

Deliverable D5.2

Facilitation of Stakeholder events

Due date of Deliverable: M11

Submitted to EC: M11

Responsible for Deliverable: Swedish University of Agricultural Sciences
Magnus Ljung and Nadarajah Sriskandarajah

Summary

WP5 has been responsible for the facilitation of the first Stakeholder Event. Based on a collaborative planning process, and by liaising with WP1, 2, 3 and 4, a final program and detailed schedule for the first Stakeholder Event were developed. D5.2 is both the actual facilitation of the Event enacted as well as the transcription and documentation of the outputs (although the final analysis of the outcomes and outputs are not included in this Deliverable). The first Stakeholder Event was designed as a pre-conference event to the IFOAM World Congress held in Istanbul on the 11-12th of October 2014.

Objectives

The objectives of this deliverable are to facilitate the first Stakeholder Event and transcribe all outputs produced as a result of the event.

Introduction and background

Task 5.3 is behind D5.2. The planning process before the Event was in close collaboration with the other WPs. By liaising with WP1, 2, 3 and 4, a final program and detailed schedule for the event was developed, f.i., working guidelines and terms of references (D5.1). The enactment and facilitation was aimed to a) support and guide learning processes among stakeholders to ensure a high level of participation, b) reach a high quality of deliberations, and by doing this enable convergence of different areas of knowledge, c) get feedback from the participants to the OrAqua review process as well as input for the forthcoming MCDA, and d) document the different inputs made by the participant so that this material could be used by the OrAqua-project.

European Organic Aquaculture - Science-based recommendations for further development of the EU regulatory framework and to underpin future growth in the sector

The facilitation applied dialogical tools as means of transforming participants' understanding and to bridge between "language" barriers among stakeholders and between stakeholders and researchers. At this first event we mixed plenary presentations by experts and stakeholders, with Round Table and Café dialogues.

From a process design perspective we also planned the first Stakeholder Event so that it became a platform for ongoing and increased interaction among stakeholders and the OrAqua partners. Furthermore, we introduced forthcoming Stakeholder Events already at this point, in order to enable an internal coherence between the three Stakeholder Events.

The PMB in OrAqua decided to organize the first stakeholder event as a pre-conference event to the IFOAM World Congress held in Istanbul on the 11-12th of October 2014. In short, Deliverable 5.2 is about enacting, facilitating and documenting all three Stakeholder Events, and in this particular deliverable is about the first one.

Results

As result of the above described work different documents have been developed as part of D5.2:

- The final program (appendix 1).
- A list of participants (appendix 2) and round table groups (appendix 3).
- Documentation of the different presentations (appendix 4-9)
- Brief summary of the plenary discussion at the event's first day (appendix 10).
- Outcome of group discussions day 1 (appendix 11) and discussion themes identified for day 2's discussions (appendix 12)
- Documentation and summary of the feedback sheets and evaluation of the event (appendix 13-15).

The facilitation of the Stakeholder Event, which is a central part of D5.2, is not by itself documented. This would only be possible by filming or by other similar means. The appendices nevertheless offer a good picture of the quality of the facilitation and an indication of whether or not the set objectives were reached.

APPENDIX 1

ORAQUA FIRST STAKEHOLDER EVENT – FINAL PROGRAM

LUNCH 12.00-12.45

1. Opening (0,75h) – 12.45-13.30

Welcome addresses (Speaker: Matthew Holmes, IFOAM): 12.45-13.00

Introducing the OrAqua-project and aims of the event (Speaker: Ingrid Olesen): 13.00-13.20

Process design and the role of stakeholders in OrAqua (Facilitators: Sri & Magnus): 13.20-13.30

2. Stakeholder views on current regulatory framework (1h) 13.30-14.30

Implications of basic organic farming principles on aquaculture (Speaker: Giuseppe Lembo): 13.30-13.45

Current challenges from the perspective of the stakeholders (Speaker: Stefan Bergleiter, 15 minutes) 13.45-14.00

Open comments/reflections from the auditorium 14:00 -14.30

BREAK 14.30-14.45

3. Identified challenges for the organic aquaculture (1,25h) 14.45-16.00

Presentation of the synthesis of the scientific review process so far (Speaker: Alfred Jokumsen): 14.45-15.45

Introducing the group discussion, its objectives, clarifications on questions, format and “rules” (Speakers: Sri & Magnus): 15.45-16.00

4. Improvements of the EU regulatory framework on organic aquaculture (2,25) 16.00 – 18.15

Part A (day 1). Round table discussions: What challenges have come out of the review process and what improvements are needed?: 16.00-17.30

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Presentations and shared reflections in a plenary session: 17.30-18.15

At 18.30 we break for the evening. Transportation to the hotel and dinner

SUNDAY MORNING – DAY 2

Busses leaves at 08.00 from the hotel. Busses arrive at latest at 08.45 at the university

CONFERENCE STARTS SHARP AT 09.00

4. Continuing the discussion on improvements of the EU regulatory framework on organic aquaculture (2h) 09.00-11.00

Feedback from day 1 (summarized by the facilitators Sri & Magnus): 09.00-09.15

Dialogues in café format summing up the participants suggestions of improvements and other inputs to OrAqua: 09.15-10.15

SHORT BREAK: 10.15-10.30

Plenary presentations of the most important conclusions: 10.30-11.00

5. Participation, outreach and feedback from the OrAqua team (1h) 11.00-12.00

Forthcoming stakeholder involvement, incl. introducing stakeholder event no. 2 (Speaker: Facilitators Sri & Magnus) and in addition introducing MCDA (Speaker: Giuseppe Lembo): 11.00-11.20

Communication of results, further contacts and the participants platform (Introduced by Jean-Paul Blancheton, WP1): 11.20-11.40

General conclusions and responses to stakeholders' input from the OrAqua-team: 11.40-12.00

6. Closure 12.00-12.15 (0,25h)

Concluding remarks and presenting how inputs will be integrated in OrAqua: 12.00-12.15

Evaluation of the event.

LUNCH 12.15-13.00

APPENDIX 2

List of participants

Is available in a separate file

APPENDIX 3

Round Table groups

Is available in a separate file

APPENDIX 4-9

Prepared presentations made during the first Stakeholder Event

All presentations are available in separate files.

Introducing the OrAqua-project and aims of the event – Ingrid Olesen (app 4)

Process design and the role of stakeholders in OrAqua – Magnus Ljung and Nadarajah Sriskandarajah (app 5)

Implications of basic organic farming principles on aquaculture – Giuseppe Lembo (app 6)

Current challenges from the perspective of the stakeholders – Stefan Bergleiter (app 7)

Presentation of the synthesis of the scientific review process so far – Alfred Jokumsen (app 8)

Forthcoming stakeholder involvement, incl. introducing MCDA – Giuseppe Lembo (app 9)

APPENDIX 10

Brief summary of the plenary discussion on Day 1 of the Event

The document is available in a separate file

APPENDIX 11

Outcome of group discussions Day 1

The document is available in a separate file

APPENDIX 12

Discussion themes identified for Discussions held on Day 2

The document is available in a separate file

APPENDIX 13-15

Documentation and summary of the feedback sheets and evaluation of the Event

All documents are available in separate files.

Feedback sheet – Day 1 (app 13)

Feedback sheet – Day 2 (app 14)

Evaluation form (app 15)

First Stakeholder Event, Istanbul, 11th-12th October 2014

Advisory Committee

Anne-Kristin	Løes	Bioforsk
François	Simard	IUCN
Jimmy	Young	University of Stirling
Stefan	Bergleiter	IFOAM Aquaculture Forum

Project Partners

Wout	Abbinck	Wageningen University
Zdenek	Adamek	Institute of Vertebrate Biology
Themis	Altintzoglou	Nofima
Jean-Paul	Blancheton	IFREMER
Antonio	Campanioni	Istituto Certificazione Etica e Ambientale
Andrea	Fabris	Associazione Piscicoltori Italiani
Jan Widar	Finden	Debio
Elonora	Fiocchi	Istituto Zooprofilattico Sperimentale delle Venezie
Pirjo	Honkanen	Nofima
Lizzie M	Jespersen	Intern. Centre for Research in Organic Food Systems
Alfred	Jokumsen	Danmarks Tekniske Universitet
Marie-Louise	Krejsler Andersen	Aarhus University
Giuseppe	Lembo	COISPA Tecnologia & Ricerca
Jan Magnus	Ljung	Swedish University of Agricultural Sciences
Marilo	Lopez	Culmarex
Amadeo	Manfrin	Istituto Zooprofilattico Sperimentale delle Venezie
Ingrid	Olesen	Nofima
Catherine	Pons	Federation of European Aquaculture Producers
Henri	Prins	Wageningen University
Emmanuelle	Roque d'Orbcastel	IFREMER
Maria	Spedicato	COISPA Tecnologia & Ricerca
Nadarajah	Sriskandarajah	Swedish University of Agricultural Sciences
Robert	Stokkers	Wageningen University

Platform Participants

Regine	Andersen	Organic Norway
Christopher	Atkinson	Soil Association
Pablo	Avila Zaragoza	Junta de Andalucia (CAQ – GFCM)
Hans Stefan	Bergleiter	IFOAM Aquaculture Forum
Eric	Bernard	RNO – Relo Seafood Gastronomy
Emmanuel	Briquet	Searen
Emmanuele	Busacca	IFOAM EU
Simon	Bush	Wageningen University
John	Carmichael	Biomar
Eric	Cause	Greensea
Udo	Censkowsky	Organic Services
Arnault	Chaperon	Fish Farmer - FEAP President
Thomas	Cierpka	IFOAM Head Office, Bonn
Jean-Marc	Cochet	Idee aquaculture
Dominique	Corlay	Aquaculture Natural Solutions
Eduardo	Cuoco	TP Organics
Per	Dolmer	Orbicon
Konstantinos	Dristas	Environmental Consultant
Alicia	Estevez	IRTA Research Institute
Pierre	Fortin	Le Gouessant
Ernesto	Franzolini	Naturalleva
Marco	Fuselli	Rio Fontane
Denez	Gal	HAKI
Eric	Gall	IFOAM EU
David	Gould	IFOAM World
Stefan	Holler	Naturland
Malin	Jonell	Uppsala University
Matthias	Kaiser	University of Bergen
Joelle	Katto-Andrighetto	IFOAM
Duncan	Knowler	Simon Fraser University
Henrik	Korsholm Larsen	Danish Veterinary and Food Administration
Marine	Levadoux	CIPA - Comité interprof. des produits de l'Aquaculture

Catherine	Mc Manus	Marine Harvest
Marc Anton	Moessmer	Biofish
Angela	Morell Perez	IFOAM EU
Peter	Niedermeier	Binca
Mette R.	Nørrelykke	Aller-Aqua
Bjarne Hald	Olsen	Billund Aquakulturservice A/S
Jan Vidar	Olsen	Salmar
Filippos	Papageorgiou	Kefish
Rosaria	Piseri	AlgAran
Maria	Ramos	Inia
Marco	Schlüter	IFOAM EU
Soizic	Schwartz	Min. de l'Ecologie, du Dévlpt durable et de l'Energie
Michèle	Stark	Institute for Market Ecology
Solveig	van Nes	Bellona
Reinier	Vandenbiggelaar	Hortimare
Erdmann	Wischhusen	Seafood Connection
Michela	Zanibellato	Rio Fontane
Gabrielle	Seilen	Pamedise Fruit
Nina	Baumgartner	ICEA
Sems	Yonsel	Simbiyotek
Y-Song	Chen	Yilan University, Taiwan
Karin	Heinze	Organic-Market.Info Online Magazine

Tab1

Soizic Schwartz
Duncan Knowler
John Carmichael
Eric Causse
Eric Gall
Regine Andersen
Andrea Fabris

Tab2

Yvonne Solveig van Nes
Denez Gal
Marc Anton Moessmer
Erdmann Wischhusen
Hans Stefan Bergleiter
Marco Schuelter
Angela Morell Perez

Tab3

Eric Bernard
Jimmy Young
Mette R. Nørrelykke
Ernesto Franzolini
Henrik Korsholm Lars
Per Dolmer
Robert Stokkers

Tab4

Arnaud Chaperon
Konstantinos Dristas
Dominique Corlay
Bjarne Hald Olsen
Michela Zanibellato
Stefan Holler
Michèle Stark

Tab5

Maria Ramos
Marlin Jonel
Peter Niedermeier
Emmanuel Briquet
Christopher Atkinson
Udo Censkowsky
Catherine Mc Manus

Tab6

Anne-Kristin Loes
Pablo Avila Saragoza
Pierre Fortin
Jan Vidar Olsen
Reinier Vandenbiggelaar
Joelle Katto-Andrighetto
Zdenek Adamek

Tab7

Matthias Kaiser

Simon Bush

Emmanuele Busacca

Filippos Papageorgiou

Marine Levadoux

David Gould

Rosaria Piseri

Tab8

François Simard

Alicia Estevez

Eduardo Cuoco

Jean Marc Cochet

Marco Fuselli

Thomas Cierpka

Henri Prins

European Organic Aquaculture

Science-based recommendations for further development of the EU regulatory framework and to underpin future growth in the sector

Coordination and support action

2014-2016

Ingrid Olesen (Project Coordinator)



Overall vision

Economic growth of the organic aquaculture sector
in Europe,
supported by science based regulations
in line with the
organic principles and consumer confidence



