



<i>Project Board</i>	<b>Advisory Council</b>
<i>Meeting Type</i>	<b>F2F meeting</b>
<i>Date/Time</i>	<b>19 March 2012 / 09.00-17.30 CET</b>
<i>Location</i>	<b>FAO, Rome</b>
<i>Project Attendees</i>	<p>Marc Taconet (FAO), Chair of the iMarine Board, meeting <b>CHAIR</b>  Edward Vanden Berghe (UNESCO), Deputy Chair of the iMarine Board  Anton Ellenbroek (FAO), iMarine Board Secretary  Julien Barde (IRD), iMarine Board member</p> <p>Donatella Castelli (CNR), iMarine Project Director  Lino Pagano (CNR), iMarine Project Technical Director  Philippe Rohou (ERCIM), iMarine Project Administrative &amp; Financial Director  Sara Garavelli (Trust-IT), Dissemination</p>
<i>Advisory Council Members</i>	<p>Stefan Asmundsson  Patricio Bernal  Tammo Bult (on behalf of Martin Pastoors)  Serge Garcia  Johanne Fischer</p>
<i>Observers</i>	Patrice Chasset (French ministry of Food, Agriculture and Fisheries)
<i>Invited participant</i>	<p>Richard Grainger (Chief, FAO-FI Statistics and Information Service)  Tina Farmer (Technical officer for ABNJ, FAO)  Fabbio Carocci (FAO)  Merete Tandstad (Lead ABNJ High Seas Deep Seas, FAO)</p>

## AGENDA:

<b>Morning session:</b> Presentation of project developments/achievements/potential		<b>Start: 9:00</b>	<b>End: 12:30</b>
<b>9:00 – 9:30</b>	<b>Welcome – introduction of participants</b> <b>Presentation of meeting objectives, meeting agenda and its adoption</b>		
<b>9:30- 10:00</b>	<b>Introduction of vision and objectives of iMarine</b> <ul style="list-style-type: none"> <li>• <i>From the Community of Practice view point (M. Taconet)</i></li> <li>• <i>From the Data infrastructure view point (D. Castelli)</i></li> </ul>		
<b>10:00- 10:30</b>	<b>Scoping - brief introduction to the three iMarine business cases (see Doc iMBAC/2012/1)</b> <ul style="list-style-type: none"> <li>• <i>Support to the European Common Fishery Policy (M. Taconet)</i></li> <li>• <i>Support to FAO's Deep Seas Fisheries programme (E.vdBerg)</i></li> <li>• <i>Support to regional (Africa) LME pelagic EAF community (M. Taconet)</i></li> </ul>		
<b>10:30 - 11:00</b>	<b>Scoping – feedback from advisors</b> <ul style="list-style-type: none"> <li>• <i>Discussion – towards refinement of document iMBAC/2012/1</i></li> </ul>		
<b>11:00 - 11:30</b>	<i>Coffee break</i>		
<b>11:30 - 13:00</b>	<b>Understanding the opportunity - demo of iMarine functionality</b> <ul style="list-style-type: none"> <li>• <i>Virtual Research Environment (VRE) set-up (P. Pagano)</i></li> <li>• <i>Exploiting the iMarine analytical and processing capacity:</i> <ul style="list-style-type: none"> <li>○ <i>ICIS, FAO SDMX registry to the iMarine statistical repository (A. Ellenbroek)</i></li> <li>○ <i>R and Gapminder charts (A. Ellenbroek)</i></li> <li>○ <i>Analysing Vessels Transmitted Information (VTI) (A. Ellenbroek)</i></li> <li>○ <i>The integrated Species list service (P. Pagano)</i></li> </ul> </li> </ul>		

Afternoon session: Seeking high level guidance contributions from Advisors		Start: 14:30	End: 17:00
14:30 - 15:30	<b>Sustainability of the initiative</b> <ul style="list-style-type: none"> <li>• <i>Towards an EA-CoP<sup>1</sup> partnership – Sustainability, Governance mechanism and Policy development</i></li> <li>• <i>Discussion</i></li> </ul>		
15:30 - 16:00	<i>Coffee break</i>		
16:00 - 17:00	<b>Building the EA-CoP - discussion</b> <ul style="list-style-type: none"> <li>• <i>Discuss the iMarine objectives, business cases and policies</i></li> <li>• <i>Review opportunities regarding existing activities relevant to the work of the iMarine Board</i></li> <li>• <i>Discuss Advisors role for outreach and feedback</i></li> </ul>		
17:00	<b>End of meeting day</b>		

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## PRESENTATIONS:

Presentations delivered at this meeting are available on the iMarine shared workspace at:  
<http://bscw.research-infrastructures.eu/bscw/bscw.cgi/244724>

List of presentations and documents available in this shared folder:

Presentation 1: iMarine-to-AdvisoryCouncil1(v2).pptx

**Introduction of vision and objectives of iMarine: *The community view point* (M.Taconnet)**  
including introduction, business cases, sustainability.

