WAGENINGEN
UNIVERSITY & RESEARCH

Minutes

MEETING
ISAC

LOCATION
Online meeting

DATE
30 October 2020

PRESENT
ISAC: Michel Kaiser, Dave Reid, Christopher Zimmermann, Alyne Delaney
Ministry LNV: Roos Strating, Maddalena Visser; last part also: Martha Wurzer, Joris Hoogbergen
WMR: Adriaan Rijnsdorp, Edward Schram, Marloes Kraan, Nathalie Steins (report).

ABSENT

COPY TO

DATE
December 17, 2020

OUR REFERENCE
2038833.NSt.mb

POSTAL ADDRESS
The Netherlands

HANDLED BY
Nathalie Steins

TELEPHONE
+31 (0)317 487092

EMAIL
nathalie.steins@wur.nl

PROJECT
BO-43-023.02-004

Report of the final meeting of the International Science Advice Committee of the Impact Assessment of the Pulse Fishery

Background

In April 2020, the final report of the multi-annual research project Impact Assessment of the Pulse Fishery (IAPF) was published (Rijnsdorp *et al.,* 2020: https://doi.org/10.18174/519729). The project ran from 2016-2020 and aimed at providing the scientific basis for the assessment of the consequences of a transition from conventional tickler chain beam trawls to pulse trawls for the sustainability of the beam trawl fishery for sole in the North Sea. The project was initiated in response to the extension of the number of pulse fishery derogation licenses in 2014. IAPF comprised of four work packages which focused on the effect of pulse exposure on (1) marine organisms; (2) the benthic ecosystem; (3) fish stocks and the benthic ecosystem; and (4) a synthesis comparing the impact of pulse trawling with the impact of conventional beam trawling.

IAPF was funded under the European Fund for Maritime Affairs (EMFF) by the Ministry of Agriculture, Nature and Food Quality (LNV) and by funding from the Ministry of LNV under the Policy Support Research Theme Nature Inclusive Fisheries (Project Nr. BO-43-023.02-004).

To ensure the scientific quality and provide feedback on the workplan and progress of the research activities, an international Scientific Advisory Committee (ISAC) was established. In addition, International Stakeholder Dialogue Meetings were organised by the Ministry of Agriculture, Nature and Food Quality (LNV) to discuss the concerns of stakeholders and inform them about the developments in- and results of the research project.

The final meeting of the ISAC was held on 30 October 2020. The objectives of this meeting were to evaluate the role of ISAC, discuss potential follow up research in relation to the pulse fishery, discuss the closure of the IAPF project in relation to the International Stakeholder Dialogue meeting and lessons learnt from the pulse fishery project for future innovation processes. In addition to the ISAC members, the meeting was attended by representatives from the Ministry of LNV and scientists from Wageningen Marine Research (WMR). The meeting was held under Chatham House Rules. The presentations during the meeting are included in Annex 1.

Update pulse fishery

LNV gave a short update on the status of ongoing **pulse fishery policy processes**:

Pulse fishing is now prohibited under the EU technical measures regulation. There is, however, a transition period, with 1 July 2021 as an end-date. This means that now only the initial group under the European '5%-derogation' is still fishing with the gear. There are several ongoing trajectories:

- An evaluation of the technical measures is expected in the second half of 2021. The latest ICES advice of May 2020 provides the best available science on which decisions on innovative fishing gears should be based, which may lead to a discussion on the decision to ban the use of electricity in marine fisheries. There is, however, a lot of resistance to reopen the pulse discussion again.
- The Dutch government started a Court of Justice procedure asking for the annulment of the prohibition. The written procedure has been completed, and the Netherlands are now awaiting the oral procedure.
- There was also a discussion of the ICES 2020 advice planned in the fisheries committee of the European parliament on 16 November. The Dutch government was not involved in this. This was an own initiative of the EP.

In response to the question whether the ban on pulse fishing has any ramifications for other electric fishing activities, such as the use of electricity to catch razor clams, LNV answers that (as far as they are aware) the United Kingdom wants to ban any fishing activities using electricity post-Brexit.

