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Latest News from OrAqua

Welcome to the third OrAqua Newsletter

Reports from the second stakeholder event

Well-attended and fruitful second stakeholder event

By Dr. Åsa Maria Espmark, Nofima, coordinator of OrAqua

Welcome to the third newsletter from OrAqua. Since the last newsletter, OrAqua has organised the second stakeholder event, which took place 19th and 20th of October, back to back with the European Aquaculture Society conference in Rotterdam. During this platform meeting, we were happy to gather a mix of 68 stakeholders.

As the coordinator of OrAqua, I will use the opportunity to thank everybody that contributed to the event, either as organisers or as participants.

In the second stakeholder event, we wanted each individual stakeholder to be able to give their views and recommendations to the OrAqua project and to the updated organic regulations. We strived to achieve this by e.g. organising café-dialogues and a panel debate. Another very important tool for us was the MCDA (Multi Criteria Decision Analysis) survey, where the stakeholders' experiences and perceptions on key issues for the economic development of organic aquaculture was in focus. In the survey, the stakeholders were individually asked to give preferences, either on paper or on a given web-portal, to multiple alternative issues. Many of the participants found the

survey interesting and challenging, while some found it a little complicated. Some of the participants wondered why we spent time at the event to carry through this survey, when we instead could have sent it to everybody as homework. To this, I would like to say that in the project group we have discussed a lot how to perform the MCDA, amongst others when was the best timing for carrying it through. Since the MCDA is a very important tool for the project in fulfilling the goals, we concluded that in order to collect as much information as possible, the best way was to use time at the event to perform the survey.

The interpretation of the results from MCDA survey will be followed up at the third and last event, which will take place during the summer 2016. The place for this event is not yet de-



cided, but we have already started to plan an interesting event with different activities and discussions.

The focus in the last event will be the recommendations to the renewed organic regulations. At the event, the OrAqua project will present a draft of recommendations, based on the two completed scientific reviews inside the project (one review of production issues and one of socioeconomic issues), stakeholders' views and confidence (based on the MCDA, completed and further discussions), and basic organic principles.

OrAqua project is entering the last year in 2016. In addition to concluding the recommendations for the regulations, we also recognise the cru-

cial value of the stakeholder platform.

Together with the evolution of the regulations, there will be a need for continuous discussions and debate, and the stakeholder platform will be perfect for this task. We are confident that there will be a way that we can continue the work also after the end of the project.

At last, we would like to invite all to follow OrAqua project at www.oraqua.eu, where you will find more information about the project. We are also happy to receive comments and contributions from all interested, so please do not hesitate to contact the project for any relevant organic issues.

Five views at Organic Aquaculture

We asked five of the stakeholders what they hope will be the long term outcome of the second stakeholder event



*Johan Kridih,
Organic Food Company, Norway:*

“I work with food development and food culture, and sustainable fish production is really important for the future. The OrAqua project is interesting in the way that it approaches all aspects of the production. I hope the final outcome of the project will be, that we achieve an adjustment of the regulations, so we can have a truly sustainable production.”



Thomas Roland, COOP, Denmark:

“I come from the Danish consumer-coop and supermarket COOP Denmark. We are very interested in how we can help develop the market for organic fish and fisheries. It is a major challenge for us to break through in that market, because consumers are only reluctantly taking organic fish into their daily consumer habits. So we want to understand what the dis-

cussions are at a European level and hopefully also be able to influence the European regulations so we can help develop that market. It is difficult to explain consumers the benefit of organic fish production. First of all they have to understand the difference between wild caught fish and farmed fish. Then secondly, they have to understand that there is also a difference between organic, ASC and other farmed fish that claim to be in some sense sustainable. I hope the outcome of this meeting will be that the EU regulations will be revised in a way that would clarify some of the obstacles that exist today for developing the European organic fishmarket even further. We do see some challenges, but there is also a way ahead, because the market is pretty low at the moment.”