OrAqua will

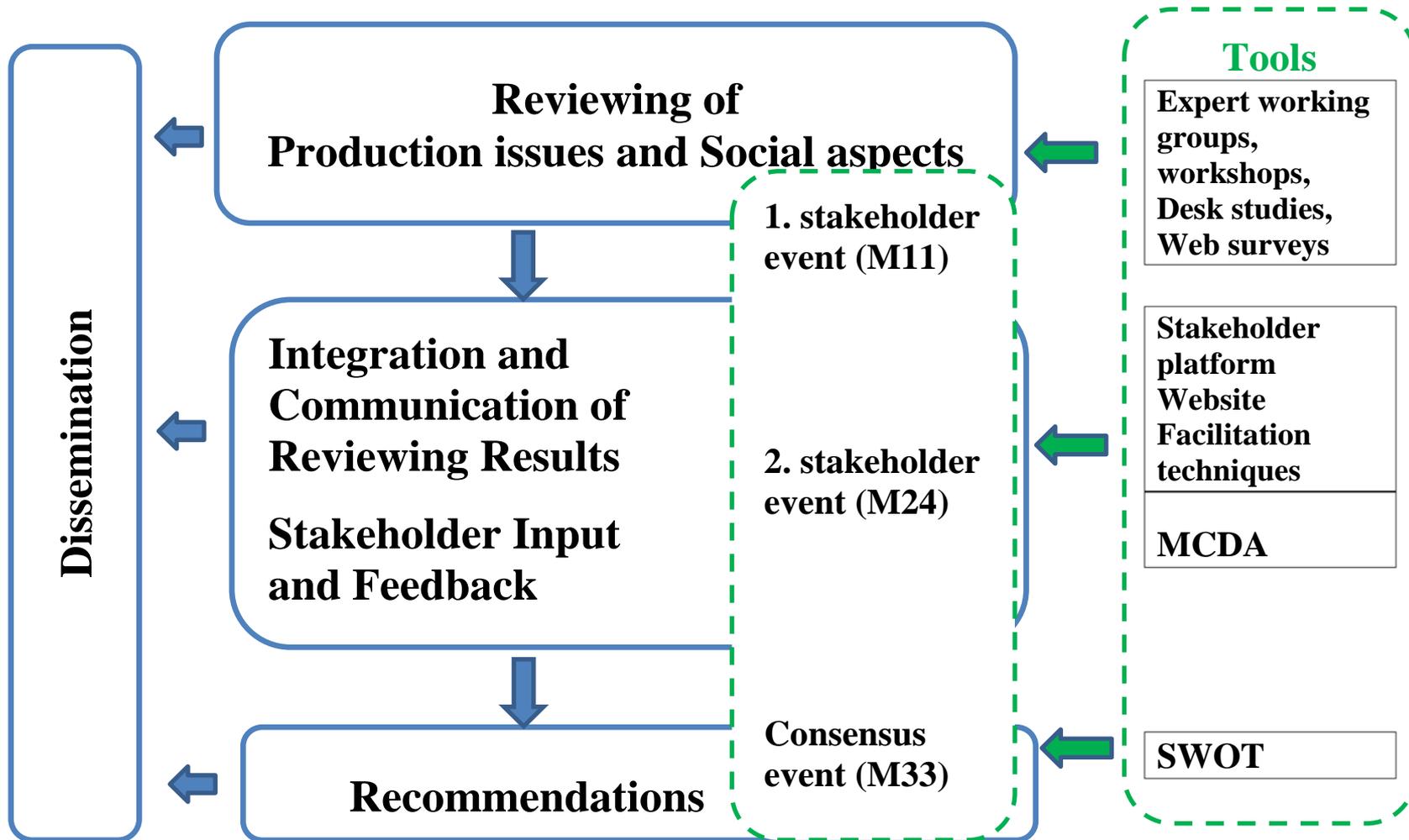
- suggest improvements for the current EU regulatory framework for organic aquaculture based on
 - ✓ a review of the relevant available scientific knowledge on organic aquaculture production, economics and consumer perceptions of organic aquaculture
- focus on aquaculture production of relevant European species of finfish, molluscs, crustaceans and seaweed

Partners

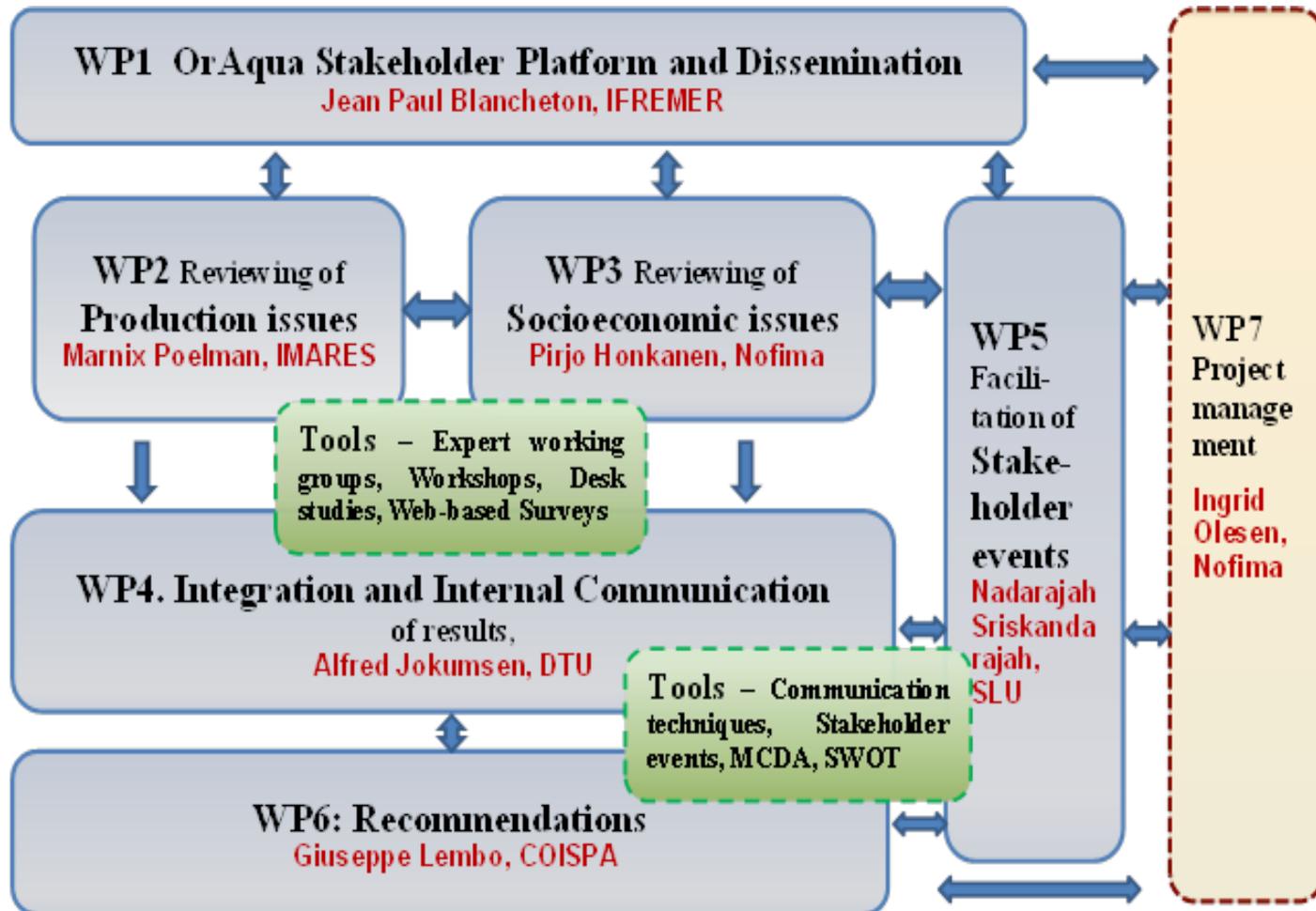
1. Nofima
2. COISPA Tecnologia & Ricerca, Italy
3. DTU – Technical University of Denmark, Denmark
4. Ifremer – French Research Institute for Exploitation of the Sea, France
5. USB – University of South Bohemia in České Budejovice, Czech Republik
6. SLU – Swedish University of Agricultural Sciences, Sweden
7. DLO – Stichting Dienst Landbouwkundig Onderzoek, Netherlands
8. Debio Association, Norway
9. ICEA – Istituto per la Certificazione Etica ed Ambientale, Italy
10. ICROFS – International Centre for Research in Organic Food Systems, Denmark
11. FEAP – Federation of European Aquaculture Producers, France
12. IZSve – Istituto Zooprofilattico Sperimentale delle Venezie, Italy
13. Culmarex SA, Spain



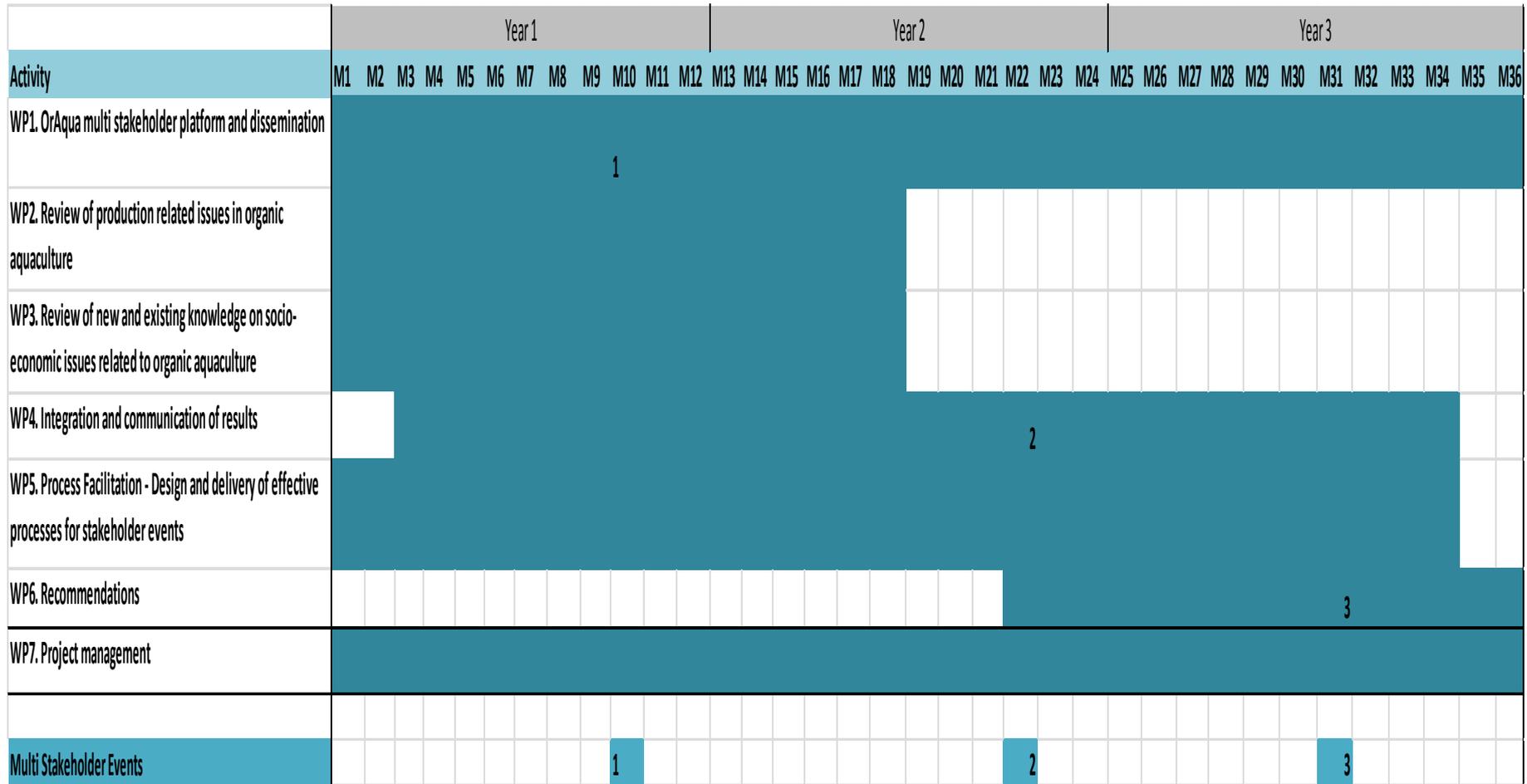
Structure of work, mechanisms (green) and knowledge flow (blue) in OrAqua



Organisation of work packages



Gantt chart showing timing of activities



WP1 OrAqua multi stakeholder platform and dissemination - Overall aims

**(1) To coordinate and facilitate the consultation
with relevant stakeholders**

- planning of the 3 stakeholder meetings,
- to collect and analyse the stakeholder feedbacks
- to validate the project results

(2) To disseminate the project results towards

- aquaculture industry,
- policy makers,
- consumers,
- NGOs

through the OrAqua website and printed documents

Multi-stakeholder platform

[Follow OrAqua at www.oraqua.eu](http://www.oraqua.eu)

OrAqua
Organic Aquaculture

Site map Search Web guide

About OrAqua ... | WP OrAqua organisation | Dissemination and platform participant lists

Contact Zoom

Contact : Jean-Paul Blancheton - Ifremer (WP1 OrAqua Stakeholder: Platform and Dissemination)
Address :
Palavas - Chemin de Maguelone
34250 Palavas-les-Flots
<http://annuaire.ifremer.fr/cv/15796/er>
Mail :
Jean.Paul.Blancheton@ifremer.fr

General search

Term to search

On this site
On all Ifremer

Kick-off meeting group

Content:

P. 2: Stakeholder platform and dissemination (WP1)

P. 3: Review of production related issues (WP2)

P. 4: Review of socio-economics issues (WP3)

P. 5: Integration and internal communication of results (WP4)

P. 6: Facilitation of stakeholder events (WP5)

P. 7: Recommendations (WP6)

P. 8: Workflow in OrAqua

P. 9: Project partners



Latest News from OrAqua

Welcome to the first OrAqua Newsletter

A highly committed and qualified consortium met at Ås in Norway in January and kicked-off the OrAqua project. The 13 OrAqua project partners form a strong and multidisciplinary consortium that includes four universities, five aquaculture research institutes, two research groups in social science, the Federation of European fish farmers, the fish farming company Culmarex and two organic certification/control bodies.

The main outcomes of the OrAqua project will be recommendations on how to improve the EU regulation and a Policy Implementation Plan (PIP). Furthermore, the project will deliver recommendations on how to enhance economic development of the European organic aquaculture sector.

