Deliverable No. 4.2

Project acronym:

AquaVitae

Project title:

New species, processes and products contributing to increased production and improved sustainability in emerging low trophic, and existing low and high trophic aquaculture value chains in the Atlantic

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Task leader, author	Celine Boechat	Nofima	05.11.2019	CB
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Scientific Advisor	Valur Gunnlaugsson	MATIS	20.11.2019	VG
Coordinator	Philip James	NOFIMA	22.11.2019	PJ
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Task leader, author	Celine Boechat	Nofima	2/3/2021	CB
WP leader	Petter Olsen	Nofima	2/3/2021	PO
Scientific Advisor	Valur Gunnlaugsson	MATIS	5/3/2021	VG
Coordinator	Philip James	NOFIMA	6/3/2021	PJ

[1] Document will be a draft until it is approved by the coordinator
[2] PU: Public, PP: Restricted to other programme participants (including the Commission Services), RE: Restricted to a group specified by the consortium (including the Commission Services), CO: Confidential, only for members of the consortium (including the Commission Services)
[3] The initials of the revising individual in capital letters

Deliverable D4.2

AquaVitae Data Management Plan

30/11/2019

Executive Summary

The overall goal of WP4 is to coordinate the collection, harmonization, sharing and archiving of data collected and generated by the project, and to document data collection methods and procedures. As a first step in achieving this goal, AquaVitae, as a participant in the H2020 Open Research Data Pilot, will create a Data Management Plan (DMP).

This deliverable contains a comprehensive overview of the different data sets used within the project, a list of the repositories chosen so far, and procedures for archiving and sharing research data after the projects' lifetime. The deliverable contains a total of 61 forms.

The forms provide a detailed description of the content of the datasets, how it will be preserved and whether or not they will be made available for further reuse after the project end. When data sets are finalized, they will be uploaded to either a field related repository or in-house repository belonging to an institution. If no such repository exists, data will be uploaded to a general repository e.g. Zenodo.

Contents

1. Introduction

The overall goal of the Horizon 2020 Open Research Data Pilot (ORDP) is to help enable reuse of research data either collected or generated throughout a project. Over the course of a project, considerable amounts of data are generated, but not sufficiently archived, shared or made available for reuse later on. This causes time and effort to be spent in other projects collecting similar data, as well as discourages openness.

The Open Research Data Pilot aims to make data FAIR:

- Findable
- Accessible
- Interoperable
- Reusable

As a way of ensuring good data management, a data management plan (DMP) should be developed. This is one of three requirements laid out in task 1.1, the other two being depositing collected research data in a data repository, and taking measures to enable third parties to access, mine, exploit, reproduce and disseminate research data.

The DMP used in this project includes information on topics such as:

- identification of the dataset and the institution responsible
- the handling of research data during and after the end of the project
- what data will be collected, processed and/or generated
- which methodology and standards will be applied
- whether data will be shared/made open access and
- how data will be curated and preserved (including after the end of the project)
- ethical issues
- costs associated with archiving data

2. Method

A form and an accompanying explanation describing the information needed for each component was created based on the recommended DMP-structure in the ECs "Guidelines on FAIR Data Management in Horizon 2020". Both the form and the explanation were sent out to all participants, along with an example of a filled in DMP-form from a previous project. The email also contained a detailed description on the nature of the deliverable. Participants were asked to fill out one form per dataset. Both the form and the explanation are included in "Appendix 2 – Templates".

The Data Management Plans will be updated once per every 18-month periodic reporting period. An email will be sent out to all participants asking them to either update existing forms or add new ones, if needed.

3. Concluding remarks

Deliverable 4.2 contains a total of 61 DMP-forms. The forms provide a detailed description of the content of the datasets, how it will be preserved and whether or not they will be made available for further reuse after the project end.

Most of the data generated in the case studies are collected in WP1-3, so in the appendix, the forms pertaining to WP1-3 are grouped according to case study. Forms pertaining to WP 4-8, however, are classified according to their respective work package. Forms concerning more than two CS or WP are grouped in the categories "multiple case study" or "multiple WP". Within each category the forms are grouped according to the organization who submitted the form.

Due to the project being at an early stage, and because different work packages are at a different time schedule, not all forms share the same level of detail. The DMP is intended to be a living document, however, meaning it will be updated at later stages (as described above). This means more information can be added to existing forms or new forms be added should new data be used.

When data sets are finalized, they will be uploaded to either a field related repository or in-house repository belonging to an institution. If no such repository exists, data will be uploaded to a general repository e.g. Zenodo. At the moment no datasets are ready to be uploaded to a repository. As the work is in progress the data will change with it. The workflow concerning the data is the following:

- Identify the data used/generated/produced during the project
- Describe the data in a dataset form, one per dataset
- Plan a suitable repository
- Work on/with the data
- Work done/contribution to the project accomplished: upload the data to the repository

Therefore, no data are expected to be uploaded to a repository until the end of the project, except if a project participant is finished with their contribution to the project before the project ends.

Table 1 lists the datasets gathered at M5. In the left column, datasets are color-coded, separating them by CS (for WP1-3) and by WP. The right column indicates which repository the data is planned to be upload to at the end of the project or when the data is finalized, whichever comes first. By clicking on the title, you will be directed to the corresponding data set file in the appendix for more information about it.

Table 1: List of the datasets present at M5.

CS/WP	Responsible	Title	Repository planned
CS1	Universidade Federal de Santa Catarina	Evaluation of different conditions to induce reproduction for Ulva sp in Brazil	Figshare
CS1	University of Porto	Evaluation of different growth conditions for Codium.	Figshare
CS2	Fiskaalling and Ocean Rainforest	Mapping the Atlantic Ocean to identify suitable cultivation site	Not decided yet

CS2	Fiskaalling and Ocean Rainforest	Mapping the sea around the Faroe Islands to identify suitable cultivation site	Not decided yet
CS2	RU and MariFeed	Testing abalone performance after a seaweed-based feed	Not decided yet
CS3	France Haliotis	Ulvella lens and European abalone (Haliotis tuberculata) settlement and growth	Zenodo
CS3	France Haliotis	Effect of Heating in European abalone (Haliotis tuberculata) Nursery	Zenodo
CS3	ULPGC	Abalone hatchery production results	Not decided yet
CS3	ULPGC	Land based IMTA grow out production	Not decided yet
CS3	ULPGC	Land based IMTA new and improved products	Not decided yet
CS4	Fiskaaling	Sorvag Zooplankton	Envofar
CS4	Fiskaaling	Sorvag nutrients and Chl a	Envofar
CS4	Fiskaaling	Sorvag blue mussel growth rate and carbon and nitrogen uptake	Envofar
CS4	Fiskaaling	Sorvag seaweed growth rate and carbon and nitrogen uptake	Envofar
CS4	Fiskaaling	Sorvag Hydrography	Envofar
CS4	Luna	Sorvag Currents	Envofar
CS4	Luna	Sorvag fish farm data	Not decided yet
CS4	France Haliotis	Deployment of seeded Saccharina latissima longline on abalone grow out farm.	Zenodo
CS4	France Haliotis	Assessment of co-culture of Queen scallop Chlamys varia culture with European abalone (Haliotis tuberculata) at sea	Zenodo
CS4	Rhodes University/Marifeed	Biosecurity of algae in abalone feeds	Pangaea
CS4	IVL	Lobster and oyster IMTA	Figshare
CS5	UFSC, FURG and UNESP	Biofloc and pond-based IMTA.	Zenodo
CS5	Unesp and Embrapa	Designing shrimp-seaweed-oyster IMTA in tropical ponds	Zenodo
CS6	Nofima	Sea urchin roe enhancement results (Norway/Spain/Canada)	Zenodo
CS6	Nofima	Sea urchin species of interest datasheet	Zenodo
CS6	Nofima	Sea urchin roe enhancement protocols	Zenodo
CS7	Alfred Wegener Institute	Sea cucumber expert's species of interest	Pangaea
CS7	Alfred Wegener Institute	Sea cucumber hatchery species of interest survey	Pangaea
CS7	Alfred Wegener Institute	Sea cucumber hatchery growth results	Pangaea
CS8	GMIT	Evaluation of juvenile oyster production	Figshare

CS8	IVL	Developing and testing protocols for fouling treatments on Ostrea edulis.	Figshare
CS8	IVL	Evaluation of different settlement substrates for field-based collection of Ostrea edulis.	Figshare
CS8	IVL	Pond based production of oyster spat (Ostrea edulis)	Figshare
CS8	IVL	Low-tech nursery system for Ostrea edulis.	Figshare
CS8	IVL, Bohus Havsbruk, Orust Shellfish	Evaluation of different grow-out systems for oysters.	Figshare
CS8	Embrapa	Evaluation of oysters sea-based seed collectors.	Figshare
CS8	Embrapa	Development of hatchery techniques for Crassostrea gasar	Figshare
CS8	Embrapa	Evaluation of different grow-out systems for oysters	Figshare
CS8	Primar	Revise the estuarine water collection and treatment structure, to improve the water quality of the Primar hatchery of Crassostrea gasar	Figshare
CS8	Primar	Native microalgae feed for larvae fase of Crassostrea gasar	Figshare
CS9	Technical University of Denmark (DTU), Cartron Point Shellfish Ltd	Mussel hatchery production (Ireland & Denmark)	Zenodo
CS10	Lucas Simon Torati	Reproduction of Arapaima gigas	Figshare
CS10	Lucas Simon Torati	Reproduction of Arapaima gigas	Figshare
CS10	Lucas Simon Torati	Reproduction of Arapaima gigas	Figshare
Multiple CS	Centre of Marine Sciences (CCMAR)	AQUAVITAE_Fish key performance indicators_Diets from fisheries by-catch valorisation	Figshare
Multiple CS	Centre of Marine Sciences (CCMAR)	AQUAVITAE_Fish key performance indicators_Diets from low-trophic species	Figshare
Multiple CS	Stellenbosh University	Protein hydrolysis optimiztion	4TU.ResearchData
Multiple CS	Stellenbosh University	Pelletizing of agricultural lime obtained from shellfish shells.	4TU.ResearchData
Multiple CS	Alfred Wegener Institute	Sea cucumber controlled feeding experiments	Pangaea
Multiple CS	WP1 leader and participants. WP2 & WP3 for shared case studies	Hatchery production of juveniles or sporophytes from case studies in WP1	Zenodo
WP4	Biolan	Sulphite monitoring device technical documents	Confidential
WP4	Biolan	Sulphite analyses	Confidential
WP5	Nofima	Consumer survey data	Zenodo

WP6	IVL	External and internal risks effecting the sustainability performance of LTS aquaculture in the Atlantic region	Figshare
WP6	IVL	Challenge-structuring framework for sustainability performance assessment of LTS aquaculture in the Atlantic region	Figshare
WP6	SAMS	T6.4 Environnemental monitoring	Figshare
WP6	University of Porto	List of Nature Contributions to People provided by LTS aquaculture	Figshare
WP6	University of Porto	Quantification of the value of selected Nature Contributions to People provided by LTS aquaculture	Figshare
WP6	Unesp and Embrapa	Indicators of sustainability for aquaculture	Zenodo
WP8	UiT	Producers perception of aquaculture policy and regulation issues	AquaVitae project site
Multiple WP	Unesp	Data used to compute and quantify the indicators	Unesp repository

Table 2 gives an overview of the repositories considered so far, as well as the number of datasets planned to be uploaded to each. At the moment, one field related, three institutional and two public repositories have been targeted (the AquaVitae project website doesn't count as a repository).

