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GRRIP

WP 5: RPO&RFO Working Groups Set-Up, and Audit and Impact Assessment of RRI Maturity

D5.2 – RPO&RFO Audit Reports

29th April 2021
Revised submission on 15th October 2021

About GRRIP

The overall aim of GRRIP is to implement Responsible Research and Innovation (RRI) to improve research in the Blue Economy. GRRIP will embed sustainable RRI practices in four Research Performing Organisations (RPO) and one dual-function RPO and Research Funding Organisation (RPO/RFO) in the marine and maritime sectors to achieve institutional and cultural change. This will be accompanied by establishing a platform for engagement with the Quadruple Helix (QH) for each RPO&RFO, and a platform for mutual learning between the five RPO&RFOs and QHs. The project will revolve around five key RRI dimensions: ethics, gender equality, open access & data, science education, public engagement. Whilst marine and maritime (M&M) research is a high priority in the EU, this project acknowledges that M&M is extremely exposed to non-RRI alignment between Research and Innovation, societal actors, and the environment, affecting its performance and competitiveness.

Objectives of GRRIP

1. To co-develop, implement and evaluate self-tailored RRI Action Plans (AP) to enable institutional and cultural change processes for the 5 Marine and Maritime (M&M) Research Performing Organisations and research funding Organisations (PPO&RFOs).
2. Establish structures to facilitate, promote and maximise real sustainable engagement with, and input from, the Quadruple Helix (QH).
3. Establish indicators and methodology for impartial Monitoring, Reflection and Evaluation cycles.
4. Develop a mutual learning process across the M&M RPO&RFOs and the QH, both during the institutional and cultural change project and ongoing evaluation feedback loop cycles.
5. Legacy: to enable more M&M RPO&RFOs to ground RRI practices through institutional and cultural changes by creating a practical user-friendly RRI AP framework template and launching an M&M RRI community.
6. Examine how an RFO can positively influence and encourage an RPO towards RRI via its funding policy and interaction.

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List of abbreviations

AP	Action Plan
EU	European Union
EUR	Erasmus Universiteit Rotterdam
CNR	Consiglio Nazionale delle Ricerche
DMU	De Montfort University
HEFCE	The Higher Education Funding Council for England
HSRW	Rhine-Waal University of Applied Sciences
ICoRSA	International Consortium of Research Staff Associations (Company Limited by Guarantee)
IUML	Institut Universitaire Mer & Littoral
MaREI	SFI Research Centre for Energy, Climate and Marine research and innovation
M&M	Marine and Maritime
NGO	Non-Governmental Organisation
PA	Percentage that Agrees (expressed using decimal)
PD	Percentage that Disagrees (expressed using decimal)
PLOCAN	Consorcio Para el Diseno, Construccion, Equipamiento Y Explotacion de la Plataforma Oceanica de Canarias
TML	Top-down Maturity Level
PML	Perception Maturity Level
PSoA	Percentage that Somewhat Agrees (expressed using decimal)
PSoD	Percentage that Somewhat Disagrees (expressed using decimal)
PStA	Percentage that Strongly Agrees (expressed using decimal)
PStD	Percentage that Strongly Disagrees (expressed using decimal)
QH	Quadruple Helix
RPO	Research Performing Organisations
RFO	Research Funding Organisation
RP(F)Os	Research Performing or Funding Organisations
RRI	Responsible Research and Innovation
RRI Pillars	Gender Equality, Open Access, Research Ethics, Public Engagement, Science Education
SME	Small and Medium Enterprise
SU	Swansea University
SwafS	Science with and for Society
UCC	University College Cork - National University of Ireland, Cork
WavEC	Offshore Renewables - Centro De Energia Offshore Associacao
WG	Working Group

1. Background

The auditing process is a sequenced, coordinated activity aimed at obtaining a specific result. The audit plan was designed to establish the baseline in each Research Performing Organisation (RPO) and Research Funding Organisation (RFO) to be able to evaluate and change the structural and cultural assets to include RRI (as defined in "D5.1: Self-Tailored RPO&RFO Audit Plans – Parts A&B" of the GRRIP project). This report contains the analysis of the evidence related to the five case study organisations.
The audit was designed to collect data at the organisational level from the site leads (i.e., a top-down approach), and a survey was conducted with researchers and stakeholders, as a bottom-up approach.
The top-down approach aimed at collecting objective data and documents from the five case study organisations.
The bottom-up approach aimed at collecting data: 1) from the staff of the five RP(F)Os, and 2) from the Quadruple Helix stakeholders in conjunction with the activities carried out in "WP4 - Q GRRIP D&C Board". Interviews were conducted with the leaders of the GRRIP working groups established within the five RP(F)Os to complement information collected from the top-down and bottom-up survey to facilitate interconnection with the other Work Packages (WPs). The audit results presented within this report aim to inform the development of the action plans for institutionalising RRI. The findings, however, cannot be considered an exact reflection of the existing organisational processes and procedures about RRI dimensions as they are constrained by low response rates of the sent-out surveys and the use of convenience sampling method.
In our analysis, we were interested in the correlation between the answers coming from the bottom-up analysis to provide a picture of the situation, even if it did not have statistical significance due to the number of answers received from the case study sites. We decided to use the Pearson's coefficient, as Pearson correlation coefficient is found to be appropriate for measurements taken from an interval scale according to Choi et al. [1]; in this respect, see also the response from Abdulvahed Khaledi Darvishan in the ResearchGate post (https://www.researchgate.net/post/Which-correlation-coefficient-is-better-to-use-Spearman-or-Pearson).
The analysis of information and data collected is shown in Appendix A and Appendix B of this deliverable. Complete data and information are available only for the Consortium, the project officer and the GRRIP project's evaluators (on request). Section 2 provides a summary of the methodology used to collect data necessary to carry out the audit analysis. Section 3 describes the method to establish the baseline maturity level and definition of the indicators. Section 4 describes the maturity level for the five M&M RP(F)Os. Section 5 concludes the deliverable.

2. Methodology for the Audit Analysis

The GRRIP Audit Plan [2] identified the qualitative and quantitative data needed to be collected to understand the organisation's current RRI-like practices and situation.
The top-down survey was designed considering the need to collect data and information from the RPOs and the RFO regarding the governance, policies, and internal processes for managing any issue related to the RRI keys to assess the organisation's status. In particular, the top-down approach had the following objectives to aid in understanding each organisation:

- the existing governance structures and the key decision-makers and staff already existing in the organisation that are involved in defining policies and managing the processes related to the

different RRI keys (Gender equality, Open access, Public engagement, Science education, Ethics) [3],

- the policies to be followed by researchers in their activities, the formalisation of these policies, and if they are public or shared within the staff, and
- the current processes, the level of specification of the processes, and if they are covering the main aspects of each RRI key.
- if the organisation collected data and information related to the five RRI keys.

The top-down approach allowed for collecting data from responses to surveys distributed to each of the Working Group managers established in the five RP(F)Os and analysis of the data collected.
The bottom-up survey was designed mainly using a 7-point Likert Scale, to collect data and information from the RP(F)Os' researchers and stakeholders, who returned their perception about the RRI-like approaches being followed in the organisations.

In particular, the objective of the bottom-up approach was to understand:

- the opinions of researchers and stakeholders on each RRI key,
- what perception researchers and stakeholders have about the steps taken by an organisation to ensure compliance with the objectives of the five RRI keys, and
- if the researchers and stakeholders are aware of the barriers that the organisation faces, and what steps the organisation could take to overcome barriers.

Data collected have been analysed in this deliverable for understanding the researchers' and stakeholders' behaviours and perception about the RRI-like approaches being followed in the organisations.
In particular, data were collected and analysed considering RRI in the perspective of its application in the whole research and innovation process as defined in the RRI Tools project [4], i.e., considering *Diversity and inclusion, Openness and transparency, Anticipation and reflection and Responsiveness and adaptive change*. These four dimensions were already introduced by Stilgoe et al. [5] for research and innovation in the form of anticipation, reflection, inclusion, and responsiveness.
Diversity and inclusion mean that "A wide range of stakeholders is required to generate diverse perspectives and expertise. Responsible Research and Innovation needs to be inclusive to be diverse, and equally, a focus on diversity encourages inclusion. *Openness and transparency* are important conditions for trust. Communicators need to adapt communication according to the needs of different audiences. *Anticipation* is important in RRI because present research and innovation practices shape the future; it is about envisioning impending change and acting accordingly. In essence, 'reflection' is a form of post-event critical thinking. *Reflection* must therefore concern all aspects of research and innovation: from daily routines, planning assumptions and personal interactions, all the way up to institutional values and strategies. *Responsiveness* means being receptive to new knowledge, perspectives, and views – all necessary when *adapting to change*. Being RRI-oriented also requires the flexibility and openness to adapt existing organisational structures in response to evolving environments, values and insights" [6, 7].
In particular, we analysed Gender equality and Ethnic minorities under the diversity and inclusion process dimension of RRI, concern for society under the anticipation and reflection dimension, open science and open access under the openness and transparency, societal needs related to the responsiveness and adaptive change capability, and ethics which is crosscutting to the implementation of diversity and inclusion, anticipation and reflection (see the following table).

Bottom-up RRI categories	RRI dimensions, as in Stilgoe et al.[5]
Gender equality	Diversity and inclusion
Ethnic Minorities	Diversity and inclusion
Concern for society	Anticipation and reflection
Open Science and open access	Openness and transparency
Societal needs	Responsiveness and adaptive change
Ethics	Diversity and inclusion, Anticipation and reflection

Von Schomberg (2011, p. 9) defines RRI as: "Responsible Research and Innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view on the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society)." Based on the analysis of the data and information collected, each organisation's maturity level (considering the top-down and the bottom-up perspective) has been derived.

3. The Baseline Maturity Level Indicators

The assessment of the level of maturity in the institutionalisation of the RRI keys in each organisation was done by taking into account various data and information collected: the qualitative information provided by the organisations through the top-down surveys, the data provided by the site lead and staff from the site's administrative departments, the surveys (bottom-up) conducted on the perception of researchers and stakeholders of the organisation, and, finally, interviews conducted with the case study site leads.

Based on the data and information collected, easily understandable indicators were defined, which facilitated the assessment of the maturity level of an organisation (this was comparable across the RPOs and RFO).

Two distinct set of indicators have been defined for arriving at the RRI maturity level of an organisation considering the different nature of the data collected (i.e., data from the top-down survey and subjective data from the bottom-up surveys). The indicators are the Top-down Maturity Level (TML) indicator and the Perception Maturity Level (PML) indicator.

An important point to note is that the administrative structures of the R(F)POs were not able to provide complete gender disaggregated data, ethnicity of staff and data on Trainings conducted disaggregated on gender and ethnicity, concerning the RRI keys. In these cases, the decision to arrive at the maturity level necessitated that consideration is given to the absence of data that could not provide sufficient evidence to support the existing policies, structures, and systems in place in these organisations.

Top-down Maturity Level (TML)

The TML indicator is established according to the following parameters, which consider the significant potential situations in each organisation:

1. Clear policies made explicit in documents available online (and availability of data on gender from the organisation) to develop action plans, and to enable monitoring in the next phases of the project

to assess whether an organisation is reaching a high maturity level with the specific RRI issue.

2. Well documented internal procedures.
3. Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key.

The TML is equal to 5 when the three parameters can be completely satisfied (see the configuration of Yes, Yes, Yes related to the three criteria in the following table).

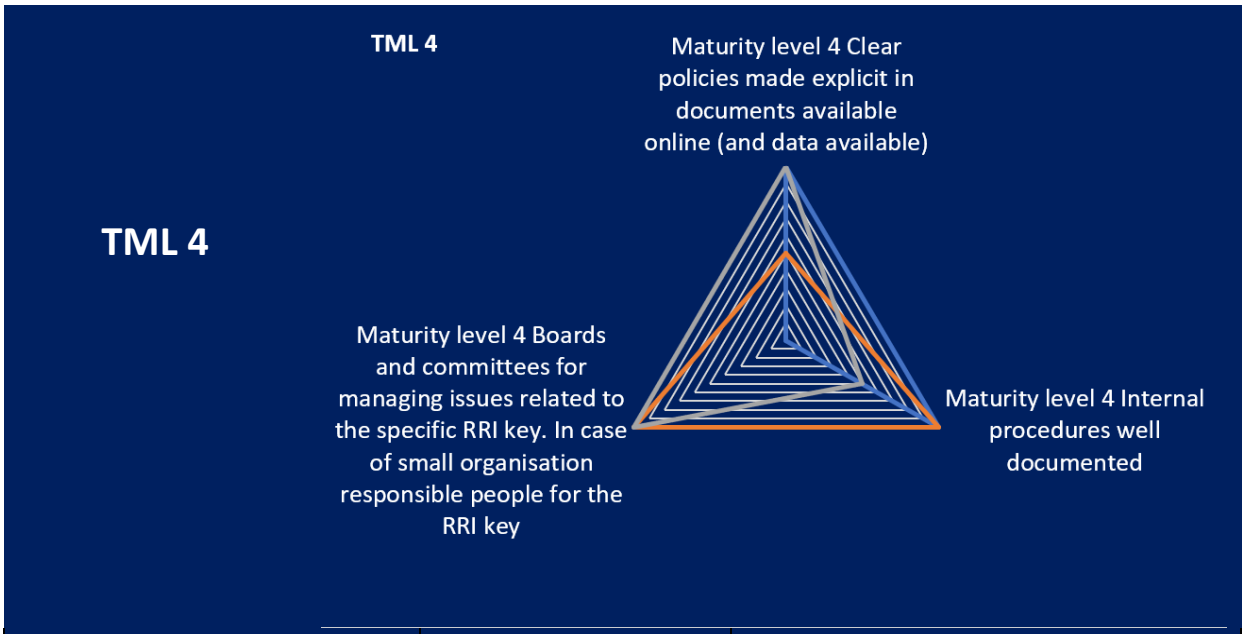
Clear policies made explicit in documents available online (and availability of data on gender from the organisation)	Well documented internal procedures	Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key
Yes	Yes	Yes

The TML is equal to 4 when there is one of the following configurations for the three established criteria:

- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender). There are well documented internal procedures. The organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes, Yes, No).
- The organisation follows policies that are not clear and made explicit in documents available online (and the organisation provided data on gender), and there are well documented internal procedures, and the organisation appointed boards/committees related to the specific RRI key (configuration: Yes/No, Yes, Yes).
- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender), and there are well documented internal procedures, and the organisation appointed boards/committees related to the specific RRI key (configuration: Yes/No, Yes, Yes).
- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender), there are internal procedures, but they are not well documented. The organisation appointed boards/committees related to the specific RRI key (configuration: Yes, Yes/No, Yes).

Note that we assume the "Clear policies made explicit in documents available online" and "Well documented internal procedures" to be a stronger factor in returning the TML vis-a-vis the existence of boards and committees for managing issues related to the specific RRI key.

The configurations for TML 4 are summarised in the following table:



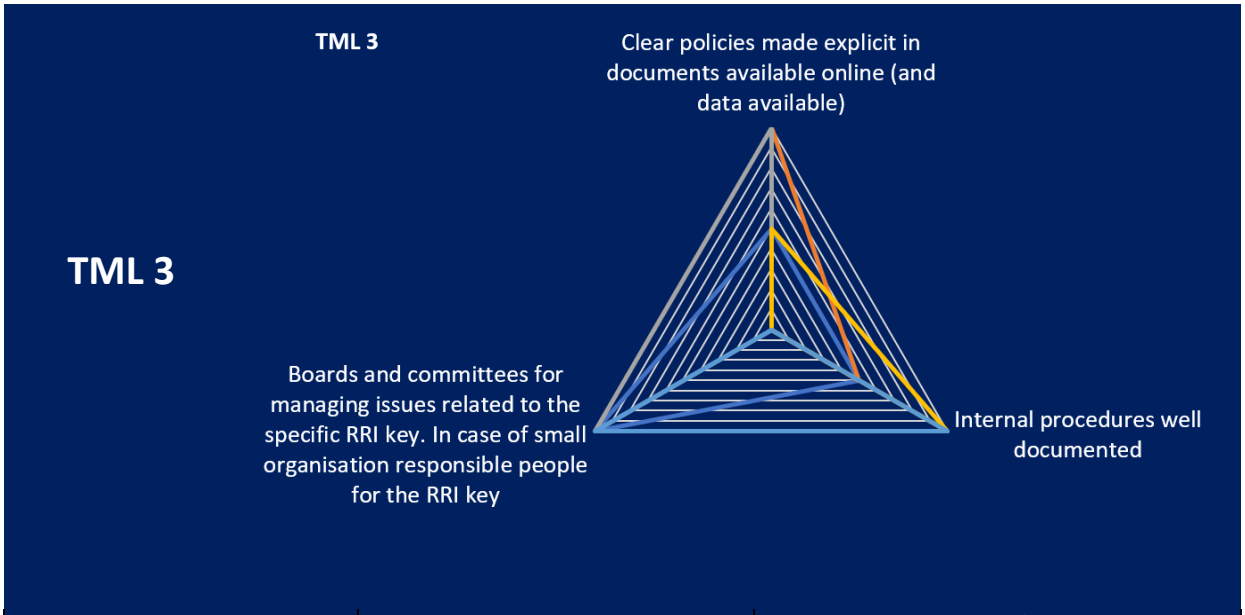
Clear policies made explicit in documents available online (and availability of data on gender from the organisation)	Well documented internal procedures	Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key
Yes	Yes	No
Yes/No	Yes	Yes
Yes	Yes/No	Yes

The TML is equal to 3 when:

- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender, but there are no well documented internal procedures. The organisation appointed boards/committees related to the specific RRI key (configuration: Yes, No, Yes).
- The organisation does not follow clear policies made explicit in documents available online, but there are well documented internal procedures, and the organisation appointed boards/committees related to the specific RRI key (configuration: No, Yes, Yes).
- The organisation follows policies, but they are not clear enough or made explicit in documents available online, but there are well documented internal procedures, and the organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes/No, Yes, No).
- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender), and there are well documented internal procedures, but the organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes/No, Yes, No).
- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender), there are internal procedures, but they are not well documented, and the organisation did not appoint boards/committees related to the specific RRI key

(configuration: Yes, Yes/No, No).

The different configurations for TML 3 are summarised in the following table:



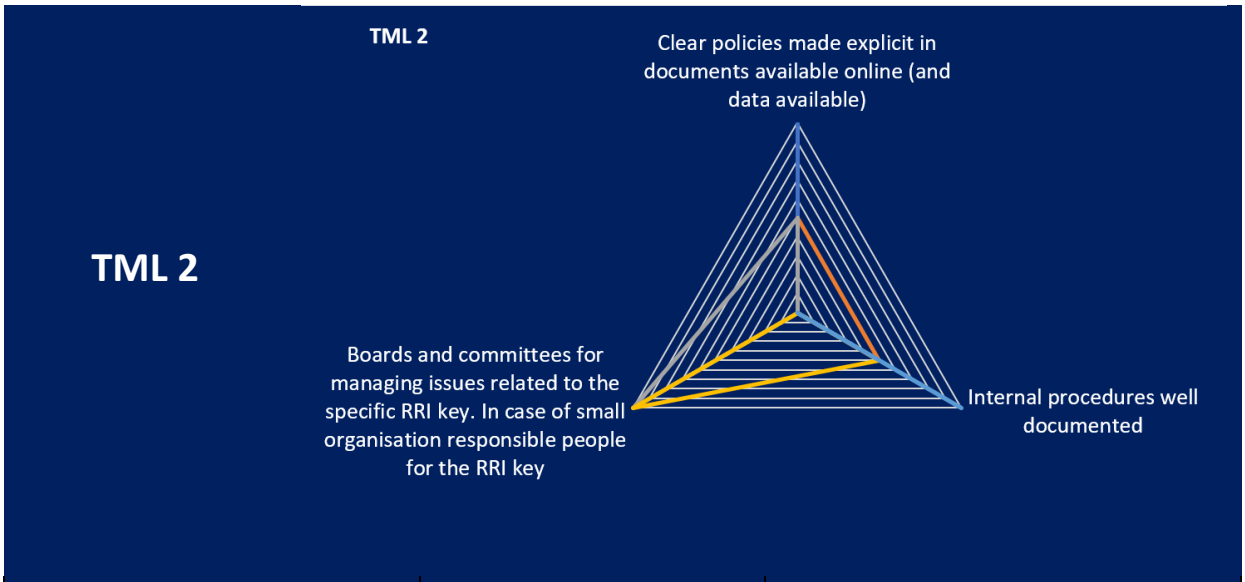
Clear policies made explicit in documents available online (and availability of data on gender from the organisation)	Well documented internal procedures	Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key
Yes/No (existing but to be improved or data not available)	Yes/No (existing but to be improved)	Yes
Yes	Yes/No	No
Yes	No	Yes
Yes/No	Yes	No
No	Yes	Yes

The TML is equal to 2 when:

- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender), but there are no well documented internal procedures, and the organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes, No, No).
- The organisation follows policies, but they are not clear enough or made explicit in documents available online; there are internal procedures, but they are not well documented, and the organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes/No, Yes/No, No).
- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender there are internal procedures, but they are not well documented, and the organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes/No, Yes/No, No).
- The organisation follows policies, but they are not clear enough or made explicit in documents available online. There are no internal procedures. The organisation appointed boards/committees related to the specific RRI key (configuration: Yes/No, No, Yes).
- The organisation follows clear policies made explicit in documents available online (and the organisation provided data on gender). There are no internal procedures. The organisation appointed boards/committees related to the specific RRI key (configuration: Yes/No, No, Yes).

- The organisation does not follow clear policies made explicit in documents available online. There are internal procedures, but they are not well documented. The organisation appointed boards/committees related to the specific RRI key (configuration: No, Yes/No, Yes).
- The organisation does not follow clear policies made explicit in documents available online. There are well documented internal procedures. The organisation did not appoint boards/committees related to the specific RRI key (configuration: No, Yes, No).