To ensure interaction with all relevant stakeholders, a multi stakeholder platform is established. Here, a wide range of actors from several countries participate and interact. In order to obtain relevant input and feedback, OrAqua will bring together representatives of consumers, farmers, hatcheries, breeders, feed and technology suppliers, regulation, certification, processing, wholesalers, retailers, research groups, projects and technology platforms in Europe and other continents. The OrAqua multi stakeholder platform will facilitate the consultation with stakeholders and dissemination of the project results towards a broad target audience. Three stakeholder events will be organized, the first will take place in Mid-October in Istanbul prior to the IFOAM Organic World Congress.

By then the project will assess and review existing knowledge on fish health and welfare, veterinary treatments, nutrition, feeding, seeds, production systems, environmental impacts, socio-economic and aquaculture economic interactions, consumer aspects, legislations and private standards for organic aquaculture.

We therefore invite stakeholders to sign up for our multi stakeholder platform as soon as possible (see also separate article about WP1 and ww.oraqua.eu). We look forward to some fruitful discussions and cooperation in OrAqua to fulfill our vision of a growing organic aquaculture sector in Europe, supported by science based regulations in line with the organic principles and consumer confidence. *Ingrid Olesen, Project Coordinator, Nofima*

WP2 Review of production issues

Overall aim in short

- **To review scientific knowledge on production issues in organic farming focusing particularly on**
 - **fish feed and nutrition,**
 - **health and welfare, veterinary treatments and biosecurity,**
 - **production systems and management,**
 - **environmental interactions**

WP3 Review of socio-economic issues

Objectives

We will collect and review available information related to organic aquaculture to:

- 3.1. Assess **consumer perceptions, sentiments and understanding** of organic aquaculture to promote consumer confidence and acceptance of organic farming principles.
- 3.2. Improve understanding of the **economics** of organic aquaculture production and the **competitive position** of organic aquaculture products in EU markets
- 3.3. Explore critical development constraints and potential improvement in the **institutional systems**, to provide input to **regulatory bodies** for an increased organic aquaculture production
- 3.4. Identify **socio-economic issues/bottlenecks** that need to be addressed for successful implementation of organic aquaculture

WP4 Integration and internal communication of results - Objectives:

- ★ Analyse and integrate outputs from WPs 1, 2, 3 and 5
- ★ Identify: Objectives – Criteria - Options – Priorities
➡ MCDA (1st event)
- ★ Transform the information into readily accessible format for WP 1
- ★ Prepare MCDA survey WP 5 (2nd event)
- ★ MCDA ➡ WP 6 (SWOT – Recommendations)

WP 5

Facilitation of stakeholder events

Organize three stakeholder events to engage stakeholders, facilitate the communication between participants, enable collaborative learning, and to develop outcomes that feeds into the other processes





WP6 Recommendations

Overall objectives

- 1. Assess the relevance, measurability and applicability of the main achieved results to the organic aquaculture EU regulation**
- 2. Generate sound science based recommendations for potential updates of the regulation, which reflect the holistic perspective of the project**
- 3. Facilitate a large diffusion of the recommendations among stakeholders**
- 4. Produce executive dossiers on the main technical background behind the recommendations according to the standard/template used by EGTOP**
- 5. To realize a Policy Implementation Plan (PIP)**

Three Stakeholder Events

Events designed to build strong relations, a shared understanding, and a communicative culture within the project.

- Event 1 - supporting the processes of reviewing (WP2 and 3) and integration (WP4) with stakeholders interests and experiences – *Preconference at Ifoam Organic World Congress in Istanbul October 11-12, 2014*
- Event 2 - survey stakeholders values, attitudes and prioritize, and to initiate the decision making process generated by MCDA (WP4) – *Conference at EAS meeting in Rotterdam in October 2015?*
- Event 3 - building consensus on recommendations (WP6) – *Brussels July 2016*

Objectives of this first Stakeholder Event

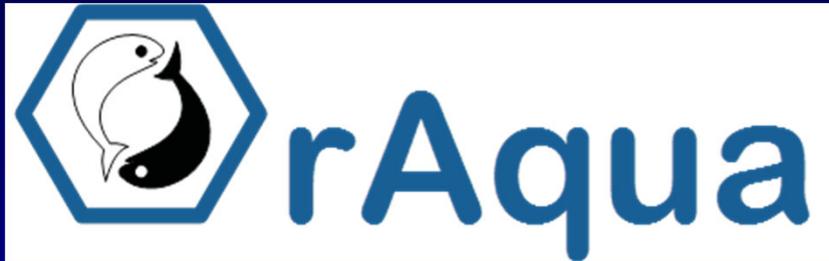
- Initiate the interaction between the project partners and the key stakeholders in the field of organic aquaculture
- Validate results of reviewing and make sure that all important issues and aspects are taken into consideration and covered by the project
- Engagement of all participants to ensure iterative development of whole project

Thank you for the attention

Funding from the EU FP7 by the OrAqua project N°613547 is
acknowledged

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11-12 October 2014, Istanbul
First stakeholders event



Implications of basic organic farming principles on aquaculture

Pino Lembo



COISPA Tecnologia & Ricerca
Stazione Sperimentale per lo Studio
delle Risorse del Mare



The four Principles of Organic Agriculture



1. Principle of Health

Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

2. Principle of Ecology

Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.



3. Principle of Fairness

Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities

4. Principle of Care

Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.



Reg. CE 834/2007

ORGANIC PRODUCTION SHALL PURSUE THE FOLLOWING GENERAL OBJECTIVES:

(a) ESTABLISH A SUSTAINABLE MANAGEMENT SYSTEM FOR AGRICULTURE THAT:

- (i) respects nature's systems and cycles and sustains and enhances the health of soil, water, plants and animals and the balance between them;
- (ii) contributes to a high level of biological diversity;
- (iii) makes responsible use of energy and the natural resources, such as water, soil, organic matter and air;
- (iv) respects high animal welfare standards and in particular meets animals' species-specific behavioral needs;



Reg. CE 834/2007

ORGANIC PRODUCTION SHALL PURSUE THE FOLLOWING GENERAL OBJECTIVES:

- (b) AIM AT PRODUCING PRODUCTS OF HIGH QUALITY;**
- (c) AIM AT PRODUCING A WIDE VARIETY OF FOODS AND OTHER AGRICULTURAL PRODUCTS THAT RESPOND TO CONSUMERS' DEMAND FOR GOODS PRODUCED BY THE USE OF PROCESSES THAT DO NOT HARM THE ENVIRONMENT, HUMAN HEALTH, PLANT HEALTH OR ANIMAL HEALTH AND WELFARE.**

Reg. EC 889/2008





**Organic
and non-organic
production units
shall be separated
adequately.**





The use of hormones and hormone derivatives is prohibited.





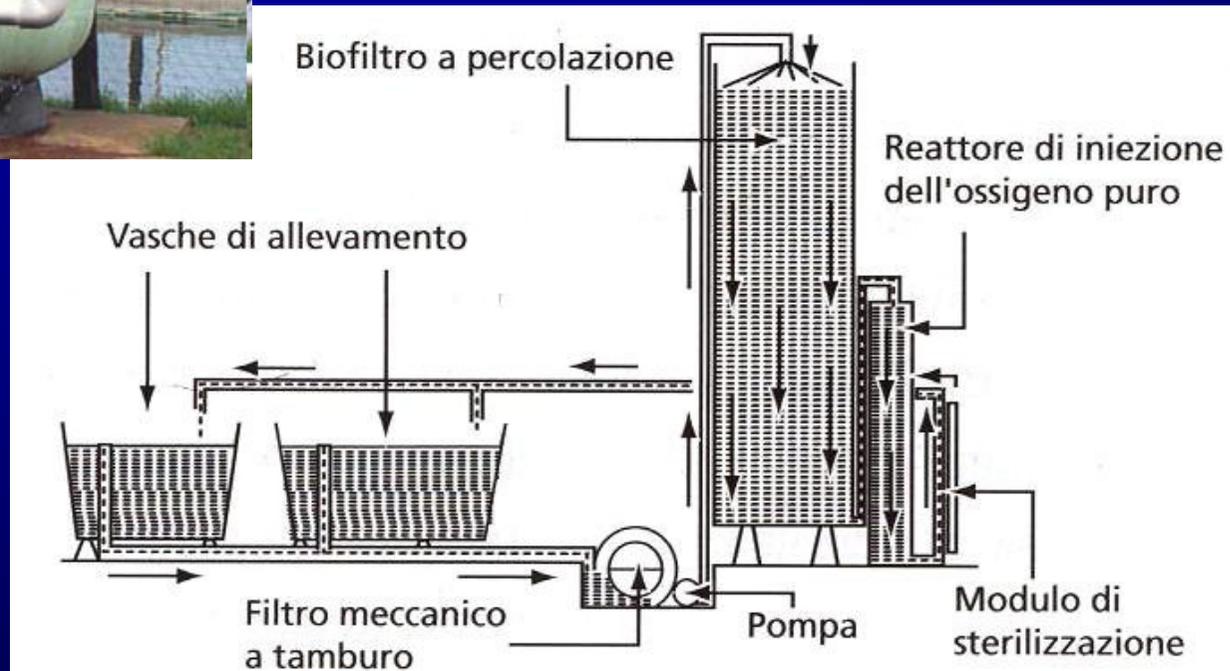
For on-growing purposes and when organic aquaculture juvenile animals are not available non-organic aquaculture juveniles may be brought into a holding (50 % by 31 December 2014 and 0 % by 31 December 2015).

At least the latter two thirds of the duration of the production cycle shall be managed under organic management.





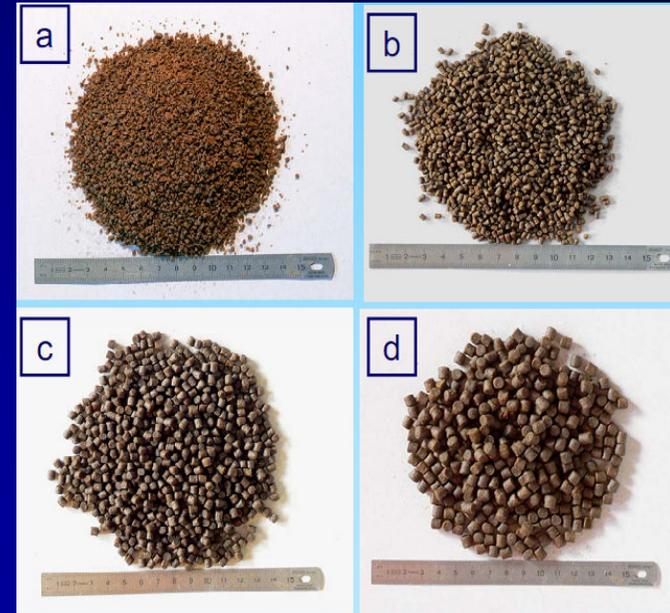
Closed recirculation aquaculture animal production facilities are prohibited, with the exception of hatcheries and nurseries.





Feed for carnivorous aquaculture animals shall be sourced with the following priorities:

- a) organic feed products of aquaculture origin;
- b) fish meal and fish oil from organic aquaculture trimmings;
- c) fish meal and fish oil and ingredients of fish origin derived from trimmings of fish already caught for human consumption in sustainable fisheries;
- d) organic feed materials of plant or animal origin.



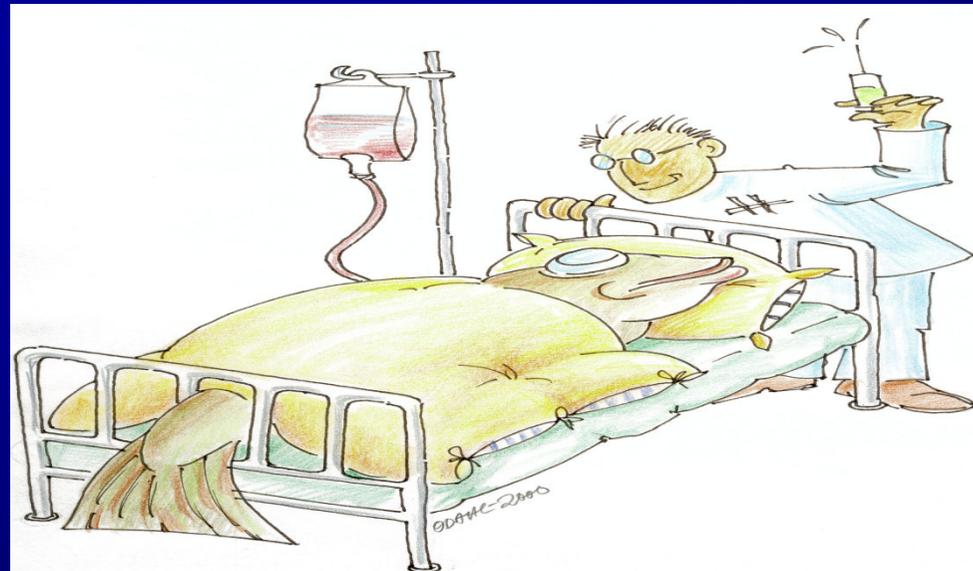


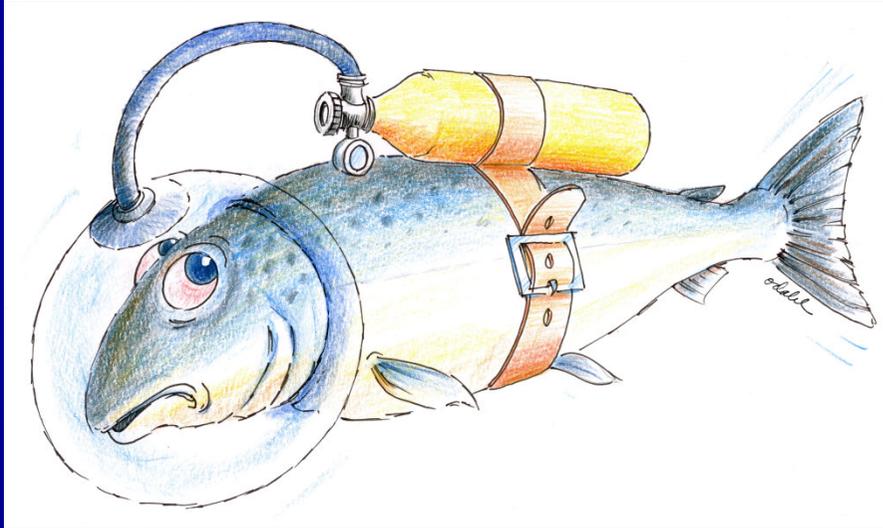
Stocking density is set out in Annex XIIIa by species or group of species.