Table 2: Repositories chosen, and the number of datasets planned to be uploaded to each.

Repositories	Type of repository	Number of datasets
Envofar	Field related repository for the Faro Island	6
Pangaea	Institutional	5
Unesp repository	Institutional	1
4TU research.data	Institutional	2
Figshare	Public	24
Zenodo	Public	13
AquaVitae project site*	Public*	1*
Not decided yet		7
Confidential		2

*These data generated by UiT are not research data, but terms and concepts definitions. They do not need to be uploaded to a repository but are available on the project website.

4. References

- "Guidelines on FAIR Data Management in Horizon 2020". EC Directorate-General for Research and Innovation, version 3.0, July 26th 2016
- "Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020". EC Directorate-General for Research and Innovation, version 3.1, August 25th 2016

Appendix 1

Case Study 1

1. Data set name	Evaluation of different conditions to induce reproduction for *Ulva sp* in Brazil
2. Data set owner or user, link to WP and/or Case Study	Universidade Federal de Santa Catarina - CS1
3. Data set summary	Aim: Evaluation of different reproductive conditions for *Ulva sp* Evaluation of alternative growth conditions in laboratory will be based on existing previous experiences in Ciimar, ALGAPlus, UFSC and other labs to find optimal conditions to induce reproduction in *Ulva* sp. The data will be used to evaluate different techniques for larger scale production of *Ulva* in pilot scale tanks
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	Figshare is a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Data will be hosted by Figshare and will follow their guidelines for data security.
7. Ethical aspects	No known ethical aspects.
8. Other	N/A

1. Data set name	Evaluation of different growth conditions for *Codium*.
2. Data set owner or user, link to WP and/or Case Study	University of Porto (Portugal), CS1
3. Data set summary	Aim: Evaluation of different growth conditions for *Codium*. Evaluation of alternative growth conditions in laboratory will be based on existing previous experiences in Ciimar and other labs. The data will be used to evaluate different techniques for production of *Codium* in tanks
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	Figshare is a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
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5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Data will be hosted by Figshare and will follow their guidelines for data security.
7. Ethical aspects	No known ethical aspects.
8. Other	N/A

Case Study 2

1. Data set name	Mapping the Atlantic Ocean to identify suitable cultivation site
2. Data set owner or user, link to WP and/or Case Study	Fiskaalling and Ocean Rainforest Case study 2 WP 2
3. Data set summary	Input source: • Temperature data • Depth data • Wave data • Nutrients data • Current data • Marine use data **All from other available sources outside the project** DATA SET GENERATED: • Map of suitable sites • Model using GIS
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Will be findable No plan yet for how
4.2 Plans for making data openly accessible	Will be accessible No plan yet for how
4.3 Plans for making data interoperable	Will be interoperable No plan yet for how
4.4 Plans for making data re-usable (through clarifying licenses)	Will be re-usable No plan yet for how
5. Allocation of resources	
6. Data security	
7. Ethical aspects	No concerns
8. Other	N/A

1. Data set name	Mapping the sea around the Faroe Islands to identify suitable cultivation site
2. Data set owner or user, link to WP and/or Case Study	Fiskaalling and Ocean Rainforest Case study 2 WP 2
3. Data set summary	Input source: • Temperature data • Depth data • Wave data • Nutrients data • Current data • Marine use data **All from other available sources outside the project** DATA SET GENERATED: • Map of suitable sites • Model using GIS
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Will be findable No plan yet for how
4.2 Plans for making data openly accessible	Will be accessible No plan yet for how
4.3 Plans for making data interoperable	Will be interoperable No plan yet for how
4.4 Plans for making data re-usable (through clarifying licenses)	Will be re-usable No plan yet for how
5. Allocation of resources	
6. Data security	
7. Ethical aspects	No concerns
8. Other	N/A

1. Data set name	Testing abalone performance after a seaweed-based feed
2. Data set owner or user, link to WP and/or Case Study	RU and MariFeed Case study 2 WP 2 WP 3
3. Data set summary	• Growth rates vs seaweed included in the diet
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Will be findable No plan yet for how
4.2 Plans for making data openly accessible	Will be accessible No plan yet for how
4.3 Plans for making data interoperable	Will be interoperable No plan yet for how
4.4 Plans for making data re-usable (through clarifying licenses)	Will be re-usable No plan yet for how
5. Allocation of resources	
6. Data security	
7. Ethical aspects	No concerns
8. Other	N/A

Case Study 3

1. Data set name	*Ulvella lens* and European abalone (*Haliotis tuberculata*) settlement and growth
2. Data set owner or user, link to WP and/or Case Study	France Haliotis, CS3, WP1
3. Data set summary	Effect of *Ulvella lens* quality on settlement rate and growth of European abalone (*Haliotis tuberculata*) juveniles. - 6 quality levels of *U. lens* culture tested, - Monitoring of abalone larvae settlement at 10 days, - Survival after 30 and 60 days, - Size of post larvae after 60 days. The data was collected over the summer of 2019 in France Haliotis farm.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The dataset will be uploaded to Zenodo website The dataset will be recorded in a CSV format and will be accompanied by a methodological note.
4.2 Plans for making data openly accessible	Dataset will be made openly available in Zenodo.
4.3 Plans for making data interoperable	Dataset will be in English
4.4 Plans for making data re-usable (through clarifying licenses)	The dataset will be made openly accessible and re-usable once a scientific publication will have been finalized and/or before the end of Aquavitae project in 2022 – whichever comes first.
5. Allocation of resources	The data will be made FAIR through Zenodo and should not include any specific costs other than the technician time required to format and upload the dataset. These costs will be covered by France Haliotis during the Aquavitae project.
6. Data security	No specific security requirements have been identified for this dataset.
7. Ethical aspects	There is no ethical issue identified with the data collected in this dataset.
8. Other	N/A

1. Data set name	Effect of Heating in European abalone (Haliotis tuberculata) Nursery
2. Data set owner or user, link to WP and/or Case Study	France Haliotis, CS3, WP1, experiment 2
3. Data set summary	Effect of *heating in European* abalone (*Haliotis tuberculata*) nursery on survival and growth of juveniles. - 2 levels of heating, - Monitoring of abalone juveniles before and after winter, - Survival over winter, - Size of juveniles. The data will be collected over the winter of 2019-2020 in France Haliotis farm.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The dataset will be uploaded to Zenodo website The dataset will be recorded in a CSV format and will be accompanied by a methodological note.
4.2 Plans for making data openly accessible	Dataset will be made openly available in Zenodo.
4.3 Plans for making data interoperable	Dataset will be in English
4.4 Plans for making data re-usable (through clarifying licenses)	The dataset will be made openly accessible and re-usable once a scientific publication will have been finalized and/or before the end of Aquavitae project in 2022 – whichever comes first.
5. Allocation of resources	The data will be made FAIR through Zenodo and should not include any specific costs other than the technician time required to format and upload the datasets. These costs will be covered by France Haliotis during the Aquavitae project.
6. Data security	No specific security requirements have been identified for this dataset.
7. Ethical aspects	There is no ethical issue identified with the data collected in this dataset.
8. Other	N/A

1. Data set name	CS3/WP1 abalone hatchery production results
2. Data set owner or user, link to WP and/or Case Study	ULPGC (Spain) CS3 Links to WP1 and CS3
3. Data set summary	The research aims at improving abalone larval settlement and postlarval survival through optimisation and implementation of effective induction cues and settlement substrates. Data will be related to settlement rates, growth rates and survival.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Metadata information will be provided at the beginning of each data document, specifying parameter number, name, short name, units as well as location and date.
4.2 Plans for making data openly accessible	Information will be made readily available once published or at the end of Aquavitae and will be hosted in on-line database. Keywords will be chosen carefully to facilitate access.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, jpg) and will apply standardized international measures (Specific growth rates, percentages….)
4.4 Plans for making data re-usable (through clarifying licenses)	The results obtained will be publicly available once published or at the end of Aquavitae. The standardized format of the data will facilitate the use of data by others.
5. Allocation of resources	No data management FAIR costs are expected as the information will be hosted in on-line database.
6. Data security	Data will be hosted in online database that complies with the guidelines for data security.
7. Ethical aspects	None
8. Other	n/a

1. Data set name	CS3/WP2 Land based IMTA grow out production
2. Data set owner or user, link to WP and/or Case Study	ULPGC (Spain) CS3 Links to WP2 and CS7
3. Data set summary	The research aims at: • Developing novel co-culture systems and feeding strategies for low trophic species in land-based Recirculating Aquaculture System (RAS) and flow through system. Data will be related to growth rates, ingestion rates, FCR, weight and survival as well as biochemical composition, and water quality parameters
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Metadata information will be provided at the beginning of each data document, specifying parameter number, name, short name, units as well as location and date.
4.2 Plans for making data openly accessible	Information will be made readily available once published or at the end of Aquavitae and will be hosted in on-line database. Keywords will be chosen carefully to facilitate access.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, jpg) and will apply standardized international measures (Specific growth rates, FRC, Kg, percentages….)
4.4 Plans for making data re-usable (through clarifying licenses)	The results obtained will be publicly available once published or at the end of Aquavitae. The standardized format of the data will facilitate the use of data by others.
5. Allocation of resources	No data management FAIR costs are expected as the information will be hosted in on-line database.
6. Data security	Data will be hosted in online database that complies with the guidelines for data security.
7. Ethical aspects	None
8. Other	n/a

1. Data set name	CS3/WP3 Land based IMTA new and improved products
2. Data set owner or user, link to WP and/or Case Study	ULPGC (Spain) CS3 Links to WP3 and CS7
3. Data set summary	The researches aims at: Assessing the potential of Land based IMTA production for new and improved products and/or applications. The land-based IMTA produced species and their by-products will be screened through the performance of nutritional and quality analysis Data will be related to biochemical composition, physical quality parameters and heavy metals
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Metadata information will be provided at the beginning of each data document, specifying parameter number, name, short name, units as well as location and date.
4.2 Plans for making data openly accessible	Information will be made readily available once published or at the end of Aquavitae and will be hosted in on-line database. Keywords will be chosen carefully to facilitate access.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, jpg) and will apply standardized international measures.
4.4 Plans for making data re-usable (through clarifying licenses)	The results obtained will be publicly available once published or at the end of Aquavitae. The standardized format of the data will facilitate the use of data by others.
5. Allocation of resources	No data management FAIR costs are expected as the information will be hosted in on-line database.
6. Data security	Data will be hosted in online database that complies with the guidelines for data security.
7. Ethical aspects	None
8. Other	n/a

Case Study 4

1. Data set name	Sorvag Zooplankton
2. Data set owner or user, link to WP and/or Case Study	Fiskaaling, CS4
3. Data set summary	The dataset is an element in the investigation of the ecology in Sørvágsfjord and the mussel larval availability Two-year time series of the zooplankton community in a Faroese fjord. Weekly or biweekly sampling from April to September at three stations. The data is useful investigations on fjord ecology and mussel spawning and larval availability
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be available as csv files at Envofar, Environmental data on terrestrial and marine ecosystems in the Faroe Islands http://www.envofar.fo/ Metadata will be provided with the datasets
4.2 Plans for making data openly accessible	The data will be publicly available at http://www.envofar.fo/
4.3 Plans for making data interoperable	The data will be presented in standard vocabulary to allow inter-disciplinary interoperability.
4.4 Plans for making data re-usable (through clarifying licenses)	All data on ENVOFAR are freely available to anybody interested, but should be acknowledged by reference to the data generating institution
5. Allocation of resources	A few working hours are expected to prepare and generate the data
6. Data security	These data are not sensitive, they will follow Envofar guidelines for data security.
7. Ethical aspects	No known ethical aspects
8. Other	NA