Olivier Catrou, INAO, France:

“I am from the National Institute of Origin and Quality in France, head of the department of organic farming. The aquaculture production is developing in France and we have to help the sector to improve the practices, help the control bodies to control properly etc. Our main concern is the harmonization of controls within Europe. It is difficult because we need to harmonize, which is why we need to exchange experiences, but at the same time we must bear in mind, that organic farming is also local production with certain specificities, so we need to keep some kind of flexibility, but the main issue is to harmonize within Europe.” >





*Ivar Warrer Hansen,
Interaqua, Ireland:*

“I am particularly interested in the organic salmon which is the main aquacultural produce in Ireland. We have a little problem, not just in Ireland but in all EU countries, and that is that the water framework directive will probably limit further development of the normal fresh water fish farms such as the flow-through fish farms, meaning that there is going to be a problem with the supply of juveniles for the sea cages. As I am involved also with recirculation systems, I am trying to see if we can, in the future, use the juvenile fish as acceptable for the organic fish farming of the adults,

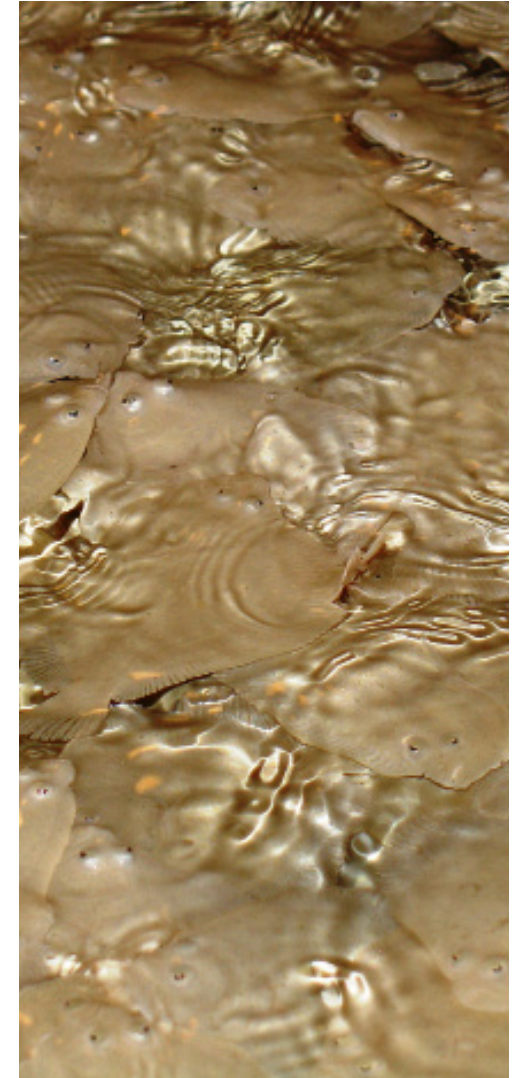


the marketised fish, which I hope, because recirculation is sustainable and would add sustainability to the organic fish farming. This meeting will come with recommendations to the organic authorities, and I hope they see some benefits of what I am proposing, as it is only a short period of the whole life cycle. I hope there will be further discussion on the use of recirculation systems.”



Lars Hällbom, KRAV, Sweden:

“I am here to learn. There are lot of practical problems with aquaculture in Sweden and I want to hear which suggested solutions exist. So my main focus is the discussion of the technical issues.”



Turbot. Photo: Wout Abbink, Institute for Marine Resources & Ecosystem Studies, Wageningen University

Output and feedback from the second stakeholder event

By Alfred Jokumsen, DTU Aqua, Denmark

The overall aim of the second stakeholder meeting in Rotterdam 18th – 19th October 2015 was to get stakeholders opinion on relevance and measurability of the current EU regulations for organic aquaculture as well as their experience on organic aquaculture production and economics.

At the meeting stakeholders covered the whole value chain from primary producers (farmers, feed producers etc.) to the consumers.

During the first 18 Months of the OrAqua project an extensive review study on state of the art organic aquaculture has been performed on production related issues, including nutrition, welfare, health, veterinary treatments, biosecurity, productions systems, environmental impacts and interactions. The review studies also included consumer aspects, socio-economy and institutional frameworks.

At the start of the meeting the stakeholders were informed about the progress of the project in terms of extracted communication material based on an analysis of the review studies. Based on this information a presentation was given, taking into account the feed-back from the 1st Stakeholder event in Istanbul, Turkey 11th-12th October 2014. This was done to provide the stakeholders with an extract and synthesis on key issues related to the current regulation on organic aquaculture. The presentation included main conclusions and identified challenges and research gaps as common ground and starting point for the discussions and issues to be addressed at the stakeholder event to underpin future growth of the European aquaculture sector.