The different configurations for TML 2 are summarised in the following table:



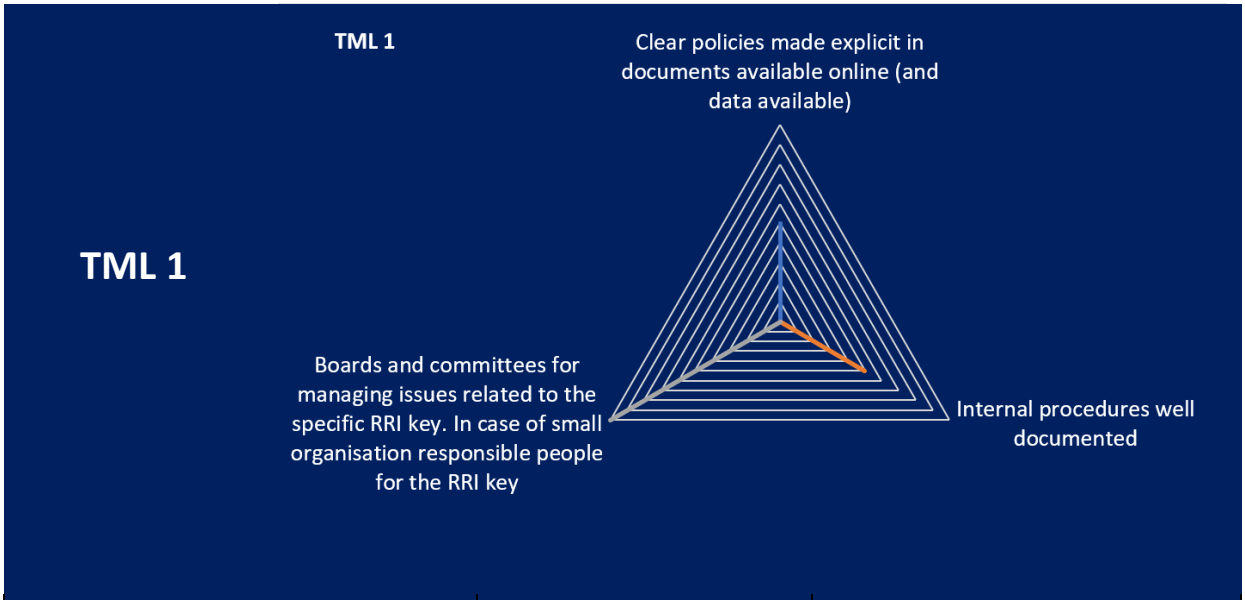
Clear policies made explicit in documents available online (and availability of data on gender from the organisation)	Well documented internal procedures	Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key
Yes	No	No
Yes/No	Yes/No	No
Yes/No	No	Yes
No	Yes/No	Yes
No	Yes	No

The TML is equal to 1 when:

- The organisation follows clear policies and made them explicit in documents available online (and the organisation provided data on gender), but there are no well documented internal procedures, and the organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes/No, No, No).
- The organisation follows policies, but they are not clear or made explicit in documents available online. There are no well documented internal procedures. The organisation did not appoint boards/committees related to the specific RRI key (configuration: Yes/No, No, No).
- The organisation does not follow clear policies and did not them explicit in documents available online (and the organisation provided data on gender), there are internal procedures, but they are not well documented. The organisation did not appoint boards/committees related to the specific RRI key (configuration: No, Yes/No, No).
- The organisation does not follow clear policies and did not make them explicit in documents available online (and the organisation provided data on gender). There are no internal procedures. The

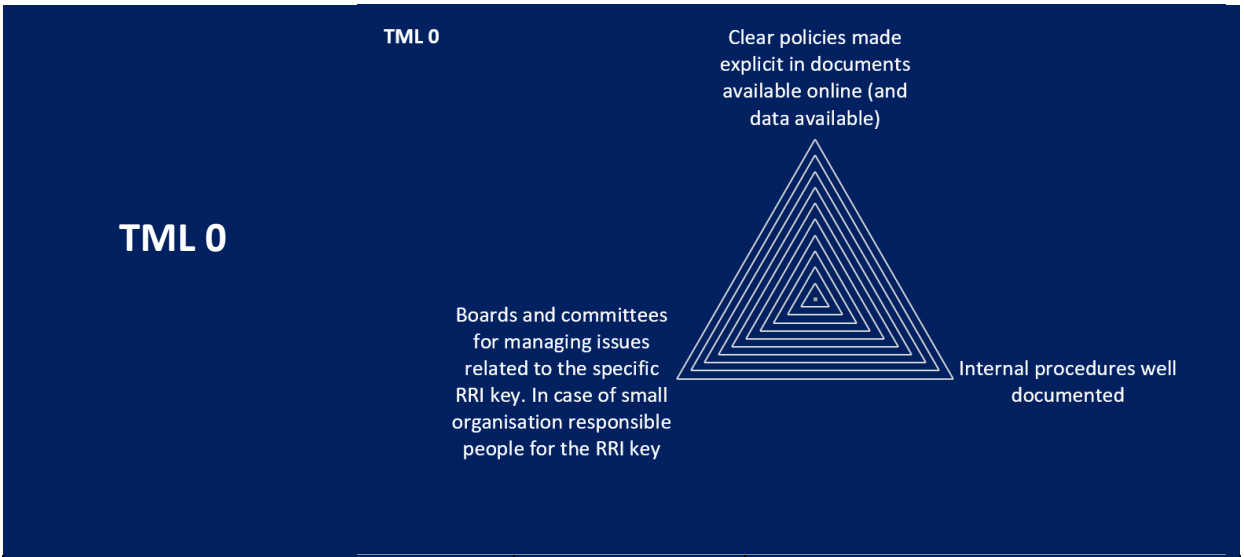
organisation appointed boards/committees related to the specific RRI key (configuration: No, No, Yes).

The different configurations for TML 1 are summarised in the following table:



Clear policies made explicit in documents available online (and availability of data on gender from the organisation)	Well documented internal procedures	Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key
Yes/No	No	No
No	Yes/No	No
No	No	Yes

The different configurations for TML 0 are summarised in the following table:



Clear policies made explicit in documents available online (and availability of data on gender from the organisation)	Well documented internal procedures	Boards and committees for managing issues related to the specific RRI key. In case of small organisations, responsible people for the RRI key
No	No	No

An example of a TML evaluation, concerning gender equality, in the box below.

- The organisation has documents explicitly establishing the policies and provided data on gender (Yes).
- The internal procedures are defined, but not well documented, so employees can have difficulties with them (Yes/No).
- There are no boards or committees established related to gender equality (No).

Therefore, the TML in this case is 3, as the configuration identifying it is Yes, Yes/No, No.

Perception Maturity Level (PML)

The PML is an indicator that returns the researchers' and stakeholders' perceptions about the RRI-like approaches in their organisation. This indicator computes the data collected using the bottom-up survey. This indicator is being introduced here for providing an indication about the perception between researchers and stakeholders of the organisation's maturity level on RRI. The survey questionnaires were distributed to the organisations' researchers and stakeholders. The number of respondents is specific to each of the organisations. This indicator returns us the maturity level framed by the respondents. It is important to note that the small number of survey respondents and interviewees impact on the representativeness of the findings.

In particular, the bottom-up surveys collected researchers' and stakeholders' perceptions on the following topics: gender, ethnic minorities, concerns for society, open science and open access, societal needs, and ethics. These topics reflect the features of RRI, focusing more on the elements related to how an R&I performing organisation connects itself (or should connect) with society. The surveys focussed on the opinions and perceptions of the staff and the stakeholders of the five RPOs&RFO about the importance of taking into account "Societal needs" in their R&I activities and reflection before pursuing R&I which might cause "Concern for society"; indeed, they are related to the ability to understand in advance the needs, and existing values in a social context, and the related ethical issues. To successfully communicate research methods, processes and findings to the public, science education is crucial, which can, in turn, promote responsible innovation.

Focusing on "societal needs" and "concern for society" also means maximising inclusion and reducing any kind of inequality and engaging with the publics to do so; and thus, creating the conditions for open science. In this respect, the survey included questions to understand the staff/researchers' and stakeholders' opinions on the importance to be inclusive. The five RRI categories used in the Top-down analysis and their relation to the Bottom-up RRI PML indicators is schematised in Figure 1.

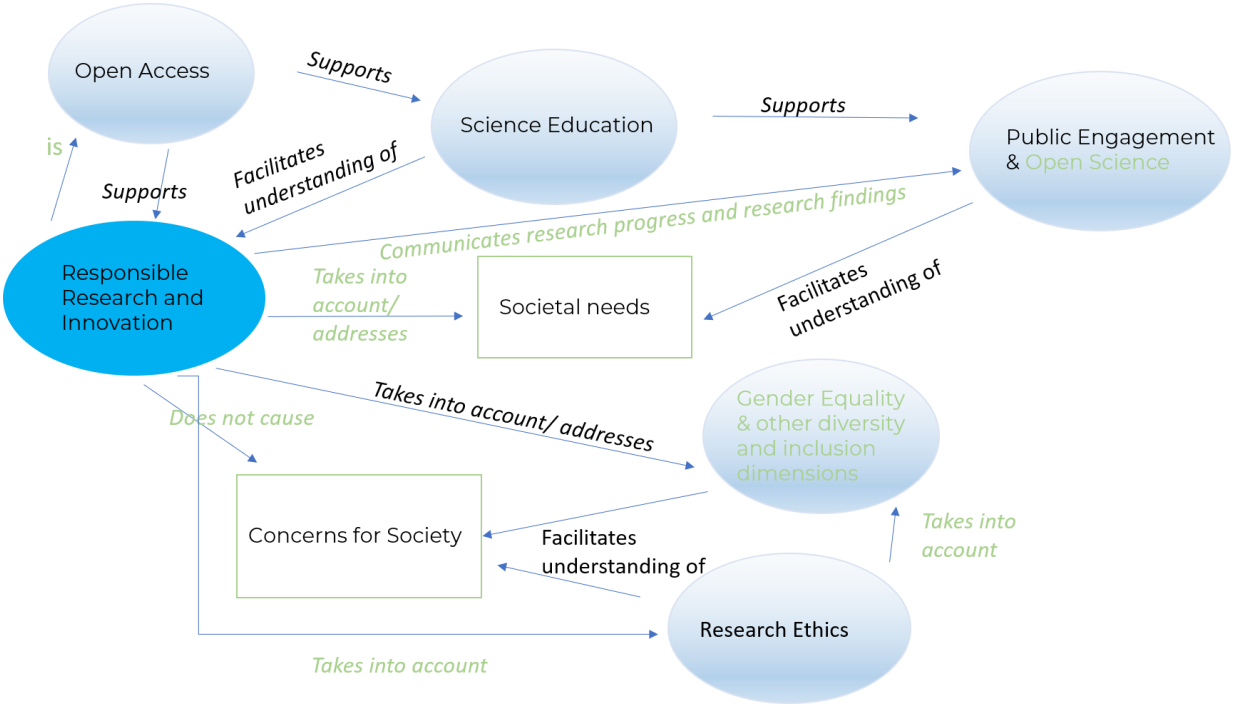


Figure 1: Relationships between categories used in the Top-down and Bottom-up analysis (green fonts and green outlined boxes are related to survey questions and categories to establish the PML; light blue shaded shapes are the five thematic elements of RRI).

The same questions were asked to researchers and stakeholders, to be able to compare the responses, and compute the organisation's internal and external perceived maturity level.

The assessment of each organisation included calculations for the set of questions aggregated according to the topics established in the bottom-up survey (i.e., Gender, ethnic minorities, concerns for society, open science and open access, societal needs, ethics).

Therefore, the evaluation of the PML for each organisation was carried out by considering three components: 1) the PML from researchers (with a total maximum weight of 1.8), 2) the PML from the stakeholders (with a total maximum weight of 1.8), and 3) the correlation factor (CF) between the percentages of researchers' and stakeholders' responses to the questions for each one of the issues of the survey. Consideration of the CF is essential, so that PML is not only the sum of perceptions from researchers and stakeholders, but it also reflects the homogeneity of internal and external perceptions.

The CF is calculated as the average value of correlations of researchers' and stakeholders' answers for each issue, only considering questions formulated according to a 7-point Likert scale (when both, researchers and stakeholders provided an answer to the question). We did not consider the questions with less than 5 options as a response to answers (such as, containing the responses: Yes, No, Unsure, I do not Know) because they are considered insufficient for providing a significant correlation.

In the ideal case, both researchers and stakeholders strongly agreed with the questions on an issue; in this case the assigned maturity level was 5, returning the highest PML.

The following steps describe how the PML is computed: 1) computation of researchers' and stakeholders' PML, 2) computation of the CF, and 3) computation of PML of an organisation.

1. Computation of Researchers' and Stakeholders' PML

Before computing the PML for researchers and stakeholders, we introduce the following terms, all expressed using decimal numbers:

PStA = Percentage that strongly agrees
PA = Percentage that agrees
PSoA = Percentage that somewhat agrees
PN = Percentage that is neutral
PSoD = Percentage that somewhat disagrees
PD = Percentage that disagrees
PStD = Percentage that strongly disagrees

The percentages associated with the different levels of agreement (and disagreement) are weighed to evaluate the perceived level of institutionalisation of the issue (for example, gender equality) for each organisation. The PML is calculated for researchers and stakeholders using the following formula:

$$\mathbf{PML_k} = (1{,}8 * \sum_{i=1}^{n} PStA_i + 1{,}4 * \sum_{i=1}^{n} PA_i + 1 * \sum_{i=1}^{n} PSoA_i + 0 * \sum_{i=1}^{n} PN_i - 1 * \sum_{i=1}^{n} PSoD_i - 1{,}4 * \sum_{i=1}^{n} PD_i - 1{,}8 * \sum_{i=1}^{n} PStD_i)/n$$

where i is the i^{th} question related to the selected RRI key, n is the number of questions for the topics, and K = Researchers, Stakeholders.

The coefficients allow us to take into account the answers associated with the levels of perception: 1,8 for strongly agree, 1,4 for agree, 1 for somewhat agree, -1,8 for strongly disagree, -1,4 for disagree, and -1 for somewhat disagree.

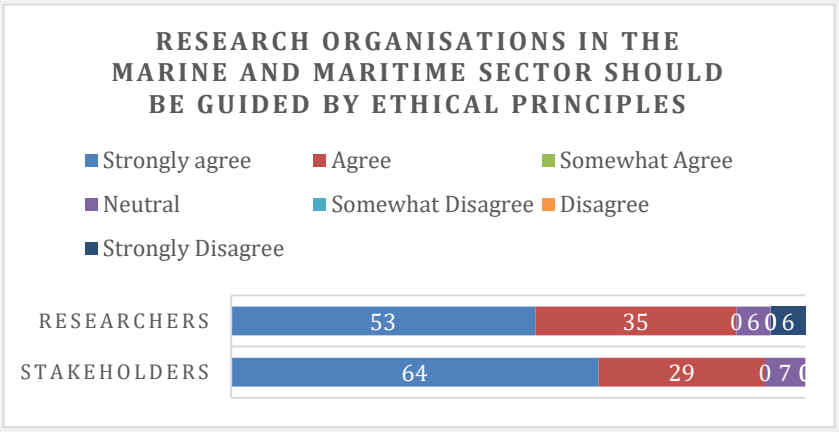
The maximum value (1,8) for an issue is acquired when all the researchers or stakeholders strongly agree on a 7-value Likert-scale question, and the stakeholders answer yes to the yes/no questions related to the issue. In the case of $PML_{researcher}$ or $PML_{stakeholder}$ negative values, they are assumed equal to zero.

2. Computation of the CF

As explained above, the CF is computed considering the correlation associated with each item of the seven-point Likert scale questions and is essential for the evaluation.

We consider the correlation coefficient (note that it is not the CF, where correlation coefficient contributes) very highly for values between 0,9 and 1,0, high between 0,7 and 0,9, medium between 0,5 and 0,7, low between 0,3 and 0,5, very low for values lower than 0,3 (these values can be negative).

For example, in the 7-point Likert scale question of Figure 2, the correlation between researchers' and stakeholders' responses is 0,98 (green text). This means that researchers and stakeholders have a very similar perception. An identical perception between researchers and stakeholders would produce a value of 1.
Figure 2 (made anonymous): example of analysed responses on ethics.



88% of researchers and 93% of stakeholders agreed at different levels that ethical principles should guide research organisations in the marine and maritime sector; 6% of researchers and 7% of stakeholders were neutral, and 6% of researchers strongly disagreed.

Correlation=0,98

81% of researchers and 33% of stakeholders think that the organisation takes steps to ensure that ethical principles guide its work, while 13% of researchers believe that no steps are taken. 60% of stakeholders are unsure, and 6% of researchers and 7% of stakeholders have no opinion.

Figure 2: example of collected data on ethics

As shown in the box, the questions formulated had two types of design: 1) 7-point Likert scale 2) yes/no, unsure, not applicable/no opinion questions.

The CF is calculated using the following formula:

$$\boldsymbol{CF} = (\sum_{i=1}^{n} \boldsymbol{Correl}_i) / i$$

where i is the i^{th} question (only Likert scale questions *are computed) related to the selected issue, n is the number of Likert scale questions for the issue, and* $\boldsymbol{Correl}_i$ *is the correlation of the answers to the question i.*

Note that we took into account the CF only if there are answers both from researchers and stakeholders that return a positive PML. The CF contributes to the total PML only if the $PML_{Researcher}$ and $PML_{Stakeholder}$ are both greater than zero.

CF does not influence the PML if either $PML_{Researcher}$ or $PML_{Stakeholder}$ is less than or equal to zero, as in this case the CF cannot be significant. If $PML_{Researcher}$ and $PML_{Stakeholder}$ are both less than or equal to zero, then the PML for both is at the minimum value, and we decided against adding the CF to the PML.

3. Computation of PML

The PML is calculated using the following formula:

$$PML = PML_{Researcher} + PML_{Stakeholder} + 1{,}4*CF$$

There are five categories of maturity level for an organisation, schematised in the following table:

PML value	Category
>=4 and <=5	Very high PML
>=3 and <4	High PML
>=2 and <3	Medium PML
>=1 and <2	Low PML
>=0 and <1	Very low PML

4. The Maturity Level for the Five M&M RP(F)Os

This section provides the details of the TML and PML for the RP(F)Os in GRRIP, obtained from the analysis of survey data (see Appendix A). Data collected are shared within the Consortium and available for reviewers.

4.1 IUML

IUML		
	TML	Top-Down Survey
GENDER EQUALITY	2	The top-down maturity level for gender equality is equal to 2. The organisation has policies, but they are not clear enough or made explicit in documents available online; there are internal procedures, but they are not well documented, and the organisation has no appointed Boards/Committees related to the specific RRI Key (Configuration: Yes/No, Yes/No, No). Actions are suggested (within the Action Plan), which aim to produce and share formalised documents and specify governance structures that allow making explicit policies, supporting institutionalisation of gender equality, and managing related processes. The staff in IUML per gender resulting from objective data collection is unbalanced with total number of men nearly twice that of women. However, when considering the percentages of women and men by salary category, we observe a substantially balanced distribution. This is also true if we observe the percentage per gender and type of contract. It is forbidden in some countries to collect data on ethnicity of their

		employees as it is considered a discriminatory practice. IUML does not collect data on ethnicity of its staff. Therefore, actions are suggested to identify and remove barriers that hinder a balanced gender representation in the organisation overall.
OPEN ACCESS	2	The top-down maturity level for open access is equal to 2. RRI principles related to open access are, for many aspects, followed in practice. The organisation has policies, but they are not clear enough or made explicit in documents available online; there are internal procedures, but they are not well documented, and the organisation had no Boards/Committees related to the specific RRI Key (Configuration: Yes/No, Yes/No, No). Actions are suggested (within the Action Plan), which aim to produce and share formalised documents and, specifies the governance structures that help to implement policies, support implementation of open access, and manage related processes.
PUBLIC ENGAGEMENT	2	The top-down maturity level for public engagement is equal to 2. RRI principles related to public engagement are, for many aspects, followed in practice. The organisation has policies, but they are not clear enough or made explicit in documents available online; there are internal procedures, but they are not well documented, and the organisation had no Boards/Committees related to the specific RRI Key (Configuration: Yes/No, Yes/No, No). Actions are suggested (within the Action Plan), which aim to produce and share formalised documents, and specify the governance structures that help to implement policies, institutionalise public engagement, and manage related processes.
SCIENCE EDUCATION	2	The top-down maturity level for Science education is equal to 2. RRI principles related to science education are, for many aspects, followed in practice. The organisation follows policies, but they are not clear enough or made explicit in documents available online; there are internal procedures, but they are not well documented, and the organisation had no Boards/Committees related to the specific RRI Key (Configuration: Yes/No, Yes/No, No). Actions are suggested (within the Action Plan), which aim to produce and share formalised documents and specifies governance structures that help to implement policies, support strategies for institutionalising science education, and manage related processes.
ETHICS	4	The top-down maturity level for ethics is equal to 4. Concerning Ethics IUML had official and formalised documents. Research ethics and integrity policies, and procedures adopted by IUML are explicitly indicated and described in the documents shared within the organisation. Specific official structures and boards/committees related to ethics should be established.
OTHER		The lack of any data on RRI training activities indicates that IUML should include trainings on RRI keys in the Action Plan for RRI institutionalisation.
	PML	**Bottom-Up Surveys**
GENDER EQUALITY	2,82	The PML needs to be improved. This is also influenced by the small number of stakeholders (at most 3) who provided their responses to some

		questions. The researchers' and stakeholders' answers to the five questions related to gender equality do not return a uniform trend. Some answers suggest that respondents are strongly aware of the gender issues and the steps done or to be done by the organisation, but others seem to contradict this. In particular, the collective awareness of the importance of any connection of a gender Issue with the work in the organisation should be improved. Moreover, the graphs comparing the stakeholders' and researchers' opinions from IUML collected in the bottom-up survey (and the correlation values of their answers when computable) show no or little correspondence. Promotion of debate on gender issues is suggested involving researchers and stakeholders. The interviews highlighted the need to explain and underline researchers' benefits in including the gender perspective in the research and innovation work. IUML should have internal rules to ensure balanced gender representation on research projects as IUML is also a funding organisation, it could include in the funding calls a constraint establishing that at least 1/3rd of WP leaders are women. Finally, IUML is suggested to understand why some stakeholders did not provide answers to some of the questions related to gender equality.
ETHNIC MINORITIES	1,82	The PML is low and needs to be improved. This is also influenced by the small number of stakeholders (at most 3) who provided their responses to some questions. The graphs comparing the stakeholders' and researchers' opinions from IUML collected within the bottom-up survey show some differences. Furthermore, both researchers and stakeholders frequently chose the options "neutral", "unsure", or they did not know or were not aware", or "no opinion/not applicable" concerning the steps taken by the organisation. The organisation should take steps and plan actions regarding ethnic diversity and inclusion and make them known to researchers and stakeholders. Promotion of debates on ethnic minority issues is suggested. Finally, IUML is suggested to understand why some stakeholders did not provide answers to many questions related to ethnic minorities.
CONCERNS FOR SOCIETY	4,09	The PML is very high. Very high percentages of both researchers and stakeholders agreed at different levels on the questions related to this issue. Moreover, comparing the stakeholders' and researchers' opinions on concerns for society, the stakeholders' and researchers' opinions have a very high correspondence (they agreed on the need to avoid concerns for society). Both researchers and stakeholders frequently chose the options "unsure" or "no opinion/not applicable" concerning what they know about the steps taken to avoid concerns for society. Promotion of debate is suggested on the steps taken by the organisation to reduce concerns for society and to reduce the percentage of people who are unsure or do not have an opinion.