When despite preventive measures to ensure animal health, a health problem arises, veterinary treatments may be used ...





Courtesy of Fiskeriforskning



Aeration is permitted to ensure animal welfare and health ...

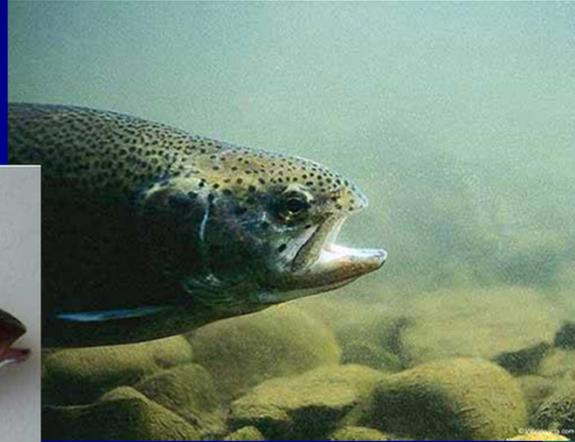
The use of oxygen is only permitted for uses linked to animal health requirements and critical periods of production or transport.



Slaughter techniques shall render fish immediately unconscious and insensible to pain.



Courtesy of the BC Salmon Farmers Association



In paragraph 11 of Article 95 of Regulation (EC) No 889/2008, '1 July 2013' is replaced by '1 January 2015'.

The competent authority may authorize for a period expiring on 1 July 2013, those aquaculture animal and seaweed production units which are established and produce under nationally accepted organic rules before entry into force of this Regulation, to keep their organic status ...

Comments and reflections
are welcome





First Stakeholder Event
Istanbul, 11&12 October 2014



The current regulatory framework –
Challenges from the perspective of
organic aquaculture stakeholders

Dr. Stefan Bergleiter
s.bergleiter@naturland.de
www.naturland.de

www.naturland.de



Association for organic farming

Founded in 1982

One of the largest international organic associations

Diverse areas of activity:

- agriculture
- processing
- forestry
- **aquaculture**
- textiles
- cosmetics
- fair partnerships
- **capture fishery**



Challenges in the current organic aquaculture regulation



1. State of regulation
2. Selected issues

► B

COMMISSION REGULATION (EC) No 889/2008

of 5 September 2008

laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control

(OJ L 250, 18.9.2008, p. 1)

Implementing rules:

889/2008 mostly agriculture,

710/2009 mostly aquaculture

505/2012 and 1364/2013 with punctual amendments.

Amended by:

Official Journal

		No	page	date
► <u>M1</u>	Commission Regulation (EC) No 1254/2008 of 15 December 2008	L 337	80	16.12.2008
► <u>M2</u>	Commission Regulation (EC) No 710/2009 of 5 August 2009	L 204	15	6.8.2009
► <u>M3</u>	Commission Regulation (EU) No 271/2010 of 24 March 2010	L 84	19	31.3.2010
► <u>M4</u>	Commission Implementing Regulation (EU) No 344/2011 of 8 April 2011	L 96	15	9.4.2011
► <u>M5</u>	Commission Implementing Regulation (EU) No 126/2012 of 14 February 2012	L 41	5	15.2.2012
► <u>M6</u>	Commission Implementing Regulation (EU) No 203/2012 of 8 March 2012	L 71	42	9.3.2012
► <u>M7</u>	Commission Implementing Regulation (EU) No 505/2012 of 14 June 2012	L 154	12	15.6.2012

COMMISSION IMPLEMENTING REGULATION (EU) No 1364/2013

of 17 December 2013

amending Regulation (EC) No 889/2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 as regards the use of non-organic aquaculture juveniles and non-organic seed of bivalve shellfish in organic aquaculture



Challenges in the current organic aquaculture regulation



2. Selected issues:

- a) Permitted organic breeding techniques
- b) Demand for organic juveniles
- c) Feed for hatcheries
- d) Feed for carnivorous species
- e) Feed for omnivorous species
- f) Stocking densities
- g) others

Prohibition of conventional reproduction techniques

(but for some species, there are no organic alternatives...)



The regulation is prohibiting

- **hormone application for stimulation of spawning** („hypophization“), which is still indispensable for reproduction of e.g. Pangasius catfish, but also of several marine species covered by the regulation (e.g. flat fish, milkfish, rabbit fish, croaker...)
- **eyestalk gland manipulation in female parent shrimp**, which is still indispensable for breeding of Black Tiger shrimp, but also important for economical reproduction of e.g. Western White shrimp.

The **Capture of wild parent stock** (e.g. in Black Tiger shrimp) is very much restricted, and somewhat unclearly regulated (*e.g. how about already egg-bearing wild shrimp?*)

Demanding Organic Juveniles to fix deadlines

(but they are not available for all species or in all places)



710/2009 enters into force at 01.07.2010, but contains various deadlines, in particular:

3. The maximum percentage of non-organic aquaculture juveniles introduced to the farm shall be: 80 % by 31 December 2011, 50 % by 31 December 2013 and 0 % by 31 December 2015.

1364/2013 is only slightly shifting these deadlines and percentages, but this is not helpful for species with **no** availability of organic juveniles at all

‘3. The maximum percentage of non-organic aquaculture juveniles introduced to the farm shall be 80 % by 31 December 2011, 50 % by 31 December 2014 and 0 % by 31 December 2015.’

Demanding Organic Juveniles to fix deadlines

(but they are not available for all species or in all places)



Reasons for non-availability can be

- **technical** (e.g. species not reproducing without eyestalk ligation or hypophization)
- **infrastructural** (e.g. no regular transport from the next certified organic hatchery)
- **legal** (no live animal imports permitted)
- **economical** (organic farm's demand too small for motivating an organic hatchery to convert)
- „**cultural**“ (regional strains are preferred, but not available in organic quality)

Demanding Organic hatchery/larval feed

(but they are not sufficiently available...)



The **development of formulated, microencapsuled feed in microscopic pellet sizes** for tiny fish and shrimp larvae has been a breakthrough for the reproduction of particularly marine species.

The few companies active on that field have still not produced such feeds in organic quality, due to technical and economic constraints.

The „traditional“ technique of cultivating unicellular algae, rotifers, microcrustaceans as a hatchery feed can theoretically be brought in line with basic organic principles, but this is not a solution for all species, still a broad field for R&D, and also demanding more standard development.

Defining feed for carnivorous species

(many questions...)



- Which species are carnivorous?
- Which percentages of fishmeal/-oil in the feed formula are acceptable?
- Which origins of fishmeal/oil are acceptable? Certifications?
- Are terrestrial animal by products acceptable?
- How to deal with deficits in essential amino acids?

Defining feed for omnivorous species

(standards are e.g. very tough for organic tilapia... so there are none)



- Which species are omnivorous? (is the definition just that these species **can** be raised on a high level of pond-feed-autoproduction, i.e. extensively, or without fishmeal?)
- Which percentages of fishmeal/-oil in the feed formula are acceptable for those? (is it e.g. adequate to permit some level for pangasius and shrimp, but none for tilapia and carp?)

Defining stocking densities

(on which bases...?)



Currently, in 1 hectare of a 1 m deep pond an organic fish farmer is permitted to produce per year:

- 1.5 t of carp
- 2.4 t of shrimp
- 10,0 t of pangasius
- 20.0 t of tilapia
- 25.0 t of trout, or
- 30.0 t of sturgeon.

The carp pond, at such densities, would act as a **nutrient trap**, since the fish would grow more or less **on natural feed alone**.

The other species, at such densities, would rely more or less **completely on external feed** and release a significant amount nutrients.

Carp, shrimp, pangasius, tilapia, and sturgeon are **peaceful** species (no fighting at lower or higher densities), and they can live on the **same type of – natural or external – feed** (as e.g. in Asian aquaculture).

Others



The pressure to overcome the immediate challenges has led to a certain neglect in developing others, such as:

- holding systems corresponding to the animals' needs

(d) in the case of freshwater fish the bottom type shall be as close as possible to natural conditions;

- measures for improving biodiversity

(b) at least five percent of the perimeter ('land-water interface') area shall have natural vegetation.

... but the most challenging challenge is:



The approaching expiry date of the „**nationally accepted rules‘ option**“, organic standards that have been in place successfully for many years, adjusted to state of public debate, reflecting the state of R&D and the reality of industry.

This option enabled organic aquaculture operators to adapt to the regulation, but also the regulation to further evolve (ORAQUA, EGTOP) without damaging the sector.

Basically, the expiry in January 2015 appears very early, since important amendments of the regulation might take more time.

Thank you very much for your kind attention!





Technical University,
of Denmark



Production and Socio-economic Issues related to Organic Aquaculture

**Juveniles - Production systems –
Nutrition - Welfare - Environment –
Consumers – Economics - Institutional
Frameworks**

**Alfred Jokumsen, DTU Aqua
Wout Abbink, Imares
Pirjo Honkanen, Nofima**



Sourcing of Juveniles



**Complete Organic Life Cycle
from 1. January 2016**

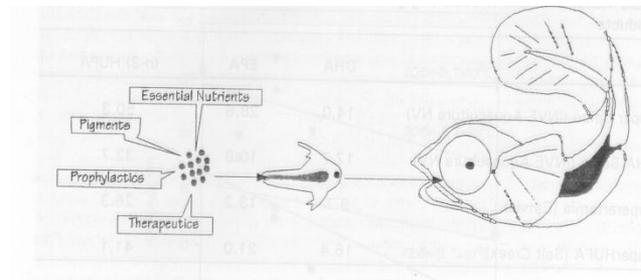
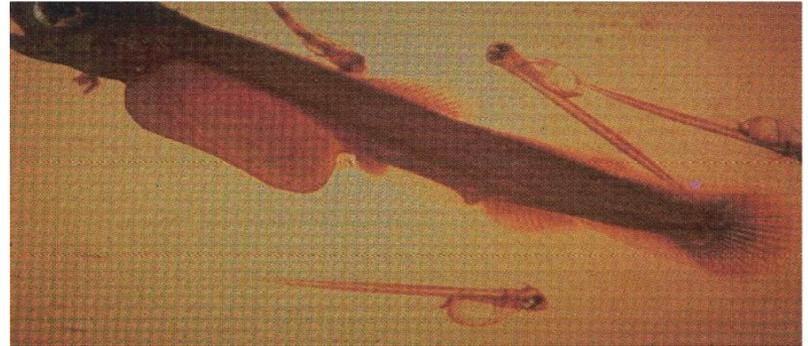


Sourcing of juveniles

Max. non-organic juveniles:

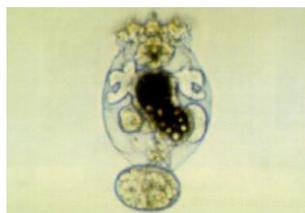
- 80 % by 31.12.2011
- 50 % by 31.12.2013*
- 0 % by 31.12.2015

*Postponed to 01.01.2015 by EU Regulation 1364/2013 of 17.12.2013



Challenges of Sourcing of Organic Juveniles

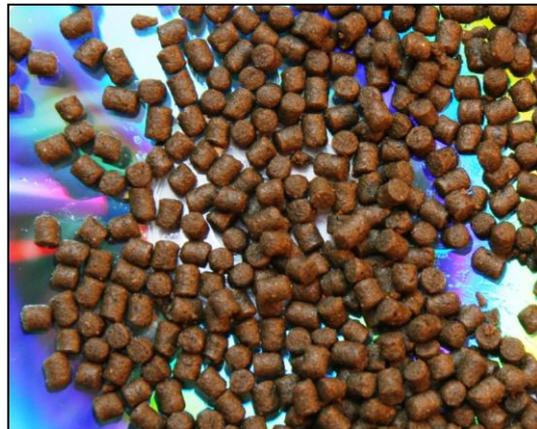
1. Inadequate supply of organic juveniles (+ organic trout ova, DK)
2. Lack of specific rules for organic hatcheries (FW & SW) to distinguish organic and non-organic hatcheries, e.g.
 - Breeding (Tools/objectives, selection, robustness etc.)
 - Stocking densities
 - Management
 - Phytoplankton and zooplankton production
 - Essential nutrients
 - "Organic" weaning diets etc. (Hatching → weaning of juveniles)



Feed and Nutrition - Carnivorous aquaculture

Sourcing priority of feed ingredients:

1. Organic feed products of aquaculture origin
2. FM & FO from org. aquaculture trimmings
3. FM & FO derived from trimmings of fish caught in sust. fisheries
4. Org. feed mat. of plant origin (max. 60 %)



Feed and Nutrition

Organic feeding regimes priority:

- Animal Health
- High product quality/human health
- Low environmental impact



Feed and Nutrition

Sourcing priority of feed ingredients:

1. Organic feed products of aquaculture origin
2. FM & FO from org. aquaculture trimmings
 - Prohibited to feed fish with ingredients derived from the same species
 - Limited organic production → Limited trimmings
 - Below the critical level needed for sustainable manufacturing processes
3. FM & FO derived from trimmings of fish caught in sust. fisheries

Feed and Nutrition

Fish Meal & Fish Oil derived from trimmings of fish

Considerations:

- **Optimum nutrient balanced diet (Amino acids (AA) – Fatty acids (FA)) is crucial for optimum performance**
- **Fish meal and Fish oil - well balanced nutrient source**
- **FM from trimmings is lower in protein/essential AA**
- **Supplementation with AA is prohibited**
- **FM from trimmings is higher in Phosphorus (P)**
 - ➔ *Decreased performance (growth, health, quality)!*
 - ➔ *Increased environmental impact!*

Feed and Nutrition – Alternative options

FM & FO are limited resources

- **FM from whole fish caught in sustainable fisheries may be prioritized**
- **FM & FO from trimmings for limited use**
- **Alternative sources of proteins and lipids urgently needed to optimize dietary AA-profile (micro-/macro organisms high in essential AA and FA, plants, PAP etc.)**
- **Supplementation with essential AA and FA and other essential nutrients derived from processes in line with organic principles**

Feed and Nutrition – Omnivorous/Polyculture/»Extensive» Aquaculture

- Carps, shrimps, tilapia: Natural feed/add. comp. feed
- Molluscs: Extract nutrients from natural local feed web/
organic fish production/water quality issues
- Sea weed: Extract nutrients from the
environmental water body/organic fish
production



Health – Veterinary treatments

Order of preference:

1. Substances from plants, animals or minerals in a homoeopathic dilution (stimulate self-cure)
2. Plants and their extracts not having anaesthetic effects
3. Trace elements, metals, natural immunostimulants or authorised probiotics
4. Allopathic treatments



Health – Veterinary treatments

Allopathic treatments:

- Max. 2 treatments/year – life cycle > 1 year
- Max. 1 treatment – life cycle < 1 year

Anaesthesia prior to vaccination – counts for treatment?