Several issues were addressed. The following key issues could be extracted:



The second OrAqua stakeholder event was held in Rotterdam that houses a large indoor food market. Photo: Camilla Mathiesen, ICROFS



- Regulations and standards seem not in line with practical and economic realities, necessitating amendments extending deadlines. This means low predictability and uncertainty, making the regulations a “moving target”; and creates constraints
- Lack of clarity in the regulation has resulted in differences in interpretation and practice and hence variations in national implementation

- Uncertainty about production rules, control provisions and exception deadlines create a lack of trust and investments; i.e. impeding the transition to organic production
- Highly competitive rivalry from organic aquaculture products imported to the EU due to lower production costs compared to higher costs of organic production in EU due to the current EU regulation for organic aquaculture
- Transparent, proactive communication strategy on organic aquaculture is needed
- Assessment of use of energy (carbon foot print) in the various production systems, including recirculation technologies (water (re)use)
- Sourcing of organic juveniles is urgently challenging due to the deadline of 1st January 2016 of 100 % organic juveniles; i.e. specific organic rules to manage the life cycle stage between hatching and the weaning of juveniles for specific fresh water and marine species, including production of phyto- and zooplankton, in order to be able to distinguish between organic and non-organic hatcheries
- Adequate stocking densities of fish sp. should be considered taking into account the co-variation with water quality and a multitude of operational behavioral, physiological and morphological welfare indicators as well as management practices
- Sourcing of feed ingredients – Diversifying the raw material basket; i.e. increase the adequate options of ingredients to better match amino acid profiles and covering the dietary needs of other essential nutrients for the full organic production cycle, i.e. brood stock, fry and for on-growing. Further taking into account compliance with the organic principles of fish health and welfare and environmental sustainability
- Lack of statistics and information on national implementation makes it difficult to identify bottlenecks related to the rules, procedures and control measures, hence hard to make corrective action to improve the management and control system



Conflicting approaches among stakeholders were anticipated to the various issues addressed. However, to structure the feedback of stakeholders a preliminary survey among participants using a so-called Multi Criteria Decision Analysis (MCDA) was conducted.

The MCDA has shown to be an efficient tool to choose the best alternative from a set of alternatives to balance stakeholder feed-back and interests.

Extracting main messages from the survey, it is the ambition that the voice of stakeholders will be heard and taken into account in the messages that the OrAqua project will bring forward to the decision makers in EU to suggest improvements for the current EU regulatory framework for organic aquaculture.

Multistakeholders' experience of key issues for the economic development of organic aquaculture

By Dr. Giuseppe Limbo, COISPA

To assess the various stakeholders knowledge, experience and perception on key issues for the economic development of organic aquaculture, a survey on the current EU regulatory framework for the organic aquaculture was carried out.

Conflicting approaches to the wide range of multidisciplinary and complex organic farming issues may challenge stakeholders having different backgrounds and knowledge and maybe conflicting objectives and preferences of specific farming issues (feed, welfare, environment, economic, etc.), related to the EU regulation. These challenging issues were addressed using the Multi Criteria Decision Analysis (MCDA) as a tool to facilitate informed decisions of choices among alternatives and hence to balance conflicting approaches to the specific organic farming issues.

Typically, a unique optimal solution for such alternatives does not exist, and it is necessary to use stakeholder's preferences to differentiate between solutions. Indeed, the information from the first stakeholder event, held in Istanbul, together with the results of the scientific

literature review carried out so far, have been used to build the methodological basis of the survey carried out at the stakeholder meeting.

MCDA technique facilitates the in depth analysis of important issues/goals (e.g. feed, environment, etc.), breaking these into smaller components for evaluating interests/alternatives (e.g. protein source, fat source, amino acid profile, fatty acid profile, feed utilization, growth rate, discharge of nitrogen and phosphorus, etc.) and finally integrating each component according to a process of ranking, weighting and calculating a score.

As in the "real world" situations, solutions to alternatives are reached as compromise solutions, resulting from trade-offs between various (sometime) conflicting objectives of the stakeholders and decision makers, through negotiations to reach a consensus. This involves seeking "optimal solutions" to multiple alternatives, such as prioritising between fish health/welfare and farm economics/competitiveness, etc.