Wageningen Marine Research gave an update of **pulse fishery research**:

Adriaan Rijnsdorp informed the meeting on the IAPF research. The final report is available. The first of the PhD projects is finalised, with a successful PhD defence of the work on effects on the benthic ecosystem by Dr Justin Tiano. The other PhD candidate is still working on data processing and writing. The research team is now working on peer reviewed papers of the findings in the final report. Three short English animations (subtitled in Dutch and French) were made to explain the results to a wider audience:
https://www.youtube.com/playlist?list=PLuJyz0qvHVHsNDk4nwkClTbB6OFUm6hrC

Following a request from ISAC, a list will be made of all publications in relation to pulse fisheries including socio-economic research. This will be made available on the pulse web portal: www.pulsefishing.eu

In response to a question from ISAC on whether the peer-reviews of manuscript displayed any resistance to pulse, it was confirmed that this is not the case. The main issue is that journals have problems finding the reviewers, particularly for the work on impacts on marine organisms.

Edward Schram updated the meeting on ongoing work (see also annex 1): WMR continues the monitoring of pulse fishing activities until the end date of the transition period. This work focuses on spatial distribution, catches and settings of pulse. WMR also carried out research into the question of direct mortality in the wake of a pulse trawler. This was one of the issues raised by small-scale fishers during the International Dialogue Meetings. Last year a pilot was carried out and this year additional data were collected. The project also included interviews with Dutch small-scale fishers about their concerns in relation to what happened in the wake of the pulse trawl. The report is planned for the end of the year.

In addition to the work by WMR, two fundamental research projects have been granted by NWO (Dutch Research Council). These projects run from September 2020 to September 2022. NIOZ is working on a bottom-trawl fishing impact assessment tool, which includes pulse trawls. Wageningen University is working on low impact bottom trawling, focusing on optimizing the pulse gear for size selectivity.

ISAC evaluation

To aid discussions during the meeting, a short questionnaire was sent to all four ISAC members and the scientific leader of the IAPF project. Nathalie Steins presented the results (see annex 1):

All four ISAC members and the IAPF leader responded to the questionnaire. While IAPF was considered an exemplary research project from the perspective of collaboration across groups (academic and applied), the quality of the scientific team and depth of the studies, the general feeling was that the programme started too late in relation to the policy timescales. In addition, the programme had a strong focus on the fine detail of ecosystem impacts of pulse fishing, whereas a more holistic approach including socioeconomics would have been needed. The social sciences were only included later in the ISAC, and social science research that was carried out did not reach ISAC, i.e. was not discussed in the meetings with ISAC as this was not part of IAPF.

It was felt that ISAC played a valuable role in the IAPF process. In particular, its peer-review role was highlighted. Warranting the quality and credibility of the science throughout the research process is not only important for scientists, but also for funders (LNV) and the wider stakeholder community involved in policy discussions on science-based management. Where the science team leader also highlighted ISAC's role in sheltering scientists from potential pressure from stakeholders and stimulating scientists to look beyond their own task, one ISAC member was disappointed by the lack of use of the ISAC by research groups to enhance their research by using ISAC as a sounding board and how ISAC was merely viewed as a board of examiners. Other ISAC members highlighted that they were able to make constructive suggestions about the project and these were taken on aboard where feasible, adding or even changing directly. It was also noted that, in addition to its peer-review function, ISAC served as a forum for working with the stakeholders, particularly in the questionnaires ISAC developed, but also at the various stakeholder dialogue meetings (IDM) which allowed ISAC to individually pick up on the issues and drivers of the stakeholders' views.