Parasite treatments

- Max. 2 treatments/year
- Max. 1 treatment – life cycle < 1,5 year

Prolonged withdrawal period for all treatments

Health – Cleaning and disinfection

Parasite treatments:

- Only Limestone and Dolomite permitted but without anti-parasitic effect
 - ➔ Need of effective sanitizers for proper management of disease risks in organic open systems, welfare and environmental protection

Substances for consideration in line with organic principles, e.g.:

- Hydrogen peroxide
- Sodium percarbonate
- Peracetic acid and peroctanoic acid
- Calcium hydroxide



Aeration/Oxygenation



- Only mechanical aerators
- Prefer renewable energy sources
- Pure oxygen only permitted in critical situations

Stocking density

Salmonids in freshwater (FW):

- Salmon, arctic charr: Max. 20 kg/m³
- Sea- and rainbow trout: Max. 25 kg/m³

Salmonids in seawater (SW):

- Salmon, sea- and rainbow trout: Max. 10 kg/m³

Cod, bass, bream, turbot (SW):

- Turbot: Max. 25 kg/m²
- Others: Max. 15 kg/m³

Carp family and associated Species in polyculture (perch, pike, catfish, coregonids):

- Max. 1.500 kg/ha/y

Consider: Holistic approach



Welfare

Interactions:

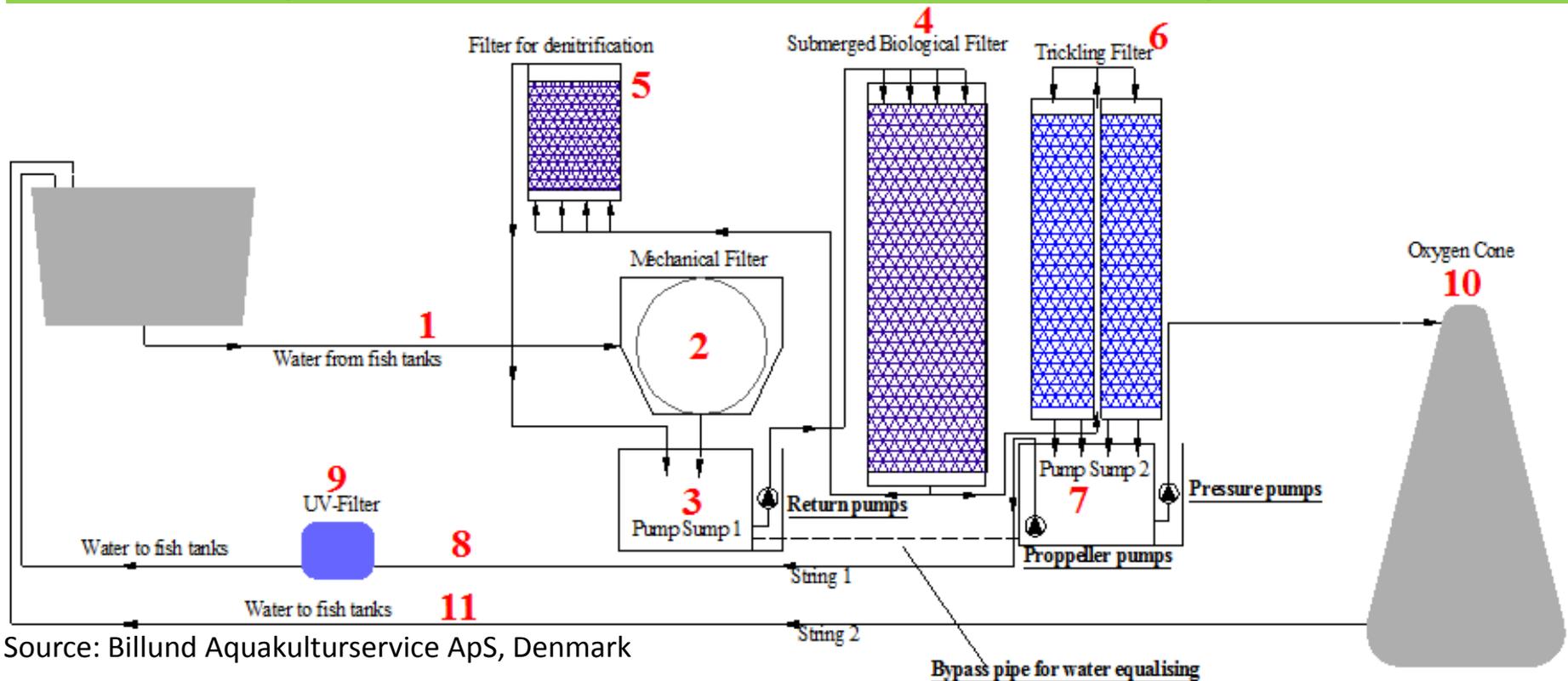
- Feed quality
- Stocking density
- Water quality
- Rearing conditions
- Daylength - Geography
- Physical injuries
- Transportation
- Slaughter methods (preventing suffering in fish, preserving the flesh quality, human safe)



Consider: Holistic approach

Closed Recirculation Aquaculture Systems (RAS)

NOT permitted – excl. hatcheries & juveniles



RAS: Advantages and Disadvantages. Intensive & energy issues
Consider: Reuse of water – save water resources – renewable energy in line with organic principles.

Environmental interactions

Escapes
Recycling and waste



Marketing & Sale

- Production vol.
- Distance



Consumer Perceptions of Organic Seafood and the production systems

1. ***Positive to aquaculture*** → ***Positive to organic aquaculture***
If Negative → ***Remain Negative***
2. ***Positive about organic production*** → ***Also willing to pay for organic***
- Link stronger at high *Education*, high *Income*, high *Knowledge* about organic and have young *Children*
3. ***High Knowledge about organic*** → ***rational to organic prod.***
Low Knowledge about organic → ***Emotional to organic***
4. ***Health benefits of organic fish, Naturalness of Local/ Domestic production and Food Safety***



Consumer Perceptions of Organic Seafood and the production systems

5. Only a small segment concerned about *welfare* regimes among consumers in general
 - Priority to *Quality, Freshness, Taste*
6. Realising aquaculture *protecting wild stocks* → perceive aquaculture *protecting the environment*
7. *Missing common understanding* of organic aquaculture; i.e. *Missing distinction* between labels: Organic, Ecological, Green, Sustainable, Fair Trade → *Transparency – Tangibility*



Consumer Perceptions of Organic Seafood – A Survey

- Low familiarity with labels – in particular the EU leaf



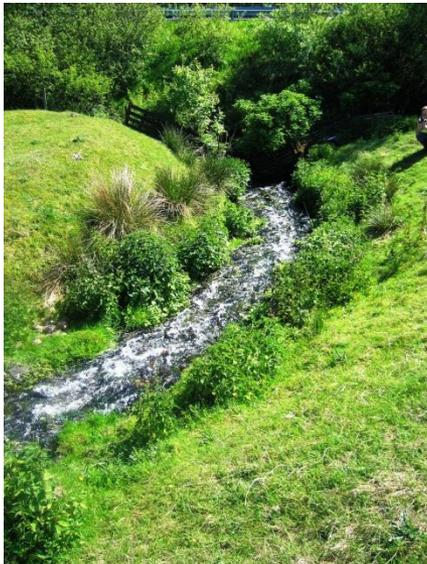
- More familiar with national labels



Consumer Perceptions of Organic Seafood – A Survey

High priority:

1. No use of *toxic chemicals*
2. *Natural* living conditions
3. Water quality
4. No medicines



Consumer Perceptions of Organic Seafood – A Survey

Lower priority:

1. Environment
2. *Welfare*
3. *Organic feed*
4. *Sea cage or pond farming*
5. *Min. water use*
6. *Feed utilization*
7. *Escapees*



Lesson:
Consumers' perception of organic seafood seems not in line with the EU regulation definition of organic seafood



Consumer Perceptions of Organic Seafood – Knowledge gaps

1. **Tangible** information about specific production systems and feed → balancing food *choices* between *moral* and *physical* attributes of organic fish
2. **TRANSPARENCY** : *Information* transfer and product *labelling*
→ *Organic aquaculture* make a difference in the European and global markets

Transparent Information Strategy on Organic Seafood Production



Economics - and Competitive Position of Organic Aquaculture Products in EU

I. Preliminary main findings of Organic versus Conventional production

1. Higher Production Costs

- Salmon: 20 – 30 %
- Trout: 25 – 40 %
- Sea bass/Sea bream: 20 – 30 %
- Carp: 10 – 20 %

2. Higher estimated selling price

- 15 – 30 %



Economics - and Competitive Position of Organic Aquaculture Products in EU

II. Main reasons for higher production costs of Organic production

1. Lower production intensity → Higher costs/kg prod.
2. Feed price 25 – 30 % higher
3. Higher price of organically raised fingerlings/juveniles
4. Rel. more labour hours and skills – special care/quality/risks



Institutional Frameworks – Constraints to the Growth of Organic Aquaculture

I. Preliminary identified main constraints of the organic aquaculture regime in Europe:

- **Complex and fragmented → Challenging the whole chain**
- **Bureaucratic production rules and control provisions**
- **Complexity of bureaucracy hamper the transition to organic certified production**
- **Lack of national policy support for achieving a critical mass of organic aquaculture production**
- **Lack of relevant statistics and updated information on organic aquaculture**
- **Great variation between the countries with respect to standards and certifications hampers export to international markets**

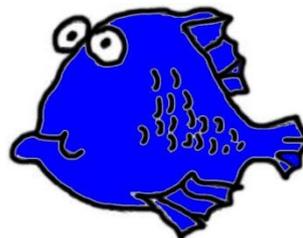
Institutional Frameworks – Constraints to the Growth of Organic Aquaculture

- **Cost of certification and requested control programs are relatively higher for small-scale aquaculture producers**
- **Lack of knowledge/confusion among consumers about organic/conventional and other labels**
- **Organic aquaculture production may be challenged by stricter regulation for conventional production, which may wipe out some of the differences between organic and non-organic production**



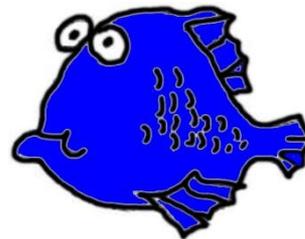
Reflections (I)

- Basically organic production aims natural processes and sustaining the cycle in Nature
- Extensive production in line with organic principles – cf. omnivorous fish, seaweed, molluscs – minor/no input of feed/polyculture
- Contradicting to production of carnivorous fish, i.e. salmonids, bass, bream
 - Pressure on FM & FO
 - Trimmings (P, environment, energy)
 - Transport of ingredients (Carbon-footprint)



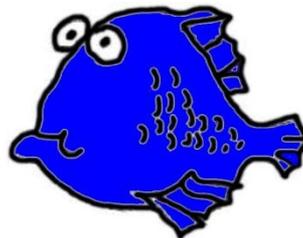
Reflections (II)

- **Flow through systems for on-growing (No RAS)**
 - Risk of infections – limited treatment options
 - Interaction with predators
 - Escapees
- **Max. stocking densities: "Extensive"**
 - Question mark economical sustainability
- **Establishment of robust brood stocks; i.e. stress resilient, disease resistant, ethical welfare**
- **Critical mass of organic aquaculture production (Ova, juveniles, feed)**
- **Need of organic aquaculture statistics (database)**



Reflections (III)

- **Small producers face market barriers**
 - **Relatively high costs of control and certification**
 - **Exclude the organic spirit of development rural areas, improve employment and social structures**
- **Europe has big potential for organic aquaculture products**
 - **However great imports at competing prices, high carbon-footprint and contradicting organic principles/Institutional frameworks**



THANK YOU FOR YOUR ATTENTION



OrAqua will

- suggest improvements for the current EU regulatory framework for organic aquaculture based on
 - ✓ a review of the relevant available scientific knowledge on organic aquaculture production, economics and consumer perceptions of organic aquaculture
- focus on aquaculture production of relevant European species of finfish, molluscs, crustaceans and seaweed

This event aims to...