Presentation 2: Advisory\_Council\_Introduction\_donatella 19 Mar 2011.pptx

**Introduction of vision and objectives of iMarine: *The Data Infrastructure view point* (D.Castelli)**

Presentation 3: Report from advisory council.pptx

**Summary and conclusions of the Advisory Council meeting**, presented to the iMarine Board the next day (E. Vanden Berghe)

Meeting document: iMBAC\_2012\_1.docx

**iMarine Vision and Business Cases document**

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## MEETING DISCUSSION NOTES:

### 1. Welcome – introduction of participants

#### Chair

Marc Taconet (FAO) chairs this Advisory Council meeting, the first of three such meetings planned over the full duration of the iMarine project. Marc suggests that the chair of the next meeting may be one of the Advisory Council members.

#### Purpose

The purpose of the meeting is for the iMarine Board to seek advice and guidance from the Advisory Council as well as to use this exchange as a dissemination vehicle to the broader community. Invited participants from other projects are also here to assess future collaborations. To this end, the ABNJ meeting has been planned the next day to optimise participants' time.

#### Expectations

With a humble approach, iMarine is tackling new scales of data sharing. It has to invent new and useful mechanisms. It tries to align an offer (the D4Science leading edge IT platform facilitating collaborative analysis of new scales of data) to a need (science-based policy making increasingly relying on multi-disciplinary data sources). The advisors' guidance for coming to something really used is highly welcome. The consortium seeks guidance in reviewing strategies, in defining policies, in assisting with sustainability and governance. The consortium also hopes that its advisors can be its ambassadors, promoting the project in the broader community.

### 2. Introduction of Vision & Objectives

#### From the Community of Practice view point (Marc Taconet)

Presentation outline (See slides in Presentation 1)

Matching needs and offer (Slide 1, diagram)

The offer – 4 successive projects: Diligent, D4Science, D4Science-II, iMarine

Main concept: VRE's (Virtual Research Environments)

Vision statement (draft - will seek advisors' help to improve it).

Slide on iMarine project objectives

Slide on consortium partners, showing Technologist & User communities (+F&A+ dissemination). 3 types of users: fisheries, Bio-diversity, environment.

Slide on Project Strategy.

Slide on iMarine boards

Slide on sustainability. Workshop was held and led to a 8-step sustainability plan.

End of Marc's intro ppt.

### Q&A

Patricio Bernal: 1<sup>st</sup> comment is that iMarine vision is clear and correct; the challenge to make it sustainable is big; only 5 or 6 international operators said they were able to deliver and distribute this kind of global system today (from a recent international conference he attended). The business model has to be adapted to the level of sophistication that involved players can afford.

Serge Garcia: this is not a vision, it's a set of objectives. Vision needs to be at higher, more global level.

Marc Taconet: The concepts vision & objectives need to be put at the right level.

### From the Data infrastructure view point (D. Castelli)

#### Presentation outline (See slides in Presentation 2)

Objectives of the Project.

General definition of an e-Infrastructure for a community of practice (CoP)

Specific features of iMarine's e-Infrastructure (tools, data, compute power)

Main properties of iMarine's e-Infrastructure

Lessons learned from past projects

iMarine entities (initiative: iMarine, infrastructure: D4Science, system: gCube)

The data infrastructure (interoperability of resources through D4Science base architecture)

The system: gCube. 3 areas: enabling layer, data mngt, applications.

### Q&A

Patricio: points out that sustainability depends very much on the ability to associate little private companies with public agencies; also that data policies differ in various parts of the world, and it will be difficult to harmonise.

Marc/Donatella: this is EU's policy to push private-public partnerships, as well as cooperating infrastructures among EU, USA, Australia.

Tammo: you must clarify priorities. iMarine is providing tools to create synergies in the community. Main goal is synergies, data and IT is just the tool. CoP are central.