		The interviews suggested that keeping research connected to current and emerging societal needs may improve citizens' trust in scientific research. This connection can also be developed by organising opportunities that facilitate access to funding (e.g., through crowdfunding).
OPEN SCIENCE	3,38	The PML is high. Both researchers' and stakeholders' answers suggest that they have a high level of awareness about the importance of open science. Researchers perceived that the opportunity to talk to public about their work is at the very end of the process after all the work has been completed. Actions should be taken to improve awareness of researchers on upstream public engagement. Another issue that needs actions to modify the stakeholders' perception is related to their opinion of whether the organisation enthusiastically communicates findings from its work to public. Comparing the stakeholders' and researchers' opinions from IUML emerging from the bottom-up survey on open access, we observe moderate to strong correspondence between their responses. However, as only 3 stakeholders provided responses to some questions, in this case we did not compute the correlation. Furthermore, both researchers and stakeholders sometimes chose the options "unsure" or "no opinion" for questions about the steps taken by IUML concerning open science. Therefore, actions are suggested aiming to communicate better IUML's actions that address open science. The interviews showed that making research results accessible to a wide audience and facilitating science education initiatives makes society resilient against fake news and improves communication between stakeholders of the marine and maritime environment. Sharing knowledge with civil society using a language that the wide public can understand is crucial. Finally, IUML is suggested to understand why some stakeholders did not provide answers to many questions related to open science.
SOCIETAL NEEDS	3,44	The PML is high. All stakeholders and the majority of researchers agreed at different levels that research organisations in the marine and maritime sector should focus on addressing societal needs. They have opinions with a medium level of correspondence concerning the importance of addressing societal needs. However, both researchers and stakeholders frequently chose the options "unsure" or "no opinion" when answering the question about the steps taken by IUML. Therefore, better communication is suggested about IUML actions and plans for funding and performing research addressing societal needs.
ETHICS	3,24	The PML is high. Both researchers and stakeholders have opinions with high correspondence, agreeing on the importance of ethics for research in the marine and maritime sector. However, they frequently chose the options "unsure" or "no opinion" for the question about the steps taken by the organisation to ensure that ethical principles guide its work. Therefore, actions are suggested to make clear and transparent (for researchers and stakeholders) the steps that IUML takes to ensure that ethical principles guide its work. The interviews showed that the organisation has plans to improve citizens' trust in scientific research and promote the ethics goals.

4.2 MaREI(UCC)

		MaREI (UCC)
	TML	Top-Down Survey
GENDER EQUALITY	4	The top-down maturity level on gender equality is equal to 4. RRI principles, policies and procedures related to gender equality are formalised in official documents in MaREI (UCC). Governance structures that can facilitate implementing policies and procedures exist. MaREI (UCC) did not provide gender disaggregated data citing the reason that it was difficult to provide the information and data in the required format. The organisation is suggested to have a strategy in place for periodic review and update of documents and related boards/committees/ roles to support continued high maturity level for the gender equality aspect. It is suggested that systems are set up in a manner that in the future gender disaggregated data of staff members can be easily made available for future survey related requests/projects or to make necessary changes in organisational culture.
OPEN ACCESS	5	The top-down maturity level on open access is equal to 5. UCC has policies and procedures related to open access. An organisational structure for managing this issue is already established. It is suggested that regular trainings on open access are organised for new researchers so that they are aware of the existing structures. Set up a system (or revisit the system, if one exists) to record data on the number of open access publications by MaREI (UCC) researchers so that number of open access publications is easily queried for reporting purposes.
PUBLIC ENGAGEMENT	5	The top-down maturity level on public engagement is equal to 5. MaREI and UCC have policies and procedures related to public engagement. An official structure for managing this issue is already established. It could be helpful if MaREI (UCC) take actions within the Action Plan to stimulate the staff to establish collaborations and engagement with external stakeholders.
SCIENCE EDUCATION	5	The top-down maturity level on science education is equal to 5. MaREI (UCC) has science education in its mandate (mandate being under the governance structure of UCC) clearly defined with policies, procedures, and organisational structures.
ETHICS	5	The top-down maturity level on ethics is equal to 5.

		MaREI (UCC) has documents about policies and procedures related to ethics. An official structure for managing this issue is already established. It is suggested that the training attendance system of new recruits/researchers also collect data on gender (and ethnicity, if possible) of attendees, paying attention to be compliance with GDPR.
Other		The MaREI (UCC) RRI Action Plan should include interventions for collecting information and data to facilitate measuring RRI-related changes.
	PML	**Bottom-Up Surveys**
GENDER EQUALITY	2,43	The PML is medium and can be improved. The PML of both researchers and stakeholders is respectively 0,75 and 0,74, but there are very different opinions (and a CF that is 0,66) about the relevance of gender to the work of the organisation and the need to maintain an equal number of men and women in research and innovation teams. The interviews show that the organisation provides an inclusive environment, even if people do not know the real benefit. The organisation includes a lot of diversity, but it is necessary that awareness on gender equality is raised. Discussions involving researchers and stakeholders are suggested to establish a common understanding of the situation and potential actions to improve collective awareness on including gender equality in research. Actions should aim to promote inclusion of diverse people in the research process, practices, and methods.
ETHNIC MINORITY	2,11	The PML is medium and should be improved. The answers to the questions related to ethnic minorities show high correspondence between stakeholders' and researchers' opinions only when considering that research organisations in the marine and maritime sector should include ethnic minorities in their work (and they agreed on that). However, both researchers and stakeholders frequently chose the options "neutral", "unsure", "I don't know", "not aware", or "no opinion", and have very different opinions concerning the steps taken by the organisation or concerning the need to take ethnic diversity into account when developing its work. Interviews showed that MaREI (UCC) provides an inclusive environment, also for ethnic minorities, even if people don't see a real benefit of this. The organisation has researchers from different parts of the world. It is recommended to improve awareness about equality, diversity and inclusion within the organisation's work culture and research processes and methods.

		Considering the divergence of opinions, promotion of debate is suggested concerning the need to take into account ethnic minorities when developing research projects and the steps that the organisation can take to make researchers (and others) aware of the importance of diversity and inclusion.
CONCERNS FOR SOCIETY	4,02	The perceived maturity level concerning whether the way the organisation carries out its activities (i.e., implement research projects) can cause any concerns for society is very high. Indeed, the researchers' and stakeholders' maturity level are respectively 1,16 and 1,56. Moreover, the bottom-up surveys show high correspondence between stakeholders' and researchers' opinions, with a CF of 0,93. All stakeholders and the majority of researchers agreed at different levels that research organisations in the marine and maritime sector should ensure the way their work is conducted does not cause concerns for society. Stakeholders and researchers frequently chose the options "neutral", "unsure", or "no opinion/not applicable" or they did not know or were not aware about the steps taken to avoid concerns for society. It is suggested that MaREI unpacks the responses to the question "Does MaREI takes steps to ensure that the way it conducts its works does not cause concerns to society" to further understand the findings of the survey and then communicate its values to its researchers and external stakeholders. Many of the projects that MaREI has either explores environmental and societal concerns of a particular innovation or embeds societal concerns.
OPEN SCIENCE	4,06	The PML concerning open science and open access is very high. The stakeholders' and researchers' answers show that both mainly agreed about adopting open science and open access concepts and behaviours; indeed, they have respectively a perceived maturity level value of 1,49 and 1,43 and CF is 0,8. The interviews showed that open science and open access present some challenges; indeed, openness has been a long-term goal at MaREI (UCC), especially concerning data; but funders (government/commercial) sometimes see this as a threat to their intellectual property rights. It is recommended that MaREI-UCC conducts regular cafes / debates / workshops on open science.
SOCIETAL NEEDS	4,56	The PML concerning pursuing research addressing societal needs is very high. The stakeholders' and researchers' answers from the bottom-up surveys show respectively a perceived maturity level value of 1,65 and 1,9, and a CF of 0,72. Both groups (researchers and stakeholders) generally believe that societal needs are crucial for

		guiding research, and they feel that the organisation is active in this respect. Interviews showed that "social buy-in is essential to remain relevant and ensure that society understands the benefit of science".
ETHICS	4,63	The PML concerning ethics is very high. The bottom-up surveys show a perceived maturity level value of 1,7 and 1,54, of researchers and stakeholders respectively and a CF of 0,99. Both groups (researchers and stakeholders) agreed at different levels that ethical principles should guide research organisations in the marine and maritime sector. No specific issues emerged concerning ethics. Both groups mainly believe that ethics is crucial for guiding research, and they feel that the organisation is active in this respect. It is recommended that MaREI (UCC) communicates with stakeholders regarding ethical practices and policies that it follows to reduce the number of stakeholders unsure about the organisation's steps in dealing with ethical issues. The interviews showed that "ethics is an essential component for individuals", and the organisation must adopt the highest ethical standards to maintain a high level of integrity and reputation.

4.3 PLOCAN

PLOCAN		
	TML	**Top-Down Survey**
GENDER EQUALITY	2	The top-down maturity level on gender equality in PLOCAN is equal to 2. PLOCAN has formal policy on gender equality (evidenced by the two documents that PLOCAN provided). It does not have a Gender Equality Plan (GEP), and no staff member has explicit responsibility to promote gender equality. (Configuration: Yes, No, No). Therefore, it is suggested that PLOCAN includes in the Action Plan actions to assign direct responsibility to staff members to promote gender equality and define a GEP for the organisation.
OPEN ACCESS	4	The top-down maturity level on open access in PLOCAN is equal to 4. PLOCAN has formal policies and procedures for open access. However, it does not have an organisational structure or staff members with responsibility for open access. This is suggested for inclusion in the Action Plan. The organisation is also suggested to have a strategy in place for periodic review and update of documents and related boards/

		committees/roles to support continued high maturity level for open science aspect.
PUBLIC ENGAGEMENT	5	PLOCAN has official documents containing both a strategic plan and an action plan for public engagement. PLOCAN also has staff members responsible for promoting and providing practical support for researchers to do public engagement. It is not very formally structured, but it is important to note here that PLOCAN is a small organisation. The organisation is suggested to have a strategy in place for periodic review and update of documents and related boards/committees/ roles to support continued high maturity level for public engagement.
SCIENCE EDUCATION	4	PLOCAN has defined policies and processes for science education in its already existing Action Plan and strategic plan documents. PLOCAN does not have members responsible for giving researchers practical support in conducting science education and literacy work. This is suggested for inclusion in a future Action Plan. The organisation is suggested to have a strategy in place for periodic review and update of documents and related boards / committees/ roles to support continued high maturity level for science education.
ETHICS	5	PLOCAN follows the European Charter for Researchers and the code of conduct. It has staff members with the responsibility to promote research ethics and/or integrity, but it does not have a research ethics committee and does not run trainings on this specific issue. This is suggested for inclusion in a future Action Plan. A future Action Plan should include actions for trainings on ethics and/or research integrity. The organisation is suggested to have a strategy in place for periodic review and update of documents and related boards/committees/ roles to support continued high maturity level for ethics aspect.
Other	-	As PLOCAN did not run any training related to any RRI issue in the last year, this is suggested for inclusion in the future Action Plan. The interviews showed that for promoting the organisation's goals coherently with RRI principles (this is for all the RRI keys), “it is necessary that PLOCAN is attractive to funding, is compliant with legal requirements or professional standards, has a high reputation, attracts and retains talent, responds to stakeholder expectations, and achieves strategic and action plan goals.”
	PML	**Bottom-Up Surveys**
GENDER EQUALITY	2,99	The PML concerning gender equality is medium. All the stakeholders and 91% of researchers agreed at different levels that organisations should promote gender equality in their work. However, the bottom-up survey showed large divergences in opinions. The CF related to gender equality is 0,56. In particular, there are different opinions

		about whether the organisation should take gender into account when developing its work. Differences are also observed with respect to the relevance of gender to the work of PLOCAN. Planning actions and discussions involving researchers and stakeholders is suggested to establish a common understanding of the situation and potential actions to improve collective awareness on including gender equality in research.
ETHNIC MINORITIES	2,46	The PML concerning ethnic minorities is medium and should be improved. Many researchers have a neutral opinion about whether research organisations in the marine and maritime sector should include ethnic minorities in their work. The CF is medium and equal to 0,48. The bottom-up survey showed moderate correspondence between stakeholders' and researchers' opinions. Both groups frequently chose the options "neutral", unsure", or "no opinion" about whether the organisation take steps to include ethnic minorities in its work. Considering these, it is suggested that debates and discussions about diversity and inclusion is arranged in PLOCAN.
CONCERNS FOR SOCIETY	4,70	The PML related to research being done in a way that it does not cause any concern to society is very high. The bottom-up surveys showed very high correspondence of stakeholders' and researchers' opinions (CF 0,9). All stakeholders and the majority of researchers agreed at different levels that research organisations in the marine and maritime sector should ensure that the way their work is conducted does not cause concerns for society. Both groups are aware of steps taken by the organisation to ensure that the way it conducts its work does not cause concerns for society. Some among them are unsure or have no opinion.
OPEN SCIENCE	3,85	The PML with respect to open science and open access is high. All the stakeholders and the majority of researchers agreed at different levels that research organisations in the marine and maritime sector should make their research methods/processes open and transparent. They also agreed at different levels that the marine and maritime sector should make their research results publicly accessible as widely as possible. However, some are unsure or do not have any opinion about whether PLOCAN takes steps to ensure open and transparent research methods/processes, to make the results of its work widely accessible, and any barriers that prevent such accessibility. Finally, there are different opinions between researchers on the question about the best time for marine and maritime research organisations to talk to the public about their work (if it is at the very end of the process after all the research work has been completed).

		There are very different correspondence levels between the researchers' and stakeholders' answers. The CF has a medium value, equal to 0,59. Therefore, actions should be taken for increasing researchers' awareness about the importance of engaging with the public at various stages of a research and innovation process. Communication about steps that PLOCAN takes to support open access is suggested, to stimulate discussion about further strengthening open access.
SOCIETAL NEEDS	3,87	The PML concerning societal needs is high. The majority of researchers and stakeholders agreed at different levels that research organisations in the marine and maritime sector should focus on addressing societal needs. The CF is equal to 0,76. No one provided an answer to the question of whether PLOCAN takes steps to ensure its work addresses societal needs. But it is important to underline that "PLOCAN is a research infrastructure. It accelerates and support science and technologies in the marine and maritime sector by providing services and offering access to our facilities to our customer". PLOCAN should strengthen this aspect by communicating with its external stakeholders how it contributes to and supports research that addresses societal needs, sharing this information widely.
ETHICS	4,50	PML is very high. Stakeholders' and researchers' opinions have very high correspondence. Both groups mainly believe that ethics is crucial for guiding research, and they feel that the organisation is active in this respect. The CF is 0,96. Researchers and stakeholders frequently chose the options "unsure" and "no opinion" for the question about the steps taken by PLOCAN. Therefore, it is suggested that PLOCAN develops plans to communicate PLOCAN's steps to embed aspects related to ethics with researchers and stakeholders.

4.4 SU

SU		
	TML	**Top-Down Survey**
GENDER EQUALITY	4	The top-down maturity level for gender equality in SU is equal to 4. SU has high level of institutionalisation with many documents and processes concerning gender equality and a strategic equality plan (till 2024), a Concordat action plan, an annual equality report, etc. SU has a unit with explicit responsibility to promote gender equality.

		The staff composition is relatively balanced in number between women and men, but sometimes its distribution is not balanced; for example, there are more men in senior positions (i.e., Grade 8) and in professorial grade. We observe that men exceed women in positions with higher salaries, and more women, compared to men, left the organisation (mainly with a lower salary level). We also observe that women have more fixed-term contracts than permanent ones, while men have more permanent contracts. Therefore, actions should be planned to understand better and overcome the unequal gender distribution of researchers in different grades and salaries. The organisation is suggested to have a strategy in place for periodic review and update of documents and related boards/committees/ roles to support continued high maturity level for gender equality.
OPEN ACCESS	5	The top-down maturity level on open access in SU is equal to 5. SU has formalised documents that guide researchers regarding University's open access policy and its compliance to HEFCE's open access policy, guidelines that researchers/authors of manuscripts should follow to adhere to the open access policy of the University and, provides a guide for authors regarding resources available. The governance structure and dedicated staff for open access are at the university level.
PUBLIC ENGAGEMENT	4	The top-down maturity level on public engagement in SU is equal to 4. SU has: -a public engagement strategy plan, -a document elaborated for the process of developing a civic mission strategy, -materials for developing skills in public engagement contained in the website of the organisation, -a website for an exhibition centre of SU. SU does not have staff members responsible for promoting public engagement. Hence one important recommendation is establishing a civic mission committee. Actions should be planned toward this purpose. Actions should also be planned for improved management of information about research and innovation collaborations with external stakeholders.
SCIENCE EDUCATION	5	The top-down maturity level on science education is equal to 5. SU has science education in its mandate (being a university) and clearly defined policies, procedures, and organisational structures.
ETHICS	5	The top-down maturity level on ethics in SU is equal to 5.

		SU has formalised research ethics/research integrity policies and procedures in official documents, and it has bodies such as the Research Ethics and Governance Committee and its sub-committees.
Other	-	In the Action Plan, SU should include actions to collect all data related to training (e.g., gender, age, grade) and research and innovation collaborations with external stakeholders according to the template established in GRRIP to facilitate monitoring activities and analyse the evolution.
	PML	**Bottom-Up Surveys**
GENDER EQUALITY	2,02	The PML is medium and can be improved. All the researchers and the majority of stakeholders agreed at different levels that organisations should promote gender equality in their work. Some stakeholders were neutral in this respect; there is a strong correspondence between the stakeholders' and researchers' opinions. However, many researchers and the majority of stakeholders agreed at different levels (very low correlation factor, see section 3) that gender is irrelevant to SU's work. They have very different opinions (low correlation factor) about whether research organisations in the marine and maritime sector should maintain an equal number of men and women in research and innovation teams (CF 0,36). The interviews showed that values of the organisation align with gender equality, diversity, and inclusion. Actions and discussions involving researchers and stakeholders should be planned; these discussions should be done to establish a common understanding of the situation and potential actions that can improve collective awareness on gender equality in research.
ETHNIC MINORITY	2,78	The PML is medium and can be improved. The bottom-up survey showed moderate or strong correspondence between researchers and stakeholders. We observed that some researchers and stakeholders also believe that ethnic differences are irrelevant to the work of SU. It would be important to discuss this concept to have a common understanding and a collective awareness on issues of diversity and inclusion. The CF is equal to 0,62. Furthermore, both groups frequently chose the options "unsure" for the question on steps taken by SU. Better communication with researchers and stakeholders is suggested on the steps SU takes for including minorities.
CONCERNS FOR SOCIETY	3,93	The PML is high. The majority of researchers and stakeholders agreed at different levels that research organisations in the marine and maritime sector should ensure that the way their work is conducted does not cause concerns for society. There was a strong

		correspondence between stakeholders' and researchers' opinions (CF 0,88). However, some researchers and many stakeholders chose the options "unsure" for the question on steps taken by SU to conduct research which would be expected to not cause concerns for society. It is suggested that SU communicates the steps it takes to ensure that the way SU conducts its work does not cause concerns for society to its external stakeholders and researchers
OPEN SCIENCE	3,72	The PML is high. Stakeholders' and researchers' answers show strong correspondences, except for the survey question which was related to understanding what people perceive to be the best time to involve the public in research and innovation activities There are different opinions on the question about the best time for marine and maritime research organisations to talk to the public about their work. In particular, some researchers somewhat agreed and some stakeholders agreed on the best time to talk to the public about the work of the organisation. The feeling on this issue is not homogeneous (correlation is low). The CF for open science is 0,75. Actions should be taken to increase researchers' awareness about the importance to talk to the public not only at the very end of the process after all the work has been completed, but throughout the research and innovation process. Furthermore, some researchers and many stakeholders frequently chose the options "unsure" or "no opinion" for the questions about the steps taken by SU to ensure its research methods/processes are open and transparent. Therefore, better communication is suggested.
SOCIETAL NEEDS	2,32	The PML is medium and should be improved. The majority of researchers and stakeholders agreed at different levels that research organisations in the marine and maritime sector should focus on addressing societal needs. The PML for researchers is 0,97 and for stakeholders is 0,92. Moreover, even if researchers and stakeholders agreed at different levels, we observe a very low value for correlation (CF 0,17). Researchers provided answers distributed among five of the seven values of the Likert scale. In this case, the misalignment is mainly related to the differences in levels in the agreement, with some indicating "disagree" or "somewhat disagree" among researchers and some indicating "neutral" among stakeholders. Therefore, actions and discussions are suggested involving researchers and stakeholders to build a common understanding of this issue and improve collective awareness. Moreover, interviews showed that an important motivation to involve wider society in ecological research is to do impactful research. They

		mentioned that, “This can be achieved through a) industrial collaboration, b) innovation (spin-out companies, patents filed), and c) community engagement. This means engaging the different actors”.
ETHICS	4,52	The PML is very high. The answers from the bottom-up surveys showed very high correspondence between researchers and stakeholders, and they agreed that ethical principles should guide research organisations. The CF is 0,98. The majority of researchers (81%) and 33% of stakeholders think that SU takes steps to ensure that ethical principles guide its work. However, many stakeholders chose the options “unsure” or “no opinion” for the question about the steps taken by SU. Therefore, better communication on ethics is suggested, especially with stakeholders.

4.5 WavEC

WavEC		
	TML	**Top-Down Survey**
GENDER EQUALITY	3	The top-down maturity level on gender equality in WavEC is equal to 3. The WavEC Equal Opportunity Policy is formalised in an official document available on the institution’s website. No official documents establish the processes followed, but gender equality is promoted in job applications and recruitment. The staff composition is relatively balanced between women and men. Women are distributed from the grade 1 (the lowest) to the grade 5 (i.e., position grade level in career), while men belonged to Grade 2 to Grade 6. This distribution is reflected in the salary levels. All the employees in WavEC are of white ethnicity, and the staff who left the organisation were of white ethnicity also. The organisation does not have a staff member or members with explicit responsibility to promote gender equality and does not assign time in regular meetings to promote awareness of gender equality. The organisation’s strategic management structure carries out the governance of the aspects related to RRI keys. Therefore, it is suggested to assign responsibility to people for gender equality, even if the organisation is small.
OPEN ACCESS	2	WavEC does not have written policies or procedures and it does not collect data on number of open access publications.