- ...support the processes of reviewing (WP2 and 3) and integration (WP4) with yours interests and experiences

Questions

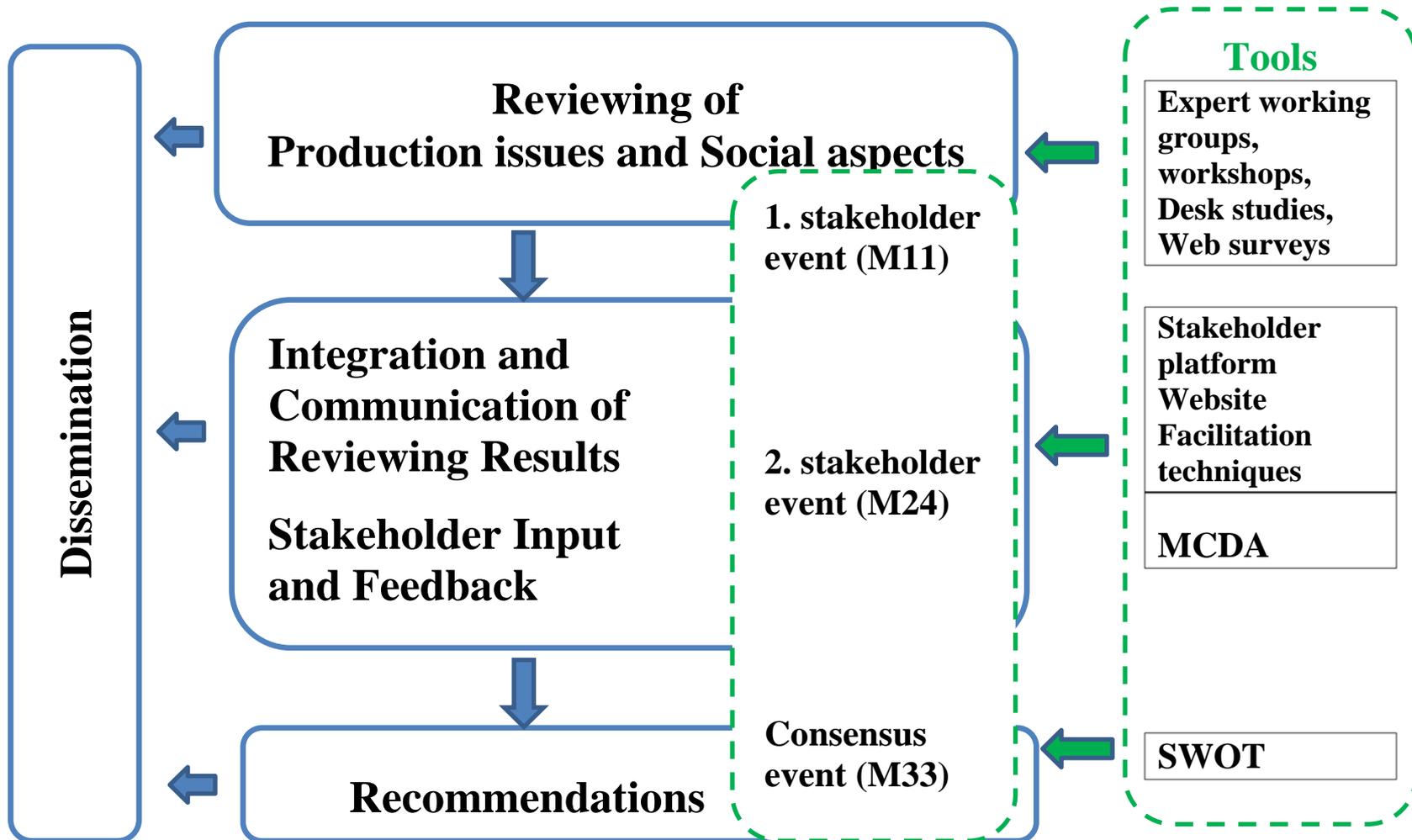
Dialogues in café-format, smaller groups

Based on the theme for your discussion:

- a) What needs to happen to develop the organic aquaculture sector?
- b) What is important for the OrAqua-project to keep in mind over the next two years?

Report by making three statements on a flip chart!

Participation, outreach and communication



Stakeholder event no. 2

“In collaborative learning the procedural aspects are put to the fore. It is about creating substantial improvements in complex situation. The activities are constantly evolving and adapting to new circumstances, but still following a pre-defined process design”

The aim of Stakeholder event no. 2 is to survey stakeholders values, attitudes and prioritize, and to initiate the decision making process generated by a MCDA (WP4)



11-12 October 2014,
Istanbul
First stakeholders event



WP4: Integration and internal communication of results.

-  ***Setting up methodological basis for MCDA***

GIUSEPPE LEMBO – COISPA
ALFRED JOKUMSEN – DTU Aqua

How implement participatory management?

Organic Aquaculture can be typically characterised by complex decision and evaluation problems involving tradeoffs of multiple and sometimes conflicting objectives.

Multiple Criteria Decision Analysis techniques (MCDA) with the use of preference modelling can be useful for:

ranking a set of possible decisions on the basis of agreed-upon decision factors and criteria, once common wide objectives have been identified and agreed.

This will be achieved during the second stakeholders event by means of discussion and distributed questionnaires

Examples of methods

Two examples of methods of deterministic preference modelling:

- ✓ the Analytical Hierarchy Process (AHP, Saaty, 1990; 2003; 2008)
- ✓ the Non-Structural Fuzzy Decision Support System (NSFDSS, Tam et al. 2002; 2006)

AHP provides a complete decision-making framework for the analysis of appropriate management problems:

- ✚ has the advantage to decompose the decision problem into a hierarchy of more easily comprehended sub-problems, each of which can be analyzed independently;
- ✚ converts the human expert judgement to numerical values that can be processed and compared (allowing diverse and often incommensurable elements to be compared to one another in a rational and consistent way).

Examples of methods

NSFDSS is similar to the AHP in that both methods:

- ✓ decompose a problem in a hierarchical manner;
- ✓ apply pair wise comparisons at lowest level of the hierarchy;
- ✓ synthesise the results, working from most detailed level up through the hierarchy towards the general objective.

but NSFDSS

- ✓ applies fuzzy logic to model the ambiguity and imprecision of vague terms such as “marginally different”, “strongly preferred” etc.,
- ✓ modifies the process of consistency checks to the pairwise comparisons and allows for a larger set of semantic operators than the classical AHP;
- ✓ simplifies the decision process and may reduce errors because a stakeholder has only three possible answers to give: prefer A to B, prefer B to A; A and B are equally important.

Example of AHP implementation

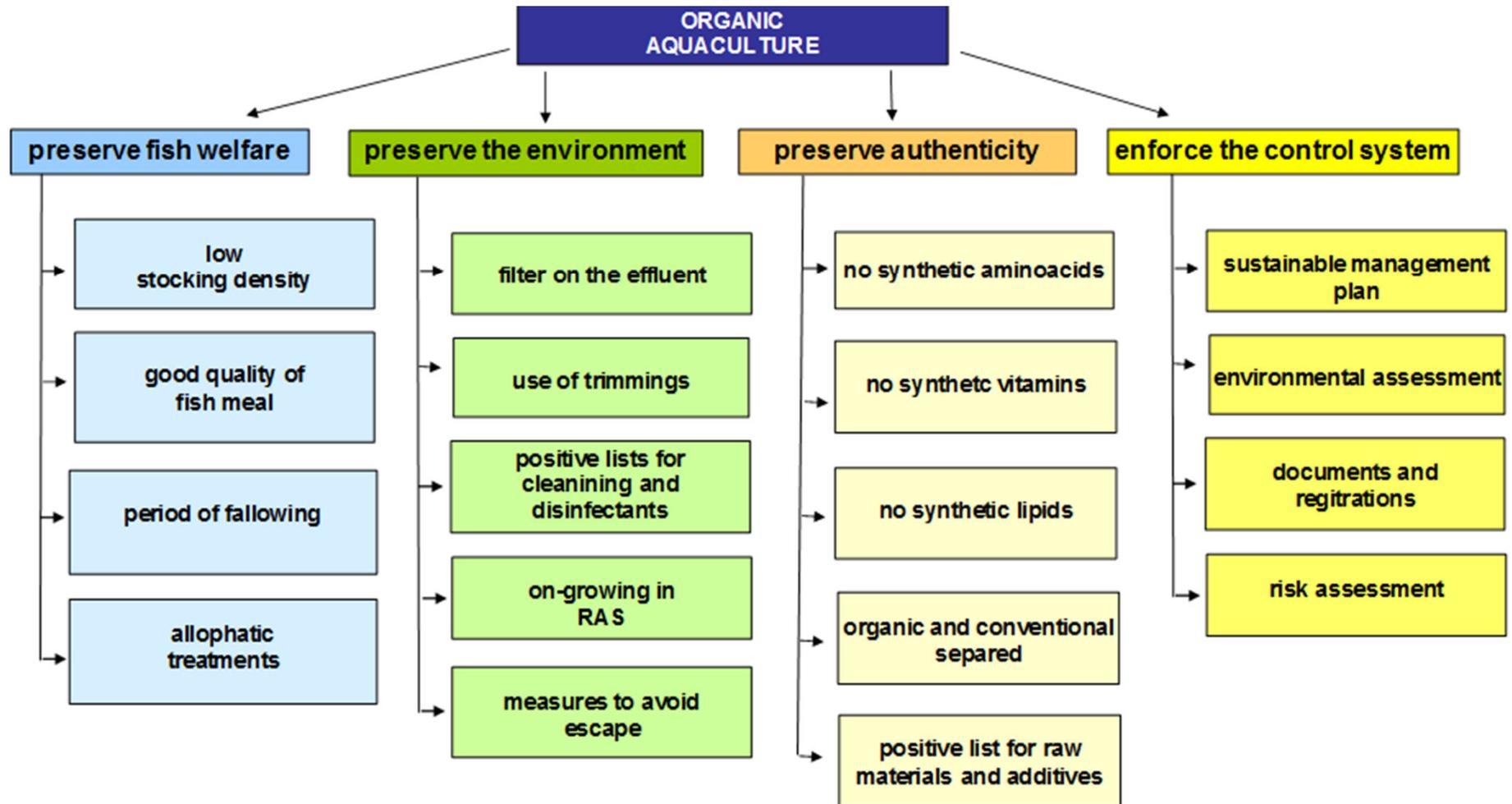
The AHP decision tree:

(1st level) the goal, *organic aquaculture*;

(2nd level) the main objectives, *fish welfare, environmental sustainability, preserve authenticity, enforce the control system*;

(3rd level) the associated indicators, ...

Example of AHP implementation

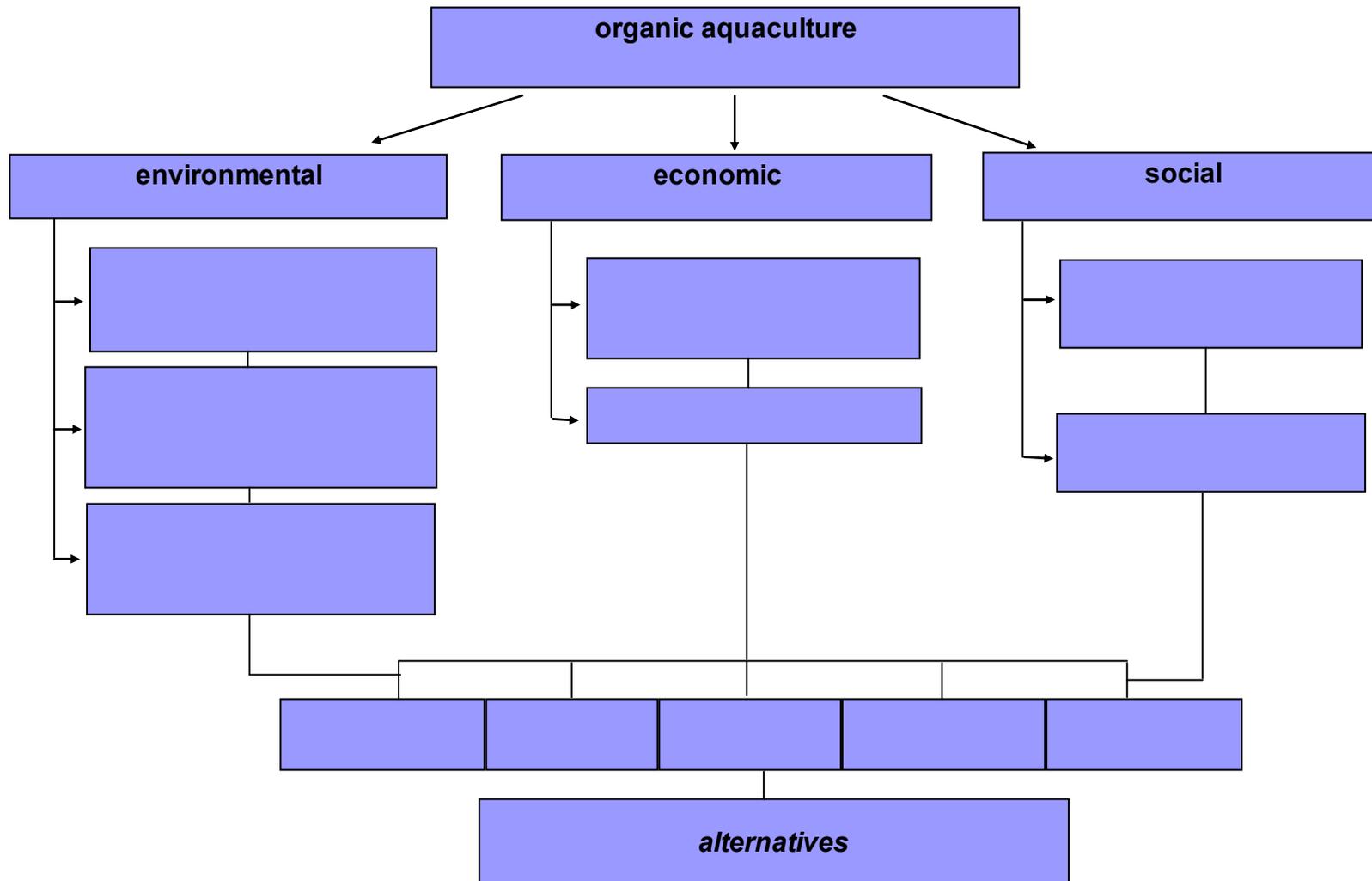


Examples of methods

Questionnaire with pairwise comparisons

LEGEND		
<i>Intensity of importance</i>	<i>Definition</i>	<i>Explanation</i>
1	Equal importance	The two indicators/criteria contribute equally to the objective
2	Moderate importance	Experience and judgement slightly favour one over the other
3	Strong importance	Experience and judgement strongly favour one over the other
4	Very strong importance	Experience and judgement very strongly favour one over the other. Its importance is demonstrated in practice.
5	Extreme importance	The evidence favouring one over the other is of the highest possible validity

The NSFDSS implementation



APPENDIX 10

Short summary of the plenary discussion at the event's first day

Documented by Catherine Pons, FERA

Questions/comments after introduction (2014-10-11)

- How were people selected for this 1st Stakeholder Event?
 - Key people in organic aquaculture mostly known or recommended by the project partners. Ambition to increase the size of the group.
- Importance of having farmers, that can implement on site
- The project is supposed to give recommendations to the organic EU legislation, is there any conflicts regarding timing? Is the end of the project not a bit too late compared to the drafting of the legislation?
 - The project coordinators need to have constant contact with the Commission and updating them of what is going on.
 - On the other hand, the OrAqua-project and the legislation are two different and parallel ways.
- How do we stay informed?
 - Crucial question to be discussed on day 2.
- Are the recommendations from the project Global or EU?
- All input is welcome, anyone who wants to participate in the OrAqua work should write to Jean-Paul Blancheton
- Does the project include micro algae for human production?
 - Is it not in the scope of the aquaculture regulation, but can be addressed.
- Are feeds in the regulation?
- Fish meal included in the agenda and will be discussed
- Avoid abbreviations/acronyms

Questions/comments during and after ppt presentation (2014-10-11)

- Is OrAqua just for EU-based farms? What about farms outside Europe? Same issues have to be solved.
- Is EU food ethics and consumer concerns (economics) on the agenda?
- Availability of stocks – juveniles?
- Recirculation systems are not organic (excl., hatcheries and juveniles)
- Is this the end of simultaneous production?
- Should we move toward area-based certification?
- Organic aquaculture's aim = high quality food responding to consumer demand.
 - What is high quality? Are we identifying consumer demands? Who is the consumer?