Merete: stresses that interaction between tools and users is needed

Serge: you need a better definition of CoP. Define Community, define Practice ! Is it world statisticians, modellers, oceanographers ? It seems from the slides that iMarine mainly addresses the community of data crunchers. Following presentations on business cases may help in answering this point.

Tammo: you have to set your own time frame, e.g. have a business model set-up by next year. First step is “what are the costs”

Serge: do not forget the “opportunity” costs of the providers of information.

### 3. Scoping - brief introduction to the three iMarine Business Cases (BC)

BC1: Support to implementation of the EU Common Fishery Policy (Marc Taconet)

Key issues of BC1 - iMarine responses (see slides in presentation 1)

#### Q&A

Stefan/Serge: Comment on accuracy of data collected, and role of this type of data infrastructure to reveal and help reduce discrepancies among sources. Such role is a real asset for the infrastructure which should be dealt with. From a statistical viewpoint, a 5% error margin should be allowed in most cases (Serge).

Tammo: what is the unique contribution of iMarine in this business case? Leads to discussions on higher level policy making in fisheries, outside of the scope of this meeting/project perhaps (?)

*Morning Break (11:00 – 11:30)*

*Following sessions are video-recorded by Sara with the approval of all participants.*

BC2: Support to FAO’s Deep Seas Fisheries programme (Edward vanden Berghe / Marc Taconet)

Key issues of BC2 – iMarine responses (see slides in presentation 1)

Deep Seas key issues: unregulated, unique and fragile.

Proposed responses based upon 7 EBSA<sup>1</sup> criteria and 5 VME<sup>2</sup> criteria

FAO is preparing to build VME mapping information system.

next 3 slides on VME mapping information system (by Marc)

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<sup>1</sup> Ecologically or Biologically Significant Areas – more on EBSA data collection at [ebsa.cbd.int](http://ebsa.cbd.int)

<sup>2</sup> Vulnerable Marine Ecosystems

Q&A

Patricio: handed out IUCN brochure (pdf version available on web site [iucn.org/water](http://iucn.org/water)<sup>3</sup>) and presented GOBI<sup>4</sup>, a partnership of 22 organizations supporting the EBSA science-based policy process implying a significant amount of data gathering (in particular oceanographic and satellite), harmonization, processing and analysis. Acknowledges that same sort of process happens on FAO's side on VMEs.

Merete: a number of EBSA and VME criteria are similar, but the policy process is distinct. Key partners in VMEs are RFMOs and industry, including a lot of confidentiality issues. The Community we are supporting must be closely associated when defining the tools which iMarine can offer.

Stefan: EBSA and VMEs are not the same. It's very good if we can take all the information collated through different streams and make it available to the other groups

Patricio: how close can the EBSA repository (which CBD is mandated to establish) be of the VME one?

Fabio: the Recife EBSA workshop indicates that Governments have brought the information in their hands related to the criteria; the EBSA are essentially identified in descriptive ways with supporting material, but criteria relevance is defined in vague ways.

Patricio: the EBSA policy process is very different since it doesn't imply any kind of management, and still needs to sediment through various meetings before strong judgement can be made.

Tammo/Stefan: it is important to understand why parties differ, and the rational / definition of the process is as important as its result (ie the identification of EBSA). Sharing the different view points is really key.

Serge: Politics are often blocking, so iMarine needs to offer a platform for discussion and exchange of opinions, in addition to the exchange of data. If the communities don't come together, the data collected will not be used.

Tammo: Industry and NGOs would have an interest in this form of collaboration.

Patricio: CBD is only one policy process. Other data rich on-going processes are IMO, or International Seabed Authority.

BC3: Support to regional (Africa) LME<sup>5</sup> pelagic EAF<sup>6</sup> community (Marc)

EAF key issues and iMarine response - links to projects Smartfish and ABNJ Tuna (see slides in presentation 1)