The IDM was a valuable aspect of the IAPF process. It helped to check if the proposed research addressed the stakeholders' concerns, and to incorporate views of a wide variety of stakeholders in one forum. Even if not all the issues raised could be addressed, an honest attempt was made to do so. ISAC members generally felt that stakeholders were at least willing to talk with the ISAC. ISAC recommends incorporating such stakeholder dialogue in future programmes but emphasizes this should be done from the outset. In the case of the pulse fishery, stakeholder dialogue started too late when opinions had already formed and fishers from other countries already felt the consequences from a new, more efficient gear in or close to their fishing grounds. Part of setting up an IDM at the outset of future innovation projects should be the discussion on how to deal with the fact that with every answer a new potential question is raised, i.e. when is the science enough. Finally the IDM was considered very useful for communicating the results.

In terms of closing the IAPF and IDM process, ISAC members recommended to organize one final meeting of the IDM. This should include a short summary of the

final results, but the main focus should be reflection, for example: how did stakeholder's input over the years affect the research programme, what was their own role, did their views change during the process, how do they evaluate the eventual outcomes? Ideally, the closing meeting should be in person, but in these Covid-19 times a webinar could be an alternative.

The questionnaire results identified several lessons to be learnt for future fisheries innovation programmes. First, the main issue for this specific process started prior to the onset of the project – the distribution of licenses for pulse trawling on top of the 5% derogation under a science exemption without a proper scientific program. This apparently created so much negative setting that it was impossible to overcome the prejudices with credible science. Second, all ISAC members highlighted that innovation is a social process, and hence should begin with a stakeholder process working towards real co-creation of innovations. Such a co-creation process could involve the following steps: (1) alert other national fishermen's organisations, get a sense of concerns. Deal with concerns sensitively and cautiously; (2) get stakeholders to identify the problems; (3) get stakeholders to co-create (with other national fisher organisations) the research programme, (4) devise the work plan, and (5) do the research, feedback to step 3 regularly and adjust. Social scientists should be involved in this process from the outset. It was suggested that they could carry out a scoping study to identify which stakeholders where likely impacted (and how) by a proposed innovation as part of steps 1 and 2. A reflection lead by social scientists on why neighbouring member states' fishers joined the NGO opposition would also be useful in terms of identifying lessons for future projects. Finally, the experience with the pulse innovation, which was potentially a valuable new tool to increase sustainability of beam trawling, may have a much wider impact than only in the Netherlands, as it may have discouraged innovative thinking by fishers themselves in other counties and for other metiers. Indeed, such concerns have already been expressed by fishers inside and outside the Netherlands.

Following the presentation, some questionnaire results were subject to further discussion. A first suggestion was to send out a similar questionnaire to a broader group of stakeholders.

The discussion then focussed on the diverging views in relation to how the relation between ISAC and the IAPF research team, and the linkages between ISAC and the socioeconomic research. The ISAC member who was disappointed that ISAC was not used more as a resource, reiterated this view; there was little interaction with the project researchers outside formal meetings. This was also felt in relation to the socioeconomic research, where ISAC could have interacted with the scientists and students to reflect on their work and proposals. Following a clarification question, this ISAC member confirmed that ISAC's remit was not to scrutinize the socioeconomic work, but everyone was aware that a lot of the policy discussion was driven by social processes and from this perspective socioeconomic research should have been stimulated much more. This ISAC member only found out that socioeconomic research was carried out from talking to participants in the IDM. Hence, also the request to include the socioeconomic work in the overview document with pulse research. ISAC has expertise that they could have shared if they had been asked. ISAC could have played a mentoring role. What were the reasons why ISAC was not approached for this role? The IAPF project leader does not know the answer to this question and can only speculate that it had not been clear enough for the research team that ISAC was willing to take on this role.

Another ISAC member pointed out that there is an advantage to keep somewhat distant. It is much easier to do a sanity check better if one is not too much embedded in research. All ISAC members agree with this, but also stress that a mentoring role in terms of sense-checking of proposals or methods would have fit within the remit of peer-review. One ISAC member also noted that the setting of the meetings (in the building of the ministry) may have been a bit frightening to the younger researchers. Finally, it was pointed out that the social science member of the ISAC was brought in too late in the process and, as a result, the impact and potential of this discipline in the committee may not have been used to full potential.