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MULTI CRITERIA DECISION ANALYSIS (MCDA)

Whether in our daily lives or in professional settings, there are typically multiple conflicting criteria that need to be evaluated in making decisions. Multi Criteria Decision Analysis (MCDA) is a discipline of operations research that explicitly considers multiple criteria in decision-making environments. There are several techniques belonging to the MCDA, among which the Analytical Hierarchy Process (AHP).

The AHP is a popular technique for analysing and supporting decisions in which multiple and competing objectives are involved and multiple alternatives are available. It is based on three principles: decomposition, comparative judgment and synthesis of priorities.

In the AHP, the first step is that a complex decision problem is decomposed into simpler decision problems to form a decision hierarchy. The advantage to decompose the decision problem into a hierarchy is consisting in getting more easily comprehended sub-problems, each of one can be analysed independently. When developing a hierarchy, the top level is the ultimate goal of the decision. The hierarchy decreases from the general to the more specific, until a level of attributes is reached. Each level must be linked to the next higher level. Once the decomposition is completed, cardinal rankings for objectives and alternatives are required. This is done by using pairwise comparisons which reduce the complexity of decision making since two components are considered at a time. The final step is to combine the relative weights of the levels obtained in the previous step to produce composite weights. This is done by means of a sequence of multiplications of the matrices of relative weights at each level of the hierarchy.

AHP converts the human expert judgment into numerical values that can be processed allowing diverse and often incommensurable elements to be compared to one another in a rational and consistent way.

All the above should be balanced within the framework of the organic principles. Participants to the survey, by connecting to a web-based platform, were requested to answer anonymously to a questionnaire with a number of closed questions concerning the following eighteen subject areas:

1. Institutional framework
2. Consumer perception
3. Environmental interactions
4. Fish health and welfare
5. Control provision
6. Production rules
7. Legislative framework
8. Production systems
9. Product quality
10. Product ecological quality
11. Energy use
12. Recycling
13. Environmental impact
14. Quality of water
15. Quality of feed
16. Quality of the rearing environment
17. Physiological condition
18. Husbandry practices.

A glossary of the terms used in the survey was made available, in order to ensure an homogeneous interpretation/ understanding of the questions among all the participants to the survey. In addition, interested parties had the possibility to submit free contributions by answering to an open question and/or sending an e-mail to a dedicated mailbox. A total of 65 stakeholders took part in the survey.

The survey participation of consumers,

retailers, researchers, organic farmers together with experts from the organic certification bodies, the aquaculture associations, the environmental NGOs, the feed industry and the Public Institutions provided a useful feedback on how to improve the European regulation of organic aquaculture.

The overall aim of the OrAqua project is to provide recommendations for the review of the EU rules for organic aqua-

culture. Such recommendations will be based on the principles of the excellence of the technical/scientific knowledge and of the transparency of data, methods and assumptions made, but will also rely on the results of the survey carried out.

What was presented on the flipcharts is summarized on the following pages, along with how the different groups labeled themselves when finding a shared focus.



Press photo: Dansk Akvakultur

Outcome of the dialogues on key challenges for organic aquaculture

By Magnus Ljung,
Swedish University of Agricultural
Sciences

Similar to the first event in Istanbul in 2014, the guiding principles when organizing and facilitating the event in Rotterdam was 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 platform meeting, and d) document the different inputs made by the participant so that this material could be used by the OrAqua-project. Consequently, the process design mixed presentations, dialogues in small groups, plenary discussions and a panel debate.

Program and participants

The program was divided into six parts: 1) After a short welcome address the outcomes of the scientific review was presented, and directly after this overview 2) the participants answered the MCDA-survey. 3) The

first day continued with so called café-dialogues where the participants, in self-organized groups, were able to discuss key challenges for organic aquaculture. The day ended by 4) a panel discussion where representatives from different stakeholder groups were given the opportunity to reflect upon how to get a real breakthrough in organic aquaculture. 5) On day 2, the first part was a round table discussion where the participants discussed implementation challenges in relation to the EU regulatory framework. Finally, the last part of the program 6) elaborated issues related to stakeholder participation and outreach of the OrAqua project.

