

The background features a light blue gradient with several overlapping circular elements. In the top left, a semi-circle contains a photograph of several brown fish swimming in clear water. In the bottom left, another semi-circle shows a close-up of blue water ripples. On the right side, there are two large, overlapping circles. The upper one is a dark blue circle containing a photograph of a circular aquaculture net pen floating on the water. The lower one is a lighter blue circle. Faint white concentric circles and thin blue lines are scattered across the background.

# Workshop on Background paper on Good husbandry practices for aquaculture

**Aquaculture special event, Brussels**

**18<sup>th</sup> October 2023, 9:30-12:30**

**Birgit Van Tongelen (EC, DG MARE)**

**Pablo Xandri (NTT DATA,  
EU Aquaculture Assistance Mechanism)**



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# Workshop on Background paper on Good husbandry practices for aquaculture

09:30-10:00 Introduction by co-moderators

10:00-11:30 Discussion of document based on questions

11:30-12:00 Preparation of conclusions by co-moderators



***Coffee break for workshop participants***

12:00-12:20 Presentation of conclusions to workshop participants

17:15-18:30 Presentation of conclusions in plenary session

# Presentation of the draft list of “Good Husbandry Practices for aquaculture”



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# Background paper on Good husbandry practices for aquaculture



To present a mapping and revision of the best practices on husbandry practice from of point of view of **health and welfare**



Addressed to **all Member States**, particularly to **fish farmers** working in the **aquaculture sector** at the **national and regional level**



- Identification of good practices for the main aquatic species currently farmed in the EU, at all stages of their life cycle, which are: **carp, rainbow trout, Atlantic salmon, gilthead sea bream/sea bass, shellfish, ballan wrasse and lumpfish**
- Relevant **topics** include, **general** good husbandry practices and **specific good practices**



**General good husbandry practices:** feeding, handling & grading, mortality removal, fallowing, predator control, minimising risk of escapees, water quality, stocking densities, disinfection and cleaning, vaccination and treatments, environmental enrichment, functional feed, selective breeding



The GHPs was carried out based on the prioritisation of concrete examples from industry and standards and Projects with results that are relevant and linked to the industry



# Background paper on Good husbandry practices for aquaculture - Methodology



**Analysis of the results of two survey on Good husbandry practices for farmed fish**  
❖ **21 contributions** from **Member States** and the **Aquaculture Industry**

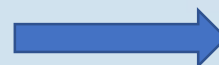


**Desk research** by **NTT DATA** and the **University of Thessaloniki**. **Mapping** from EU Funded Projects and literature review



**Cluster meeting with professors, experts and EU project officers (May 30<sup>th</sup>)**  
**Bilateral meetings (2)**

- Prepare a **first draft** of the paper by September
  - Document 76 pages + annexes
  - Introduction: reference to the “strategic guidelines on EU aquaculture”, definition of good husbandry practices, short reference to legal framework, objectives of the document
  - Methodology used
  - Elaboration of factsheets for each selected good practice, the best/most useful good practices. 232 GHP
- Discuss the first draft with **MS, AAC expert** at the **special event** in October 2023
  - Final draft: November 2023



Species or group of species								
Good husbandry practices								
Topics addressed	General					Specific		
	Feeding	Harvesting & grading	Mortality removal	Fallowing	Predator control	Environmental enrichment	Selective breeding	Functional feed
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Minimizing risks of escapes	Water quality	Stocking densities	Disinfection and cleaning	Vaccination and treatments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Description of good practices	<b>(1) Title</b> <ul style="list-style-type: none"> <li>- Description</li> <li>- Origin: national measure, international, industry lead?</li> <li>- Status: voluntary/mandatory?</li> <li>- Examples where it is implemented</li> </ul>							
	<b>(2) Title</b> <ul style="list-style-type: none"> <li>- Description</li> <li>- Origin</li> <li>- Status</li> <li>- Examples where it is implemented</li> </ul>							
	<b>(3) Title</b> <ul style="list-style-type: none"> <li>- ..</li> <li>- ..</li> <li>- ..</li> <li>- ..</li> </ul>							



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# General sources of information

- **Regulations:** EU Regulation and some national legislation from Greek, Norway and Switzerland
- **General publication:** Guidelines, codes, handbook, guides, indicators
  - FAO
  - WHO (World Health Organization)
  - RUMA (Guidelines produced by Responsible Use of Medicines in Agriculture Alliance)
  - VDFF (German Animal Welfare Act in aquaculture establishments)
  - FEAP (The Federation of European Aquaculture Producers)
- **Publications about species:** private policy or handbook, code of conduct, standards, projects and scientific articles
  - EFSA (European Food Safety Authority)
  - HAPO (Hellenic Aquaculture Producers Organization)
  - ASC, GSA (Global Seafood Alliance) and RSPCA (Royal Society for the Prevention of Cruelty to Animals), etc.
  - EFFAB (2023). CODE EFABAR



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# Presentation of draft list of “Good Husbandry Practices for aquaculture”