The ISAC members concluded that it is always easy to be wise after the event, but it is good to have this reflection. It was suggested that another meeting would be useful to develop an innovation process framework for the future based on the lessons learnt from the pulse fishery.

Finally, the ministry of LNV reflected on the evaluation. The ministry agrees that the social dimension was not included enough. The situation is now as is, and LNV is cautious about the ways forward. Is it the right timing to continue with closing of the IDM and discussing an innovation framework, or it better to wait? LNV wants to identify the lessons learnt and act on them, also because there is a need to innovate even if fishers are now discouraged from doing so. Already work is underway on proof-of-concept for new alternatives to the beam-trawl, such as a water spray gear. But in view of the current political climate (EU, Netherlands), LNV does not see a path that is clear cut for now. It welcomes advice from ISAC on this matter.

Follow-up: closing IAPF/IDM process and future innovation framework
The meeting continued with a discussion on next steps. ISAC concludes that the IAPF science was very good and detailed. It was sometimes difficult and had its constraints but there is no reason to doubt quality of work. In hindsight more emphasis should have been put on socioeconomic aspects. It is important to look to the future. Issues the pulse fishery has encountered will come up again (see also The Conversation). The question is how to ensure that we do not end in a situation where an innovation is useful to reduce impact, but which society deems unacceptable.

Possible ways forward could be: reaching out to wider stakeholder group using a questionnaire to drill down some issues, and perhaps conducting choice-experiments (e.g. try and determine which elements in a research protocol people deem more useful) and engaging with antagonistic elements. ISAC members could play a role in discursive reflection which is not so much about pulse trawling, but on the question 'if we want to innovate in future, how do we make sure we do not make the same mistakes again?'. There is a dilemma involved as well: some technical proof of concept must be done, but at what time should one bring in go / no go elements? In this context it was pointed out that much of the elements for developing and assessing a proof-of-concept were in the EU regulations, but that a pivotal mistake started when more licenses were giving out without proper science and the fleet moved to fishing grounds they had not been able to fish previously. It is suggested that ISAC should write a scientific paper, involving Marloes Kraan and Nathalie Steins, to document the process and make sure the experience, knowledge and lessons from the IAPF process do not get lost.

Documenting history is important, but it is also important to work on the future. There is a need for a broadly accepted innovation pathway in the European Union. In developing this pathway, there are also lessons to be learnt from other processes than pulse. The EU ban on seal products (e.g., from Greenland), for example, has a lot of similarities with the pulse process. This example also addresses the question on

how 'we as scientists' communicate. ISAC also considers it essential that the development of an innovation pathway is not a Dutch project, as this will only be met with suspicion. It needs to be a forward-looking study, engaging with the stakeholder community and perhaps others to understand how these types of innovative projects should be structured in the future. It is suggested that ICES could play a useful role here. While ICES usually only works on request and would then need a request from the EC or a member state, ICES can also initiate workshops on their own initiative. Several scientists in this meeting carry enough weight in ICES to put this on the agenda.

ISAC then returned to the question of the closure of the IAPF and the IDM. A questionnaire could be useful to inform a closing meeting and a forward-looking process on innovation in general. ISAC understands that from a political perspective LNV is not keen on bringing the pulse stakeholders together or act as an innovation hub, but stresses that closure of the stakeholder process is important. LNV points out there is no enthusiasm to organize such meeting. A social scientist stressed that the worst thing one can do is set up an engagement processes with stakeholders and then not close it properly, even if outcomes may not be the ones desired from the perspective of either the initiators or participants. Not closing it will affect future willingness to engage in consultations and dialogue. At the minimum, closure should be done by informing the IDM participants of the final IAPF research results and ongoing work combined with an evaluative questionnaire. A more engaging way of closing it may be by positioning the IAPF/IDM closure in the context of a wider meeting on innovation. In the past a fisheries innovation conference was held in the Netherlands with was aimed at fishers. Fishers from all over Europe shared their experiences in relation to innovations, including barriers and how to resolve these. It was a big success and a discussion on 'failed innovation processes and successful ones' could be part of this.