At the event in Rotterdam there were 41 stakeholder participants and 27 OrAqua project partners. In total 68 participants. The participants represented most perspectives, from Aquaculture businesses to Organic Associations and NGOs, as well as different production systems within the aquaculture sector. Nevertheless, voices were raised that consumer organizations and retailer organizations was

not represented enough at the meeting, as well as the EU-level. Although efforts had been made to increase the amount of participants from these stakeholder groups, we faced the same problem as on the first meeting. Some stakeholders at the meeting offered to support the project in getting in contact with specific representatives, which the project management board is very thankful for.

Outcome of the Café Dialogues on key challenges for Organic Aqua-culture

The café dialogues focused on five themes where specific challenges have been recognized as of high importance for the future of organic aquaculture. These had been identified by both the scientific review as well as the inputs made by stakeholders. The themes were:

- a) Organic Control System
- b) Sourcing of dietary ingredients
- c) Farming systems in organic aquaculture
- d) Origin of the aquaculture animals
- e) Economic issues and consequences

Participants choose themselves which theme they wanted to discuss in more detail. Each group had a facilitator and a reporter, who documented the discussion and made a presentation to the plenary. The opening question in the groups was along the line: 'What are the key challenges within the topic of X (f.i., sourcing of juveniles)?', From this general question each group were encouraged to raise specific sub questions

The results of the discussions were documented in recording templates. The outcome of the discussions and the main messages, on all five themes, were presented and discussed at a plenary session directly after the dialogue session.

After the event the recordings were compiled and the outcome discussed within the OrAqua project. Some important messages and suggestions of measures from the stakeholders are summarized in the boxes on the following page:

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ORGANIC CONTROL SYSTEMS

1. Lack of clarity of regulations:
 - a. Misinterpretation
 - b. Lack of rules
 - c. No clear responsibilities; CB, AB, COM, CA
2. Harmonisation vs. Flexibility, that is control rules or production rules (transparency)
3. Bureaucracy – consequences for organic operators and control bodies
4. Cost of certification
 - a. Too high for (small) operators
 - b. Too low for control bodies
5. Support for consultancy services
6. Audit vs. “Police” control
7. Training for operators and control actors

FARMING SYSTEMS IN ORGANIC AQUACULTURE

1. Relationship between water quality, stocking density and carrying capacity
2. Welfare and animal needs
3. Techniques such as RAS, water reuse level and IMTA
4. Certification and the challenge of differentiating between organic and non-organic
5. Environmental items, Life Cycle Assessment and sustainability

ORIGIN OF AQUACULTURE ANIMALS

1. Uncertainty on the possibility of introducing new genetic material into limited breeding programmes
2. Guidelines required for juvenile production in relation to live feeds
3. Insufficient juvenile market information/requirement
4. Brood stock + juvenile health issues in relation to allopathic treatments
5. Parallel production issues – organic + conventional.

SOURCING OF DIETARY INGREDIENTS

1. Economic sustainability depends from price and performance of feed.
2. Different opinions about trimmings:
 - a. Only from organic aquaculture
 - b. All trimmings are better than whole fish
3. Alternative proteins:
 - a. PAP – LAP (organic)
 - b. Clean oil
 - c. Sustainable fisheries
4. Free 3-5-more % not organic.
5. High inclusion of trimmings – increasing HM PCB
6. Poor quality of FM – increasing P – NH₃
7. Concentrate vegetable protein in conventional way.

ECONOMIC ISSUES AND CONSEQUENCES

1. Identify unique selling points (USP's)
2. Story-telling, e.g., local production, extensive production
3. Consumer price +50% - is there a market?
4. Discrimination/cannibalization – conventional aquaculture and wild catch
5. Packaging and presentation
6. Niche markets, e.g., baby food
7. Profitability at farm level

Evaluating the Stakeholder Event in Rotterdam

At the end of the first day the participants were asked to answer a feedback sheet, to give some reflections on the activities and input for the next day as well as the OrAqua project. In general the participants were satisfied with the first day. The second day had less time, why a sense of not having enough time to discuss the issues emerged. Participants' views were collected at the end of the event through an evaluation form. A comment made by several participants were that an event like this needs three days for participants to really work through the complexity of the issues.