		WavEC has 25 employees. The policies concerning open access are notl formalised in strategic and planning documents, but the staff follow informal rules (which is possible due to the small size of the organisation). (Configuration: Yes/No, Yes/No, No). The Action Plan should provide written policies and processes with regard to open access.
PUBLIC ENGAGEMENT	1	The top-down maturity level on public engagement in WavEC is equal to 1. No official documents (either on policies or procedures) are available. The organisation's staff follow informal rules in this respect. Concerning engagement with external stakeholders, WavEC centrally records details of research and innovation collaborations. WavEC has no staff member who is responsible for public engagement. (Configuration: No, Yes/No, No). The Action Plan should define written policies and processes and identify or appoint people who can be responsible for public engagement.
SCIENCE EDUCATION	1	The top-down maturity level on science education in WavEC is equal to 1. WavEC has neither any written policy nor any staff member explicitly responsible for providing practical support with matters related to science education. Initiatives related to science education has been carried out, but data was not collected. (Configuration: No, Yes/No, No). The governance of various aspects related to the RRI keys, and therefore also for science education, is carried out by the organisation's strategic management structure (that is not specific), but there are no specific people for this purpose.
ETHICS	3	The top-down maturity level on ethics in WavEC is equal to 3. WavEC has a nine-point policy document that provides the principles to follow. WavEC does not have procedures for ethics review or in cases where a researcher or staff member feels there has been immoral or unethical behaviour. The governance of the aspects related to RRI keys, and therefore also for ethics, is carried out by the organisation's strategic management structure (that is not specific). There are no specific people for this purpose. The Action Plan should include actions for developing written documents that clearly establish processes (and improve those

		already available) and for identifying staff who could be responsible for ethical aspects.
Other	-	Trainings related to RRI issues should be organised. The Action Plan should include actions to facilitate data collection in a format that enables monitoring of activities over a period of time.
	PML	**Bottom-Up Surveys**
GENDER EQUALITY	1,59	The PML is low and needs to be improved. This is mostly related to the small number (2-3) of stakeholders that responded to the bottom-up survey. Moreover, these opinions show the necessity to improve awareness also among researchers on the gender relevance in the work of the organisation, and the importance of taking gender into account when planning activities. Furthermore, both researchers and stakeholders chose the options "neutral", "unsure", "I don't know", "not aware", or "no opinion". These results indicate that it is necessary to promote debate on gender issues involving researchers and stakeholders. Furthermore, WavEC should better communicate the steps taken to promote gender equality. The interviews underlined that certain policy-push help in promoting gender equality in institutions; for example, European and national funding projects have a section asking for some of the RRI pillars, so when there is a requirement in a proposal for taking this into consideration, it is necessary to do as required. WavEC is also suggested to understand why only some stakeholders provided their answers.
ETHNIC MINORITY	1,24	The PML is low and should be improved. This is mostly related to the small number (at most 3) of stakeholders that had responded to the bottom-up survey. They all agreed on this at different levels or were neutral that research organisations in the marine and maritime sector should include ethnic minorities in their work. The majority of researchers were neutral, and many agreed at different levels that research organisations in the marine and maritime sector should include ethnic minorities in their work. Furthermore, both researchers and stakeholders frequently chose the options "neutral", "unsure", "I don't know", "not aware", or "no opinion" when asked if WavEC take steps to include ethnic minorities in its work. Finally, many researchers answered that they are unaware of barriers that the organisation faces to include ethnic minority. The CF for responses on ethnic minorities is 0,44.

		WavEC is also suggested to understand why only some stakeholders provided answers.
CONCERNS FOR SOCIETY	3,09	The PML is high. It is influenced by the small number (3) of stakeholders that responded to the bottom-up survey. All stakeholders that provided their answers and the majority of researchers agreed at different levels that research organisations in the marine and maritime sector should ensure that the way their work is conducted does not cause concerns for society. However, both researchers and stakeholders frequently chose the options “unsure” or “no opinion” for their answer about whether WavEC takes steps to ensure that the way it conducts its work does not cause concerns for society. It is suggested that WavEC communicates to its researchers and stakeholders how its work does not cause concerns for society, and that its work focuses on fulfilling societal goals. WavEC is also suggested to understand why only some stakeholders provided their answers.
OPEN SCIENCE	2,28	The PML is medium. This is mostly related to the small number (3) of stakeholders that responded to the bottom-up survey. All researchers and stakeholders agreed at different levels that the marine and maritime sector should make their research results accessible by the public. They also agreed at different levels that research organisations in the marine and maritime sector have a professional responsibility to communicate findings from their research or innovation work to the public. The stakeholders’ and researchers’ opinions differ more with respect to: 1) the need that WavEC communicates the results of its work to the public, 2) the phase of the research process in which the public must be involved, and 3) whether WavEC enthusiastically communicates findings from its work to public. Actions should be taken for increasing researchers’ awareness about the importance to talk to the public not only at the very end of the process after all the work has been completed, but at various stages in the research and innovation process. Furthermore, some stakeholders chose the option “unsure” for the question about the steps taken by WavEC. Therefore, better communication with stakeholders is suggested. Interviews showed that both social engagement and open science help promote the results of the work done in the organisation, and also encourage collaboration. WavEC is also suggested to understand why only some stakeholders provided their answers.

SOCIETAL NEEDS	2,76	The PML is medium. This is mostly related to the small number (3) of stakeholders that responded to the bottom-up survey. All stakeholders who provided their answers and the majority of researchers agreed at different levels that research organisations in the marine and maritime sector should focus on addressing societal needs, and few researchers were neutral in this respect. Many researchers and stakeholders chose the options "unsure" for the question about the steps taken by WavEC. Therefore, it is recommended that WavEC shares with its stakeholders the steps it takes towards working on projects which takes into consideration societal needs. WavEC is also suggested to understand why only some stakeholders provided their answers.
ETHICS	2,93	The PML is medium. This is mostly related to the small number (3) of stakeholders that have been engaged in participating in the bottom-up survey. Stakeholders' and researchers' answers to the question if they agreed that ethical principles should guide research organisations show that they agree on that at different levels. However, many researchers and stakeholders chose the option "unsure" for the question about the steps taken by WavEC to ensure that ethical principles guide its work. Therefore, better communication is suggested, especially involving researchers. Interviews showed this is also necessary to maintain the organisation's high reputation. WavEC is also suggested to understand why only some stakeholders provided their answers.

4. Conclusion

This deliverable defined the two maturity level indicators (TML and PML) used to identify the current maturity levels for RP(F)Os and their evolutions. The initial maturity level for each organisation has been computed, and this work provides a baseline for later work packages.

Appendix A – Vertical analysis of the organisations

The main elements that emerged from each M&M RP(F)O are presented considering that they came from the analysis of the Top-Down Surveys, the Bottom-Up Surveys and the Interviews.
In the bottom-up survey, sometimes we received only few responses from the stakeholders. When we carried out the analysis, we did not consider the correlation values between the researchers and stakeholders when stakeholder responses were equal to or less than 3.
The data collected in both top-down and bottom-up surveys is available to the consortium and the evaluators upon request.

A.1 IUML

A.1.1 Observations from the objective data collected in the Top-Down Survey

Many actions and behaviours to include RRI in accordance with the five keys have been already adopted, as practices, in IUML, and they shared documents explaining the organisation's orientation and guidelines concerning Gender Equality, Open Access, Public Engagement, and Science Education.
However, IUML (except for ethics) did not formalise policies and processes. IUML doesn't have governance structures for managing the related processes. There seems to be no specific and known barriers to having these written documents (for example, a Gender Equality Plan).

In IUML, RRI principles, in many aspects, are followed, but since these principles are not formalised in document and processes, it is suggested to take actions (within the Action Plan) aiming to produce and share formalised documents, policies which make explicit the five RRI keys, to establish governance structures as a step towards institutionalisation of RRI keys and to manage processes related to RRI.

IUML's Research Ethics and integrity policies are explicitly indicated and described in the documents shared at:

- https://www.univ-nantes.fr/laboratoires/l-integrite-scientifique-un-engagement-de-l-universite-de-nantes-2062688.kjsp
- https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_kgX8oT6kvYoxAlx0/OkItBrdoctorate-charter.docx

Observing objective quantitative data provided by the organisation (Tables in Part 2):
Data collected show that only 37% of employees are women, and 63% are men. Both women and men are distributed within the different grades.
Considering the percentage of women by category of salary on the total number of women employed and, the percentage of men, we observe a substantially balanced distribution. This is also true if we observe the percentage per gender and type of contract.

Since the percentage of men is nearly twice that of women, it is suggested to include actions in the Action Plan for identifying and removing barriers that hinder a more significant presence of women in the organisation.

Many data asked in the Part 2 of the Top-down survey were not provided as they were not available. In particular, the organisation did not provide data that involves ethnicity of the staff, as that kind of data cannot is not collected in France.
Many of the missing data are related to the training associated with the different RRI pillars; these data were not provided as the organisation did not implement RRI-related training activities.

Due to the lack of any training activity related to RRI pillars, it is suggested that IUML includes trainings in the action plan for various RRI dimensions to embed RRI within the organisation.

A.1.2 Main elements from the interviews

This section is divided into two parts: part A and part B.
Part A describes the barriers and possible resolutions, as discussed during the interview. In particular, the interview enabled us to extend information acquired about the advantages and barriers in implementing RRI, complementing information coming from researchers and stakeholders' opinions (Bottom-up survey) and actions suggested to overcome these barriers.
Part B specifies how RRI could contribute to realizing the goals of the organisation. We know from the literature the most critical barrier to the design and implementation of RRI in organisations is a misalignment of incentives and responsibilities. Usually, organisations face the misalignment of RRI and the specific performance goals of an organisation. The questions in this section try to assess the gaps between what exists in the organisation currently and where the organisation would like to find itself in the future.
One relevant limitation for RRI in the organisation emerging from the interviews is the limited monitoring actions connected with activities implemented and related to the axis of RRI. Moreover, a barrier which was identified and not previously explained, consisted of the risk that researchers accept when doing interdisciplinary research (risks in career progression).

Part A: Barriers and Actions

Starting point	Action
1a How does the RRI initiative help deliver the organisation's performance goals?	1b What needs to be done so that RRI initiative will help deliver the organisation's performance goals?
Answer: Gender equality (Diversity and Inclusivity) **Public engagement – interdisciplinary publications, the DNA new innovations and new,** Ethics, Education, Open Access We want national recognition, to be in the top three M&M in France. Indicators: number of collaborative projects and interdisciplinary pubs. Internal motivation to make our applied or impact results strongly linked with the wishes of admin, and to fit with the goals of Europe etc.… internal driver, we have no real policy at the level of the institute, only few projects w/ biological issues, main ethics is about research, quality and innovation is key – how we can produce real knowledge, and what could be checked etc… GE and balance – Research involving human beings, about 1/3 of our labs work in the human sciences: sociology, psycho, economics, history, work with programs we began 30 years ago, geography and special planning, involving ppl in pollution "gulf from Senegal to Congo".	**Answer: We expect the GRRIP project will help!**

2a How are RRI considerations incorporated into business decisions on key topics such as recruitment, research topics and methodology, working with 3rd parties, application for funding, collaboration or other initiatives?	2b What needs to be done so that RRI considerations are incorporated into business decisions?
Answer: Concerning GE it is covered by the process at the university level (PhD – gender equality etc.…), for the moment Not organised mentoring	**Answer:** Thinking about how to involve women in the projects, should we have internal rules about that, when there is a submission for internal projects, when we write a proposal for calls, should we ensure that one third of WP leaders are women…
3a To what extent are managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?	3b What must be done, so that managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?
Answer:	**Answer:**
4a What mechanisms are in place to monitor and respond to what is working and what is not?	4b What mechanisms are in place to monitor and respond to what is working and what is not?
Answer: Limited monitoring, no guidance about this, of course some international funders require that we publish in OA" Partners – you write what kind of partners, this is monitored.	**Answer:** Could be in the future, it is very complex, if you have a very good paper – OS journal with lo and another with hi IF (impact factor). Especially in the beginning of the career, IF is important. There may be ppl in the group that have tools that could help manage this.
5a How effectively does an organisation create the conditions to enable RRI implementation (e.g. inclusive environment)?	5b What can be done to create the conditions that enable RRI implementation (e.g., inclusive environment)?
Answer:	**Answer:** GE – the processes that have been implemented, are good, and are at the level of the university; for the others it is the benefit for the researchers needs to be very clear; otherwise, it will be difficult to enable. Education – everyone usually agrees that it is important, but the priority is low; it is not really high on the list, monitored – first the number of pubs, and the IF. **They look at** the number of contracts, and the bottom of the list is education to science – Visit of evaluators every 5 years, and we have to prep a report in which we explain what we did, and that is where they describe patents, pubs, etc… Funding is the main focus – Research with **HIGH IMPACT**, in some cases, the impact is at the frontier between disciplines, that's more challenging, so more than 1/3 are doing inter-disciplinary research (riskier) always challenging. That's why we are after a tool that helps w/ the challenges of

	interdisciplinary research: risk in terms of real impact and publication is harder, publish work that is between the disciplines (less problematic now, but still…), still a risk – to be qualified you need to be recognized by your community. (Think about how to mitigate the risk? How to take advantage of the goal of interdisciplinarity to "piggy-back" RRI issues on top of it?

Part B: Acquiring buy-in: the ROI of RRI

How can the RRI dimensions promote your organisation's goals?

RRI dimensions	IUML
Gender equality, diversity and inclusion	IUML believes that gender equality, diversity and inclusion improve the quality of the research by bringing together different points of views.
Social Engagement	Keep research connected to current and emerging societal needs. Improve citizens trust in scientific research. Facilitate access to funding (through crowdfunding).
Open Science	Improve citizens trust in scientific research. Accelerate the dissemination of research results and reach a wider audience (not limited to academia).
Science Education	Improve citizens trust in scientific research. Make society resilient against fake news. Facilitate and improve communication between stakeholders of the marine & maritime environment. Facilitate access to funding.
Ethics	Improve citizens trust in scientific research.

Interviewees were asked to share in what way their organisation identified itself as interdisciplinary. To elicit dimensions of this value, we presented a list of interdisciplinary topics in M&M research, and asked how relevant they are for the RPFOs and how likely their research and teaching would involve these dimensions. The results are presented in the table below.

Interdisciplinary topics	IUML
Is your organisation Interdisciplinary?	Yes, it is in IUMLs's DNA. IUML brings together scientists from life sciences, sociology, law, engineering, geography, economics, psychology
Interdependencies of the environment & human rights to connect across sectors	Several members in IUML are doing research in law, economics and geography. They already work on this topic.
Sharing Knowledge in science dialogue with civil society	Yes. IUML is already involved in such initiatives (UN-e-Sea: e-University of Marine Science). However, language can be a challenge (French may be mandatory depending on the targeted audience).
Climate-proofing fisheries for equity and sustainability, integrating traditional knowledge of local fisheries	Yes. Cerographists and marine life sciences researchers of IUML are already working in this field.
Marine biodiversity and hidden trade-offs in the deep sea	Less developed in IUML than other topics. However, still relevant to us.

Empowering sustainable and equitable "blue societies": cultural heritage, marginalized knowledge, practices and economies	Not a priority.

A.1.3 Comparison of researchers' and stakeholders' opinions in IUML

This section aims to provide a comparison of opinions among stakeholders and researchers for the questions of the bottom-up surveys to verify correspondences between the opinions provided by stakeholders and those of researchers.

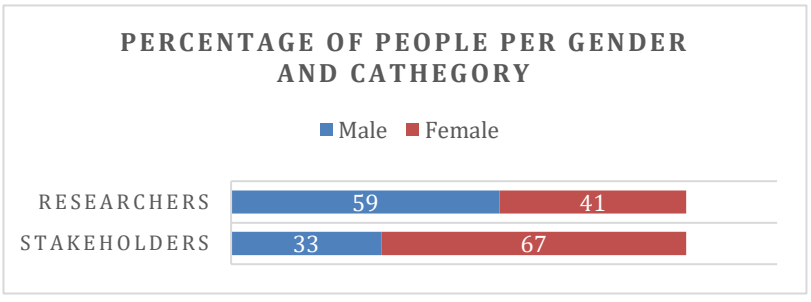
For this objective, graphs that compare the answers are provided for each question common to the two surveys (researchers and stakeholders). The graphs give a visual representation of the stakeholders' and researchers' opinions in IUML. Furthermore, the Pearson correlation index was calculated for the questions with answers in the 7-point Likert scale, as it can be treated as a grouped form of a continuous scale. We cannot consider answers with five or less values (containing responses such as: Yes, No, Unsure, I do not Know), as they do not return us an image that can be considered as approximating a continuous variable.

We did not consider the Pearson correlation values between the researchers' and stakeholders answers when the number of stakeholders who responded to the question was equal or less than 3.

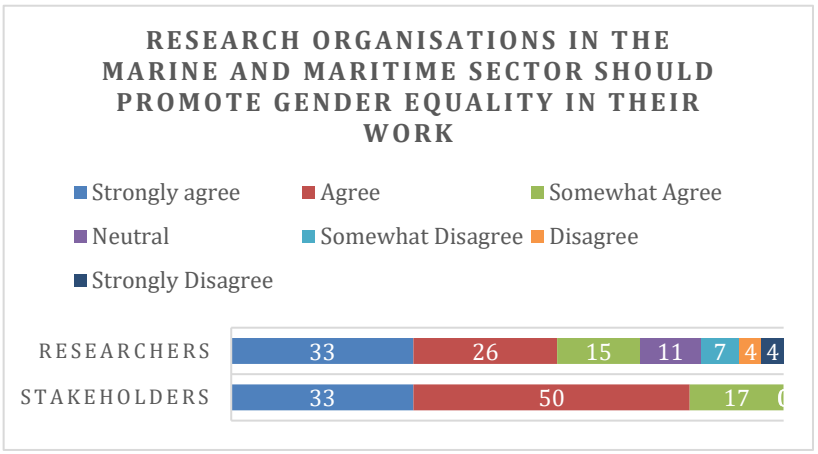
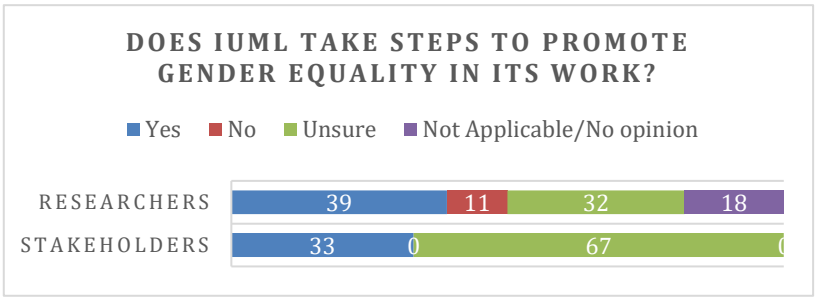
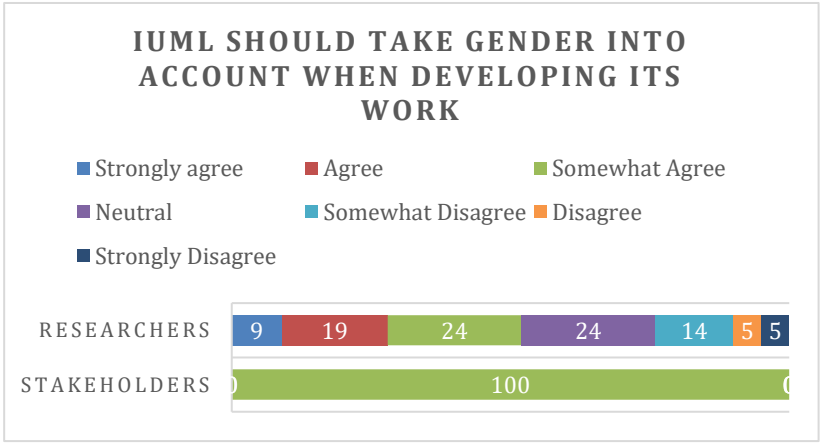
Pearson's correlation index provides a measure that assumes values between -1 and +1, where +1 corresponds to a perfect positive correlation, 0 corresponds to an absence of correlation and -1 corresponds to a perfect negative correlation. The correlation is classified as high if its value is greater or equal to 0,7; it is medium for values greater than or equal to 0,3 and less than 0,7. The correlation is low for values that are lower than 0,3.

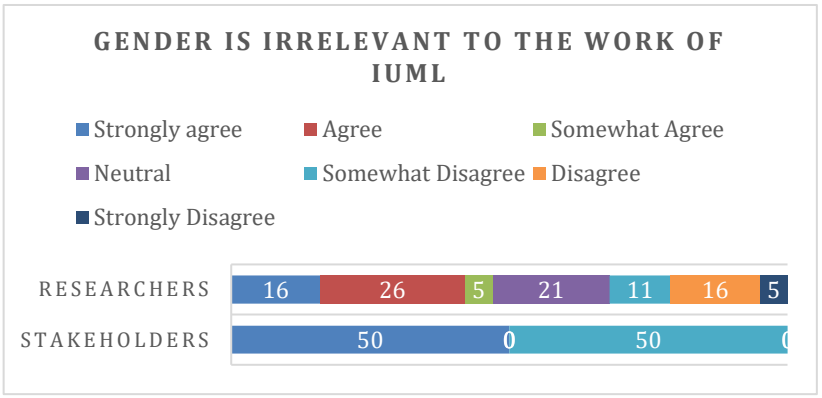
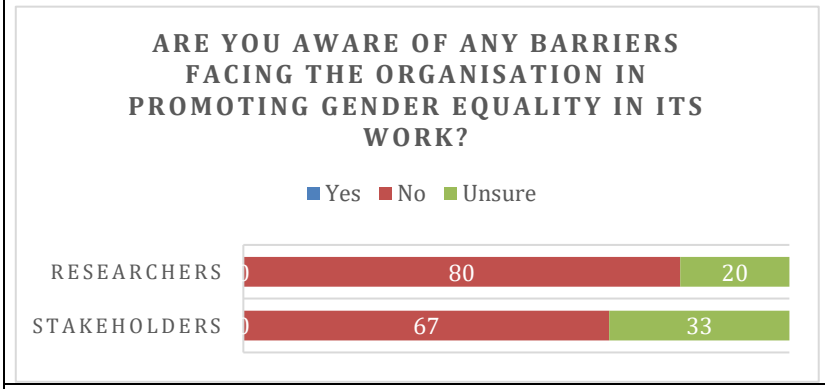
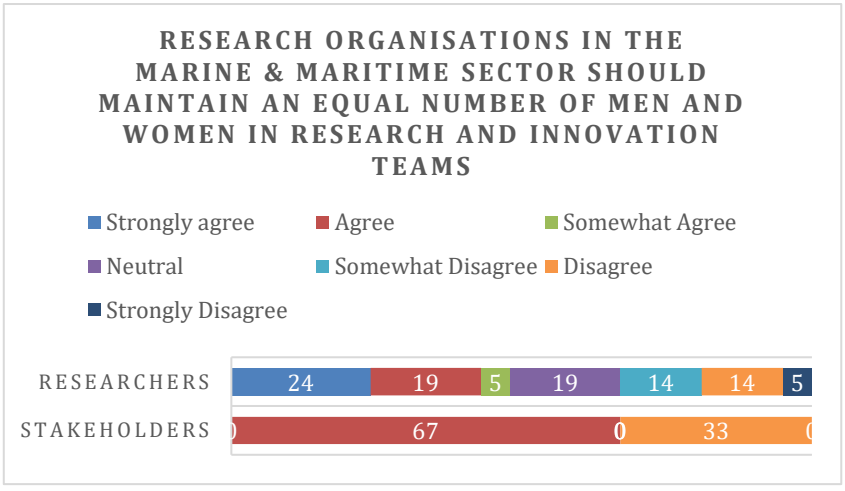
Note that there are 11 members in the stakeholder group (inc. 3 females) and 850 in the IUML community.