- French producers have to comply to be certified, the only concern is for the hatchery/nursery level
- Sustainable seafood – what is its economic impact on the market?
- Two restricting rules for supply of juveniles
 - About food – lack of choice – poor nutritional value
- Organic aquaculture has a low ecological footprint, shouldn't we consider to see the whole picture (i.e., in a sustainable way)?
- Organic should consider all aspects
 - Non-EU parts into the EU-production are important
 - The market asks for more variety of species, if you lose part of the production you lose the whole image
- Use of trimming in the feeding?
 - Decrease in performance leads to increased environmental impact
 - Any comparison between conventional and organic production?
 - No data or evidence exists.
- Different set of rules for fish meal and fish oil – to be considered
- Do we have any data on escapees?
- Emotional vs rational – the difference between south (probably more emotional) and north (probably more rational) – be careful to use these words when describing consumers
- Consumer wants quality, freshness and taste
 - We need to educate the consumer on what organic fish is
- Surveys have been made in the US, where significant market segments does not want to eat salmon but do not find any alternative
 - Consumers are ready to pay for organic products
 - We need to review all market segments
- Consumer familiarity is very different from trust
- Integrated MultiTrophic Area (IMTA) is more natural

- Extra comment about additives: When the project ends in 2017, there is no list of permitted additives, or? The industry wishes to have opportunity to have a say on what is needed as additives.

APPENDIX 11

Discussion themes based on stakeholders' interest

These themes were presented in the morning on day 2 at the First Stakeholder Event. From these headings the participants self-organized themselves in smaller discussion groups to discuss two overall questions:

- a) What needs to happen to develop the organic aquaculture sector?
- b) What is important for the OrAqua-project to keep in mind over the next two years?

The groups reported their discussions by making three statements on a flip chart!

Regulations

- Conflict with other existing regulations
- Impact on health
- Impact on environment
- Impact on product
- Species specific regulation
- Site specific regulation
- Present trend and its potentially impractical recommendation
- Third party certification
- Proposed changes and dates and their impact on sector
- EGTOP & available information

Production issues

- Juveniles and their simultaneous production
- Nutritional questions and feeding of trimmings
- Welfare of fish and shrimps, what are the differences?
- What are the allowed veterinary treatments?

Economics of organic aquaculture

- Understanding of markets
- Business sector of organic aquaculture and its present status

Consumer perspective

- Do we know who we are talking about?

Scale

- Farm-Region-Landscape

Review of organic aquaculture and its progress from a critical perspective

- Its wider benefits to society
- Future directions

Wider social and societal questions

- Lessons from agriculture (incl. not making the same mistakes)
- Challenge of feeding the world and organic aquaculture within it

JUVENILES

1. Subsidising of organic hatcheries of juvenile producers/farmers during a transition period
2. Species based differentiation – if organic juveniles, if available then requested
3. To OrAqua: Monitor development trends in availability of organic juveniles during 2 year
4. Working group of stakeholders/project partners across species

WELFARE

1. Definitions...
 - a. Species specific
 - b. Shared
 - c. Indicators
2. Carrying capacity looks better than stocking density
3. Regulations needs room for innovation and “out of the box”-thinking

SOCIETAL QUESTIONS

1. Aquaculture is not a niche market. It has an increasing importance in feeding the world.
2. Aquaculture regulations should better reflect the principles of organic agriculture, to empower producers of all sizes.
3. To develop the sector, we need to change attitudes of all value chain actors (including consumers) to support the economic viability of aquaculture producers.

EU – NON EU

1. Due recognition has to be paid to the very important role of value of small-scale production systems (smallholder farming/family farms) world-wide
2. This is not presently the case; rather regulations/imports favor large scale, global industries
3. This is important for global food security

FEED

1. Raw material
 - a. Remove barriers regarding different feed material (plant)
 - b. Prioritize marine ingredients
 - i. Trimmings
 - ii. Aquaculture organic / conventional?
2. Additives
 - a. Vitamins
 - b. Specific nutrients
 - c. Pigmentation, etc.
3. Important to monitor!

VETERINARY TREATMENTS

1. Anesthetic treatment shall be out of allopathic treatment limitation
2. There is a conflict between the VMP (Veterinary Medicine Products) “actual” and future regulation and the organic regulation:
 - a. When possible the substances of preference (art 25t a-b-c) shall be considered as feed raw material or additives
 - b. To find an easier way to authorize, when point not possible those substances according to the new VMP regulation (limited market)
3. Reconsider the setting of withdrawal period according to the VMP regulation

CONSUMER GROUP

1. Developing aquaculture further
Respond to differential consumer concerns in different countries, in particular among organic consumers, by informing them about aquaculture practices, and by taking their concerns truly seriously.
2. Recommendations for OrAqua
Map consumer preferences in greater depth, differentiating between countries, organic and non-organic consumers and subgroups, using quantitative as well as qualitative survey methods (participatory action research?)
3. OrAqua should contribute to identifying the bottlenecks to better availability, visibility and access to organic fish for consumers

UNDERSTANDING MARKETS

1. Lack of data on production and markets → database
2. High competition in global seafood sourcing → keep the regulation feasible
3. Market trends → impact on organic aquaculture (e.g. regional products)

PAST – PRESENT - FUTURE

1. Misbalance of invested resources.
10% field – 90% paper work...
2. Adaptation of principles to the aquaculture reality! Based on sustainability principles.
3. Association (supported by the OrAqua platform)
 - a. Organic aquaculture
 - b. Producers
 - c. Stakeholders
 - d. Certifiers
 - e. Administration
 - f. Etc...

IMPACT OF REGULATION

1. Need to move from practice based standards to performance based standards.
2. Identification of conflicts between performance based indicators (health, quality, environment)
3. OrAqua: Define indicators, monitoring methods, identification of conflicts...

ECONOMICS OF ORGANIC BASS AND BREAM AQUACULTURE

1. Higher cost – why?
Lower market demand, lower density, fries (future), feed price
2. Higher cost of feed, why?
Higher cost of raw materials (fish meal)
3. Higher FCR – lower efficiency feed, longer production cycle, (lower growth)
Indirect cost per kg (hotel cost)
 - a. Higher depreciation
 - b. Higher personal cost
4. What we need?
 - a. Market research/predictions
 - b. Other solutions for food raw material
 - i. Regular fish meals?
 - ii. Lower limits for marine ingredients

OrAqua First Stakeholder Event

FEEDBACK SHEET – DAY 1

38 RESPONSES

QUESTIONS:

What is an important issue that has not been addressed well so far and need to be considered tomorrow? Any other comments?

CONTENT ISSUES

BACKGROUND AND BASELINE

We are talking about very **complex issues**, very much different from land-based farms.

Definition of terms is needed to avoid misunderstanding.

Explain better **the process**.

Details about organic production in agriculture in aquaculture, evolution by species, by country (**development of aquaculture**).

Historical **evolution of organic agriculture** with analysis of bottlenecks and evolution and comparison with aquaculture.

What are the **lessons** (positive and negative ones) that one can draw from the organic movement in agriculture? Or are there none?

Link with **other quality schemes**, certification schemes, code of conducts concerning sustainability or how organic certification is considered in these frameworks.

Why producers go for organic? Is it economically interesting for them? Is there any statistical work about producers? (reasons, profit, years in business?)

Why is the **EU interested** in this (label etc), why is it not left to the market and its various actors?

Today, lack of **production data** (if they exist) – to take into account the existing sector before having a look at the future

Need to compare organic production with conventional production. We need to identify an **organic index**.

How may organic aquaculture affect the **trust and reputation of organics in general**? There are heated discussions on this in Norway.

Knowledge about organic product for **children**...

Nutritional value of fish food and fish

What is the role of organic aquaculture in providing seafood to a **growing world population** (lined to the question about performing to intensification, eg RAS)?

TODAY'S PRODUCTION AND MARKET CHALLENGES

Organic principles are endangered by nowadays "organic" aquaculture production

Organic principles are not met in standards (insufficient and in detail)

How to deal with **organic principles** when they conflict with each other? Is there any hierarchy?

As a representative of an organic consumer and producer association I feel that some of our concerns are not so well addressed: How does aquaculture reflect the **principles of organic production**, e.g. being based on living ecological systems and cycles, work with them and help sustain them, also in view of the ideal of recycling agriculture.

Clearer connection of organic aquaculture and **sustainability** – ecological/environmental, social and economic. Seemingly, some regulations for organic production rule out sustainable production.

Holistic view and **balance of criteria** is needed, site specifications are also important, open sea, currents, fiords, depth...

Perhaps **some species cannot be produced** in a way that satisfies **organic principles** at this time and that to continue to try to accommodate them in the EU-regulation is not appropriate.

Is "**be natural**" a valid concept for organic aquaculture?

Why **closed RAS** are non-authorized for organic aquaculture?

The importance of **welfare aspects** in relation to the species reared and the needs of farming (i.e. flow through, cages, extensive) and welfare issues during transport, stunning and killing.

What is **animal welfare** for fish and shrimps?

Study of **environmental impact**

No discussion on **ensuring biodiversity** by farming systems

How should the standards capture **negative environmental impacts** evident on a **landscape scale** (outside the farm boundary) – affecting provision of key environmental services?

Is **pollution** considered in the organic standards? What limits the organic farmers – do they have to refer to conventional farming limits? What about if in the same country (above all extra EU)? The government does not state any limits for content of pollutants?

Problems around the **start feed for the smolt**. Today we cannot find any pellet. Why?

The use of **trimming as feed source** has been presented in a much too negative light in the introductory summary. Positive and negative experiences and information should be collected from actors (feed industry, producers, etc.).

Fishmeal and oil coming from **non-organic aquaculture trimmings**.

Additives allowed in fish feeds (vitamins, minerals, etc)

Contamination of organic feed by **synthetic anti-oxidants**, need a maximum level in fish feed, not zero

Shrimp feed or 'ration', we should talk about feed like carnivores or 'ration' (??? – hard to read)

Is it possible to **clean the oil**?

Water quality (inside the fish farm)

What about the **quality of the water input** (proximity of a chemical factory, use of warm water of a nuclear power plant)

Heavy metals different between organic and non-organic. For salmon we have an issue. What about the other species?

Juvenile availability

EU regulations are too strict for organic production of **juveniles** and **feed formulations**. Under these rules I wonder in any hatchery or feed company will go for organic production. A question should be addressed to the EU.

Simultaneous production of **organic and non-organic juveniles**

By proposing the use only of FM/FO certified by 3rd party, we seem to assume/confess that the Common Fisheries Policy (after 20+ years) has grossly failed in its scope to ensure/enforce **sustainable sourcing**. Are we ready to do this?

3rd party certification only increases the cost of feed and discredits otherwise legal practices.

Constrains due to the regulation regarding **health status**

List of **veterinary treatments** that are permitted.

How to integrate **local economy** and **life cycle analysis**/water and carbon footprints in organic aquaculture?

One of the principles of organic production is that of **fair production** – in part referring to social issues. But social issues is/**appears to be reduced to cost and labour** ("consumer perception"). Othe key social issues need to be discussed. For example, the inclusiveness of small holders? How should this be addressed? This may have more to do with the **process of certification** than standard content.

Should **standards be driven** and pulled by 'supposed' consumer perspectives or by pushed by 'responsible and engaged' producers?

Market issues – market and consumer opinion, we talk about that but I think its important to discuss more about these aspects; market expectations for organic aquaculture, and how to boost the organic aquaculture market

Consumer point of view

Consumer point of view (perception, conviction)

The needs of **consumer** (final consumer). Why do we think that consumer wants if he is searching for organic fish? More information on labelling and clear information to help consumer choice

More information about **labelling of customers**

I tried to get the floor to address the **consumer survey presented** by Alfred. We would need more details on that. Who are the respondents: organic consumers or in general? How many respondents and from which countries? I come from Norway and I am sure that the study do not reflect the perceptions of organic consumers in Norway. I am uncertain how much weight we can put on the results.

Is organic food production becoming a niche market for **consumers** with **unrealistic requirements** on food production (rather than good for nature & fish)? Based on emotions, not a knowledge base.

Economic considerations of the organic aquaculture sector

Price of organic fish

How do the organic community **profile** itself among other eco-certification initiatives, e.g., the ASC? (**Branding**)

CONSEQUENCES OF TODAY'S REGULATION ON A BROADER SCALE

In general these regulations demands (farmers) to respect methods **without any obligation of results**; no requirement on the quality of fish, no expectation about life cycle, and no study on impact on the environment

Environmental impact of EU organic regulations

Quality (product) impacts of EU organic regulations

We discussed higher costs, offsets by higher prices (premium) as the basic economics – but we miss something. Shifting to organic has **wider benefit for the society**, whether they eat the products or not. It is a general improvement in the environment. But the farmer cannot capture this benefit so it is the place of policies to help. Here, we are talking about uncertainties that recognize this wider environmental benefit of organics (or other sustainable practices). Without these, the industry will suffer and not grow to its socially desirable size. I am talking about **subsidies, credits, favourable taxes** that penalize non-sustainable production, etc. Is this whole area part of the discussion?