The general feeling at the end of the event was a bit of frustration, although positive of having participated. Improvements were especially suggested in making additional efforts to get more balanced stakeholder groups come to the last event (especially consumer interests and retailers), and too increase time for informal (group) discussions. For the OrAqua-project the many and very concrete inputs

given are invaluable. What we learned from a process perspective at this stakeholder event will also be integrated in the upcoming planning process for the last and final event. Below we give some short comments on the different activities based on the feedback and evaluation from the participants.

The update on the progress of OrAqua and the outcomes of the scientific review was highly appreciated. The vast majority thought it was a (very) good and efficient presentation and a necessary overview at the beginning of the meeting. Some stakeholders had hoped for more progress since the first event in Istanbul one year before, but one can also say that what was identified as challenges in Istanbul have been confirmed by the scientific review.

One important purpose of this stakeholder event was to carry through a MCDA-survey. This is a quite challenging exercise in a meeting like this, in the sense that it focuses on your own attitudes/values and priorities in relation to organic aquaculture instead

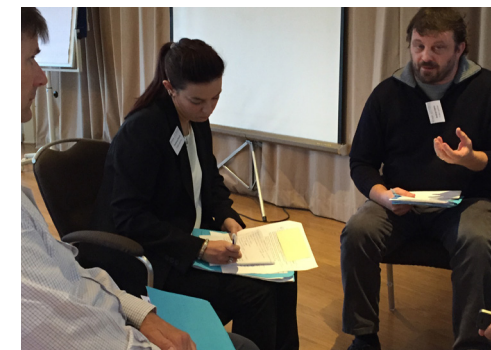
of focusing on the dialogue between stakeholders. Looking at the feedback sheets it is obvious that many participants thought it was worthwhile, while others were more curious about the final outcome of the survey. Some were more critical, and suggested that the survey should have been done beforehand; the main reason being that they wanted to spend more time discussing burning issues.

The café dialogue was appreciated, but a general comment was that more time was needed. It became a “teaser” as one put it. People were engaged and it was valuable to exchange views. We believe that most of the criticism could be interpreted positively, that is, the participants wanted more time to meet and discuss common issues. This was also reflected in the evaluation at the end of the event.

At the end of the first day, the panel, involving nine people, seems to have succeeded. Most of the participants were satisfied with the session, and thought it was an interesting discussion. Many good points were made.

What some lacked was time to discuss the statements and comments made by the panel participants, something which could have been managed by a decreased number of panel members to start with, and by giving more space for the plenary to get involved.

The second day's round table discussions on implementation challenges was an opportunity to continue the discussions started on day 1, but this time narrowing down the focus a bit. The group discussions were intense and generated important input for the next and final step of the OrAqua project (related to policy recommendations).



Key Milestone reached in the OrAqua project

By Jean-Paul Blancheton, Ifremer, France, WP leader in OrAqua

The OrAqua project reached a key milestone with the second stakeholder meeting in Rotterdam last October: during this meeting, the bio-technic and socio-economic scientific information on which the project will base its propositions for the new EU organic regulation on aquaculture was presented to the stakeholders. The meeting was organised in such a way that it maximised the possibilities for the stakeholders to react on the information presented and to provide their feed-backs to the project team.

This scientific information has also to be confronted to the organic principles, on which any organic labelling is based, and to the public perception. For this, a MCDA survey was organized and was implemented during the meeting with all the stakeholders. This online tool was also used outside of the platform stakeholder group, in order to reach a larger number of participants and to get a broader picture of the public perception.

All the information collected during the last platform meeting will be posted on the web site.

We have just entered the last year of the project. All the information that will be used to build the project proposal for a new set of organic regulations, more deeply rooted in science, is now available. It will be reworked in order to make it easily understandable, translated in several languages and widely disseminated.

I do think that it is the right moment, during the next six months, for extensive exchanges between the project core group and all those who are interested in - and concerned about the future organic EU label.

The last Stakeholder meeting will be held during the summer of 2016, not very far from the end of the project, which means that the recommendations for the future regulation, that will be presented during this meeting, will be necessarily close to the final ones.

That is the reason why I take the opportunity of this third Newsletter to

encourage you to exchange with the project consortium and share with us your vision and expectations about all aspects of the future organic regulation on aquaculture products. We will do our best to translate them into the proposition that will be the end product of the OrAqua project submitted to the EU.