1. Data set name	Sorvag nutrients and Chl a
2. Data set owner or user, link to WP and/or Case Study	Fiskaaling, CS4
3. Data set summary	The dataset is an element in the investigation of the natural nitrogen and carbon cycle in Sørvágsfjord Two-year time series of seawater nitrate, silicate, phosphorous and Chl a content in in a Faroese fjord. Weekly or biweekly sampling from April to September at four depths at two stations. The data would be useful investigations on fjord ecology
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be available as csv files at Envofar, Environmental data on terrestrial and marine ecosystems in the Faroe Islands http://www.envofar.fo/ Metadata will be provided with the datasets
4.2 Plans for making data openly accessible	The data will be publicly available at http://www.envofar.fo/
4.3 Plans for making data interoperable	The data will be presented in standard vocabulary to allow inter-disciplinary interoperability.
4.4 Plans for making data re-usable (through clarifying licenses)	All data on ENVOFAR are freely available to anybody interested, but should be acknowledged by reference to the data generating institution
5. Allocation of resources	A few working hours are expected to prepare and generate the data
6. Data security	These data are not sensitive, they will follow Envofar guidelines for data security.
7. Ethical aspects	No known ethical aspects
8. Other	NA

1. Data set name	Sorvag blue mussel growth rate and carbon and nitrogen uptake
2. Data set owner or user, link to WP and/or Case Study	Fiskaaling, CS4
3. Data set summary	The dataset is an element in the investigation of the IMTA potential in Sørvágsfjord Regular investigations of mussel growth rates, biomass and carbon and nitrogen incorporation at a long line mussel farm. The data is useful investigations on the growth and IMTA potential of blue mussels
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be available as csv files at Envofar, Environmental data on terrestrial and marine ecosystems in the Faroe Islands http://www.envofar.fo/ Metadata will be provided with the datasets
4.2 Plans for making data openly accessible	The data will be publicly available at http://www.envofar.fo/
4.3 Plans for making data interoperable	The data will be presented in standard vocabulary to allow inter-disciplinary interoperability.
4.4 Plans for making data re-usable (through clarifying licenses)	All data on ENVOFAR are freely available to anybody interested, but should be acknowledged by reference to the data generating institution
5. Allocation of resources	A few working hours are expected to prepare and generate the data
6. Data security	These data are not sensitive, they will follow Envofar guidelines for data security.
7. Ethical aspects	No known ethical aspects
8. Other	NA

1. Data set name	Sorvag seaweed growth rate and carbon and nitrogen uptake
2. Data set owner or user, link to WP and/or Case Study	Fiskaaling, CS4
3. Data set summary	The dataset is an element of the investigation of the IMTA potential in Sørvágsfjord Regular investigations Saccharina latissimi and Alaria esculenta growth rates, biomass and carbon and nitrogen incorporation. The data is useful in investigations on the growth and IMTA potential of seaweed
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be available as csv files at Envofar, Environmental data on terrestrial and marine ecosystems in the Faroe Islands http://www.envofar.fo/ Metadata will be provided with the datasets
4.2 Plans for making data openly accessible	The data will be publicly available at http://www.envofar.fo/
4.3 Plans for making data interoperable	The data will be presented in standard vocabulary to allow inter-disciplinary interoperability
4.4 Plans for making data re-usable (through clarifying licenses)	All data on ENVOFAR are freely available to anybody interested, but should be acknowledged by reference to the data generating institution
5. Allocation of resources	A few working hours are expected to prepare and generate the data
6. Data security	These data are not sensitive, they will follow Envofar guidelines for data security.
7. Ethical aspects	No known ethical aspects
8. Other	NA

1. Data set name	Sorvag Hydrography
2. Data set owner or user, link to WP and/or Case Study	Fiskaaling, CS4
3. Data set summary	The dataset is an element in the investigation of the water exchange in Sørvágsfjord Two-year time series of CTD profiles, including temperature, salinity, fluorescent, par and oxygen in a Faroese fjord. Weekly or biweekly sampling from April to September at seven stations. The data would be useful investigations on fjord ecology
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be available as csv files at Envofar, Environmental data on terrestrial and marine ecosystems in the Faroe Islands http://www.envofar.fo/ Metadata will be provided with the datasets
4.2 Plans for making data openly accessible	The data will be publicly available at http://www.envofar.fo/
4.3 Plans for making data interoperable	The data will be presented in standard vocabulary to allow inter-disciplinary interoperability.
4.4 Plans for making data re-usable (through clarifying licenses)	All data on ENVOFAR are freely available to anybody interested, but should be acknowledged by reference to the data generating institution
5. Allocation of resources	A few working hours are expected to prepare and generate the data
6. Data security	These data are not sensitive, they will follow Envofar guidelines for data security.
7. Ethical aspects	No known ethical aspects
8. Other	NA

1. Data set name	Sorvag Currents
2. Data set owner or user, link to WP and/or Case Study	Luna CS4
3. Data set summary	The dataset is an element in the investigation of the water exchange in Sørvágsfjord A two months time series of current profile in a Faroese fjord. The data would be useful investigations on fjord ecology
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be available as csv files at Envofar, Environmental data on terrestrial and marine ecosystems in the Faroe Islands http://www.envofar.fo/ Metadata will be provided with the datasets
4.2 Plans for making data openly accessible	The data will be publicly available at http://www.envofar.fo/
4.3 Plans for making data interoperable	The data will be presented in standard vocabulary to allow inter-disciplinary interoperability.
4.4 Plans for making data re-usable (through clarifying licenses)	All data on ENVOFAR are freely available to anybody interested, but should be acknowledged by reference to the data generating institution
5. Allocation of resources	A few working hours are expected to prepare and generate the data
6. Data security	These data are not sensitive, they will follow Envofar guidelines for data security.
7. Ethical aspects	No known ethical aspects
8. Other	NA

1. Data set name	Sorvag fish farm data
2. Data set owner or user, link to WP and/or Case Study	CS 4 P/F Luna (Marjun Wilhelm; IRG; marjun.wilhelm@luna.fo)
3. Data set summary	Data include fish biomass and feed usage at a commercial fish farm in the Faroe Islands during one production cycle. The data will be used in modeling the waste production at the farm.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The analyzed data will be published in either industry reports and/or peer-reviewed papers.
4.2 Plans for making data openly accessible	The peer reviewed papers and industry reports will be available to the public online at www.fiskaaling.fo and/or in open access peer reviewed papers.
4.3 Plans for making data interoperable	The data will be published in scientific language in peer-review journals and/or published in industry reports or popular literature for applied users.
4.4 Plans for making data re-usable (through clarifying licenses)	Unanalyzed data will not be publically available due to the industrial sensitivity of the data. However, they will be available for research purposes by request to Marjun Wilhelm, IRG at Luna. marjun.wilhelm@luna.fo
5. Allocation of resources	No additional costs required.
6. Data security	N/A
7. Ethical aspects	All data will be subject to ethical approval if applicable.
8. Other	N/A

1. Data set name	Deployment of seeded Saccharina latissima longline on abalone grow out farm.
2. Data set owner or user, link to WP and/or Case Study	France Haliotis, CS4, WP3
3. Data set summary	Biomass produced per linear meter of long line.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The dataset will be uploaded to Zenodo website The dataset will be recorded in a CSV format and will be accompanied by a methodological note.
4.2 Plans for making data openly accessible	Dataset will be made openly available in Zenodo.
4.3 Plans for making data interoperable	Dataset will be in English
4.4 Plans for making data re-usable (through clarifying licenses)	The dataset will be made openly accessible and re-usable once a scientific publication will have been finalized and/or before the end of Aquavitae project in 2022 – whichever comes first.
5. Allocation of resources	The data will be made FAIR through Zenodo and should not include any specific costs other than the technician time required to format and upload the datasets. These costs will be covered by France Haliotis during the Aquavitae project.
6. Data security	No specific security requirements have been identified for this dataset.
7. Ethical aspects	There is no ethical issue identified with the data collected in this dataset.
8. Other	N/A

1. Data set name	Assessment of co-culture of Queen scallop Chlamys varia culture with European abalone (Haliotis tuberculata) at sea
2. Data set owner or user, link to WP and/or Case Study	France Haliotis, CS4, WP3
3. Data set summary	Effect on abalone growth and survival of scallop and abalone, 3 culture densities tested for scallop.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The dataset will be uploaded to Zenodo website The dataset will be recorded in a CSV format and will be accompanied by a methodological note.
4.2 Plans for making data openly accessible	Dataset will be made openly available in Zenodo.
4.3 Plans for making data interoperable	Dataset will be in English
4.4 Plans for making data re-usable (through clarifying licenses)	The dataset will be made openly accessible and re-usable once a scientific publication will have been finalized and/or before the end of Aquavitae project in 2022 – whichever comes first.
5. Allocation of resources	The data will be made FAIR through Zenodo and should not include any specific costs other than the technician time required to format and upload the datasets. These costs will be covered by France Haliotis during the Aquavitae project.
6. Data security	No specific security requirements have been identified for this dataset.
7. Ethical aspects	There is no ethical issue identified with the data collected in this dataset.
8. Other	N/A

1. Data set name	CS4 Task 1 – Biosecurity of algae in abalone feeds
2. Data set owner or user, link to WP and/or Case Study	Rhodes University/Marifeed, WP2
3. Data set summary	Description of microbiota on macroalgae produced in different environments, and data that quantifies the effect that various sterilization/pasteurization procedures have on (a) the survival of certain pathogenic microbes and (b) the effect that these procedures have on nutritional value of the algae and (c) subsequent growth/health data of abalone that are fed these diets.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The analyzed data will be published in either (a) industry reports and/or (b) student theses and/or (c) peer-reviewed papers. The peer reviewed papers and industry reports and student theses will be available to the public online, using appropriate key words that will increase the chances of them being found. In addition, we will also make raw data (that was included in industry reports and/or student theses and/or peer-reviewed papers) easily accessible through an on-line database, but only after it has been published. We do not currently have experience in doing this, but will use PANGAEA (https://pangaea.de) for example, or a similar/alternative platform.
4.2 Plans for making data openly accessible	Student thesis will be freely available to the public and reports will be freely available too. Publications might be limited to subscription owner only. In addition, data will be accessible via a free platform such as PANGAEA (https://pangaea.de) included as an example here only.
4.3 Plans for making data interoperable	The data will be published in scientific language (thesis and peer-review journals) and/or published in industry reports or popular literature for applied users, and using software such as Microsoft Excel and Word, for example.
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication; e.g. PANGAEA (https://pangaea.de)
5. Allocation of resources	No additional costs required.
6. Data security	The data will be subject to standard security procedures prescribed by the platform on which it will be made available.
7. Ethical aspects	All data and use thereof will be subject to ethical approval per Rhodes University ethical clearance policy.
8. Other	N/A