GENDER EQUALITY



In IUML, 29 researchers participated in the bottom-up survey. They were more men (59%) than women in percentage, in coherence with the data provided in the Top-down analysis, in which the majority of the researchers in IUML are men. Only 6 stakeholders answered the bottom-down survey, and 67% of respondents are women and 33% men.

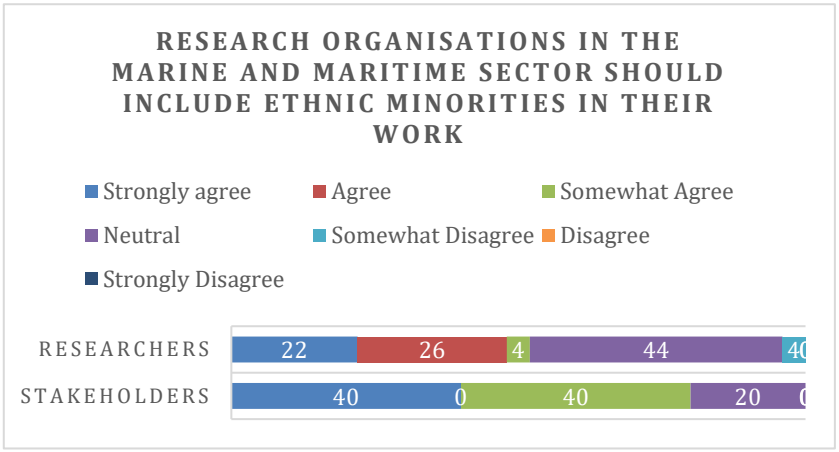
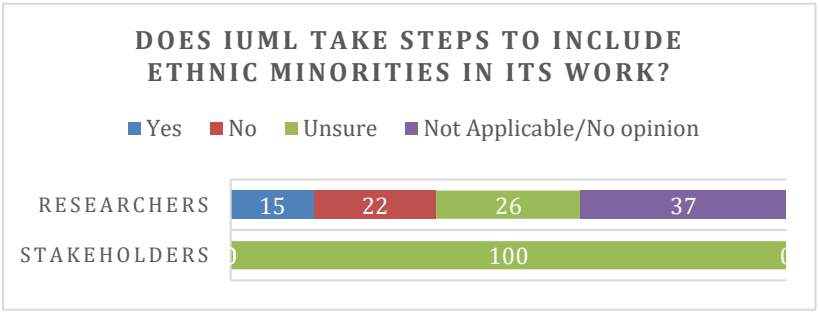
	All the stakeholders agreed that organisations should promote gender equality in their work at different levels, while there are researchers who were neutral or disagreed at different levels on this (see the next graph). Note that respondents among researchers were mainly men, while stakeholders are mostly women. ***Correlation=0,89***
	39% among researchers who answered are aware of the organisation's steps to promote Gender Equality in its work, while stakeholders are 33%. However, 11% of researchers think that no steps were taken in this respect, and no one amongst stakeholders thinks that.
	52 % of researchers agreed at different levels that IUML should take gender into account when developing its work. 5% of researchers strongly disagree in this respect. Note that only 3 of the 6 stakeholders who responded to the questionnaire answered this question. They all selected the option “somewhat agree”. As the responses were only 3, we do not provide the correlation.

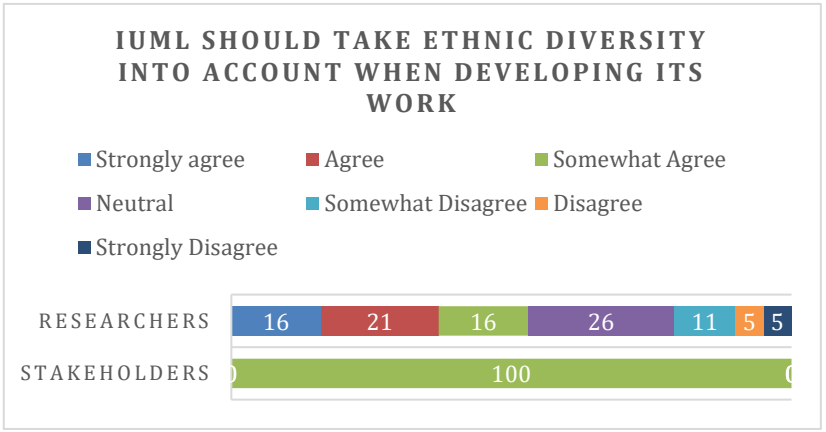
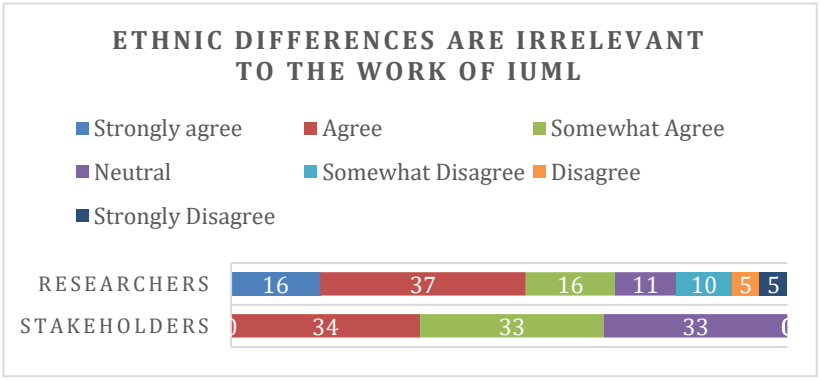
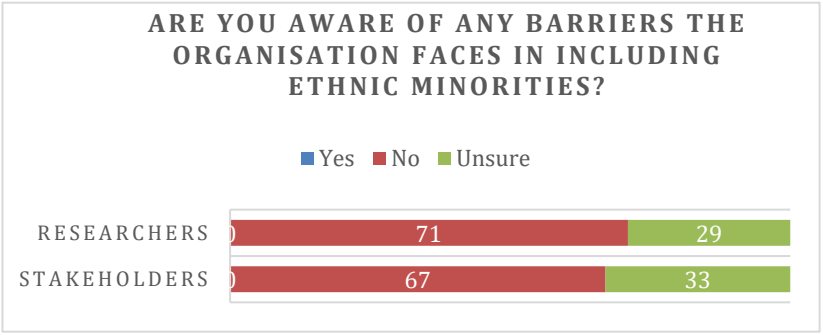
	47% of researchers agreed at different levels that Gender is irrelevant to the work of IUML. Note that only 2 of the 6 stakeholders who responded to the questionnaire answered this question, selecting one time the "strongly agree" and one time the "somewhat disagree" options. Due to the small number of stakeholders' answers, we do not provide the correlation.
	Both researchers and stakeholders seem to be not aware or unsure of any barrier facing the organisation in promoting Gender equality in its work.
	Researchers have very different opinions if research organisations in the marine & maritime sector should maintain an equal number of men and women in research and innovation teams. Note that only 3 of the 6 stakeholders who responded to the questionnaire provided an answer to this question, with 67% agreed and 33% disagreed. Due to the number of stakeholders' responses

	(≤3), we do not compute the correlation.

The graphs comparing the opinions of stakeholders and researchers show a good correspondence, but only ≤3 stakeholders answered many questions. Therefore, IUML is suggested to understand why some stakeholders did not provide answers to some of the questions related to gender equality.
A debate on gender issues involving researchers and stakeholders could improve collective awareness on this issue, and would help to gain stakeholders' point of views.

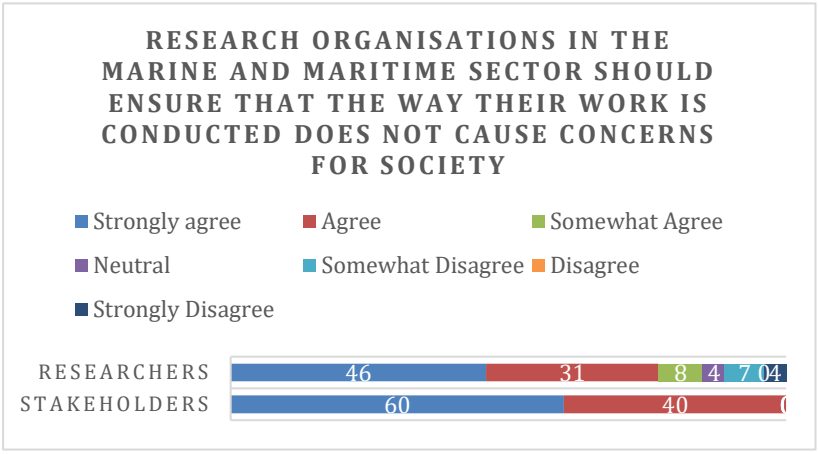
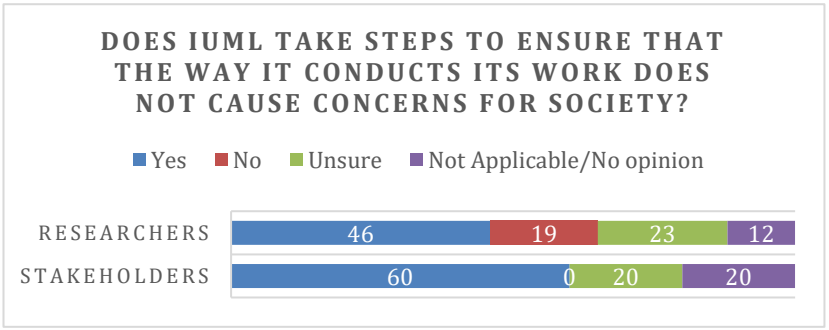
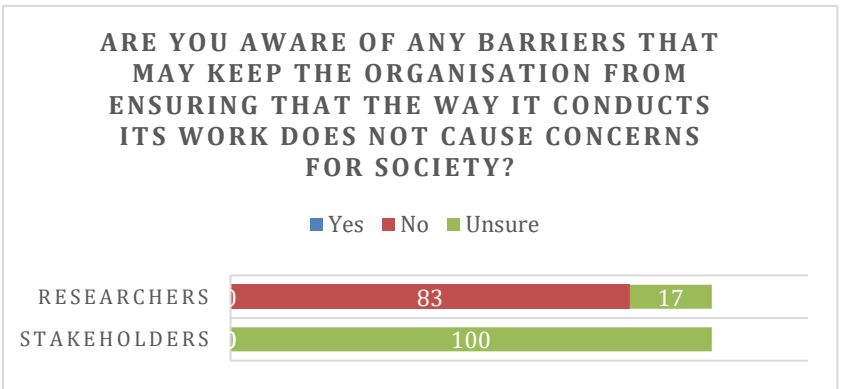
ETHNIC MINORITY

	All the stakeholders agreed on this at different levels (80%) or were neutral, while 52% of researchers agreed at different levels, 44% were neutral, and 4% somewhat disagreed on the question that research organisations in the M&M sector should include ethnic minorities in their work. Even if the majority of researcher and the majority of stakeholders agreed at different levels, we observe a low value for correlation. Indeed, researchers provided answers distributed among five of the seven Likert scale values, and stakeholders on three values. So that they have different trends and correlation is low. ***Correlation=0,26***
	Only 15% of the researchers (though no stakeholders surveyed) were aware of the steps IUML takes to include ethnic minorities in their work.

	53% of researchers agreed at different levels that IUML should take Ethnic minorities into account when developing its work. We need to underline that only 3 of the 6 stakeholders who responded to the questionnaire answered this question and all chose the Somewhat agreed value. Due to the number of stakeholders' responses, we do not compute the correlation. It is suggested IUML will understand the reason for the disagreement of some researchers, and why only some stakeholders provided an answer.
	69% of researchers agreed at different levels that ethnic differences are irrelevant to the work of IUML. Note that only 3 of the 6 stakeholders who responded to the questionnaire provided an answer to this question (with different levels of agreement). Due to the number of stakeholders' responses, we do not compute the correlation.
	Neither researchers nor stakeholders are aware of any barrier to this respect.

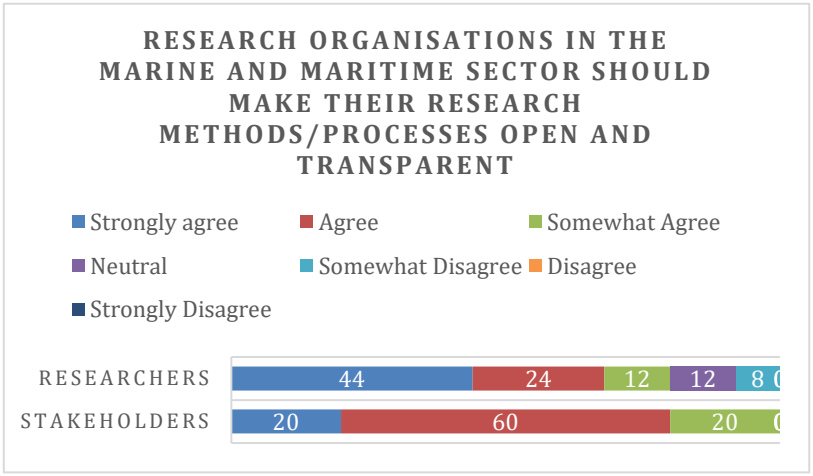
There are different opinions among researchers with respect to ethnic minorities in IUML. It is suggested that IUML understands the reason for some researchers' disagreement and why only some stakeholders provided answers.
IUML is suggested to promote discussions to improve collective awareness related to ethnic minorities and gender equality with researchers and stakeholders.

CONCERNS FOR SOCIETY

	All stakeholders who responded and the majority of researchers (85%) agreed at different levels that research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society, but 11% of researchers disagreed in this respect. ***Correlation=0,99***
	The majority of stakeholders who responded (60%) and only 46% of researchers think that IUML takes steps for avoiding any concerns for society. 19% of researchers think that IUML does not take any step to ensure that the way it conducts its work does not cause concerns for society.
	The majority of researchers (83%) are unaware of any barrier that may keep the organisation from ensuring avoiding any concern for society, differently from stakeholders who are 100% unsure in this respect. However, stakeholders, except for one of them, did not provide an answer to this question.

Both researchers and stakeholders frequently chose the options: "Unsure", "No opinion/not applicable". It is suggested that IUML communicates the steps that it takes so that the research it funds do not cause concerns for society.

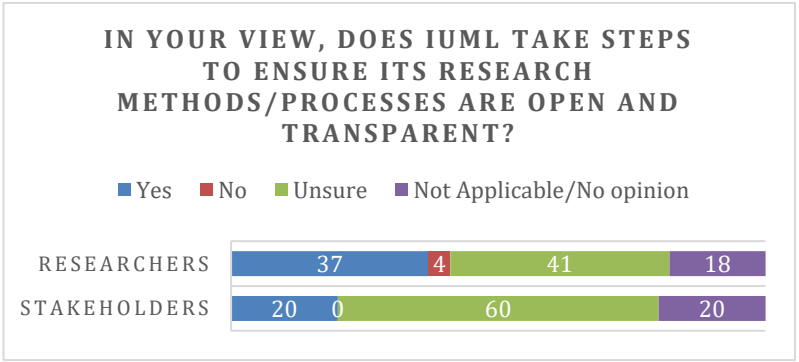
OPEN SCIENCE



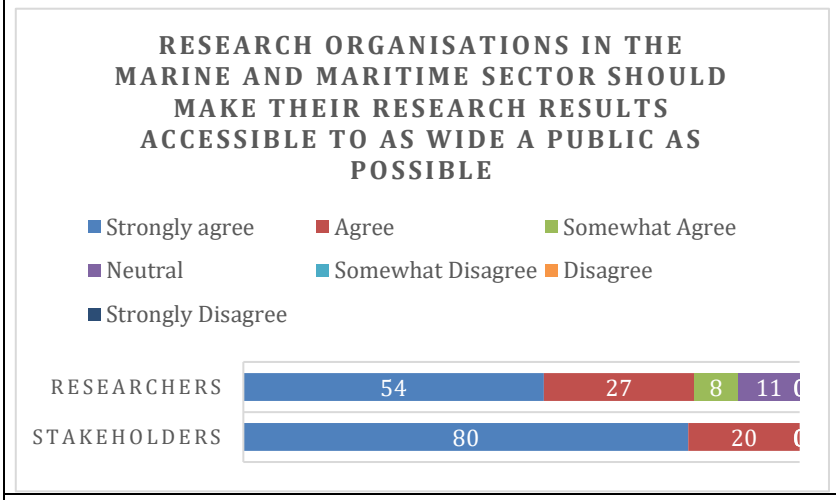
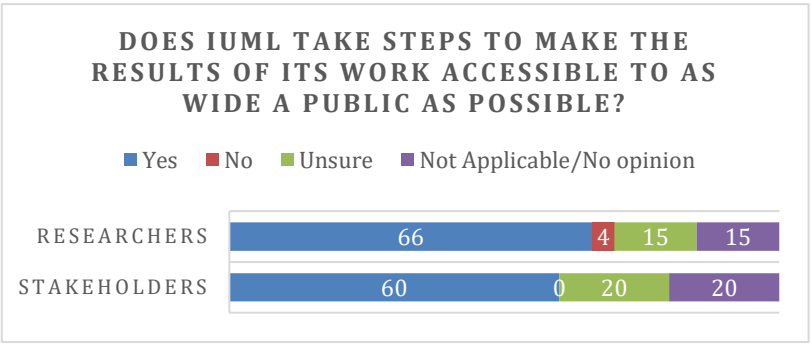
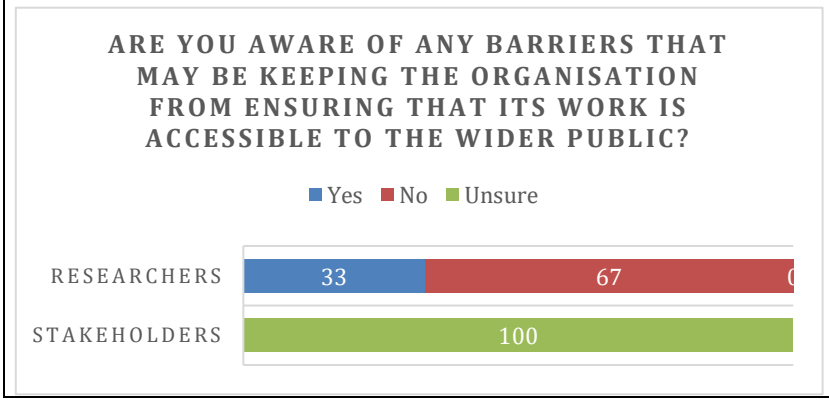
All the stakeholders who responded and the majority of researchers (80%) agreed at different levels that research organisations in the M&M sector should make their research methods/processes open and transparent. But 12% of researchers were neutral, and 8% somewhat disagreed in this respect.

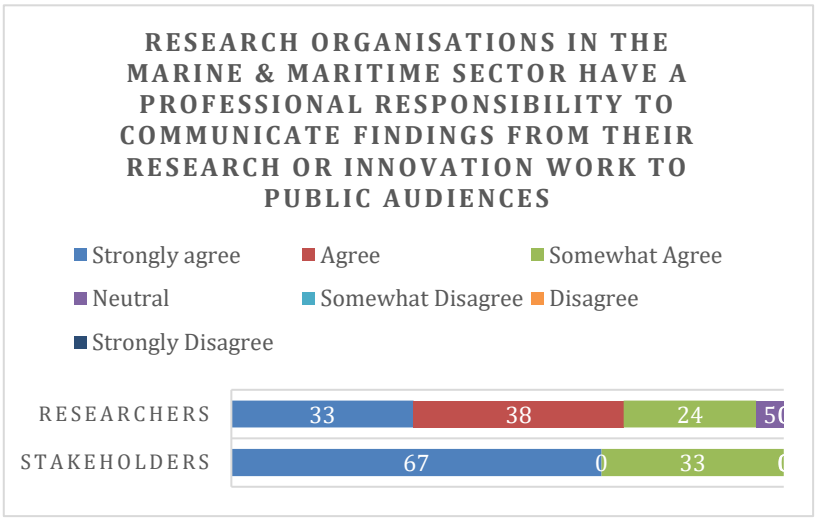
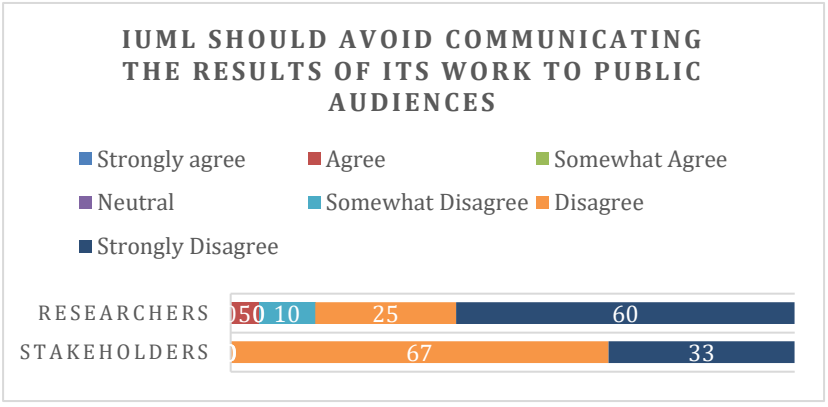
We observe a medium value for correlation. Indeed, researchers provided answers distributed among five of the seven Likert scale values, and stakeholders on three values that have quite similar trends for the different levels of agreement values.