<sup>3</sup> [http://data.iucn.org/dbtw-wpd/exec/dbtwpub.dll?AC=GET\\_RECORD&XC=/dbtw-wpd/exec/dbtwpub.dll&BU=http%3A%2F%2Fdata.iucn.org%2Fdbtw-wpd%2Fcommande%2Findex\\_newsite.htm&TN=iucn&SN=AUTO13660&SE=1459&RN=0&MR=20&TR=0&TX=1000&ES=0&CS=1&XP=&RF=WebRes&EF=&DF=WebAff&RL=0&EL=0&DL=0&NP=254&ID=&MF=&MQ=&TI=0&DT=&ST=0&IR=4500&NR=0&NB=0&SV=0&BG=&FG=&QS=&OEX=ISO-8859-1&OEH=ISO-8859-1](http://data.iucn.org/dbtw-wpd/exec/dbtwpub.dll?AC=GET_RECORD&XC=/dbtw-wpd/exec/dbtwpub.dll&BU=http%3A%2F%2Fdata.iucn.org%2Fdbtw-wpd%2Fcommande%2Findex_newsite.htm&TN=iucn&SN=AUTO13660&SE=1459&RN=0&MR=20&TR=0&TX=1000&ES=0&CS=1&XP=&RF=WebRes&EF=&DF=WebAff&RL=0&EL=0&DL=0&NP=254&ID=&MF=&MQ=&TI=0&DT=&ST=0&IR=4500&NR=0&NB=0&SV=0&BG=&FG=&QS=&OEX=ISO-8859-1&OEH=ISO-8859-1)

<sup>4</sup> further information available on GOBI web site [www.gobi.org](http://www.gobi.org)

<sup>5</sup> Large Marine Ecosystems

<sup>6</sup> Ecosystem Approach to Fisheries

Conclusion: main opportunities offered through these 3 Business Cases.

### Global discussion on Business Cases

The 'dashboard': what it is, who uses it, at what stage is it made public, etc. ?

Serge: the process to design and implement the dashboard is more important than the dashboard itself.

Lino: the dashboard is integrated to the infrastructure, allowing sharing of data and results as well as supporting group discussions, in a secure environment.

Johanne: we need to think about those users in the world who do not use IT systems; how do we care for their needs? Can we extract some data from the system in a different format for them?

Serge: iMarine needs to decide where the boundaries are, with clear interfaces defined

## 4. Understanding the opportunity - demo of iMarine functionality

P. Pagano presents a few slides first, in order to explain the broader IT context. New IT opportunities are cloud computing, no-sql technologies (better scaling databases), data analysis and mining via MapReduce. The D4Science approach is secure, cost-effective, powerful, and adaptable. Based on VREs.

DEMOS show the front-end to various apps (P. Pagano /Anton ellenbroek)

- Demo 1: *VRE set-up (P. Pagano)*  
Demonstrate the set-up of a collaborative scientific environment that combine a set of resources: mention the infrastructure behind, the advantages of being on a large infrastructure, the access to resources and services, security
- Demo 2: *Exploiting the iMarine analytical and processing capacity:*
  - *Integrated Capture Information System (ICIS VRE), FAO SDMX registry (A.Ellenbroek)*
  - *R and Gapminder charts (A. Ellenbroek)*
  - *Analysing Vessels transmitted information (VTI) (A.Ellenbroek)*
  - *The integrated Species list service (P. Pagano)*

### Q&A

Serge: stresses the value of data: data collected could be considered as marketable good, e.g. Microsoft could offer free computing facilities, Elsevier could offer free publications, etc. for using this data. A business model could be based on data provision rewarded by access to Cloud time computing. Market specialists should undertake a real economic approach based on the real value of data.

A discussion followed which highlighted that usage of the infrastructure is monitored and that setting-up VREs is a relatively easy process.

## 5. Sustainability of the initiative

Towards an EA CoP partnership - Governance mechanism and Policy development (Marc Taconet)

**Roadmap towards sustainability (8 points) (see presentation 1)**

This roadmap includes writing of a business plan and creation of a legal entity to market the D4Science platform, iMarine being one of its many clients.

Discussion on the sustainability plan

Patricio: do you know the cost? this is the first thing we need

Marc: a consultant has been hired to assess the real cost of maintaining the D4Science infrastructure.

Patricio: some projects are funded by private sector that could use the iMarine data and outcome; e.g. 1 project to avoid route of mammals (e.g. whales) when exploring for oil and gas. Russian company finances one such project 2M\$ per year to make good of knowledge.

Marc: asks advisors to kindly promote iMarine when such business opportunities arise.

Donatella/Lino: a sustainability workshop was held recently to define the future of the project. As a result, an 8-point sustainability plan was produced. D4Science led to gCube, which is open source. Compute (up to 5000 CPUs) and storage resources are provided for free by external partners via agreements with private sector (MS, Engineering, ...) that span over 2 or 3 years typically, just covering the project lifetime or a bit more. How does the project become self-sustained after the end of the EU contract?