1. Data set name	CS4 Task 4 – Lobster and oyster IMTA
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute (Sweden), CS4
3. Data set summary	Aim: Evaluate co-cultivation of the European lobster (*Homarus gammarus*) and the European flat oyster (*Ostrea edulis*) in sea-based systems. Data will be collected in Sweden and shall be associated with the potential for co-cultivation of the European lobster (*Homarus gammarus*) and the European flat oyster (*Ostrea edulis*) in sea-based systems adapted to local conditions. The data will include growth and survival of lobster juveniles and oysters in different systems and at different depths. Data will generate new knowledge and techniques for ongrowing cultivation methods for lobster juveniles with respect to cost efficiency, sustainability and quality of animals and will include data related to the improvement of oyster farming with regards to managing biofouling during the grow out stage.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable. The analyzed data will be published in either (a) industry reports and/or (b) student theses and/or (c) peer-reviewed papers. The published papers and/or reports will be available to the public online, using appropriate key words that will increase the chances of them being found.
4.2 Plans for making data openly accessible	Figshare is a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner. If applicable, the student theses and industry reports will be freely available to the public. Scientific publications might be limited to subscription owners only.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv) The data will be published in scientific language (thesis and peer-review journals, if applicable) and/or published in industry reports or popular literature for applied users.
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Data will be hosted by Figshare and will follow their guidelines for data security.
7. Ethical aspects	No ethical aspects known, but all data and use thereof will be subject to ethical approval if applicable.
8. Other	N/A

Case Study 5

1. Data set name	Biofloc and pond-based IMTA.
2. Data set owner or user, link to WP and/or Case Study	UFSC, FURG and UNESP CS5
3. Data set summary	Aim: Enhance the Biofloc Technology by adjustments of production parameters and design and validate a shrimp rearing in IMTA system in biofloc and pond base. We will evaluate different systems to shrimp rearing in biofloc and AMTI using biofloc and pond based. Shrimp rearing in biofloc system will be performed at FURG (Rio Grande/RS), AMTI in biofloc (shrimp, mullet and seaweed) at FURG and UFSC (Florianópolis/SC) and AMTI (shrimp, oyster and seaweed) in pond at PRIMAR (Tibau do Sul) in collaboration with UDESC. Data will include system performance (shrimp, fish, oyster and seaweed), yield and water quality parameters. Data will be used to evaluate different shrimp production systems.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	All the data will be provided in excel data document, with the specific units, date and the responsible for the data collection. Raw data will be available through an online database suggested by WP 4.
4.2 Plans for making data openly accessible	Use an online general repository suggested by WP 4.
4.3 Plans for making data interoperable	We will use standard database, like docx, xlsx and csv.
4.4 Plans for making data re-usable (through clarifying licenses)	Raw data will be available after publication.
5. Allocation of resources	We do not expect to need extra resources for that. We will have simple data.
6. Data security	Use an online database suggested by WP 4. We have no experience with that.
7. Ethical aspects	No known ethical aspects.
8. Other	N/A

1. Data set name	Designing shrimp-seaweed-oyster IMTA in tropical ponds
2. Data set owner or user, link to WP and/or Case Study	Unesp and Embrapa CS5
3. Data set summary	To design and validate a shrimp - seaweed-oyster IMTA production system on a commercial scale to enhance profitability, ensure sustainability and promote the circular economy of aquaculture enterprises besides conserving natural resources.
4. FAIR Data (Findable, Accessible, Interoperable, Re-usable)	
4.1 Plans for making data findable	All information will be recorded in Excel data document, according to sampling schedule with spatial and temporal description, specifying units.
4.2 Plans for making data openly accessible	At the end of the work and after publications in open journals, all data will be available in a general repository e.g. Zenodo.
4.3 Plans for making data interoperable	Standard formats of data will be made available (Word and Excel).
4.4 Plans for making data re-usable (through clarifying licenses)	Data will be available after publications, in a standardized format.
5. Allocation of resources	No extra costs are required.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations.
7. Ethical aspects	All ethical aspects related to research required by the Brazilian law will be attended. It refers to interviews that will be necessary to obtain social and economic data for calculating sustainability index.
8. Other	No.

Case Study 6

1. Data set name	Sea urchin roe enhancement results (Norway/Spain/Canada)
2. Data set owner or user, link to WP and/or Case Study	Nofima (Norway) CS6 Links to WP2 and WP3
3. Data set summary	The research aims to commercialize sea urchin roe enhancement in Europe and Canada. Dataset of sea urchin roe enhancement results for 1. Norway 2. Spain 3. Canada Some existing data from previous projects will be used together with information supplied by industry partners. Given this is a new product the quantity of data will be limited. Data from Canada will be reliant on project stakeholders. This data will be useful to industry partners involved in this Case Study and will be utilized by WP7. Data will be primarily on size, weight and change in gonad index over time.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The raw data will be made accessible through a general open access repository e.g. Zenodo as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable. Standard naming conventions will be followed, and choice of key words will be carefully considered. No metadata will be generated.
4.2 Plans for making data openly accessible	Standard formats of data will be made available (word, excel, .csv). No special or specific software will be required to access the data. Any data that is commercially sensitive to members of the AquaVitae industry partners or members of the IRG will be withheld (on request of the partner or IRG member).
4.3 Plans for making data interoperable	The data will be publicly available after publication. A standardized format and vocabulary for the data will be set up to facilitate the use of data by others.
4.4 Plans for making data re-usable (through clarifying licenses)	All data will be available unless specified as commercially sensitive in which case it will not be made available in the database. The data produced and/or used in the project is useable by third parties (excluding commercially sensitive data as described in 4.2). The data will remain usable as long as it is relevant and or requested.
5. Allocation of resources	No data management FAIR costs are expected. The CS leader will be responsible for this data. There will be no costs associated with long term preservation of this data.
6. Data security	Data will be hosted by Nofima and will adhere fully to guidelines for data security
7. Ethical aspects	Data will be anonymized before publication
8. Other	n/a

1. Data set name	Sea urchin species of interest datasheet
2. Data set owner or user, link to WP and/or Case Study	Nofima(Norway) CS6 Links to WP2 and WP3
3. Data set summary	The research aims to describe sea urchin species of commercial relevance for roe enhancement in Norway, Canada and Spain. This data will serve to show which markets are relevant and commercial values of enhanced sea urchins Dataset of market values, market volumes and normal seasonal supply in various markets. Some existing data from previous projects will be used together with information supplied by industry partners Given this is a new product the quantity of data will be limited This data will be useful to industry partners involved in this Case Study and will be utilized by WP7
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The raw data will be made accessible through a general open access repository e.g. Zenodo as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable. Standard naming conventions will be followed, and choice of key words will be carefully considered No metadata will be generated
4.2 Plans for making data openly accessible	Standard formats of data will be made available (word, excel, .csv). No special or specific software will be required to access the data Any data that is commercially sensitive to members of the AquaVitae industry partners or members of the IRG will be withheld (on request of the partner or IRG member)
4.3 Plans for making data interoperable	The data will be publicly available after publication. A standardized format and vocabulary for the data will be set up to facilitate the use of data by others
4.4 Plans for making data re-usable (through clarifying licenses)	All data will be available unless specified as commercially sensitive in which case it will not be made available in the database. The data produced and/or used in the project is useable by third parties (excluding commercially sensitive data as described in 4.2) The data will remain usable as long as it is relevant and or requested
5. Allocation of resources	No data management FAIR costs are expected The CS leader will be responsible for this data There will be no costs associated with long term preservation of this data.
6. Data security	Data will be hosted by Nofima and will adhere fully to guidelines for data security
7. Ethical aspects	Data will be anonymized before publication
8. Other	n/a

1. Data set name	Sea urchin roe enhancement protocols
2. Data set owner or user, link to WP and/or Case Study	Nofima (Norway) CS6 Links to WP2 and WP3
3. Data set summary	Dataset defining protocols for sea urchin roe enhancement. Including feed rates, water flows, cleaning and feeding regimes. Some existing data from previous projects will be used together with information supplied by industry partners. This data will be useful to industry partners involved in this Case Study.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The raw data will be made accessible through a general open access repository e.g. Zenodo as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable. Standard naming conventions will be followed, and choice of key words will be carefully considered. No metadata will be generated.
4.2 Plans for making data openly accessible	Standard formats of data will be made available (word, excel, .csv). No special or specific software will be required to access the data. Any data that is commercially sensitive to members of the AquaVitae industry partners or members of the IRG will be withheld (on request of the partner or IRG member).
4.3 Plans for making data interoperable	The data will be publicly available after publication. A standardized format and vocabulary for the data will be set up to facilitate the use of data by others.
4.4 Plans for making data re-usable (through clarifying licenses)	All data will be available unless specified as commercially sensitive in which case it will not be made available in the database. The data produced and/or used in the project is useable by third parties (excluding commercially sensitive data as described in 4.2). The data will remain usable as long as it is relevant and or requested.
5. Allocation of resources	No data management FAIR costs are expected. The CS leader will be responsible for this data. There will be no costs associated with long term preservation of this data.
6. Data security	Data will be hosted by Nofima and will adhere fully to guidelines for data security.
7. Ethical aspects	Data will be anonymized before publication.
8. Other	n/a

Case Study 7

1. Data set name	Sea cucumber expert's species of interest
2. Data set owner or user, link to WP and/or Case Study	Alfred Wegener Institute (Germany) CS7 Links to WP3 and CS7
3. Data set summary	The research aims to identify sea cucumber species of interest in South Africa and possibly Brazil. Dataset of market values, local names, purchasers and fishery areas for sea cucumber species of commercial interest for IMTA. Data will include expert opinions on whether the animals associate with aquaculture sites.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	A metadata sheet will be provided in the beginning of each excel data document, specifying parameter number, name, short name, units and comments/factors mentioned in the data, as well as who collected the data, where and when. The raw data (anonymized) will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv) and will apply standardized international measures (Density per m2, standard physicochemical parameters…)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others
5. Allocation of resources	No data management FAIR costs are expected. AWI has free access to PANGAEA and virtually unlimited storage available.
6. Data security	Data will be hosted by PANGAEA and will adhere fully to guidelines for data security.
7. Ethical aspects	Data will be anonymized before publication
8. Other	n/a

1. Data set name	Sea cucumber hatchery species of interest survey
2. Data set owner or user, link to WP and/or Case Study	Alfred Wegener Institute (Germany) CS7 Links to WP3 and CS7
3. Data set summary	The research aims to verify sea cucumber species of interest in South Africa and possibly Brazil. Dataset (developing over time) of site specifics for surveyed sites for sea cucumbers in South Africa and possibly Brazil. Data will be primarily on-site characteristics (facies, depth, water parameters, and density of sea cucumbers).
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	A metadata sheet will be provided in the beginning of each excel data document, specifying parameter number, name, short name, units and comments/factors mentioned in the data, as well as who collected the data, where and when. The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv) and will apply standardized international measures (Density per m2, standard physicochemical parameters...)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others
5. Allocation of resources	No data management FAIR costs are expected. AWI has free access to PANGAEA and virtually unlimited storage available.
6. Data security	Data will be hosted by PANGAEA and will adhere fully to guidelines for data security.
7. Ethical aspects	None
8. Other	n/a

1. Data set name	Sea cucumber hatchery growth results
2. Data set owner or user, link to WP and/or Case Study	Alfred Wegener Institute (Germany) CS7 Links to WP1 and CS7
3. Data set summary	The research aims to verify hatchery techniques to grow larval sea cucumbers though to juveniles. Dataset (developing over time) of hatchery production of sea cucumbers in South Africa and possibly Brazil. Data will be primarily on growth and survival of sea cucumbers.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	A metadata sheet will be provided in the beginning of each excel data document, specifying parameter number, name, short name, units and comments/factors mentioned in the data, as well as who collected the data, where and when. The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv) and will apply standardized international measures (Growth, Specific Growth Rates...)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others
5. Allocation of resources	No data management FAIR costs are expected. AWI has free access to PANGAEA and virtually unlimited storage available.
6. Data security	Data will be hosted by PANGAEA and will adhere fully to guidelines for data security.
7. Ethical aspects	None
8. Other	n/a