The meeting concluded that there are a couple of good ideas on how to wrap up. Bringing the IAPF/IDM to an end is important. But this should be done in the context of forward-looking: gathering the state of the art and reflecting on innovations in general (also outside pulse fishing). ISAC suggests convening a smaller group of people to take various ideas forward.

Closure of meeting

LNV expresses appreciation about ISAC's willingness to advise them on ways forward and contribute to further discussions. It thanks the research teams for their scientific contributions. LNV will come back to the ISAC chair on whether a report on its activities is required and a way of closing the IDM.

ISAC suggests that a reflexive scientific paper would be more useful than a report. The group thanks the ministry of LNV for their invitation to become involved in the IAPF. In response to a question from ISAC, LNV confirms that uptake of action points will be discussed via email.

Action points

1. Make hyperlinked overview of all pulse publications including socioeconomic reports and theses available on pulse web portal: LNV.
2. Proposal a means for closure of IDM: LNV.
3. Discuss innovation pathway workshop in context of ISAC: ISAC & WMR.
4. Work on reflexive paper: ISAC & WMR
5. Inform ISAC chair on any additional reporting requirements: LNV.

Annex 1: Meeting presentation

Final ISAC Meeting

International Scientific Advisory Committee for the Impact Assessment of the Pulse Fishery

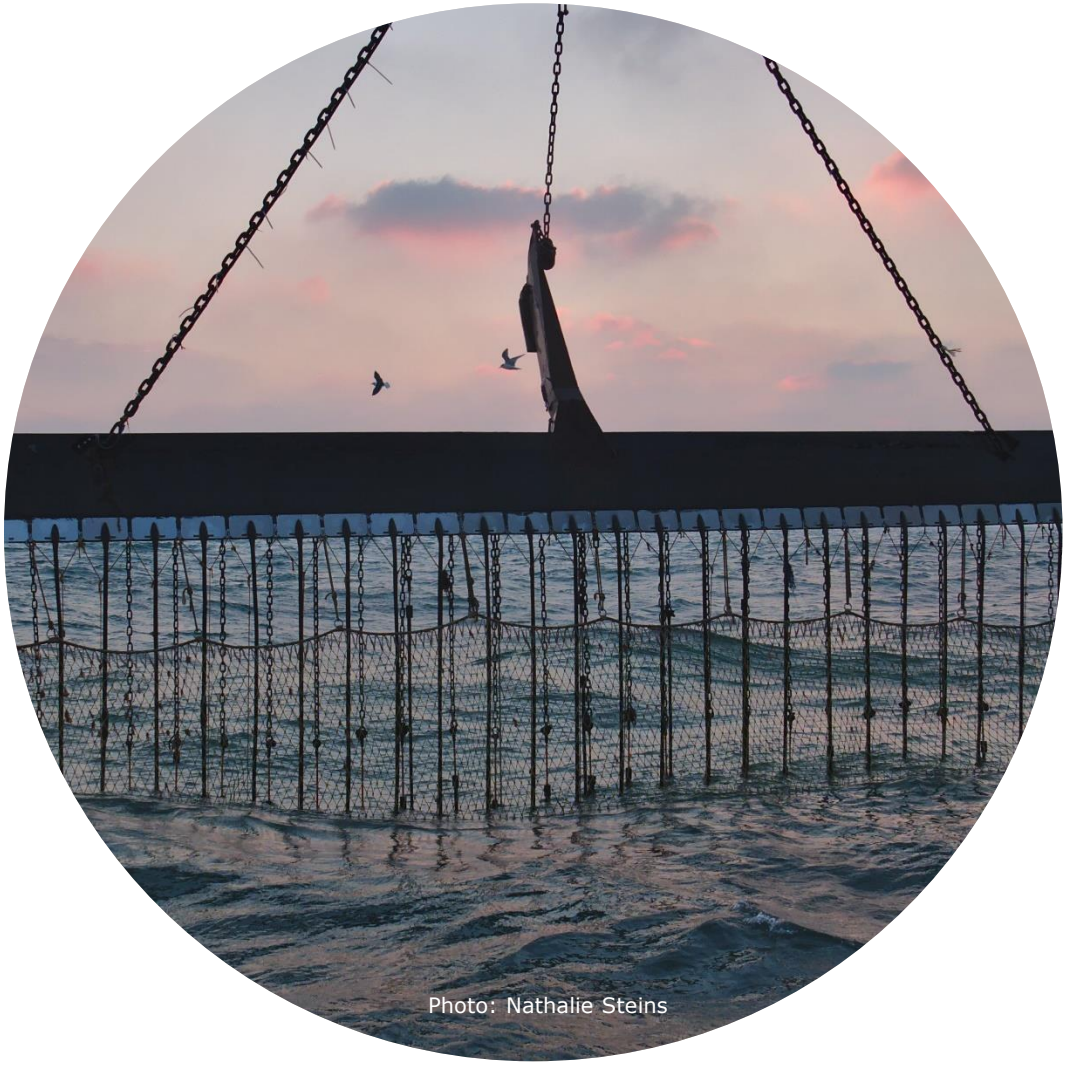
30 October 2020 (online)