Patricio: Physics (weather data), living ocean/biodiversity, sedimentology are for instance domains which can have impact way beyond iMarine communities. Off-shore Oil and Gas, monitoring pollution, even hotel business may be interested. Thanks for IT progress, the Global Oceans Observing System (GOOS) has boosted weather forecasts capacities, and was able to attract interest by oil platforms. Today there is a backbone of public services paid all over the world and additional inputs from private sector. "Ocean related services" could be valued more. Close work with these potential clients would however be necessary to identify how they can make profit. Many potential clients and benefits, need to think out of the box. There are strong cases with the Business Cases currently chosen, but somebody must have the vision to connect with "private users". Developing such vision could be matter of a project.

Serge: sustainability is not a state to reach, it is transient. Sustainability concerns data flows, money, and many other aspects. Fund raising costs money; for 1\$ invested, you can raise 3\$ ! Need to go and talk to big players.

Lino: numbers are being collected by the system now to size the real cost of human support to the infrastructure.

**6. Building the EA-CoP**

Marc introduced the session asking the group to review and discuss strategies; business cases; governance; opportunities regarding existing activities relevant to the work of the iMarine Board. Examine advisors role for outreach and feedback, and for Governance and sustainability.

Patrice: data collection framework feeds definition of quotas at DG Mare. Current reflexion is to develop Regional Database and to develop unique data exchange format. The Cost and FishFrame formats for

statistical data exchange should be promoted. It would be a good idea to invite coordinator of EU data collection framework at next iMarine meeting (Mr. Marcus ...). The iMarine initiative should be presented at the September ICES Conference.

Tammo: iMarine needs to attend the ICES Annual Science Conference<sup>7</sup> on 17-21 September 2012.

Johanne: expresses concern about the term EA-CoP; EA is confusing here. A better phrasing could be “Community of Practice to support the Ecosystem Approach” e.g. CoP-EA !

Serge: does not agree that there might be confusion with toolbox. FAO should promote both that there is a toolbox and a CoP.

Tammo: advisors could help the project in identifying potential stakeholder groups that could work to develop the dashboard idea.

Serge: there are books on how to govern a CoP. The issue is to define the question ! Governance of what (CoPs?), when (during? after the project?), on which scale ? Discussion is different depending on the level of scaling-up. Governance will be different between operations at project level and widely opened all-out deployment.

Tammo: recommends a small advisory board for each CoP that can decide/ influence governance.

Patricio: the GMES experience started as small scale initiative and ended as Intergovernmental initiative. Deep Seas could become client via the InDeep group headed from Southampton. Conservation vs Fisheries: project is clearly weighted towards Fisheries, which may implicitly exclude conservation groups.

Johanne: it might be useful to define the minimum number of people to make the system useful, to avoid at the beginning too much interference from too many users diversity, and proceed through stepwise approach. The project title doesn't call for other industries to come in, such as oil & gas (who happens to have lots of money!),

Patricio: we can live with this title, but we have to make understand to other groups the potential.

Serge: stresses two points. About the project title, “conservation” is a flag that can attract all companies. Regarding the meaning of the EA-CoP, elements to consider are: define the practice; make your target clearer; the approach can be stepwise with a nucleus (statisticians and/or deep seas communities seem to be possible CoPs) from which emulation can see the expansion of the CoP up to the universe (e.g. the global EA-CoP Deep seas); consider the risks of competition with existing CoPs (federating CoPs can be politically difficult; for instance, for Deep Seas, InDeep could argue that they are the federators).

Johanne: stresses again that the EA-CoP is an instrument which “supports” the Ecosystem Approach.

Serge: I would choose an “organic growth” starting from the current project and connecting iteratively with other groups

Conclusion on governance:

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<sup>7</sup> <http://www.ices.dk/iceswork/asc/2012/index.asp>

Adapt the governance model to the scale of the initiative

Start by consolidating the existing user groups

## 7. Conclusion

Wrap-up:

Marc thanks our advisors for a set of rich discussions today. We shall organise notes and share them with our advisors.

Main points throughout the day:

- Refine vision statement.
- We got good ideas for potential markets mid-term
- Use consultants and exploit project opportunities to explore market
- Business cases: we got good strategic ideas on how to proceed with them
- Success of the project is linked to size of active user base
- Governance is linked to size of initiative

Final remarks

Event in May organised with iMarine & DG Mare, advisors may want to attend.

Tammo: look at new KBBE environment call for extended funding. Also, you need a time frame to define and implement a business model; don't wait until end of the project.

Participation of advisors welcome at meeting tomorrow with ABNJ Tuna.

*Meeting closes at 18:00*