Case Study 8

1. Data set name	Evaluation of juvenile oyster production
2. Data set owner or user, link to WP and/or Case Study	GMIT (Ireland), CS8, WP1
3. Data set summary	Evaluation of juvenile oyster production for the native European flat oyster *O. edulis*. Data will be collected from pond production of oysters at Cartron Point Shellfish, Ireland. In conjunction with GMIT & IVL
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Developing and testing protocols for fouling treatments on *Ostrea edulis*.
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute (Sweden), Bohus Havsbruk (Sweden), CS8
3. Data set summary	Aim: Develop protocols for effective fouling treatment on oysters (Ostrea edulis and/or Pacific oysters) in the lab. Fouling treatments will be evaluated using lab trials (in tanks) for evaluation of effects of heat treatment of fouling organisms on oysters. A range of different temperatures and exposure times will be evaluated. The most promising treatments will then be evaluated in field conditions at industry scale (in large tanks where oysters are submerged temporarily). The data will consist of parameters associated with the treatments (temperature, salinity) and survival of oysters, survival of fouling organisms/fouling cover of oyster shells over time. Data will originate from the Swedish west coast. The data will be used to evaluate an optimal technique to minimize fouling problems in oyster production in Sweden.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare, a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Evaluation of different settlement substrates for field-based collection of *Ostrea edulis*.
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute (Sweden), CS8
3. Data set summary	Aim: Evaluate different types of settlement substrates for field-based collection of Ostrea edulis. Different types of substrate (shells of different species etc.) will be placed in the sea and the survival and number of spat attached to the substrates will be evaluated. Growth and species identification (O. edulis versus M. gigas) will also be documented. Data will originate from the Swedish west coast. The data will be used to develop a protocol for optimal techniques for field based spat collection of oysters in Sweden.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Pond based production of oyster spat (*Ostrea edulis*)
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute, Bohus havsbruk, CS8
3. Data set summary	Aim: Evaluate protocol for extensive pond production of oyster spat to ensure a reliable supply of high-quality oyster seed (Ostrea edulis) Oysters will be placed in ponds or land-based tanks and let to spawn under optimal conditions. Field measurements of temperature, salinity, turbidity, primary production (Chl a) and larval density in the water may be collected. Also, data on timing and success rate of settlement (survival) will be collected and summarised in an excel document. Data will be compiled on regular intervals during the spring and summer months. Data will originate from the Swedish west coast. The data can be useful to develop protocols and evaluate techniques for spat production for oyster farmers as well as researchers.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Low-tech nursery system for *Ostrea edulis.*
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute, Orust shellfish, CS8
3. Data set summary	Aim: Develop and evaluate low-tech nursery systems for Ostrea edulis. Evaluation of sea based, low-tech nursery systems. Data will involve growth and survival of oysters. Data will involve growth and survival of oysters. Data will originate from the Swedish west coast. The data can be useful to develop protocols and evaluate techniques for oyster aquaculture for oyster farmers as well as researchers.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Evaluation of different grow-out systems for oysters.
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute (Sweden), Bohus Havsbruk, Orust Shellfish, CS8
3. Data set summary	Aim: Evaluate of different grow-out systems for oysters (Ostrea edulis). Evaluation of alternative grow-out systems will be based on existing systems used in other regions around the Atlantic with similar climatic conditions (e.g. Maine, US). System performance in a Scandinavian context will be evaluated using oyster growth trials. System modifications will be made when necessary. New systems will also be developed and evaluated. Data will include growth and survival of oysters in different systems. Data will originate from the Swedish west coast. The data will be used to evaluate different techniques for production of oysters in Sweden.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Evaluation of oysters sea-based seed collectors.
2. Data set owner or user, link to WP and/or Case Study	Embrapa (Brazil), CS8
3. Data set summary	Aim: Evaluate of different artificial collector for oysters' seeds (*Crassostrea gasar*). Evaluation of different texture treatments in traditional Brazilian collectors handmade from plastic bottles used in tropical waters from the Brazilian North and Northeast coast. The best treatment obtained after one year of data collection will be compared to collectors used commercially in Europe during a 12 months field trial in which the number of seeds collected and the cost of each type of artificial collector will be quantified.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The arrangements for making data accessible will be based on CS leader's steps. An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU and Brazil will be followed.
8. Other	N/A

1. Data set name	Development of hatchery techniques for *Crassostrea gasar*
2. Data set owner or user, link to WP and/or Case Study	Embrapa (Brazil), CS8
3. Data set summary	Aim: Development of hatchery techniques for *Crassostrea gasar* seed supplies, including larval diets and maturation and conditioning using salinity manipulation. A larval diet and a protocol for maturation and conditioning using salinity manipulation for *C. gasar* will be developed based on review of existing literature and data from previous projects. The protocol will be tested and evaluated by university partners in southern Brazil, refined by Embrapa and then transferred to industry partner
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The arrangements for making data accessible will be based on CS leader's steps. An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU and Brazil will be followed.
8. Other	N/A

1. Data set name	Evaluation of different grow-out systems for oysters.
2. Data set owner or user, link to WP and/or Case Study	Embrapa (Brazil), CS8
3. Data set summary	Aim: Evaluate of different grow-out systems for oysters (*Crassostrea gasar*). Evaluation of alternative grow-out systems will be based on existing systems used in Brazil comparing with systems used in other regions around the Atlantic. Data will originate in tropical waters from the Brazilian Northeast coast. Systems will be adapted to local conditions and new systems will be produced throughout the project. Performance evaluations will be based on oyster growth and survival and also on the advantages and disadvantages of managing each system tested.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The arrangements for making data accessible will be based on CS leader's steps. An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU and Brazil will be followed.
8. Other	N/A

1. Data set name	Revise the estuarine water collection and treatment structure, to improve the water quality of the Primar hatchery of Crassostrea gasar
2. Data set owner or user, link to WP and/or Case Study	Primar (Brazil) CS8
3. Data set summary	Aim: Refine hatchery production by improving water quality Based on the review of previous projects and literature, we will draft for a project to improve catchment structure and treatment of estuarine waters that are used in Primar's hatchery. The project will be evaluated and implemented later. Data will originate from the northeast of Brazil. The data can be useful to develop protocols and evaluate techniques for treatment of estuarine waters for hatcheries as well as researchers.
4. FAIR Data (Findable, Accessible, Interoperable, Re-usable)	
4.1 Plans for making data findable	The arrangements for making data accessible will be based on CS leader's steps. An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare, a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per Scientific Data manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU and Brazil will be followed.
8. Other	N/A

1. Data set name	Native microalgae feed for larvae fase of Crassostrea gasar
2. Data set owner or user, link to WP and/or Case Study	Primar (Brazil) CS8
3. Data set summary	Aim: Enhance feeding protocols for oyster larvae and seeds. Based on literature review, the feeding of oyster larvae and seeds will be reviewed. Samples with native micro algae will be collected in the environment, isolated and placed in experimental production, for subsequent tests, evaluations and adjustments before pilot production of native micro algae for feeding of C. gasar. Data will originate from the northeast of Brazil. The data can be useful to develop protocols and evaluate techniques for spat production for oyster hatcheries as well as researchers.
4. FAIR Data (Findable, Accessible, Interoperable, Re-usable)	
4.1 Plans for making data findable	The arrangements for making data accessible will be based on CS leader's steps. An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare, a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per Scientific Data manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU and Brazil will be followed.
8. Other	N/A

Case Study 9

1. Data set name	Mussel hatchery production (Ireland & Denmark)
2. Data set owner or user, link to WP and/or Case Study	Technical University of Denmark (DTU), Cartron Point Shellfish Ltd, WP1 Leader Case study 9 (CS9) – Hatchery production of mussel's seed
3. Data set summary	- Collection of mussel biomass growth data from hatchery derived production - Biomass samples will be collected and processed in terms of e.g. morphometrics and total biomasses. Processed data will be stored in Excel-files or similar. - No existing datasets are expected to be included. - Dataset will be relevant for other mussel and fish farmers and shellfish hatchery operators
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data will be findable through open access articles and reports.
4.2 Plans for making data openly accessible	Data will be publicly available in open access articles either in condensed tables or as raw data in supplemental material and uploaded to a general repository e.g. Zenodo.
4.3 Plans for making data interoperable	The data is interoperable and can be assessed by standard programs like Excel, text edit etc.
4.4 Plans for making data re-usable (through clarifying licenses)	Data will be publicly available in open access articles or by request to DTU Aqua.
5. Allocation of resources	No additional costs required.
6. Data security	Data are hosted by DTU Aqua and follows DTU's guidelines for data security according to EU *General Data Protection Regulation* (*GDPR*).
7. Ethical aspects	No known ethical aspects.
8. Other	NA

Case Study 10

1. Data set name	Reproduction of *Arapaima gigas*
2. Data set owner or user, link to WP and/or Case Study	Lucas Simon Torati CS10
3. Data set summary	Objective: To characterize and evaluate the structural diversity of intermuscular bones (IBs) in 10-month-old tambaqui specimens by X-ray imaging, to characterize the IB formation, development and diversification stages in tambaqui fingerlings 1 to 60 days after hatching through clearing for the following three stages identified during the clearing process: I - connective tissue + muscle without IBs, II - muscle tissue with partial IBs, and III - muscle tissue with complete and diversified IBs. These analyses therefore will evaluate images (X-ray and cleared specimens; raw data) and extract information from it into Excel spreadsheet. Data for this study should include fish family, size, weight, age, number and types of IBs. This study will occur at Palmas-AM (Brazil). Data will be used to understand the structural morphology and variability of IBs will help support tambaqui breeding programs in which selection for the reduction of IBs may be viable from the viewpoint of genetic gains.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data will be made available in Excel format and raw data in tiff format (images). An initial spreadsheet summarizing the data (metadata) set will be made available, including a short explanation for the factors in the data set, person responsible for the data collection and curation. Datasheet will make use of "The International System of Units (SI)" and will follow the Code of Zoological Nomenclature (ICZN) for naming animal species. Raw data will be supplied at an open globally scoped online data repository (*i.e*. Figshare, Dryad, Mendeley Data, EUDat) as soon as it becomes published. Keywords will be selected based on specific usage and following an international glossary of ichthyology. A DOI number will be used when this applies to the data set.
4.2 Plans for making data openly accessible	By using Dryad as a repository, the data set will become accessible to the wide scientific and stakeholder community. The Dryad Digital Repository is a curated resource that makes research data discoverable, freely reusable, and citable. Dryad provides a general-purpose home for a wide diversity of data types.
4.3 Plans for making data interoperable	Whenever it applies, metadata provided will include reference to other metadata, especially if it concerns results from different experiments of AV project.
4.4 Plans for making data re-usable (through clarifying licenses)	By making data set available in an open repository, it will become available for re-use by others. In order to increase possibility of reuse by others, metadata should be written/explained in a clear, accurate and standard manner. A clear and accessible data usage license should also be provided in the metadata.
5. Allocation of resources	Dryad collects a Data Publishing Charge (DPC) of $120US upon data publication, unless there is a sponsor or fee waiver in place.
6. Data security	After hosted in Dryad, data will comply and be submitted to Dryad security system and guidelines.
7. Ethical aspects	No known ethical aspects.
8. Other	NA