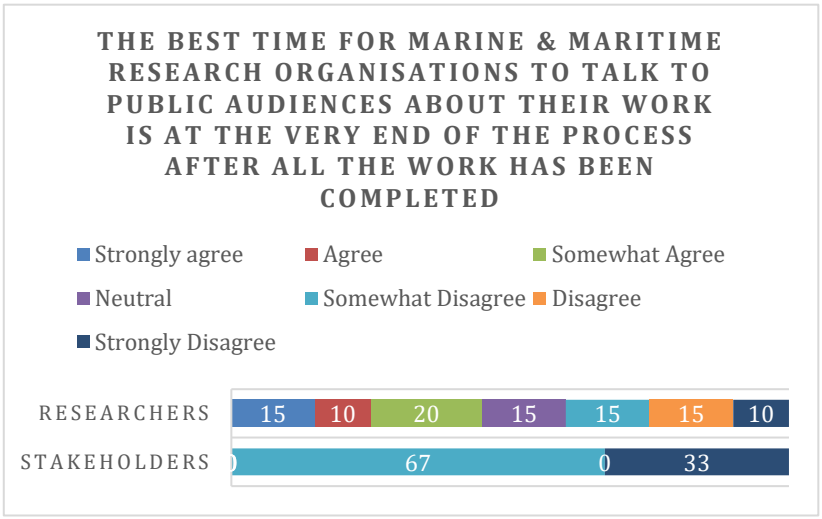
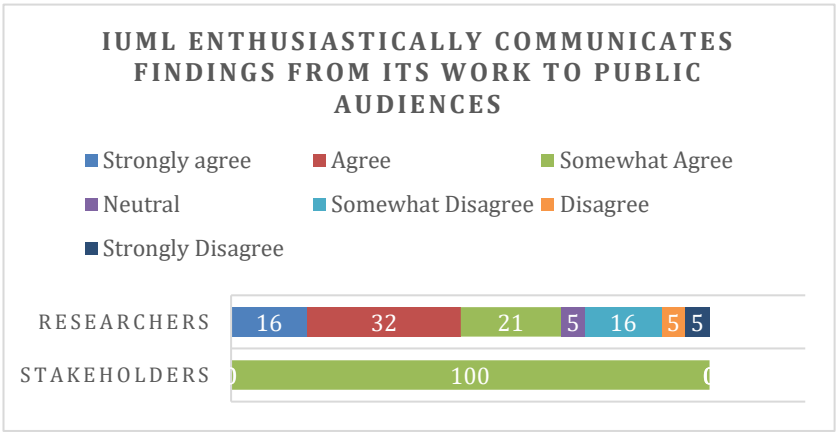
Correlation=0,55



37% of stakeholders and 20% of researchers think that IUML takes steps to ensure openness and transparency within its research methods and processes. Many respondents (41% of researchers and 60% of stakeholders) are unsure; 18% of researchers and 20% of stakeholders do not have any opinion.

	All stakeholders who responded and 89% of researchers agreed at different levels that the marine and the maritime sector should make their research results accessible to as wide a public as possible; only 11% of researchers are neutral. ***Correlation=0,96***
	66% of researchers and 60% of stakeholders think that IUML took steps to make the results of its work accessible to the public. However, not all believe that IUML take steps for this purpose. Indeed, 4% of researchers believe that no steps were taken, 15% of researchers and 20% of stakeholders are unsure in this respect.
	33% of researchers say they are aware of barriers that may be keeping IUML from ensuring that its work is accessible to the wider public and all the stakeholders are unsure in this respect.

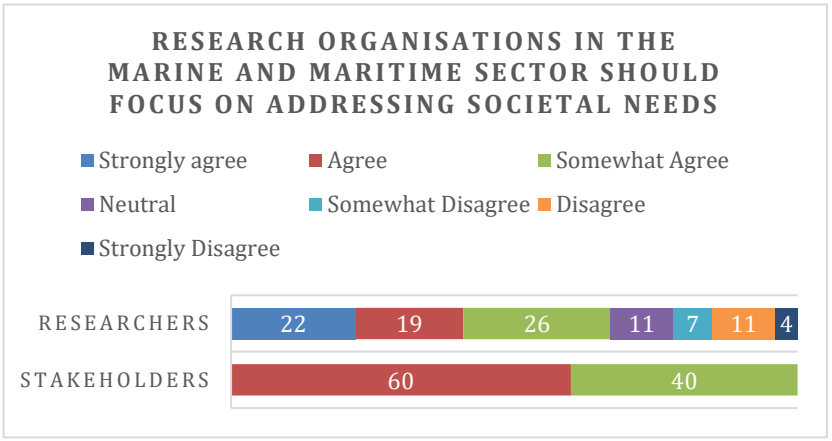
	95% of researchers agreed at different levels that research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to the public. Note that only 3 of the 6 stakeholders who responded to the questionnaire answered this question. Two of them strongly agreed and one agreed that research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to public audiences. Due to the number of stakeholders' responses, we do not compute the correlation.
	All stakeholders who responded and 95% of researchers disagreed at different levels that IUML should avoid communicating its work results to the public. Note that only 3 of the 6 stakeholders who responded to the questionnaire answered this question. 2 of them disagreed, and 1 strongly disagreed that IUML should avoid communicating the results of its work to public audiences. Due to the number of stakeholders' responses, we

	do not compute the correlation.
	Researchers have very different opinions if the best time for marine & maritime research organisations to talk to public audiences about their work is at the very end of the process after all the work has been completed. Note that only 3 of the 6 stakeholders who responded to the questionnaire answered this question. 2 of them somewhat disagreed, and 1 strongly disagreed on that. Due to the number of stakeholders' responses, we do not compute the correlation.
	All stakeholders who responded somewhat agreed, and 69% of researchers agreed at different levels that IUML enthusiastically communicates findings from its work to the public. Note that only 2 of the 6 stakeholders who responded to the questionnaire answered this question and somewhat agreed. Due to the number of stakeholders' responses, we do not compute the correlation.

Comparing the stakeholders' and researchers' opinions on Open Science we observe that the correlation between their answers (when available) were moderate to strong. However, as ≤3 stakeholders responded to some questions, we did not compute the correlation for them. Moreover, it is important to

observe that there are different opinions related to the phase of the research process in which the public must be involved. Therefore, actions should be taken for increasing researchers' awareness about the importance of talking to the public not only at the very end of the process, after all the work has been completed, but throughout the research and innovation process. Furthermore, both researchers and stakeholders frequently chose the options: "Unsure", "No opinion" for the questions about the steps taken by IUML with respect to Open science. Therefore, it is suggested that IUML communicates IUML's actions on Open Science both within the organisation and external stakeholders. It is suggested that IUML tries to understand why only some stakeholders provided an answer.

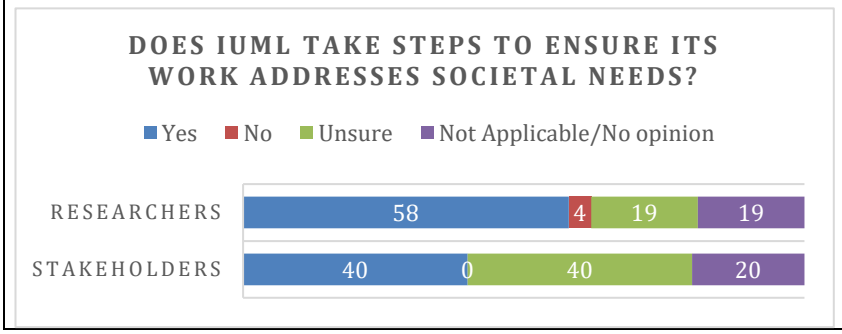
SOCIETAL NEEDS



Even if all stakeholders and the majority of researchers agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs, 11% of researchers were neutral and, 33% disagreed at different levels in this respect.

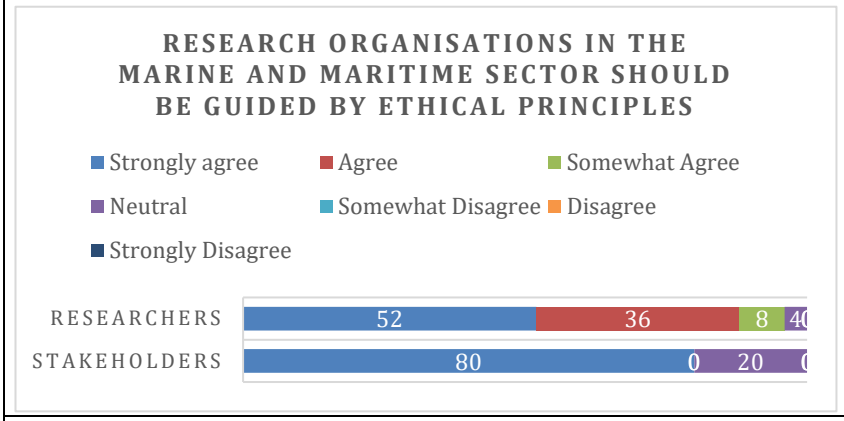
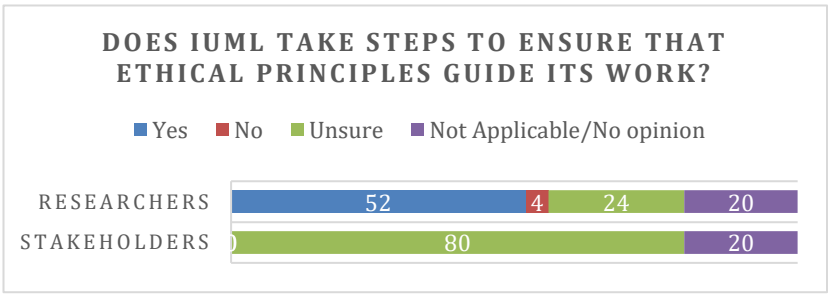
Even if researchers and stakeholders converged to agree that research organisations in the M&M sector should focus on addressing societal needs, a medium value for correlation has been observed. It indicates that researchers have different opinions related to all the seven Likert scale values, and the stakeholders have opinions on the Agree and Somewhat agree values.

Correlation=0,61

	The majority of researchers (58%) and only 40% of stakeholders think that IUML has taken steps, and 4% think no steps have been taken. 40% of stakeholders and 19% of researchers are unsure.

Researchers and stakeholders have opinions with a medium level of correspondence regarding whether IUML takes steps to address societal needs. Both researchers and stakeholders frequently chose the options: "Unsure", "No opinion/not applicable". Therefore, it is suggested that IUML better communicates the actions that it takes to fund (and perform) research that addresses societal needs.

ETHICS

	96% of researchers and 80% of stakeholders agreed at different levels that Research organisations in the M&M sector should be guided by ethical principles, while 4% of researchers and 20% of stakeholders were neutral. ***Correlation=0,74***
	The majority (52%) of researchers think IUML takes steps to ensure that ethical principles guide its work, while the majority of stakeholders (80%) are unsure, and 20% do not have an opinion

Both researchers and stakeholders have opinions with high correspondence, agreeing on the importance of ethics for research in the Marine and Maritime sector. For the question about the steps taken by IUML to ensure ethical principles guide its work, they chose the options of "Unsure", "No opinion/Not applicable". Therefore, it is suggested that IUML better communicates the steps it takes for addressing ethical issues that can arise from its work.

A.2 MaREI (UCC)

A.2.1 Observations from the objective data collected in the Top-Down Survey

MaREI is a national research centre within the Environmental Research Institute (ERI) in the University of Cork (UCC). It already has governance structures and dedicated staff for managing the different RRI keys. Governance structures and dedicated staff are also set up at the University level. Therefore, the staff of MaREI are also subject to University regulations. Decision-makers and controllers are already defined into the organisation, and they are involved in defining policies and controlling processes related to the RRI keys. The policies are well and clearly formalised in the different documents and are available on the UCC website. The processes identified and managed by the policies cover all the main issues related to each RRI key. Most of the data requested for the survey was not provided as the information was not available in the required format and data related to staff's ethnicity is not collected by UCC. The University organises trainings and courses covering all RRI keys. Please note that information collected is based on the opinion of the Working Group leader as part of an H2020 project and does not necessarily reflect the institutional position of the MAREI Centre, the Environmental Research Institute or University College Cork.

With respect to Equality, Diversity and Inclusion, MaREI (UCC) defined clear policies documented in the following publications:

- MaREI (UCC) has a Gender Equality plan available at: https://www.ucc.ie/en/iss21/genovate/resources/geap/.
- MaREI (UCC) explicitly recognises the right for Gender Identity and Expression Policy. This is codified in the document shared at: https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_3ngdn1NpWIzLkWV0/hxa2bEUCCGenderExpressionandIdentityPolicy.pdf
- MaREI (UCC) also has a clear direction on Equality, Diversity and Inclusion, which are part of its 2017-2022strategic plan (https://www.ucc.ie/en/media/support/strategicplanning/UCCStrategicPlan2017-2022.pdf).
- UCC has a unit with the explicit responsibility to promote gender equality.

With respect to Open Access, MaREI (UCC) defined policies for Open Access publications: http://www.ucc.ie/en/media/research/researchatucc/policiesdocuments/OpenAccessPublicationsPolicy.docx .
Finally, UCC promotes the Open Access through the website of the University informing about the benefits https://libguides.ucc.ie/openaccess/benefitsofgoingopenaccess of the Open Access, the impact https://libguides.ucc.ie/openaccess/impact, and the UCC policies https://libguides.ucc.ie/openaccess/uccpublicationspolicy.

With respect to Public Engagement, UCC has a five year plan (2017-2022) https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_eDnqdwXVf68WW2G0/JVSgX2UCC_Civic_Engage_2017a.pdf and has created a Civic and Community Engagement Committee.

With respect to engagement with external stakeholders, MaREI and other Centres in UCC, centrally record details of research and innovation collaborations with the different organisations.

It could be useful to take actions within the Action Plan for stimulating the staff to establish collaborations and engagement with external stakeholders.

With respect to the Research Ethics and Research Integrity, UCC has a Code of Conduct (https://www.ucc.ie/en/media/research/researchatucc/policiesdocuments/UCCCodeofResearchConductV2.2FINAL141218.pdf) that was complemented in 2019 (https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_kgX8oT6kvYoxAlx0/t4cafdIntroductiontoResearchEthicsatUCC.pdf) to align it with the national and European policies.
UCC has an established University Ethics Committee organised in three sub-committees.

Concerning Science Education UCC has policies; however, it is unclear if these policies are formalised in documents and plans. UCC provides institutional funding for staff to contribute to science education within the organisation through regular funding calls to which staff can apply, and also training on Science education are organised. Finally, UCC doesn't routinely collect data for those attending training at the level (e.g. gender, salary of trainees) required for this project. Furthermore, since it is a university, it imparts courses and degrees in STEM subjects, thereby contributing to Science Education.

If not already defined, actions for producing documents / strategic plans related to science education should be planned.

Data about people who attended the trainings need to be collected according to a template useful to analyse the participation and to improve the offer of trainings.

Objective quantitative data provided by the organisation (data available to the consortium and the evaluators):
As already explained, UCC-MaREI could not provide data, as generally, they were not collected in the required form. In some other cases, the organisation is mandated to seek permission from staff before sharing a particular datum.

The Action Plan should include actions for collecting information and data to facilitate monitoring of the activities carried out for institutionalising RRI.

A.2.2 Main elements from the interviews

This section is divided into two parts: part A and part B.
Part A describes the barriers and possible resolutions, as discussed during the interview. In particular, the interview enabled us to extend information acquired about the advantages and barriers in implementing RRI, complementing information coming from researchers and stakeholders' opinions (Bottom-up survey) and actions suggested to overcome these barriers.
Part B specifies how RRI could contribute to realizing the goals of the organisation. We know from the literature that the single most important barrier to the design and implementation of RRI in organisations is a misalignment of incentives and responsibilities. Usually, organisations face the misalignment of RRI and the specific performance goals of an organisation. The questions in this section try to assess the gaps between what exists in the organisation currently and where the organisation would like to find itself in the future.
One relevant limitation for RRI in the organisation emerging from the interviews is the limited knowledge and awareness of the importance of Open access. Criticalities connected to the management of Intellectual Property Rights (IPR) was put forward. Even if the organisation has created a very inclusive environment, this was not sufficient for implementing RRI, as people do not know its advantages.

Part A: Barriers and Actions

Starting point	Action
1a How does the RRI initiative help deliver the organisation's performance goals?	1b What needs to be done so that RRI initiative will help deliver the organisation's performance goals?
Answer: RRI (especially gender balance etc.) helps for funding. We don't record things by gender, e.g., public outreach- we don't record the gender of public participants, key goals for outreach is engaging with the public directly Committed to OS, mainly IT area. Have open data repository, and where possible, publish in journals with open access options, though funding issues limit open access publications.	**Answer:** People would do it if they were asked; it could be useful to open a conversation about why people want to do it.
2a How are RRI considerations incorporated into business decisions on key topics such as recruitment, research topic and methodology, work with 3rd parties, application for funding, collaboration or other initiatives?	2b What needs to be done so that RRI considerations are incorporated into business decisions?
Answer: Recruitment- strong policy aligning with diversity and inclusion. Panels are gender balanced. Research: time-bound by a project, senior people tend to be full-time, promotion is ''automatic'' conveyer belt based on merit, not diversity.	**Answer:** I hope we work in a meritocracy; most people we work with are actively against positive discrimination. About awareness - people are aware of gender but not necessarily the associated nuances
3a To what extent are managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?	3b What must be done, so that managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?
Answer: We do report on gender metrics, is some areas it is balanced, others are more men-dominated. Some of that are because there is a larger pool of men graduates, and though it is improving, these areas are still men-dominated. The recruitment panels don't see or look at applicants but hope for ''the best people for the job'', tend to look at qualifications and what they do, not at gender. KPIs on gender exist. There is a Outreach Officer, articles in the media, engagement with public (EPE activities), there are metrics on EPE activities, annual reviews of staff, engaging with schoolchildren and local people, record people's amount of EPE every year, targets of EPE per year are being created.	**Answer:** Creating the correct information-gathering systems, once they are in place. We could record who was there and, in some cases, we record the background of the people who were attending the events. Though there are GDPR issues about this, so we have to be sensitive about this. You don't really get a name or personal data for public-facing events, no real information gathering, especially for outdoor events. People more reticent of giving personal data on the street, so it's difficult. Co-design approach- ''the way we work'' management strategy, work from the start of co-design rather than unilateral engagement. Welcome the bilateralism of it.

	I don't think we record bilateral engagement; however, we make sure that the final output is communicated back. People know how to get there, but they don't necessarily record what they did and how. There could be merit, to think why. They are doing it; you need buy-in; people have to see an advantage in doing it. Open access can be problematic because of IP, and it's a case of presentation and providing a rationale. They don't realize the full benefit of open access; they don't see the benefit. Programmers understand the advantage of sharing from the open science community. There's an old school of thought that people will take your data. Look at scale: the whole Centre is different than its parts, some parts are committed, but collectively you might not find it, it would be hard to see it.
4a What mechanisms are in place to monitor and respond to what is working and what is not?	4b What mechanisms are in place to monitor and respond to what is working and what is not?
Answer:	**Answer:**
5a How effectively does an organisation create the conditions to enable RRI implementation (e.g., inclusive environment)?	5b What can be done to create the conditions that enable RRI implementation (e.g., inclusive environment)?
Answer: We do have an inclusive environment, but people don't really know the benefit of this. We have a lot of diversity; there is no bias necessarily, the awareness of it, and its benefit, people need to be sold on the benefits.	**Answer:**

Part B: Acquiring buy-in: the ROI of RRI

How can the RRI dimensions promote your organisation's goals?

RRI dimensions	MaREI (UCC)
Gender equality, diversity and inclusion	There is a proven benefit in having a balanced and inclusive working environment.
Social Engagement	Social buy-in is essential if science is to remain relevant and to ensure that society understands the benefit to society of science.
Open Science	This has been a long-term goal of the Centre, especially concerning data, but is often comprised by funders (government/commercial) who see this as a threat to their Intellectual Property Rights (IPR).
Science Education	Closely linked to Societal Engagement, we have been successful at several initiatives to engage including, for example, "Dance your PhD", creative art interpretation/representation of workshops' outputs.
Ethics	Ethics is an essential component for individuals at the Centre and must be of the highest standard if we are to maintain our integrity and reputation

Interviewees were asked to share in what way their organisation identified itself as interdisciplinary. To elicit dimensions of this value, we presented a list of interdisciplinary topics in M&M research, and asked how relevant they are for the RP(F)Os and how likely their research and teaching would involve these dimensions. The results are presented in the table below.