FUTURE CHANGES AND CHALLENGES

How to balance the need to make organic aquaculture **economically feasible**, while at the same time ensuring that it evolves out of **organic principles** of thinking?

Another issue is how to **scale up** the standards, verification process and ultimately impact of organic certification beyond farms to “areas”, “regions” or “**landscapes**”.

The **conflicts with other regulations** priorities to the aquaculture activity: Fish health directive (2006/88), veterinary medicine rules, water framework directive, and so on.

I suggest that the EU spend its money on **higher priority issues** than organic aquaculture. Organic is only of interest for a small group of consumers. The products are not per definition better. The costs are per definition higher and the normal producers almost as good. To a lot of costs and administration for only a very small benefit.

Do not put more standards, we need **less complexity**.

The reduction of the existing regulation is too general – a necessity to speak about a **regulation per group of species** (f.i., marine fishes, freshwater species, shell fish, algae) in order to have a more adapted regulation that will allow a **better communication**.

The actual standards are willing to put in the same bag **all species**: from shrimp to salmon! The standards must go in **more details – species by species**, the same EU did for pigs, chicken... It would help farmers, control bodies to have more detailed and practical standards. Why not totally rewrite 710/2009?! Start with a white page. It would be easier...

More focus on **species specificity** (difference between species)

OrAqua should make clear(er) that it is also dealing with **aquaculture outside EU**.

Europe has (nearly) no shrimp production. Some 99% are imported. Shrimp is from value by far the biggest seafood item in the world. Organic EU-rules should/must reflect the practicability of organic shrimp producers **beyond EU-borders** towards demand in EU for organic shrimp!

As producers and companies are present in EU and **non-EU countries**, how should they deal with this situation when countries do **declare their production** organic on non-EU countries?

It is not completely clear to me if we are commenting on a proposed regulation or if we are devising a **total new regulation**?

Suggestions on how to change or implement **current regulations**.

Presentation/discussion on **EGTOP** and draft revised regulation

There is the need to elaborate, evaluate and propose alternatives – where needed – on the EC draft that is circulated based on the evaluation from the **EGTOP** committee concerning the propositions on the amendments to the Regulation 889/07

Is the **EU aware** of the potentially negative impacts (reduction in EU organic aquaculture production) if the legislation proposed to come into effect in January 2015 is not amended?

How/who has informed the development of the current EU organic legislation to lead to a situation where there are **requirements which are either impractical/not possible** at this stage in the development of organic aquaculture? How do we prevent this from happening again?

Sustainable fisheries are supposed to be any fishery that complies to common **international standards** and guidelines (CFP, FAO/CCRF).

Solutions and actions in order to help consumers during spending for **customer satisfaction**.

For some issues organic aquaculture should act as a challenge/**test for innovation** to transfer in a later time to the whole aquaculture sector.

PROCEDURAL ISSUES

Thanks for the effort and organisation

A good day. Well organised.

Well organised

Good moderation

I like the way the seminar is organised and working (the groups, time management).

Group discussions very interesting and interactive

Hotel beautiful, university beautiful – but a bit unpractical with non-central location of hotel and long transport routes (airport – hotel, hotel – university – hotel, people in and out of bus), which were time consuming, stealing time from meeting time. Better to have a hotel with conference facilities.

Stefan Bergleiter is speaker and certifier at Naturland – does not that create a conflict of interest?

More focus on specific possibilities for “improvement”. Questions were maybe too open/large. Could be broken down in smaller or more specific questions, with alternatives for changes that could improve the regulation.

Have less than 4 groups in one room for discussion

When you consult stakeholders, then you should be willing to go into the “listening mode”, rather than trying to convince the stakeholders that they are wrong or have totally misunderstood the issues (written because of one experience in group discussion)!

In the group discussions most moderators of the table were presenting their personal meaning and are discussing instead of moderating

My input to the group discussion was not reported in the plenary. I wonder if it will be brought further in the process

It would be good if the moderator seeks to give different people the floor in the plenary. The same people were given the opportunity several times, whereas others did not get the floor.

Some people get too often the word in the discussion

Is it possible to have the first conclusions of this meeting to give to the EU commission to support member states position regarding changes in the regulation that should be voted at the end of November?

OrAqua First Stakeholder Event

FEEDBACK SHEET – DAY 2

33 RESPONSES

ISSUE no. 1

Suggestions for OrAqua to include in its work in the years ahead:

REGARDING ORAQUA

Be more explicit on project limitations

Clarify if OrAqua is working for a growth of the world organic sector or of the European organic sector (ask to the EC who is paying the OrAqua-project)

Important topic: All fish are good and healthy, organic is only an opportunity and different offer for consumers. Organic fish is not in fight with conventional ones, this is very important.

Not only use the scientific publications for the review, which should not only be scientific but also technical. Much information is practical and not published in high marked publications.

Many of the market issues cannot be addressed by a project like this

Focus on those areas that can be influenced by a clear vision, objectives and legislation

To take into the reality of the sector today

Facilitate broader coordination amongst the various organic aquaculture projects/processes currently happening, especially within: a) OrAqua, b) IFOAM EU organic regulation position, c) IFOAM aquaculture forum, and d) IFOAM global standard on aquaculture

Keeping a link with the EGTOP and the Commission

CONTENT ISSUES

Revisiting in details the implementation issues of the organic principles to organic aquaculture, taking into consideration the specificities of aquatic/marine productions and the realities of aquaculture.

Alignment of EU and IFOAM principles – still some variation

Focus on common objectives. Meet the principles of organic aquaculture. Allow for and invite flexibility in practices as long as objectives are achieved.

How can be assumed that the basic organic principles are not (part by part) lost in the developing process due to pressure of lobby groups?

Evaluate the possibility to use organic aquaculture as a challenge, a field trial for new technologies for sustainable aquaculture

More and more that the view on production is only a technical one, and not from natural systems

Analyse deeper the concurrent EU regulations affecting aquaculture activities (WFD, MSFD, VMS rules, AHL, welfare, hygiene,...)

Check new EU regulations

Propose a new organic EU regulation, plus specific and completed

Possible barriers due to general EU regulations, e.g., regulations in relation to; a) feed sources, treatment, b) sustainable fishery, c) environmental issues, and d) medication

Collect information/facts on all regarding organic production: a) amount of different raw materials, b) amount of fish produced and different species, c) in which countries – also outside EU, d) prices on fish and supermarket demands, e) comparison to organic live stock as chicken/pig, and f) collect all regulation, communication with the Commission

Clarify major categories for thematic discussions, eg., marine vs other systems, carnivores vs non-carnivores species, etc.

Find and define the most accurate indicators for performance/quality monitoring; health, product, environment

Focus on impact. More from practice based criteria – performance based.

Need to propose performance indicators and the interactions between them in order for the Commission to integrate into the next proposal for the regulation

Consider a set of continuous improvements for aspects that are difficult or complex

Global issues

Facilitate and ultimately request greater responsibility by value chain actors to support producers

Focus on markets and trends. Producers and farmers need to know market development and data base. Organic is not only an idea – more contact with reality and producer problems

Marketing of organic aquaculture. Increase consumer awareness of what it means, also in relation to other eco-certification program.

Focus on economic aspects to improve producer participation

Include economic evaluation of organic farming standards (Mediterranean organic aquaculture will collapse at present conditions)

More about seaweed and algae

COMMUNICATION AND NETWORKING

Close communication with EU group on organic production to help to elaborate new regulation for organic aquaculture having in mind the “real” situation and needs of producers.

Close communication with producers to understand their needs, problems and opinions

Close communication with research groups using feeds/medicines/welfare techniques/rearing techniques/analysing final product (qualities, quantities), being applied or to be applied by producers in organic aquaculture

PROCESS DESIGN OF EVENT

More documents – list of documents

Allow sufficient time for topics to be given adequate coverage – some tendencies to cover too many topics suggests/give the impression of superficial concern and discourage involvement

Work groups per group of species, to be able to make some precise suggestions of modification of the regulation

New group dynamics, like “**xxxx** dreaming” in order to improve on guarantee the project success

Thanks for a great experience!

It was quite well done in this meeting for my feeling

Give/show more respect to stakeholder input during meeting. Acknowledgement was very poor. Keep us in board (?)

ISSUE no. 2

Suggestions for strengthening the Stakeholder Platform:

I think your stakeholder engagement is good. There have been some representatives in this meeting expressing about ‘consumer’ representation. However, there are already NGO’s in the group. My organisation, the Soil Association, would count as an NGO as we have 16000 ordinary members of the public in our organisation.

Engage with more producers, representatives of a range of scales and species.

More economic – producers participants

A little more producers and representation from the consumers/distributors

To invite shellfish and seaweed producers or producer association

Include more fish farmers and commercialisation subjects

More representation of the professional sector (feed, manufacturers, producers, and fish manufacturers)

Invite EU retailers (Coop, Rewe, Leclerc, Edeka, Carrefour,...)

Important to have consumer groups or retailers with us

Invite more participants from consumer groups and other under-represented stakeholder groups

Consumer perceptions and increased participation

Consumer representation

Make sure that the “civil society” is well represented (consumers, NGOs, local groups...) – although it is difficult to achieve!!!

More governance participants to improve public communication and low improvement

Increase the presence of governance, local authorities and commission; to increase the exchange on regulations and implementation of rules

Enhance the participation of people from administration, decision makers.

Listen to EU-importers, importing EU-certified organic seafood from third countries (China, Viet Nam, Bangladesh)

Direct contact with trade sectors by country to discuss/involve in project, eg., UK – three major feed manufacturing companies, and trade associations for producers; Scottish Salmon Producer Organisation, British Trout Association, etc (will be same in rest of EU)

Interaction with other relevant platforms on aquaculture such as the Aquaculture Multi-stakeholder platform of the CAQ-GFCM in which administration and decision makers are involved

Make participation to the Stakeholder Platform open to any interested stakeholder. Only a few may be selected to participate in the ‘in-person’ meetings, but you can find a way to engage all the others on all the topics by e-mail input. If you claim to develop political recommendations that represent the views of the organic aquaculture stakeholders, you should not restrict the possibility to input the process of recommendation elaboration. The more input you get, the better. It is your job to find methodologies that enable you to deal with such input.

More interaction between the platform participant and the project partners

Create a forum for discussion

Working groups through “internet forum” should be set.

Use platform participants for opinions on specific issues (stakeholder panel consultations)

I came as a platform participant invited by some partners of the project. I would like to continue in contact and I think that the web page is enough to continue being informed of the advancements of the project and platform.

If you consider establishing a new association for organic aquaculture stakeholders, then it would be useful to consider establishing that within the IFOAM

Give stakeholders access to material/facts before stakeholder events, to ensure discussions are based on the same knowledge

Ensure availability of background information prior to the event, eg., via OrAqua website and posting links to related material

Send documents prior to the meeting so that people are ready – increases efficiency of the meeting

More technical and scientific information

Database on real organic market and monitoring of all countries

To be warned in advance of the event so that the representatives can consult with their organisation

I would like to be told in advance the program and the place where the next event will be

OrAqua First Stakeholder Event

EVALUATION

*Please give your evaluation of this Stakeholder Event according to the following six criteria on a scale 1 to 5 where **1 =Poor** and **5= Excellent**. Please circle one number.*

Number of respondents: 33 persons

The Stakeholder Event:

	1	2	3	4	5	AVERAGE	
1. Improved my knowledge about the current regulatory framework	1	2	3	4	5	3,25	(7 gave grade 1 and 2; 2 gave grade 5)
2. Clearly identified the challenges for organic aquaculture	1	2	3	4	5	3,6	(3 gave grade 1 and 2; 3 gave grade 5)
3. Enabled me to suggest improvements to EU regulatory framework	1	2	3	4	5	3,4	(5 gave grade 1 and 2; 2 gave grade 5)

In the Stakeholder Event

4.level of participation by stakeholders was	1	2	3	4	5	4,1	(1 gave grade 2; 9 gave grade 5)
5.information exchange was	1	2	3	4	5	3,8	(1 gave grade 1; 4 gave grade 5)
6.overall organization was	1	2	3	4	5	4,2	(none gave grade 1 or 2; 9 gave grade 5)

Please write in own words your response to following questions:

7. What did you like most about the Event?

Keywords:

participation,
open and dynamic discussions,
involvement/enthusiasm,
cultural group interaction/wide range of participants/variety/diversity,
possibility to meet/opportunities to discuss/café-format,
organization/logistics/well planned,
actionable suggestions,
facilitation/good instructions/process design,
informal talks in the breaks,
excellent presentations,
timing of the event

8. What did you like least about the Event?

Keywords:

more background info/clearer with objectives/preparations beforehand,
no bibliography,
too many issues at the table at the same time/too general
lack of evidence of some research statements/figures and data
lack of consumer perspectives/stakeholders missing,
time constrains/more time for debate in plenary,
some people seems to be above the rest/credibility,
some people get the glory/hard to “get the floor”,
some moderated group discussions not open enough,
some people say too much,
sometimes too rigid facilitation,
poor food and coffee breaks/dinner day 2,
hotel in the old town/location – too far from Istanbul,
any place in Europe would have been better than Istanbul,
meet more time

9. Any other information:

- An overall quite interesting experience
- Good to have work with groups
- Thank you for nice facilitation and all arrangements. It was a great experience
- Thank you!
- Be more reflexive, in particular about value issues!

- We need minutes (or on the web site) of this meeting

- Hope that participation is not only on punctual basis but continuous
- Need to keep the transparency level very high
- We really need an inclusive follow up of this event

- Rooms for discussion at day 1 was not good (to noisy)

- I would like to be told in advance the program and the place where the next event will be held
- Avoid first two weeks of July for the next meeting, because it will collide with the IIFET-meeting in Aberdeen.
- Deserve more time – two full days!