1. Data set name	Reproduction of *Arapaima gigas*
2. Data set owner or user, link to WP and/or Case Study	Lucas Simon Torati CS10
3. Data set summary	Objective: Development of protocols for the captive reproduction of the giant fish *A. gigas* will be based on tests of different hormonal and/or environmental therapies. These different therapies will be applied into different couples of fish (statistical units) allocated in earth ponds, or also on individual fish when aiming at the collection of gametes. Data for different treatments before and after treatments shall include variables such as hormonal levels in blood plasma, morphometric data of oocytes, and quality parameters of the collected gametes. These experiments will occur at Palmas-TO (Brazil). Data will be used to distinguish the best treatments and protocols for use in the reproduction of *A. gigas.*
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data will be made available in Excel format. An initial spreadsheet summarizing the data (metadata) set will be made available, including a short explanation for the factors in the data set, person responsible for the data collection and curation. Datasheet will make use of "The International System of Units (SI)" and will follow the Code of Zoological Nomenclature (ICZN) for naming animal species. Raw data will be supplied at an open globally scoped online data repository (*i.e*. Figshare, Dryad, Mendeley Data, EUDat) as soon as it becomes published. Keywords will be selected based on specific usage and following an international glossary of ichthyology. A DOI number will be used when this applies to the data set.
4.2 Plans for making data openly accessible	By using Dryad as a repository, the data set will become accessible to the wide scientific and stakeholder community. The Dryad Digital Repository is a curated resource that makes research data discoverable, freely reusable, and citable. Dryad provides a general-purpose home for a wide diversity of data types.
4.3 Plans for making data interoperable	Whenever it applies, metadata provided will include reference to other metadata, especially if it concerns results from different experiments of AV project.
4.4 Plans for making data re-usable (through clarifying licenses)	By making data set available in an open repository, it will become available for re-use by others. In order to increase possibility of reuse by others, metadata should be written/explained in a clear, accurate and standard manner. A clear and accessible data usage license should also be provided in the metadata.
5. Allocation of resources	Dryad collects a Data Publishing Charge (DPC) of $120US upon data publication, unless there is a sponsor or fee waiver in place.
6. Data security	After hosted in Dryad, data will comply and be submitted to Dryad security system and guidelines.
7. Ethical aspects	No known ethical aspects.
8. Other	NA

1. Data set name	Reproduction of *Arapaima gigas*
2. Data set owner or user, link to WP and/or Case Study	Lucas Simon Torati CS10
3. Data set summary	Objective: Development of an efficient protocol for large-scale production of triploid tambaqui *C. macropomum* will be based on different trials testing the effect of different temperature shocks on the retention of the second polar body at the fertilization moment. These different trials will test different temperatures and will yield different success results, to be statistically compared and analysed. Data for these different treatments shall include flow cytometry outputs to indicate success rates of treatments. These experiments will occur at Manaus-AM (Brazil). Data will be used to distinguish the best treatments and protocols for triploid production in *C. macropomum.*
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data will be made available in Excel format. An initial spreadsheet summarizing the data (metadata) set will be made available, including a short explanation for the factors in the data set, person responsible for the data collection and curation. Datasheet will make use of "The International System of Units (SI)" and will follow the Code of Zoological Nomenclature (ICZN) for naming animal species. Raw data will be supplied at an open globally scoped online data repository (*i.e*. Figshare, Dryad, Mendeley Data, EUDat) as soon as it becomes published. Keywords will be selected based on specific usage and following an international glossary of ichthyology. A DOI number will be used when this applies to the data set.
4.2 Plans for making data openly accessible	By using Dryad as a repository, the data set will become accessible to the wide scientific and stakeholder community. The Dryad Digital Repository is a curated resource that makes research data discoverable, freely reusable, and citable. Dryad provides a general-purpose home for a wide diversity of data types.
4.3 Plans for making data interoperable	Whenever it applies, metadata provided will include reference to other metadata, especially if it concerns results from different experiments of AV project.
4.4 Plans for making data re-usable (through clarifying licenses)	By making data set available in an open repository, it will become available for re-use by others. In order to increase possibility of reuse by others, metadata should be written/explained in a clear, accurate and standard manner. A clear and accessible data usage license should also be provided in the metadata.
5. Allocation of resources	Dryad collects a Data Publishing Charge (DPC) of $120US upon data publication, unless there is a sponsor or fee waiver in place.
6. Data security	After hosted in Dryad, data will comply and be submitted to Dryad security system and guidelines.
7. Ethical aspects	No known ethical aspects.
8. Other	NA

Multiple Case Study

1. Data set name	AQUAVITAE_Fish key performance indicators_Diets from fisheries by-catch valorisation
2. Data set owner or user, link to WP and/or Case Study	Centre of Marine Sciences (CCMAR), CC CS12 and WP3.
3. Data set summary	Key performance indicators from Senegalese sole (*Solea senegalensis*) juveniles fed diets formulated with ingredients from fisheries by-catch.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data is assigned a DOI to be uniquely identified. Data is shared in a searchable resource (Figshare).
4.2 Plans for making data openly accessible	Data is publicly available at https://figshare.com/.
4.3 Plans for making data interoperable	The data is interoperable. Data is created under the standards of fairsharing.org and contains different indicators and descriptors.
4.4 Plans for making data re-usable (through clarifying licenses)	Data is publicly available for all. No login required. Data will be publicly available when the final prototype is approved by the consortium members.
5. Allocation of resources	No additional costs are foreseen.
6. Data security	Data is hosted by Figshare on Amazon Web Services, which core infrastructure is built to satisfy the security requirements for military, global banks, and other high-sensitivity organizations.
7. Ethical aspects	Data is generated from experiments with animals. The experiments will be carried out according to specifications of AQUAVITAE's Deliverable D11.3 on Animal Ethics Requirements.
8. Other	NA

1. Data set name	AQUAVITAE_Fish key performance indicators_Diets from low-trophic species
2. Data set owner or user, link to WP and/or Case Study	Centre of Marine Sciences (CCMAR), CC CS13, WP2 and WP3
3. Data set summary	Key performance indicators from Senegalese sole (*Solea senegalensis*) juveniles fed diets formulated with ingredients from low-trophic species.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data is assigned a DOI to be uniquely identified. Data is shared in a searchable resource (Figshare).
4.2 Plans for making data openly accessible	Data is publicly available at https://figshare.com/.
4.3 Plans for making data interoperable	The data is interoperable. Data is created under the standards of fairsharing.org and contains different indicators and descriptors.
4.4 Plans for making data re-usable (through clarifying licenses)	Data is publicly available for all. No login required. Data will be publicly available when the final prototype is approved by the consortium members.
5. Allocation of resources	No additional costs are foreseen.
6. Data security	Data is hosted by Figshare on Amazon Web Services, which core infrastructure is built to satisfy the security requirements for military, global banks, and other high-sensitivity organizations.
7. Ethical aspects	Data is generated from experiments with animals. The experiments will be carried out according to specifications of AQUAVITAE's Deliverable D11.3 on Animal Ethics Requirements.
8. Other	NA

1. Data set name	Protein hydrolysis optimiztion
2. Data set owner or user, link to WP and/or Case Study	Generated by: Stellenbosh University Relevant WP's: WP2 and WP3 Relevant CS: CS2.3 (by-products)
3. Data set summary	The purpose of generating the dataset is to determine the optimal processing conditions at which fishery and aquaculture by-products (by-catch and/or food processing by-products and/or low-value aquaculture species) can be treated, with specific focus on recovering protein from raw materials. The data set will enable re-utilization of by-products and/or waste in aquaculture, and will therefore contribute to circular economy, utilizing low-trophic species and to optimize diets for low- and high trophic species with new ingredients. Data will mainly be in the form of measured data-points, as part of time-series in a processing operation. Data will be captured both manually and electronically and will be stored in spreadsheet format for further processing. The overwhelming majority of data will be new data generated through the AquaVitae project, including all laboratory and pilot-plant work. The data will originate from the laboratories at the Department of Process Engineering, Stellenbosch University, and will consist of experimental and analytical measurements. Data will be useful both within the project to researchers interested in industrial implementation of by-products processing operations, and to nutritionists and feed formulators interested in utilizing new ingredients in both low- and high trophic aquaculture.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The dataset will be labelled, and metadata will be associated with each sub-set of data, including experimental conditions, experimental and analytical techniques employed, origin and condition of raw material, all experimental/analytical components utilized, and all date/time/location information relevant. Identifiers for each data set and each sub-set will be unique and would include at a minimum the type of raw material, the treatment applied to the raw material and the year in which the data set was generated. The naming convention will therefore include raw material, treatment and date, and an identifier to indicate the version of the data. Keywords will include a mixture of general terms and very specific terms, to enable people both from within AquaVitae and from without to find and utilize the data. Each dataset will be accompanied by a version-history front page, which will indicate the date during which the original data were generated, and any and all changes will be detailed, which will result in a new revision of the dataset being registered. For this data-set, no standard metadata requirements are available, and the metadata associated with this dataset are as outlined above.
4.2 Plans for making data openly accessible	All raw data generated will be made available, in the form of a labelled spreadsheet format. Data will be shared within the AquaVitae group and will be available from an online repository. Basic spreadsheet software (e.g. MS Excel) will be required to access the data, and basic browser software will be required to download the spreadsheet file(s). Spreadsheets are interoperable if saved in the correct CSV format, and therefore won't require specialist tools or software to download or access. A suitable online repository will be identified once data have

	been generated. If scientific publications arise from the data (which by default needs to be open source for AquaVitae), the data itself will be published, either as supplementary files or as 'Data in Brief'-type articles.
4.3 Plans for making data interoperable	The data will be interoperable, as it will be provided as individual readings in CSV-format spreadsheet files. With very basic steps, data in CSV files can be imported into non-Windows operating systems, while these files are directly readable by MS Excel on Windows-based machines.
4.4 Plans for making data re-usable (through clarifying licenses)	Data will be deposited in an online and open access repository (currently the 4TU.ResearchData repository is being targeted, https://researchdata.4tu.nl/en/), and any licencing for re-use will be subject to the repository's policies.
5. Allocation of resources	No significant costs are envisaged to find a suitable (and open access) online repository and upload the data.
6. Data security	The data will be hosted by an online repository, and will therefore follow the guidelines thereof
7. Ethical aspects	No know ethical aspects are envisaged. Potential intellectual property aspects have been declared as part of the project application, but it is not anticipated that these will arise.
8. Other	None.