Interdisciplinary topics	MaREI (UCC)
Is your organisation Interdisciplinary?	Yes, we have marine researchers who have backgrounds in engineering, governance and law, ecology, climate change, hydrology, IT…etc
Interdependencies of the environment & human rights to connect across sectors	We are heavily involved in several ocean governance projects, but these tend to focus on Maritime Spatial Planning, but we also are partners, for example, in a COST ACTION OceanGov (Ocean Governance for Sustainability – Challenges, Options and the Role of Science) and we helped to found Marine Social Science (MarSocSci) network
Sharing Knowledge in science dialogue with civil society	Ocean and human wellbeing are an area of interest, but we have not yet been involved in a project in this area.
climate-proofing fisheries for equity and sustainability, integrating traditional knowledge of local fisheries	We run Climate Ireland, the national climate adaptation service, on behalf of the Irish government. We are working closely with Canadian and Australian colleagues who have significant experience of engaging indigenous people around aspects of climate change impacts and adaptation through this.
Marine bio-diversity and hidden trade-offs in the deep sea	Marine bio-diversity is not in our field (though colleagues in our institute are actively involved).
Empowering sustainable and equitable "blue societies": cultural heritage, marginalized knowledge, practices, and economies	Routinely support participatory approaches to inform horizon scanning (scenarios development) especially concerning the change in economic, societal or environment circumstances (or policies)

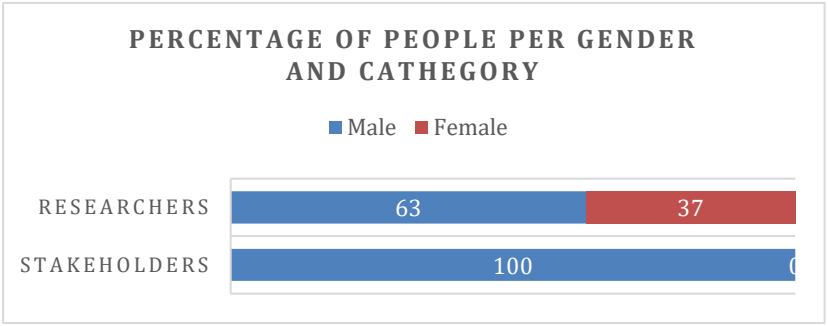
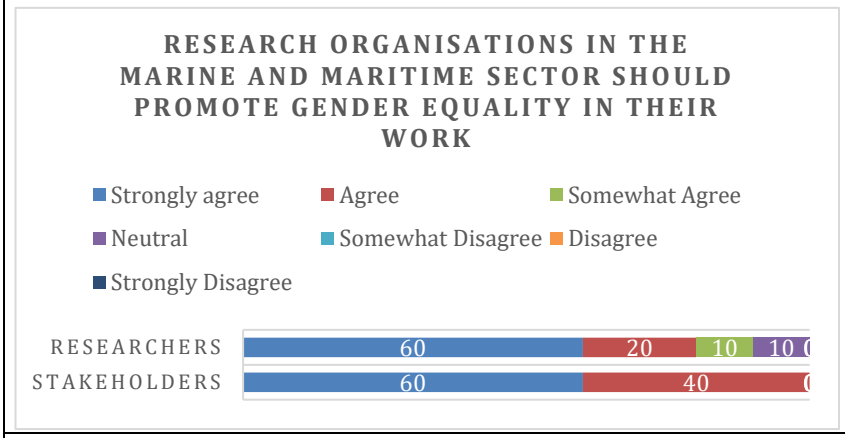
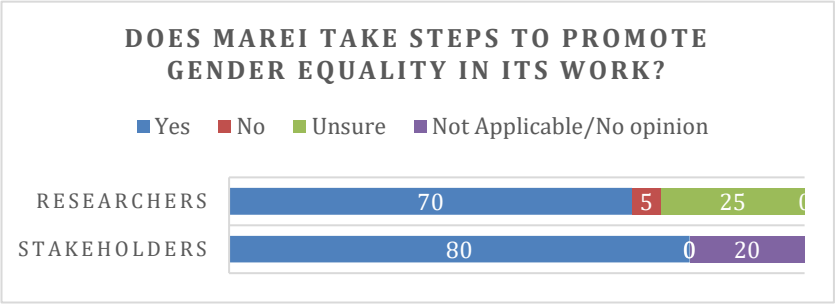
A.2.3 Comparison of researchers' and stakeholders' opinions in MaREI

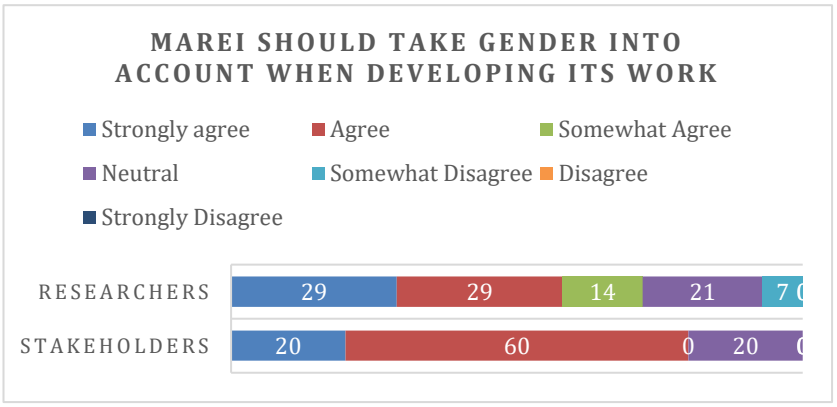
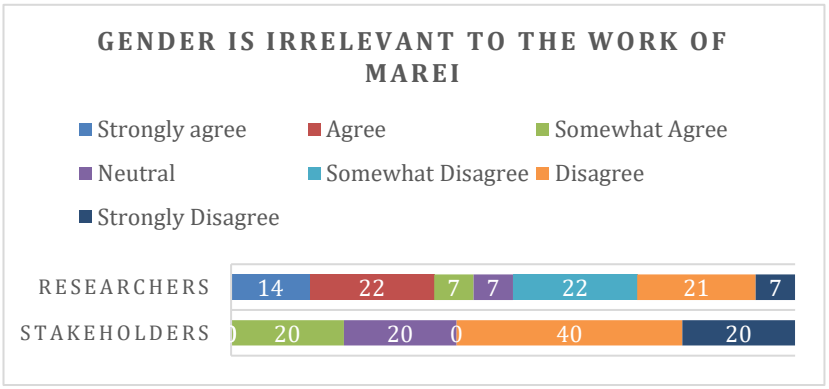
This section provides a comparison of opinions among stakeholders and researchers from MaREI for the questions in the bottom-up surveys to verify correspondences between the opinions provided by stakeholders and those of researchers.

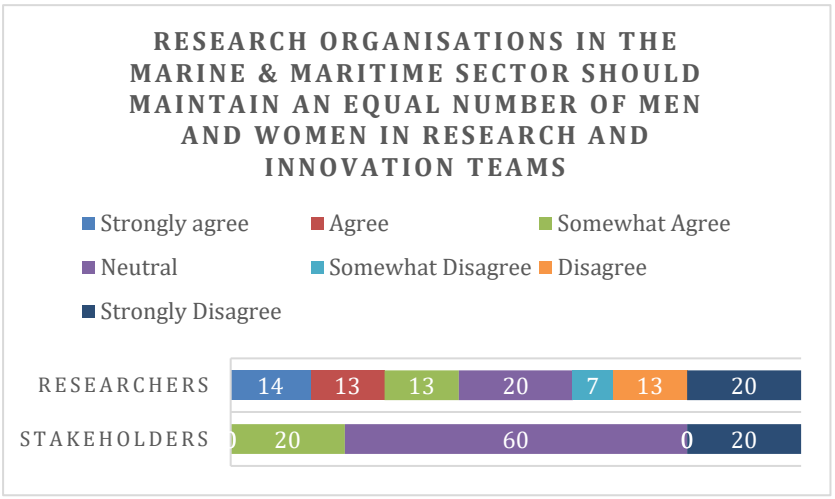
The graphs provide a visual representation of the stakeholders' and researchers' opinions in MaREI. Furthermore, the Pearson correlation index was calculated for the questions with answers in the 7-point Likert scale, as it can be treated as a grouped form of a continuous scale. We cannot consider answers with five or less values (containing responses such as: Yes, No, Unsure, I do not Know), as they do not return us an image that can be considered as approximating a continuous variable. Pearson's correlation index provides a measure that assumes values between -1 and +1, where +1 corresponds to a perfect positive correlation, 0 corresponds to an absence of correlation and -1 corresponds to a perfect negative correlation. The correlation is classified as high if its value is greater or equal to 0,7; it is medium for

values greater than or equal to 0,3 and less than 0,7. The correlation is low for values that are lower than 0,3.

GENDER EQUALITY

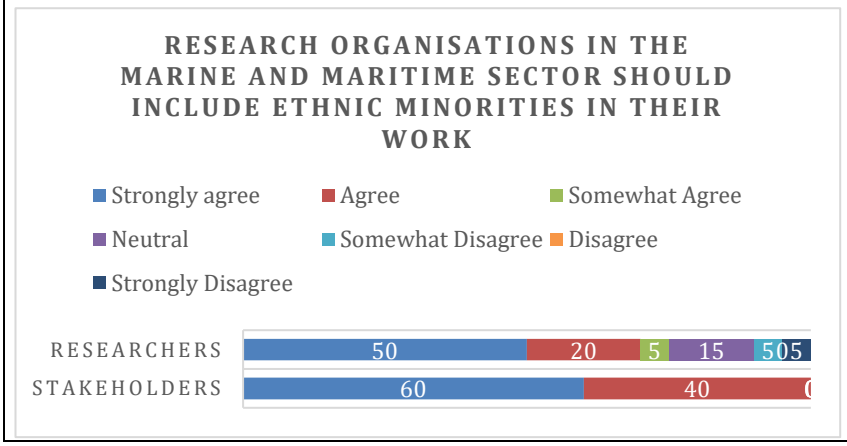
	19 researchers participated in the bottom-up surveys in MaREI, more men than women (63% men and 37% women), in coherence with the data provided by the Top-down survey, in which the majority of the respondents were men. On the other hand, only 6 stakeholders participated in the surveys, and 100% of respondents were men.
	All stakeholders agreed at different levels that M&M organisations should promote gender equality in their work, while some researchers were neutral on this. ***Correlation=0,92***
	70% of researchers and 80% of stakeholders are aware of the organisation's steps to promote Gender Equality in its work. Only 5% of researchers think that no steps were taken in this respect. 20% of stakeholders do not have an opinion or found it to be not applicable.

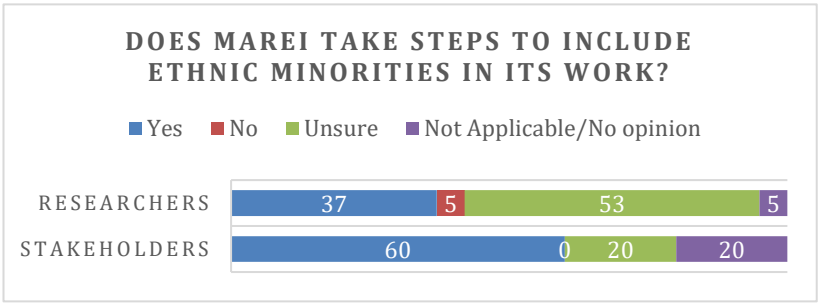
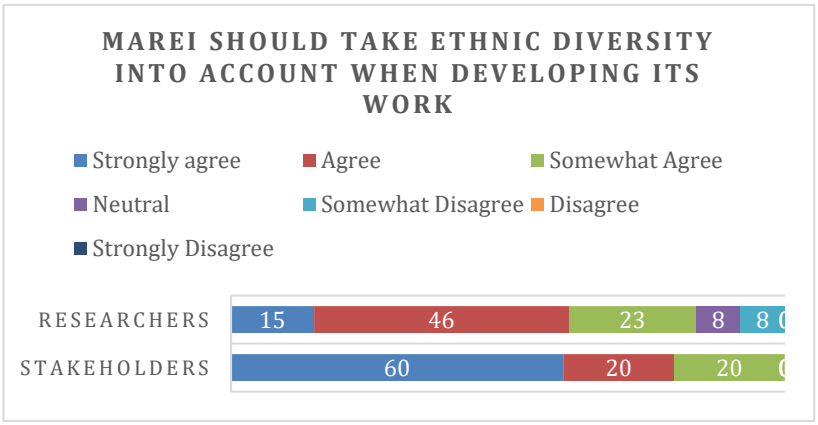
	72% of researchers and 80% of stakeholders agreed at different levels that MaREI should take gender into account when developing its work. 7% of researchers somewhat disagreed in this respect. 21% of researchers and 20% of stakeholders were neutral in this respect. ***Correlation=0,78***
	43% of researchers agreed at different levels, and 20% of stakeholders somewhat agreed that gender is irrelevant to the work of MaREI. 50% of researchers and 60% of stakeholders disagreed at different levels in this respect. 7% of the researchers and 20% of the stakeholders were neutral. We observe a very low and negative value for correlation. Indeed, researchers provided answers distributed among all the seven values of the Likert scale. On the contrary, 20% of the stakeholders Somewhat agreed that gender is irrelevant. The percentages of answers associated with the different values of the Likert scale are very different, and change (considering researchers and stakeholders) are quite independent and slightly inversely proportional, (i.e., the responses change with a small correlation; researchers' responses have values in strongly agree,

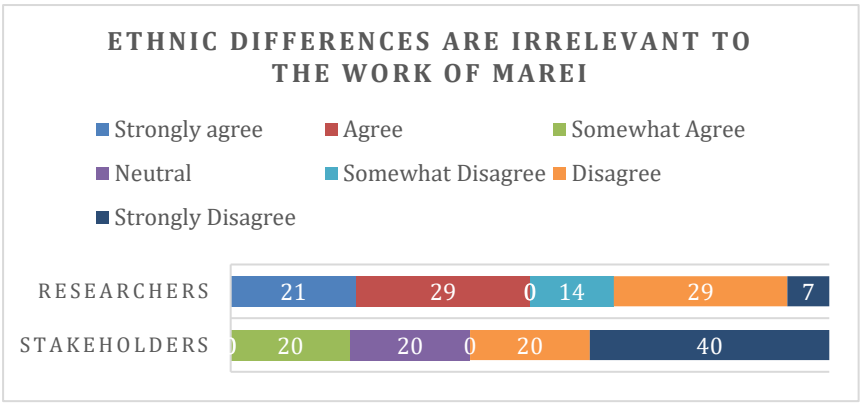
	agree or somewhat disagree that were not observed between the stakeholders). ***Correlation=-0,25***
	There is a balance between 40% of researchers who agreed at different levels and 40% who disagreed at different levels that research organisations in the marine & maritime sector should maintain an equal number of men and women in research and innovation teams; 20% of researchers were neutral. The stakeholders' opinions too are quite balanced; 20% of them chose somewhat agree, 60% were neutral, and 20% strongly disagreed in this respect. ***Correlation=0,71***

The answers to the questions of the bottom-up survey related to Gender Equality return moderate or strong correspondence between the stakeholders' and researchers' opinions in MaREI (UCC), except for the question about gender irrelevance. It is suggested that MaREI facilitates discussions involving researchers and stakeholders to establish a common understanding of the situation and plans potential actions to improve collective awareness of including Gender Equality in research.

ETHNIC MINORITY

	All the stakeholders and 75% of researchers agreed at different levels that research organisations in the M&M sector should include ethnic minorities in their work. Only 5% of researchers strongly disagreed. ***Correlation=0,92***

	37% of researchers and 60% of stakeholders are aware of the steps that the organisation has taken to include Ethnic Minorities in its work. The majority (53%) of researchers and 20% of stakeholders are unsure. Only 5% of researchers think that the organisation did not take steps.
	We observe that 84% of researchers and all stakeholders agreed at different levels that MaREI should take Ethnic diversity into account when developing its work. However, there are differences in the agreement level between the researchers and the stakeholders who responded. Indeed, we have a medium value for correlation due: 1) to the different percentages for the levels of agreement, 2) the fact that some researchers (and no one among the stakeholders) were neutral or Somewhat disagreed. ***Correlation=0,39***



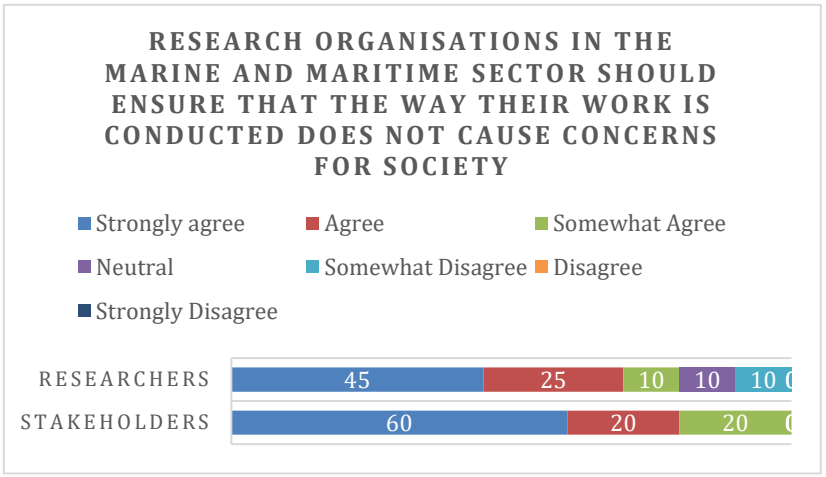
50% of researchers agreed at different levels, and 20% of stakeholders Somewhat agreed that ethnic differences are irrelevant to the work of MaREI.

We can observe that researchers and stakeholders have opinions with a medium negative correlation; indeed, high percentages for Strongly agree and Agree values for researchers do not find any correspondent value for stakeholders, which have a percentage in the value Somewhat agree. A correspondence (but with different percentages) is observable for the levels from Somewhat disagree to Strongly disagree.

Correlation= -0,5

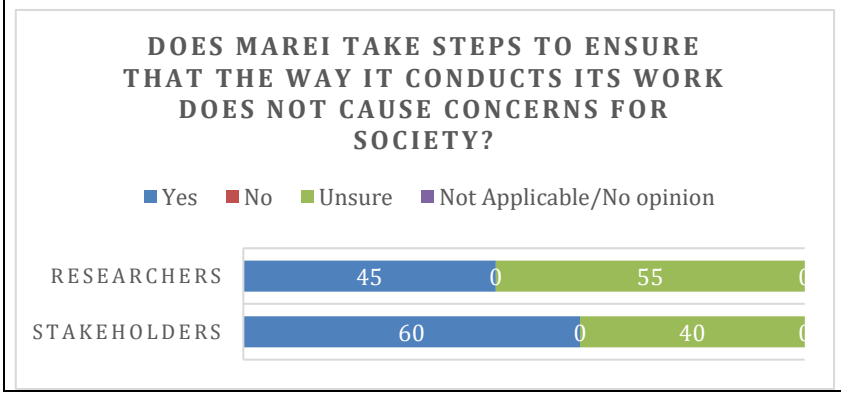
The answers to the questions of the bottom-up survey related to Ethnic minorities return high or medium correspondence between the opinions of stakeholders and researchers. Both researchers and stakeholders sometimes chose the options: "Neutral", "Unsure", "I don't know", "Not aware", "No opinion" with respect to the steps taken by the organisation. Considering the differences, it is suggested to promote a debate on ethnic minorities including researchers and stakeholders.

CONCERNS FOR SOCIETY



All stakeholders and 80% of researchers agreed at different levels that Research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society; but 10% of researchers somewhat disagreed in this respect and 10% is neutral.

Correlation=0,93

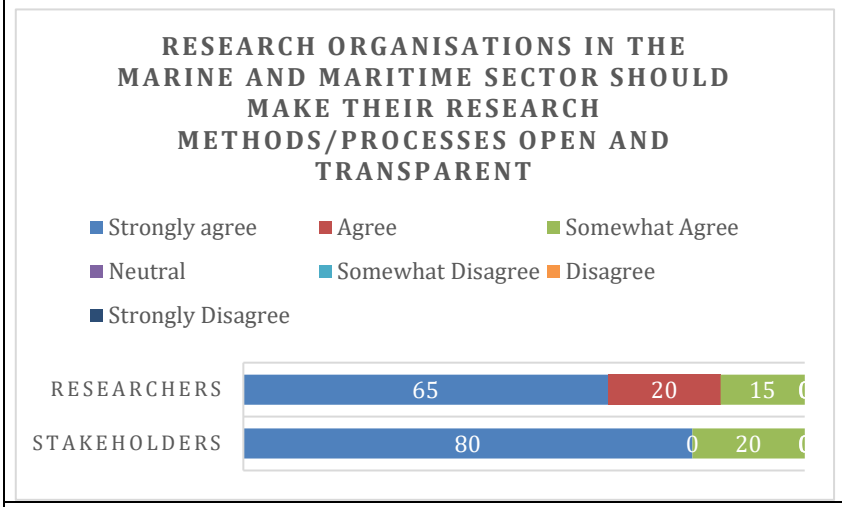
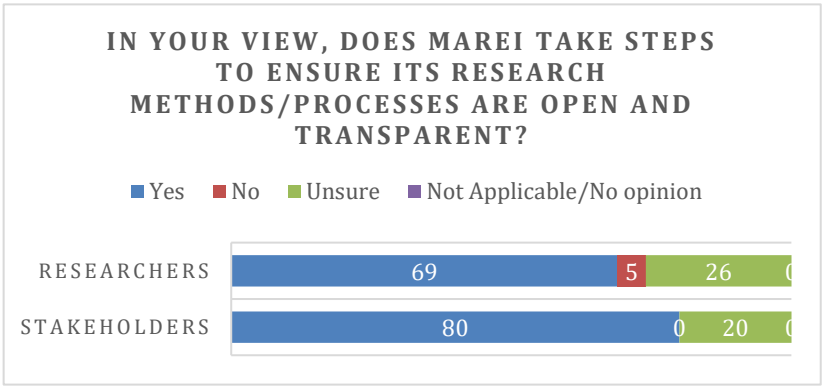


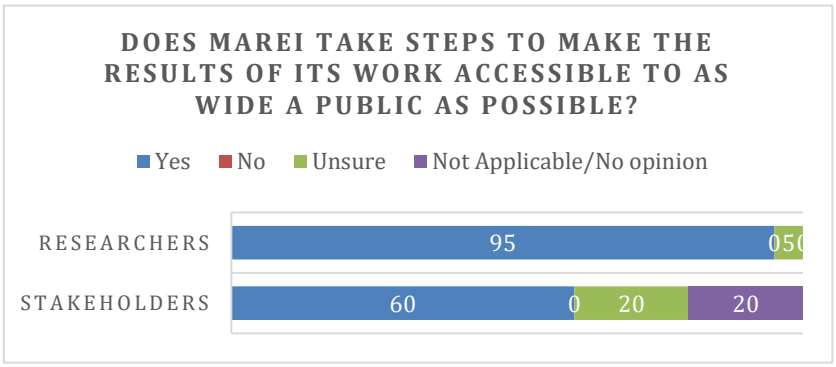
The majority of stakeholders (60%) and 45% of researchers think that MaREI takes steps for avoiding any concerns for society. 55% of researchers and 40% of stakeholders are unsure that MaREI takes any step for this purpose.

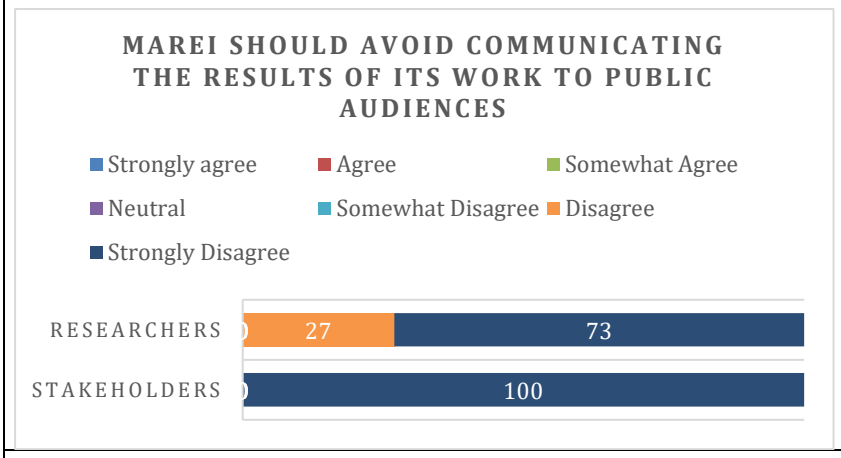
The stakeholders' and researchers' answers from MaREI (UCC) collected using the bottom-up surveys show us that the stakeholders' and researchers' opinions have a very high correspondence (they agreed on the need to avoid concerns for society).