WAGENINGEN
UNIVERSITY & RESEARCH

Programme

- Pulse monitoring
- 10:00: Opening and update
- 10:10: Discussion on the pulse research process
- 10:50: Break
- 11:00: Follow-up research: pulse
- 11:30: Discussion: lessons for future innovation processes
- 12:00: Conclusion

Ongoing pulse research



WAGENINGEN
UNIVERSITY & RESEARCH

WMR Pulse research 2020

- Pulse monitoring
  - Continued from previous years
  - Spatial distribution, catches, pulse settings
- Direct mortality in the wake of a pulse trawler
  - Continued from last year
  - Additional measurements of DM in the field
- Concerns of small scale coastal fishers re. pulse
  - 1 tot 1 interviews, plenary meetings

NWO – Pulse research projects

- Bottom Fishing Impact Assessment Tool (NIOZ)
  - online predictive application to assess the benthic ecosystem impact of bottom fishing gears (> pulse)

- Low impact bottom trawling (WU)
  - Optimizing electrode arrays and pulse parameters for optimal size and species selectivity

Summary ISAC evaluation questionnaire

Note: This questionnaire was only sent to ISAC members and the leader of the pulse assessment research programme, and hence reflects a summary of their views only.

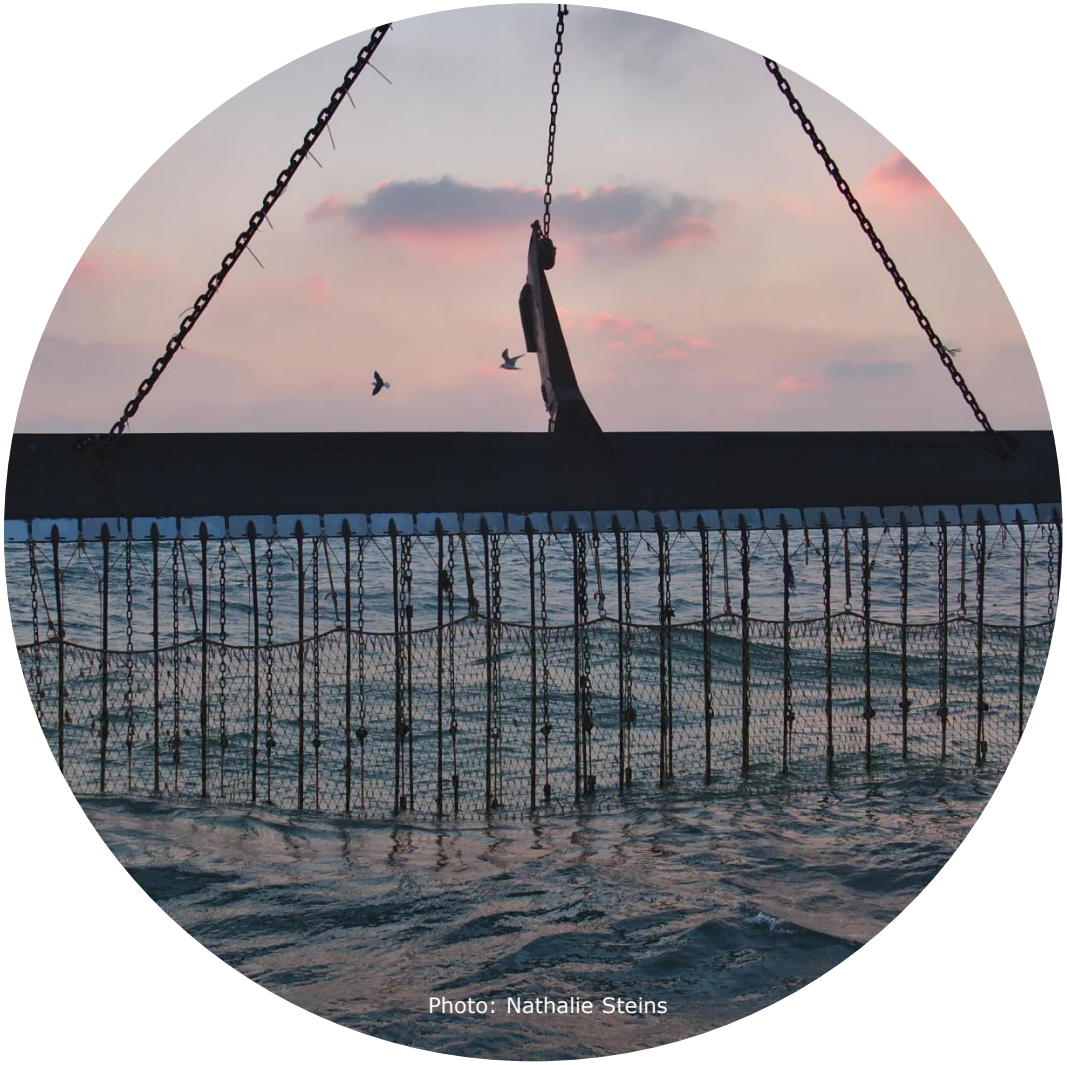


Photo: Nathalie Steins

WAGENINGEN
UNIVERSITY & RESEARCH

Reflections on pulse research process ('ISAC era')

Thumbs up for:

- Collaboration
- Mixed team
- Increased depth of studies
- Exemplary for targeted research

But:

- Mismatch with policy timescale
- Focus on finer detail rather than holistic
- Little attention for human dimension aspects

Role of ISAC

Valuable

- Peer-review (credibility)
- Furthering development of research programme
- Forum for working with stakeholders

Missed opportunities

- Sounding board for research teams
- Social science work not explicitly brought to attention

Role of the Stakeholder Dialogue

Valuable

- 'Health check'
- Incorporating suite of views
- Industry and NGOs in one forum
- Reduced some earlier critique
- All willing to talk to ISAC
- Done as well as could have been

But

- Too late
- Co-creation role (too) limited
- True dialogue remains difficult
- Each answer generates a new question

WAGENINGEN
UNIVERSITY & RESEARCH

How to close Stakeholder Dialogue?

- Final (online?) meeting
  - Results (know's, know-not's)
  - Reflective and interactive
  - Revisiting development of views
  - How did input impact programme?
  - Views on eventual outcome
  - Views on how to organise future innovation processes
  - Invite EP