1. Data set name	Pelletizing of agricultural lime obtained from shellfish shells.
2. Data set owner or user, link to WP and/or Case Study	Generated by: Stellenbosh University Relevant WP's: WP2 and WP3 Relevant CS: CS2.3 (by-products)
3. Data set summary	The purpose of generating the dataset is to document the process of preparing agricultural lime (primarily calcium carbonate) pellets for application in the agricultural industry, and to determine the best processing methods for i) size reduction of the lime and ii) the appropriate preparation methods of the lime pellets using agglomeration. The data set will enable re-utilization of by-products that originate in aquaculture in other agricultural sectors and will therefore contribute to circular and bioeconomy, and potentially to carbon capture and partial sequestration. Data will mainly be in the form of measured data-points, including time-series data in a processing stage, along with single data points detailing composition, and material properties. Data will be captured both manually and electronically and will be stored in spreadsheet format for further processing. The overwhelming majority of data will be new data generated through the AquaVitae project, including all laboratory and pilot-plant work. The data will originate from the laboratories at the Department of Process Engineering, Stellenbosch University, and will consist of experimental and analytical measurements. Data will be useful both within the project to researchers interested in industrial implementation of by-products processing operations, and to agronomists searching for more environmentally friendly pH control mechanisms in agriculture.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The dataset will be labelled, and metadata will be associated with each sub-set of data, including experimental conditions, experimental and analytical techniques employed, origin and condition of raw material, all experimental/analytical components utilized, and all date/time/location information relevant. Identifiers for each data set and each sub-set will be unique and would include at a minimum the type and origin of raw material, the treatment applied to the raw material and the year in which the data set was generated. The naming convention will therefore include raw material, treatment and date, and an identifier to indicate the version of the data. Keywords will include a mixture of general terms and very specific terms, to enable people both from within AquaVitae and from without to find and utilize the data. Each dataset will be accompanied by a version-history front page, which will indicate the date during which the original data were generated, and any and all changes will be detailed, which will result in a new revision of the dataset being registered. For this data-set, no standard metadata requirements are available, and the metadata associated with this dataset are as outlined above.
4.2 Plans for making data openly accessible	All raw data generated will be made available, in the form of a labelled spreadsheet format. Data will be shared within the AquaVitae group and will be available from an online repository. Basic spreadsheet software (e.g. MS Excel) will be required to access the data, and basic browser software will be required to download the spreadsheet file(s). Spreadsheets are interoperable if saved in the correct CSV format, and

	therefore won't require specialist tools or software to download or access. A suitable online repository will be identified once data have been generated. If scientific publications arise from the data (which by default needs to be open source for AquaVitae), the data itself will be published, either as supplementary files or as 'Data in Brief'-type articles.
4.3 Plans for making data interoperable	The data will be interoperable, as it will be provided as individual readings in CSV-format spreadsheet files. With very basic steps, data in CSV files can be imported into non-Windows operating systems, while these files are directly readable by MS Excel on Windows-based machines.
4.4 Plans for making data re-usable (through clarifying licenses)	Data will be deposited in an online and open access repository (currently the 4TU.ResearchData repository is being targeted, https://researchdata.4tu.nl/en/), and any licensing for re-use will be subject to the repository's policies.
5. Allocation of resources	No significant costs are envisaged to find a suitable (and open access) online repository and upload the data.
6. Data security	The data will be hosted by an online repository, and will therefore follow the guidelines thereof
7. Ethical aspects	No know ethical aspects are envisaged. Potential intellectual property aspects have been declared as part of the project application, but it is not anticipated that these will arise.
8. Other	None.

1. Data set name	Sea cucumber controlled feeding experiments
2. Data set owner or user, link to WP and/or Case Study	Alfred Wegener Institute (Germany) CS7 Links to WP3 CS3, CS4 and CS7
3. Data set summary	The research aims to test the IMTA (biodeposit) feeding response of sea cucumber species of interest in South Africa and possibly Brazil. Dataset of results of controlled feeding experiments for sea cucumbers in South Africa and possibly Brazil. Data will be related to feeding / consumption rates of biodeposits, impacts on biodeposits / sediments, growth rate of sea cucumbers.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	A metadata sheet will be provided in the beginning of each excel data document, specifying parameter number, name, short name, units and comments/factors mentioned in the data, as well as who collected the data, where and when. The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	The raw data will be made accessible through the AWI-dedicated on-line database, PANGAEA (https://pangaea.de) as soon as the data has been published and/or any database specified by the AV data manager. Keywords will be chosen carefully, DOI will be used when applicable.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv) and will apply standardized international measures (Specific growth rates, standard physicochemical parameters for sediments...)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others
5. Allocation of resources	No data management FAIR costs are expected. AWI has free access to PANGAEA and virtually unlimited storage available.
6. Data security	Data will be hosted by PANGAEA and will adhere fully to guidelines for data security.
7. Ethical aspects	None
8. Other	n/a

1. Data set name	Hatchery production of juveniles or sporophytes from case studies in WP1
2. Data set owner or user, link to WP and/or Case Study	WP1 leader and participants. WP2 & WP3 for shared case studies. WP1 Case Studies CS1, CS3, CS7, CS8, CS9, Cs10 & CS11
3. Data set summary	Data collection from the different and connected case studies which are primarily focused with the production of juveniles and sporophytes in WP1. As the project moves from the proto-typing stage the data and data sets will develop over time.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	It is the aim that data collected as part of WP1 will be in a useable and standardized format which is understood and searchable by all involved participants. What data is to be protected or kept closed will be decided by participants and confirmation and advice will be sought form WP4. WP4 will be consulted on the best and most appropriate method for online storage and data base use for the raw data e.g. a general repository (Zenodo).
4.2 Plans for making data openly accessible	Best practices will be implemented on the available data accessibility over the life of the project
4.3 Plans for making data interoperable	Specific searchable terms will be used to make the data useable. Standard file sharing formats will be used (Excel, Word).
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication or by agreement of the dissemination committee. A standardized format for the data will be implemented to facilitate the use of data by stakeholders
5. Allocation of resources	Best practices will be implemented once data is been collected. WP4 will be consulted for advices and best practices,
6. Data security	Data storage and hosting will follow and comply to EU regulations.
7. Ethical aspects	None
8. Other	N/A

WP4

1. Data set name	Sulphite monitoring device technical documents
2. Data set owner or user, link to WP and/or Case Study	BIOLAN WP4
3. Data set summary	Data generated as result of the development of Task 4.3. Data collected are expected to lead to the development and prototyping of a new improved device for sulphite monitoring connected to a data platform. Data will be generated by BIOLAN with the possible contribution of other WP4 partners. Collected data: sheets, materials, software packages, hardware layouts, communications layouts, source codes, assembly instructions, CAD-files. Size of data: Hundreds of megabytes/few gigabytes. Mainly documents (doc, docx, ppt, pptx, etc.), illustrations (png, jpeg, tiff, etc.), drawings (stp, slpdrw, sldprt) and raw data (xls.).
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The data will be stored in BIOLAN's server placed in a suitable folder identified following the general BIOLAN procedure for data storage
4.2 Plans for making data openly accessible	The collected data will not be openly accessible to avoid issues related to intellectual property protection
4.3 Plans for making data interoperable	No interoperability
4.4 Plans for making data re-usable (through clarifying licenses)	All the generated data will be uploaded to the existing BIOLAN data server and will be accessible using common software allowing easy access and long term re-usage. Data could be applied for the development of other biosensor devices at BIOLAN or other companies or entities under license agreement.
5. Allocation of resources	No additional costs required
6. Data security	Data are stored at BIOLAN's server following BIOLAN server data security.
7. Ethical aspects	No known ethical aspects.
8. Other	N/A

1. Data set name	Sulphite analyses
2. Data set owner or user, link to WP and/or Case Study	BIOLAN WP4
3. Data set summary	Data generated as result of the development of Task 4.3. Data collected will be generated after each validation of the prototype performing the analyses or real samples by the stakeholders. Data will be generated by BIOLAN with the contribution of the stakeholders. Collected data: Sulphite content of samples provide by the stakeholders. Size of data: Hundreds of megabytes/few gigabytes. Mainly documents (doc, docx, ppt, pptx, etc.) and raw data (xls.).
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Data files corresponding to each batch of analyses will be numerically labelled and appropriately placed in a suitable folder. Following the general BIOLAN procedure for data storage, the content of each file will be summarized on an Excel spreadsheet which will contain the following information: number of experiments, an appropriately descriptive title, date, objective, procedure and main conclusions. This Excel file will allow the project team to easily find specific data using keywords.
4.2 Plans for making data openly accessible	The collected data will not be openly accessible to avoid issues related to the sulphite content of the samples analyzed. Data will be release only with the agreement of the stakeholder.
4.3 Plans for making data interoperable	No interoperability
4.4 Plans for making data re-usable (through clarifying licenses)	All the generated data will be uploaded to the existing BIOLAN data server and will be accessible using common software allowing easy access and long-term re-usage.
5. Allocation of resources	No additional costs required
6. Data security	Data are stored at BIOLAN's server following BIOLAN server data security.
7. Ethical aspects	No known ethical aspects.
8. Other	N/A

WP5

1. Data set name	Consumer survey data
2. Data set owner or user, link to WP and/or Case Study	Nofima, WP5, cases 1, 2, 3, 6, 7, 8, 10, 11
3. Data set summary	The data is collected based on the designed questionnaire and by a survey company. These consumer preferences in relation to these attributes will be examined through surveys with representative samples from four different countries representing the four zones of the Atlantic Ocean: 1) Brazil, 2) South Africa, 3) Europe (Germany or France), and 4) USA/Canada. The data will be used to analyze consumer awareness and acceptance of low trophic species and sustainable production methods.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	Anonymized data will be findable together with other data, under the whole AquaVitae database structure.
4.2 Plans for making data openly accessible	Anonymized data will follow open accessibility strategies established by the whole AquaVitae project. If no field related repository exist, data will be uploaded to a general repository e.g. Zenodo.
4.3 Plans for making data interoperable	Csv data will be stored to ensure compatibility with all available data analysis tools.
4.4 Plans for making data re-usable (through clarifying licenses)	Clear coding will be followed to allow for future data use.
5. Allocation of resources	Nofima who is the data controller has a subcontracting budget of €40.000 for the targeted surveys to be conducted in WP5 (task 5.2).
6. Data security	Nofima will guarantee that the survey recruitment and field work provider that will be subcontracted will follow secure procedures under the GDPR regulations.
7. Ethical aspects	Participant anonymity and privacy regulations will be followed based on GDPR regulations. Furthermore, to ensure data management control, each participant will be given a numeric identifier that is created for statistical purposes. This identifier will in not be linked to the personal information of the participants. The project office plan to review the ethics requirement for Task 5.2 when the full plan of the survey has been established and the WP5 team have hired the survey companies who will collect the survey data.
8. Other	N/A

WP6

1. Data set name	External and internal risks effecting the sustainability performance of LTS aquaculture in the Atlantic region
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute, WP6
3. Data set summary	Aim: Describe positive (opportunities) and negative (threats) risks, i.e. net impacts on the sustainability performance of studied LTS-systems, relevant for specific scenarios, in terms of probability and consequence. Risks will be categorized according to different criteria, including local/regional/global, continuous/instant, manageable/unmanageable, internal/external. The risks will be identified and analyzed based on certain scenarios. The scenarios will, in turn, be selected to cover a range of relevant specific aquaculture trends, and general/global megatrends The data can be useful to identify and assess opportunities to maximize as well as risks to mitigate/minimize for LTS farmers, as well as researchers.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare, a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Challenge-structuring framework for sustainability performance assessment of LTS aquaculture in the Atlantic region
2. Data set owner or user, link to WP and/or Case Study	IVL Swedish Environmental Research Institute, WP6
3. Data set summary	Aim: Define and describe the functional and structural logic of the framework. The challenge-structuring framework (CSF) will be developed through an iterative process, adapting to the needs and requirements of the different tasks. Its purpose is to (1) provide a unified context for the tasks of WP6, enabling efficient co-operation and exchange of information within the WP and (2) facilitate documentation, transparency and traceability selected boundaries, assumptions, cases etc. The resulting dataset will consist of two parts: 1. Data defining the CSF, such as boundaries of the assessment domain and evaluation scenarios. 2. Metadata describing the rationale for data, their origin and so on. The data can be useful to review the reasoning behind the CSF, as well as to adapt and apply the CSF to other domains.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	T6.4 Environnemental monitoring
2. Data set owner or user, link to WP and/or Case Study	SAMS, WP6
3. Data set summary	Risk assessment summaries from T6.3 for appropriate CSs and publicly available data on national monitoring programs
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare**,** a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data for others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	List of Nature Contributions to People provided by LTS aquaculture
2. Data set owner or user, link to WP and/or Case Study	University of Porto (Portugal), WP6
3. Data set summary	Aim: Identify the Nature Contributions to People provided by LTS aquaculture Using the concept from IPBES, determine the contributions to people provided by the LTS aquaculture, especially for the species used in Aquavitae.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare, a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Quantification of the value of selected Nature Contributions to People provided by LTS aquaculture
2. Data set owner or user, link to WP and/or Case Study	University of Porto (Portugal), WP6
3. Data set summary	Aim: Quantify values for selected Nature Contributions to People provided by LTS aquaculture Using the concept from IPBES, determine the value of selected contributions to people provided by some of the case studies in Aquavitae.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	An information sheet will be provided in the beginning of each excel data document, specifying the units, and factors mentioned in the data, as well as who collected the data, and spatial and temporal information. The raw data will be made accessible through an on-line database, e.g. Figshare (www.figshare.com) as soon as the data has been published. Keywords will be chosen carefully, DOI will be used when applicable.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together. Data may also be published in Figshare, a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner.
4.3 Plans for making data interoperable	Standard formats of data will be made available (word, excel, .csv)
4.4 Plans for making data re-usable (through clarifying licenses)	The data will be publicly available after publication. A standardized format for the data will be set up to facilitate the use of data by others.
5. Allocation of resources	No additional costs are expected. Figshare allows 100 GB free per *Scientific Data* manuscript. Additional fees apply only for larger datasets.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations. After this the data will be hosted by data repositories connected to specific journals or by Figshare and will follow their guidelines for data security.
7. Ethical aspects	All ethical aspects related to research required by the AV/EU will be followed.
8. Other	N/A