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# Common carp

- **Good practices identified: 27**
- **Concrete examples:** mainly from Bulgaria, Croatia, Lithuania, Czech Republic, Poland, Hungary and Romania
- **Sources of good practices**
  - Carp pond management. Good professional practices. Saxony State Agricultural Institute (2007)
  - Animal welfare aspects of husbandry systems for farmed common carp – Scientific Opinion of the Panel on Animal Health and Welfare (EFSA, 2008)
  - Better management practices for carp production in Central and Eastern Europe, the Caucasus and Central Asia (FAO, 2011)
  - Carp polyculture in Central and Eastern Europe, the Caucasus and Central Asia (FAO, 2010)
  - Polish Code of Good Fish Farming Practice (2015)



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# Rainbow trout

- **Good practices identified: 37**
- **Concrete examples:** Denmark, Finland, France, Greece, Ireland, Italy, Poland, Spain
- **Sources of good practices**
  - ASC (2019). Freshwater Trout Standard
  - Animal welfare aspects of husbandry systems for farmed trout – Scientific Opinion of the Panel on Animal Health and Welfare (EFSA, 2008)
  - IFA. The Farmed Salmonid Health Handbook (2011)
  - Rainbow trout welfare handbook (FISHWELL project, 2020)
  - RSPCA welfare standards for farmed Rainbow trout (2018, 2020)
  - EFFAB (2023). CODE EFABAR



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# Atlantic salmon

- **Good practices identified : 35**
- **Concrete examples:** Denmark, Ireland, Netherland, Norway, Poland, the UK
- **Sources of good practices**
  - EFSA. (2008). Animal welfare aspects of husbandry systems for farmed Atlantic salmon
  - The Farmed Salmonid Health Handbook (2011)
  - Scottish Salmon Farming. Code of Good Practice (2014)
  - Code of Care and Handling of Farmed Salmonids (2021)
  - ASC (2023)
  - Aquaculture Facility Certification. Salmon Farms. BAP (2023)
  - EFFAB. (2023). CODE EFABAR
  - Ministry of Industry and Fisheries. (2008). Norway. Regulation on the operation of aquaculture facilities
  - MOWI. (2022). Salmon Welfare Policy



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# Gilthead sea bream and sea bass

- **Good practices identified: 32**
- **Only some concrete examples:** France, Greece, Italy, Spain, Turkey
- **Sources of good practices**
  - Code of Conduct for Responsible Fisheries (FAO, 1995)
  - EFSA, 2008. European seabass and gilthead seabream
  - A Code of Conduct for European aquaculture (FEAP, 2008)
  - The HAPO guide 'Mediterranean Fish Welfare Guide to good practices and assessment indicators' (2019)
  - CIWF (2018). Improving the welfare of European sea bass and sea bream
  - ASC. (2018). ASC Seabass, Seabream and Meagre Standard 1.1
  - EFFAB (2023). CODE EFABAR



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# Shellfish

- **Good practices identified: 27**
- **Only some concrete examples:** France, Greece, Ireland, Italy, Portugal, Spain, UK
- **Sources of good practices**
  - CNC and EMPA. (2023). Guidance document on best practices in shellfish
  - CEFAS. (2014). Background information for sustainable aquaculture development
  - Epsilon Aquaculture Limited. (2002). The Seabed Cultivated Mussel Hyperbook
  - RAPID, 2018. Good practice management guide Pacific oyster (*Crassostrea gigas*), Reducing and Preventing Invasive Species Dispersal
  - ASC (2019) Bivalve Standard Version 1.1
  - EFFAB (2023). CODE EFABAR



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# Cleaner fishes: ballan wrasse and lumpfish

- **Good practices identified** : 15 and 26 respectively
- **Concrete examples**: Ireland, Denmark, Norway, UK
- **Sources of good practices**
  - Cleaner fish welfare (Compassion in World Farming, CIWF)
  - Norwegian Seafood Research Fund. (2017). Cleaner fish - Best Practice Guidelines from the Norwegian Seafood Research Fund.
  - European Union Reference Laboratory for Fish Diseases. (2016). Cleaner fish in aquaculture
  - Cyclopterus lumpus: The North Atlantic Lumpfish in Aquaculture (2021)
  - EFFAB (2023). CODE EFABAR



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# Discussion around questions



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## General questions

- 1. The document is intended primarily for national, regional, and local aquaculture producers. Do you consider the document sufficiently clear, practical, and user-friendly? If not, how could it be improved?***
- 2. Which of the 13 selected topics could be further explored in the document in chapter 3 and in the factsheets?***
- 3. Good husbandry practices per factsheet:***
  - Are the good husbandry practices included in the 7 factsheets useful? If not, which ones should be deleted?***
  - Do you know additional good husbandry practices that could be included in the document?***



## Specific questions

1. *On **environmental enrichment, functional feed and selective breeding**, it is necessary to know what practices are actually being carried out in the Member States, beyond the information covered by the studies conducted so far.*
2. *On **predator control**, workshop participants are asked for their input regarding examples of good practices involving coordinated activities of interdisciplinary teams, which comply with conservation policies and actions (similar to the one presented in the common carp factsheet (section 4.1), developed in the INTERCAFE project).*
3. *Are you aware of **local shellfish farming practices based on carrying capacity that may differ from generally accepted good practices**? The importance of these practices lies in the fact that they are filter-feeding species, which feed on the water available in the environment in which they live. Therefore, the quality and quantity of food available will depend on the carrying capacity of the ecosystem, which will be affected by fallowing or harvesting practices.*





# Preparation of conclusions by co-moderators

*Coffee break for workshop participants*



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# Presentation of conclusions to WS participants



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# Thank you!



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