16 <sup>th</sup> May, 2006, Los Banos, Philippines	Coordinator, Manager, WP leaders	Finalization of 1 <sup>st</sup> annual scientific report, decide on INCOFISH matters. Explore subjects and funding opportunities for "The Return of INCOFISH!".
	4	Mid-Term WS	End of 2006	Participants of all WPs, representatives of other projects	Presentation of work done so far to all INCOFISHers; adjustment of schedule and agenda for remaining project duration
	5	3 <sup>rd</sup> PStC Meeting	Spring 2007	Coordinator, Manager, WP leaders	Finalization of 2 <sup>nd</sup> annual scientific report, decide on INCOFISH matters.
	6	Final PStC Meeting	Spring 2008	Coordinator, Manager, WP leaders	Finalization of final scientific report, decide on remaining INCOFISH matters.