1. Data set name	Indicators of sustainability for aquaculture
2. Data set owner or user, link to WP and/or Case Study	Unesp and Embrapa WP6
3. Data set summary	Scale: L = local R = regional G = global ENVIRONMENTAL 1.Use of Space (S) L, 2. Dependence on Water (W) L, 3. Use of Energy (E) L, 4. Proportion of Renewable Energy (PRE) L, 5. Use of Nitrogen (N) L, 6. Use of Phosphorus (P) L, 7. Efficiency in the Use of Energy (EE) L, 8. Efficiency in the Use of Nitrogen (EN) L, 9. Efficiency in the Use of Phosphorus (EP) L, 10. Production Actually Used (PU) L, 11. Potential of Eutrophication (PEN and PEP) L, R, 12. Potential of Organic Pollution (POP) L, R, 13. Potential of Siltation (PS) L, R, 14. Potential of Global Warming (PGW) L, R, G, 15. General Chemical Pollution (GCP) L, R, 16. Pollution by Hormones (PH) L, R, 17. Pollution by Heavy Metals (PHM) L, R, 18. Potential of Acidification (PA) L, R, 19. Accumulation of Phosphorus (AP) L, R, 20. Accumulation of Organic Matter (AOM) L, R, 21. Accumulation of Particulate Material (APM) L, R, 22. Risk of Farmed Species (RFS) R, ECONOMIC 1.Ratio between Net Income and Initial Investment (RII) L 2. Internal Rate of Return (IRRe) L 3. Payback Period (PPe) L 4. Benefit-Cost Ratio (B/Ce) L 5. Net Present Value (NPVe) L 6. Net Profit (NPe) L 7. Negative Externalities (En) L, R, G, 8. Positive Externalities (Ep) L, R, G, 9. Annual Income (AI) L 10. Permanence of the Farmer in the Activity (PA) R, G, 11. Risk Rate (RR) L, 12. Diversity of Products (DP) L, 13. Diversity of Markets (DM) L, 14. Invested Capital Generated in the Activity (ICGA) L, , R

	SOCIAL 1. Development of Local Economy (LE) R 2. Use of Local Workers (LW) L, R 3. Remuneration of Work per Unit of Production (RLUP) L, 4. Investment to Create Direct Employment (ICDE) L, R, 5. Investment to Create Total Employment (ICTE) L, R, 6. Proportion of Self-Employments (SE) L, R, 7. Permanence in the Activity (PA) L, R, 8. Required Work per Unit of Occupied Area (WA) 9. Required Work per Unity of Production (WP) 10. Safety at Workplace (SW) L 11. Local Consumption of Production (LC) R 12. Pay Equality (PE) L, R, 13. Proportional Cost of Work (PCW) L, 14. Income Distribution (ID) L, 15. Access to Health-Insurance Programs (AHP) L, R, 16. Schooling (Sc) L, R, 17. Participation in Outside Community Activities (PCA) L, R, 18. Gender Inclusion (GI) L, R, 19. Racial Inclusion (RI) L, R, 20. Age Inclusion (AI) L, R,
4. FAIR Data (Findable, Accessible, Interoperable, Re-usable)	
4.1 Plans for making data findable	The list of indicators will be available at the internet for all people and for the members of Aquavitae and they will be available at Google Drive and Share Point. By the end of the project data will be uploaded to a general repository e.g. Zenodo
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together.
4.3 Plans for making data interoperable	Standard formats of data will be made available (Word and Excel).
4.4 Plans for making data re-usable (through clarifying licenses)	Data will be available after publications, in a standardized format.
5. Allocation of resources	No extra costs are required.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations.
7. Ethical aspects	All ethical aspects related to research required by the Brazilian law will be attended. It refers to interviews that will be necessary to obtain social and economic data for calculating sustainability index.
8. Other	No.

WP8

1. Data set name	Producers perception of aquaculture policy and regulation issues
2. Data set owner or user, link to WP and/or Case Study	WP8, Task 8.2 (UiT) This is not fully decided. The workshops can only be arranged in cases where a sufficient number of willing industry participants will be present at a given location due to other events. We do not have resources to fund travels of participants separately. This could involve summaries from the following workshops: Macroalgae production in Europe Offshore aquaculture in Europe IMTA in Brazil IMTA in South Africa
3. Data set summary	Written summaries of workshops with aquaculture producers to identify where regulation and policy have supported or inhibited innovation and route to market and to identify common inhibitory or supportive mechanisms. The workshops will be arranged in relation to selected regions and case studies.
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	The summaries will be included in or appended to deliverable D8.2 "Report on industry perceptions on current policy frameworks". The report will be made publicly available on the AquaVitae project site. It can be foreseen that a glossary of key terms for the Aquavitae project will be developed. If this happens in time before the deliverable is due (Nov 2020), the terms can be used in a way that corresponds to the glossary. Key words can be defined in the report and used with the search functions in word or Pdf files.
4.2 Plans for making data openly accessible	Se above
4.3 Plans for making data interoperable	This is qualitative information in the form of text and is therefore interoperable with similar information sourced.
4.4 Plans for making data re-usable (through clarifying licenses)	The full minutes from the workshops will not be made available due to privacy concerning the industry participants, but summaries of the outcomes can be made available if this is accepted the participants. Se ethical aspects below.
5. Allocation of resources	No costs are foreseen with making deliverable 8.2 available.
6. Data security	Sensitive date will not be made available.
7. Ethical aspects	Workshops will be conducted in accordance with national and European requirements for social science research. A protocol for the workshop will contain a written consent form to be sent to invited participants. Summaries of workshops will only be made publicly available (D8.2) if this is accepted by workshop participants.
8. Other	N/A

Multiple WP

1. Data set name	Data used to compute and quantify the indicators
2. Data set owner or user, link to WP and/or Case Study	Previous studies: Unesp Partners Institutions of CS 1, 2, 3, 4, 5, 6, 7, 8. 9 and WP 2, 3, 5 and 7. Others (data from literature and data repositories)
3. Data set summary	Data will be obtained in the CS 1, 2, 3, 4, 5, 6, 7, 8, 9. WP 2, 3, 5 and 7; Data will also be obtained from the literature and previous studies to calculate indicators of sustainability. The complete list of data and variables will be defined after deciding what indicators will be used.
4. FAIR Data (Findable, Accessible, Interoperable, Re-usable)	
4.1 Plans for making data findable	All data will be recorded in Excel data document, according to sampling schedule with spatial and temporal description, specifying units. Data can be stored at data repository of UNESP.
4.2 Plans for making data openly accessible	At the end of the work all articles will be published in Open Access journals and data will be published together.
4.3 Plans for making data interoperable	Standard formats of data will be made available (Word and Excel).
4.4 Plans for making data re-usable (through clarifying licenses)	Data will be available after publications, in a standardized format.
5. Allocation of resources	No extra costs are required. Maybe we will need resources to pay OA fees.
6. Data security	Until the data is published, all information will be kept by the researchers who will follow data security instructions given by Brazilian and European institutions recommendations.
7. Ethical aspects	All ethical aspects related to research required by the Brazilian law will be attended. It refers to interviews that will be necessary to obtain social and economic data for calculating sustainability index.
8. Other	No.

Appendix 2: Templates

1. Data set name	
2. Data set owner or user, link to WP and/or Case Study	
3. Data set summary	
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	
4.2 Plans for making data openly accessible	
4.3 Plans for making data interoperable	
4.4 Plans for making data re-usable (through clarifying licenses)	
5. Allocation of resources	
6. Data security	
7. Ethical aspects	
8. Other	

1. Data set name	• Identifier for the data set to be produced
2. Data set owner or user, link to WP and/or Case Study	• Project participant responsible for generating or extracting the data set • What WPs or Case Studies the data set is relevant for
3. Data set summary	• State the purpose of the data collection/generation • Explain the relation to the objectives of the project • Specify the types and formats of data generated/collected • Specify if existing data is being re-used (if any) • Specify the origin of the data • State the expected size of the data (if known) • Outline the data utility: to whom will it be useful
4. FAIR Data (*Findable, Accessible, Interoperable, Re-usable*)	
4.1 Plans for making data findable	• Outline the discoverability of data (metadata provision) • Outline the identifiability of data and refer to standard identification mechanism. Do you make use of persistent and unique identifiers such as Digital Object Identifiers? • Outline naming conventions used • Outline the approach towards search keyword • Outline the approach for clear versioning • Specify standards for metadata creation (if any). If there are no standards in your discipline describe what type of metadata will be created and how
4.2 Plans for making data openly accessible	• Specify which data will be made openly available? If some data is kept closed provide rationale for doing so • Specify how the data will be made available • Specify what methods or software tools are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g. in open source code)? • Specify where the data and associated metadata, documentation and code are deposited • Specify how access will be provided in case there are any restrictions
4.3 Plans for making data interoperable	• Assess the interoperability of your data. Specify what data and metadata vocabularies, standards or methodologies you will follow to facilitate interoperability. • Specify whether you will be using standard vocabulary for all data types present in your data set, to allow inter-disciplinary interoperability? If not, will you provide mapping to more commonly used ontologies?

4.4 Plans for making data re-usable (through clarifying licenses)	• Specify how the data will be licensed to permit the widest reuse possible • Specify when the data will be made available for re-use. If applicable, specify why and for what period a data embargo is needed • Specify whether the data produced and/or used in the project is useable by third parties, in particular after the end of the project? If the re-use of some data is restricted, explain why • Describe data quality assurance processes • Specify the length of time for which the data will remain re-usable
5. Allocation of resources	• Estimate the costs for making your data FAIR. Describe how you intend to cover these costs • Clearly identify responsibilities for data management in your project • Describe costs and potential value of long-term preservation
6. Data security	• Address data recovery as well as secure storage and transfer of sensitive data
7. Ethical aspects	• To be covered in the context of the ethics review, ethics section of DoA and ethics deliverables. Include references and related technical aspects if not covered by the former
8. Other	• Refer to other national/funder/sectorial/departmental procedures for data management that you are using (if any)