Photo: Nathalie Steins

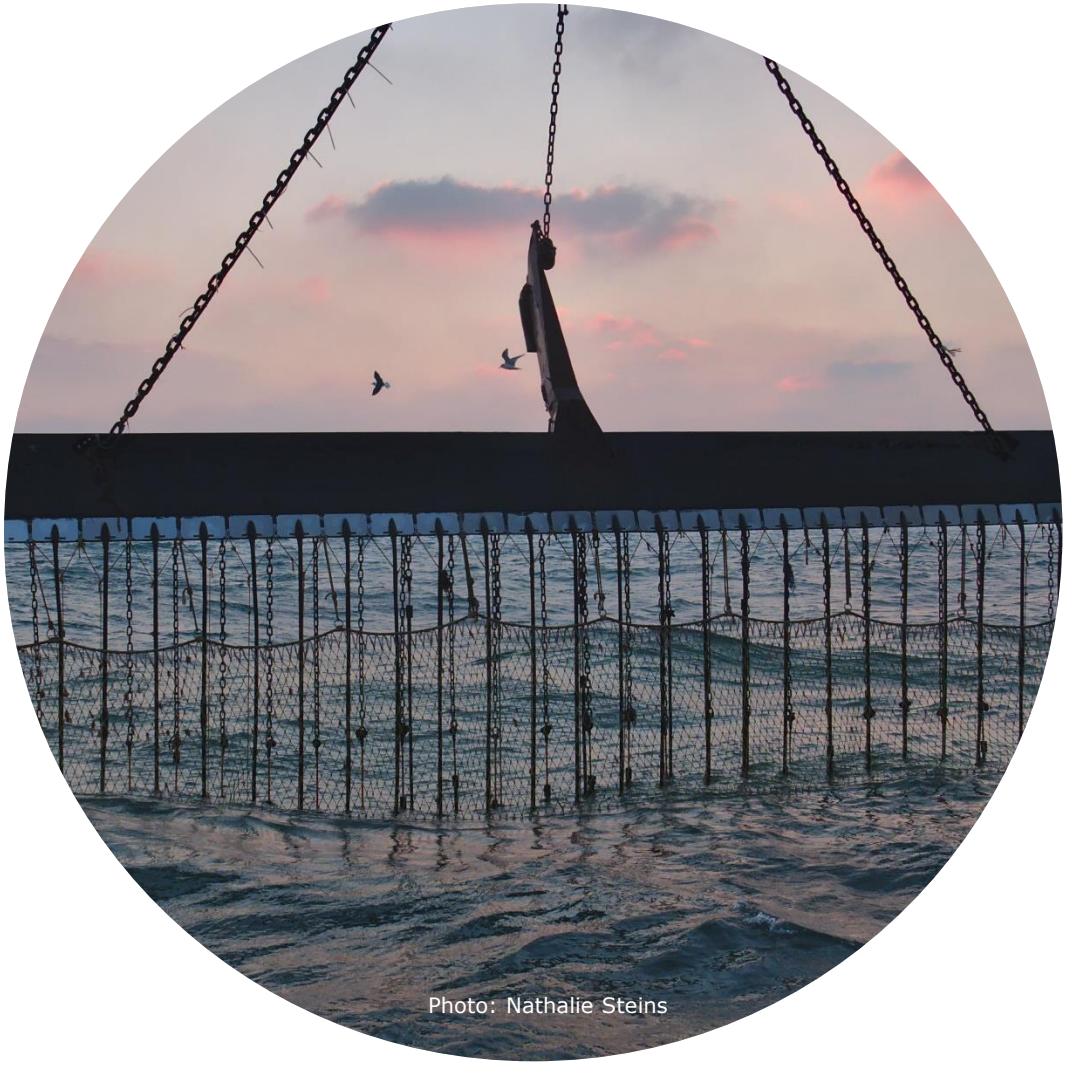
Lessons for future innovation processes

- Credible science insufficient to overcome negative setting rooted in policy decisions
- Innovation is socio-technical: include human dimension
- Co-create with stakeholders from outset
- Invest in communication
- Investment timely in underlying fundamental research
- Set up peer review committee and stakeholder dialogue

Put lessons also in context that the pulse process and eventual outcome may discourage fishers to pursue 'radical innovations'.

WAGENINGEN
UNIVERSITY & RESEARCH

Questions?



WAGENINGEN
UNIVERSITY & RESEARCH