Moreover, the stakeholders' and researchers' opinions from MaREI (UCC) show us that they sometimes chose the options: "Neutral", "Unsure", "I don't know", "No opinion" with respect to what they know about the steps taken to avoid Concerns for society. It is suggested that MaREI communicates the actions it takes to reduce any concerns for society.

OPEN SCIENCE

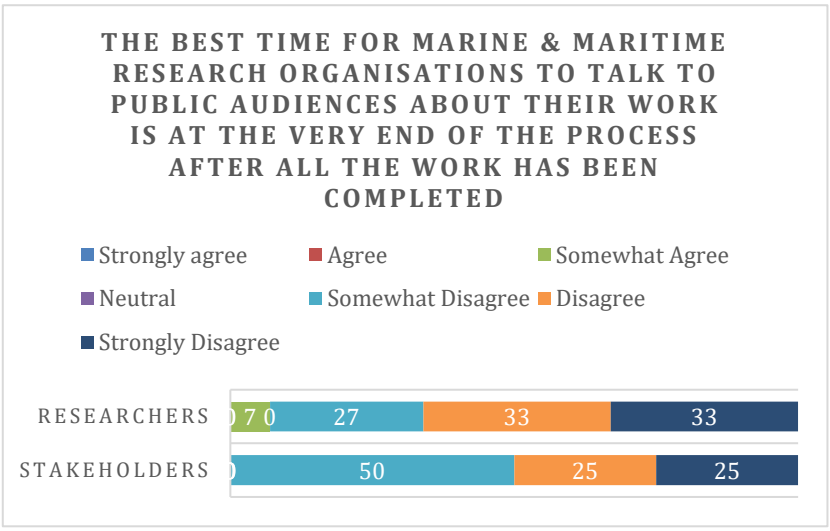
	All the stakeholders and researchers agreed at different levels that Research organisations in the M&M sector should make their research methods/processes open and transparent. ***Correlation=0,93***
	The majority of researchers (69%) and stakeholders (80%) think that MaREI take steps to ensure openness and transparency within its research methods and processes. A large number of respondents (41% of researchers and 60% of stakeholders) are unsure about this respect; 18% of researchers and 20% of stakeholders do not have any opinion.
	Only 1 stakeholder provided an answer to this question, and she/he strongly agreed. Researchers agreed at different levels that the organisations in the M&M sector should make their research results accessible to as wide a public as possible. In this case, as only 1 stakeholder responded to the question, we did not compute the correlation.

	95% of researchers and 60% of stakeholders think that MaREI take steps to make the results of its work accessible to as wide a public as possible. 5% of researchers and 20% of stakeholders are unsure; finally, 20% of stakeholders do not have an opinion in this respect.
	All the stakeholders Strongly agreed, and 93% of researchers agreed at different levels that research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to the public. 7% of researchers were neutral in this respect. We can observe that researchers and stakeholders have opinions that have a medium correlation value; indeed, high percentages related to the Agree and Somewhat agree values for researchers do not find any corresponding value for stakeholders. A similar situation is observable for the Neutral values (for researchers) that do not find any correspondence with stakeholders. ***Correlation=0,62***



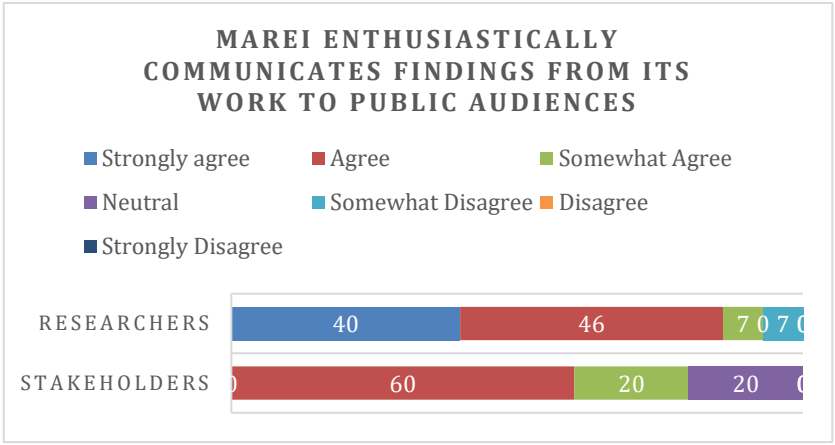
All researchers disagreed at different levels that MaREI should avoid communicating the results of its work to the public and, all stakeholder Strongly disagreed in this respect.

Correlation=0,93



All stakeholders and the majority of researchers (93%) disagreed at different levels that the best time for marine & maritime research organisations to talk to the public about their work is at the very end of the process after all the work has been completed. 7% of researchers Somewhat agreed in this respect.

Correlation=0,83



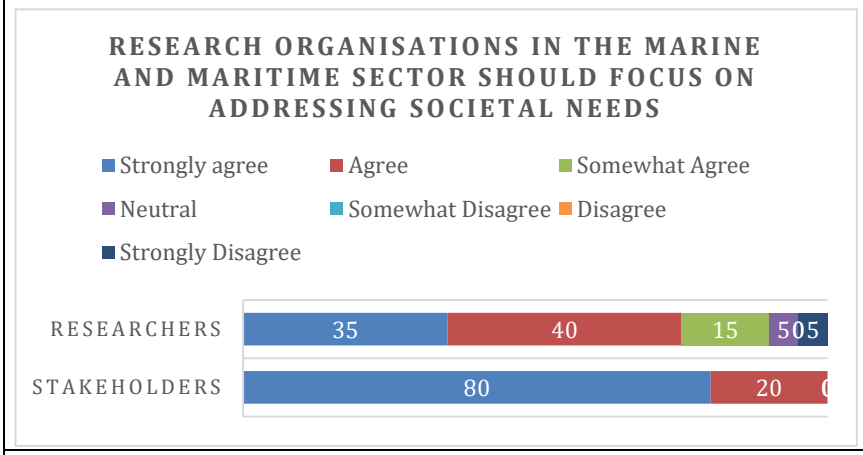
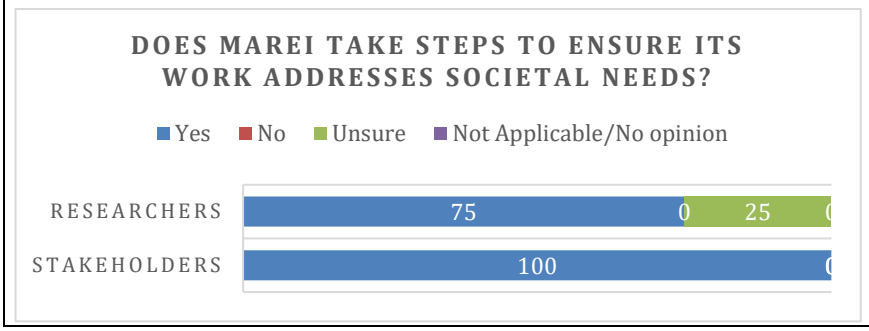
93% of researchers and 80% of stakeholders agreed at different levels that MaREI enthusiastically communicates findings from its work to the public. 7% of researchers Somewhat disagreed in this respect, and 20% of stakeholders are neutral.

We can observe that researchers and stakeholders have opinions that have a medium correlation; indeed, we observe that there are differences in the level of agreement between researchers and

	stakeholders. Moreover, there is a small percentage of researchers who Somewhat disagreed (not observed for stakeholders). Similarly, there is a small percentage of stakeholders who are neutral (not observed for researchers). These differences suggest that, even if the majority of researchers and stakeholders agreed, they have a different perception and a different feeling (related to the different levels of agreement). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,55***

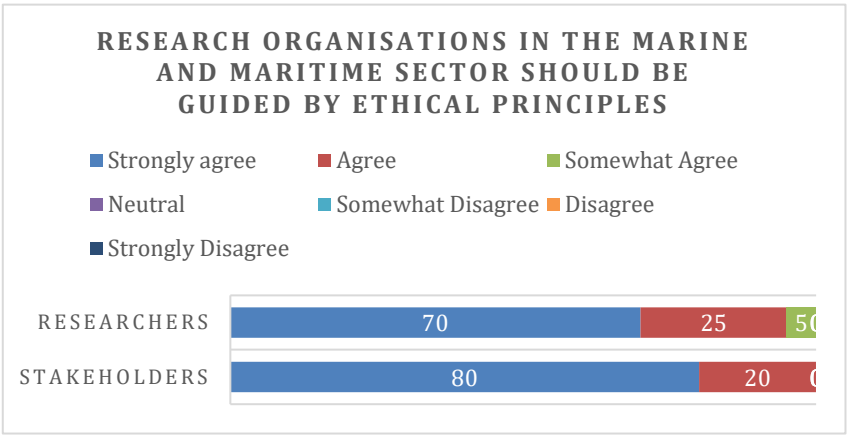
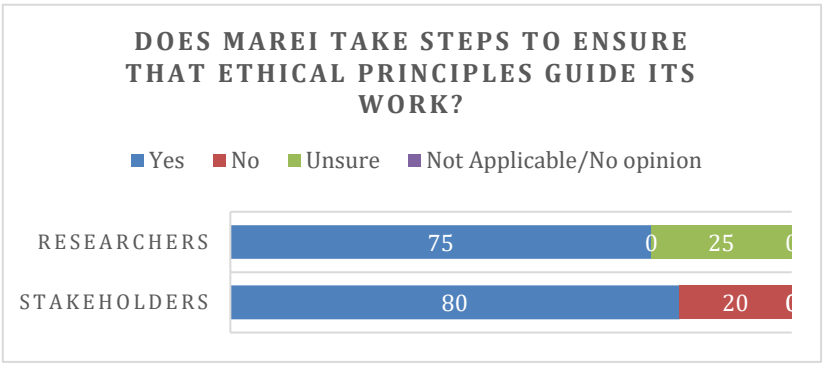
The stakeholders' and researchers' answers from MaREI (UCC) collected in the bottom-up surveys show us that the stakeholders' and researchers' opinions have a correspondence that is contained in a range of values from moderate to strong; they are mainly oriented to agree that MaREI adopts Open Science concepts and behaviours.

SOCIETAL NEEDS

	All stakeholders and 90% of researchers agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs, 5% of researchers were neutral, and 5% strongly disagreed in this respect. ***Correlation=0,72***
	All the stakeholders and the majority of researchers (75%) think that MaREI has taken steps, and 25% of researchers believe no steps have been taken to ensure its work addresses societal needs.

No specific issues emerged with respect to Societal needs, and stakeholders' and researchers' opinions have a very high correspondence. They generally believe that Societal Needs are crucial for guiding research, and they feel that the organisation is active in this respect.

ETHICS

	All researchers and stakeholders agreed at different levels that ethical principles should guide research organisations in the M&M sector. ***Correlation=0,99***
	The majority of researchers (75%) and stakeholders (80%) think that MaREI takes steps to ensure that ethical principles guide its work. 20% of stakeholders believe that the organisation does not take any step, and 25% of researchers are unsure in this respect.

No specific issues emerged with respect to Ethics, as stakeholders' and researchers' opinions have a very high correspondence. They mainly believe that Ethics is crucial for guiding research, and they feel that the organisation is active in this respect.

A.3 PLOCAN

A.3.1 Observations from the objective data collected in the Top-Down Survey

PLOCAN has about fifty employees. The policies concerning some of the RRI aspects are formalised in strategic and planning documents and periodically updated. The processes identified and managed by the policies cover the main issues addressed by each RRI key. Due to the size of the organisation, no specific governance structures are defined for each RRI key. The organisation's strategic management structure carries out the governance of the aspects related to RRI. No staff is dedicated to the issues associated with different RRI keys. Data about RRI keys are collected, but few trainings related to RRI keys are organised in PLOCAN.

PLOCAN formalised its policy on Gender Equality in two documents: 1) the PLOCAN´s Strategic Plan 17-21, and 2) EURAXESS researchers in motion - Statement of endorsement to the European Charter for researchers and the code of conduct for the recruitment of researchers.

PLOCAN´s Strategic Plan 17-21: https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_KA482vxJVgFGTHL0/3v23O7PLOCAN_STRATEGIC_PLAN17_21.pdf

PLOCAN´s Action Plan 2019: https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_5e7Q4uj7p4Oe4by0/7sgh49181213-PLAN DE ACTUACIONES 2019_vF.pdf

However, the organisation does not have a GEP, and any staff member does not have an explicit responsibility to promote gender equality.

For this reason, in the Action Plan, it is suggested to include actions for assigning direct responsibility to staff members for promoting gender equality and a GEP into the organisation.

Regarding Open Access, PLOCAN established the PLOCAN Observatory Data Policy.

PLOCAN Observatory Data Policy:
https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_AYlbX3DSJKxXiEE0/YCY4h8PLOCAN_Observatory_DataPolicy2.01.pdf

The PLOCAN's actions plan 2019 includes the policies of the organisation on Open Access. The PLOCAN's Strategic Plan 2017-2021 also illustrates the objectives of the Open Access strategy in the following sections.

PLOCAN does not provide funds for gold open access.
PLOCAN does not have an organisational structure or staff members with responsibility for Open Access.

For this reason, in the Action Plan, it is suggested to include actions for assigning explicit responsibility to staff members for promoting open access.

Concerning Public Engagement, the PLOCAN's Strategic Plan 2017-2021 and the PLOCAN's actions plan 2019 provide specifications on the policies and procedures for Public Engagement. This is a key element in PLOCAN activities. PLOCAN has staff members for promoting and providing practical support for researchers to do public engagement. PLOCAN did not run trainings related to public engagement.

Regarding the Research Ethics / Research Integrity, PLOCAN follows the European Charter for researchers and the code of conduct. PLOCAN has staff members with the responsibility to promote research ethics and/or integrity. However, it does not have a research ethics committee and does not run trainings on this specific issue.

Statement of endorsement to the European Charter for Researchers and the code of conduct for the recruitment of researchers:

https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_kgX8oT6kvYoxAlx0/l47b9oS-249 EUROPEAN COMMISSION.pdf

We suggest to include in the Action Plan, actions aiming to establish a research ethics committee.
The Action Plan should also include actions for trainings on ethics and/or research integrity.

Regarding Science Education, the PLOCAN's Strategic Plan 2017-2021 and the PLOCAN's actions plan 2019 contain the results and the policies related to this RRI key.
PLOCAN does not have members responsible for giving researchers practical support in conducting science education and literacy work. The Organisation provides institutional funding for staff to contribute to science education within the organisation through PLOCAN´s socio-economic department, which distributes these funds among staff members according to specific needs and requirements.
Regarding the engagement of external stakeholders, PLOCAN collaborates with all the Quadruple Helix stakeholders and centrally records data on collaborations for research and innovation.

For this reason, it is suggested to include (in the Action Plan) actions for assigning explicit responsibility to staff members for promoting science education and literacy work.

Objective quantitative data provided by the organisation (data available to the consortium and the evaluators):
Data about employees by grade and gender in PLOCAN show us that the situation approximates the balance between women and men. More men than women left the organisation in the last two years. Both women and men who left the organisation had a salary included in the two lowest categories. When analysing the salary by gender, the higher salary is received by one man; the other men have salaries in the three lowest categories. Women have salaries that go from the lowest to the intermediate categories. The type of contract by gender is quite balanced, and both women and men who left PLOCAN had a fixed-term contract. Considering the Ethnicity, PLOCAN has one black African-origin staff, and all the others are classified as White. All people who left PLOCAN in the last two years were white people.

Actions, promoting trainings should be encouraged within the Action Plan.

Finally, PLOCAN did not run training in gender equality and Open access, on Public Engagement, on Research Ethics and Research Integrity and Science outreach activities, on Science Education / Outreach over the last two years. The team is not aware of any barriers to running such training sessions.

Some actions, promoting trainings should be encouraged within the Action Plan.

A.3.2 Main elements from the interviews

This section is divided into two parts: part A and part B.
Part A describes the barriers and possible resolutions, as discussed during the interview. In particular, the interview enabled us to extend information acquired about the advantages and barriers in implementing RRI, complementing information coming from researchers' and stakeholders' opinions (Bottom-up survey) and actions suggested to overcome these barriers.
Part B specifies how RRI could contribute to realizing the goals of the organisation. We know from the literature and from preliminary findings of the GRRIP audit process that the most critical barrier to the design and implementation of RRI in organisations is a misalignment of incentives and responsibilities. Usually, organisations face the misalignment of RRI and the specific performance goals of an organisation. The questions in this document try to assess the gaps between what exists in the organisation and where the organisation would like to find itself in the future.

One relevant limitation for RRI implementation in the organisation emerging from the interviews is that managers and other employees' evaluation process do not include the RRI performance related to Gender equality, Open access and Science education.

Part A: Barriers and Actions

Starting point	Action
1a How does the RRI initiative help deliver the organisation's performance goals?	1b What needs to be done so that the RRI initiative will help deliver the organisation's performance goals?
Answer: • As previously reported in the WG survey, several of the RRI pillars are tackled in different strategic documents of PLOCAN. Either on the **strategic plan** (e.g., GE - *The objectives in this section have been almost entirely achieved, especially those related to promoting, strengthening and consolidating a system of gender equality in all areas of the organisation, based on non-discrimination and equal opportunities;* OA, PE, SE), **action plan** (OA, PE, SE), **open access policy** (OA) and **Statement of endorsement to the European Charter for Researchers and the** code of conduct for the recruitment of researchers (GE, RE) • The RRI initiative is not specifically mentioned, but its philosophy is already "partially" in place.	**Answer:** • We need feedback from the RRI experts in order to obtain an evaluation and better implementation of this philosophy over the organisation´s performance goals achievement. • There are not foreseeing barriers in place (as stated in the WG survey answers). An action plan with suggestions/best practices on that regard could be suggested to PLOCAN (e.g., successful cases were the RRI initiative has helped other organisations to better/more efficiently deliver/reach their performance goals).
2a How are RRI considerations incorporated into business decisions on key topics such as recruitment, research topics and methodology, working with 3rd parties, application for funding, collaboration or other initiatives?	2b What needs to be done so that RRI considerations are incorporated into business decisions?
Answer: RRI considerations are incorporated into business decisions on key topics based on the Spanish public administration principles, laws and procedures applicable to the Public research organisations and public law entities as PLOCAN (e.g., transparency, accessibility, equity, free competition, public sector contracts law, etc..). Also, via PLOCAN´s strategic plan, action plan, specific policies (e.g., open access), etc. Also, through the strong commitment in our organisation of the QH statements in the co-design and co-development of innovation and R&D projects to maximize its impact on the Society as well as to provide useful answers, tools, and new technologies and knowledge to the big challenges established by European Union and at National and Regional levels	**Answer:** • A common and consolidated understanding of the RRI philosophy • A clear and easy-going methodology to implement and evaluate RRI mechanisms • Dedicated funds considering the involvement of the QH statements and the other 4 RRI pillars to perform R&D projects ○ Industry: leadership and established percentage of participation in R&D projects. Especially SME´s ○ Policy/Government: clear and common European and National regulation frameworks ○ Academia: Increased applied research and strength citizen science involvement ○ Civil Society: Strength social innovation, citizen science and the communication with Civil Society

	representatives, especially on identifying demands • There are not foreseeing barriers in place (as stated in the WG survey answers). An action plan with suggestions/best practices on that regard could be suggested to PLOCAN
3a To what extent are managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?	3b What must be done, so that managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?
Answer: • Accountable staff members/managers for RRI performance – specific RRI pillars à GE (no), PE (yes), OA publishing of papers (no), RE (yes), SE (no) • Staff evaluation process (top-down, self-evaluation and 360-degree approach) is in place yearly. This evaluation cycle relays on the compliance of different objectives set for the employees, plus other transversal criteria/topic developed. This evaluation process is linked to a variable part of the staff loan (productivity). When the evaluation cycle has finished, the employees receive feedback.	**Answer:** Refer to 1b and 2b
4a What mechanisms are in place to monitor and respond to what is working and what is not?	4b What mechanisms are in place to monitor and respond to what is working and what is not?
Answer: • PLOCAN´s Executive commission, it's both committees (S/T and S/E) and the Spanish Ministry of Science, Innovation and Universities evaluates PLOCAN performance based on several pre-defined objectives and indicators. Based on the results of this evaluation PLOCAN receives its performance results with improvement suggestions and its objectives for the next FY • PLOCAN has in place the ISO 9001 and 14001 and 18001 for controlling the quality of environmental management and health and safety of its personnel. Everything is considered under the Project Integrated Management System (PIMS). • Staff evaluation process (top-down and 360) is in place every year; this evaluation cycle relays on the compliance of different objectives set for the employees at the beginning of the FY + other transversal criteria/topic developed by the HR and C-Level. This evaluation process is linked to the variable part of the staff loan (productivity). When the evaluation cycle has finished, the	**Answer:** Refer to 1b and 2b

employees receive feedback where room for improvement is identified.	
5a How effectively does an organisation create the conditions to enable RRI implementation (e.g., inclusive environment)?	5b What can be done to create the conditions that enable RRI implementation (e.g., inclusive environment)?
Answer: • Alignment with major policies and strategies on R&D established at the European Union Level and National and Regional level. E.g. ○ Integrated Maritime Policy (IMP) ○ UN SDGs ○ Common Fisheries Policy ○ MSP ○ Blue Growth Strategy ○ Atlantic Strategy ○ ERICs ○ RRI ○ … • Recruit and promote diverse candidates • Foster open publishing and open access to data gathered in the observatory • Developing innovative ways of connecting science to society (Glider Shoal, Edurov´s, Educational Passages, Macaronight, etc.)	**Answer:** Refer to 1b and 2b

Part B: Acquiring buy-in: the ROI of RRI

How can the RRI dimensions promote your organisation's goals?

RRI dimensions	PLOCAN
Gender equality, diversity and inclusion	Attractive to funding, compliance with legal requirements or professional standards, enhancing reputation, attracting and retaining talent, responding to stakeholder expectations, Achieving strategic and action plan goals (which ones?) PLOCAN Strategic Plan 1.7 and 4.5 (for further detail, please review WG survey answers), mitigating risk, forming new collaborations, diversifying research activities
Social Engagement	Attractive to funding, compliance with legal requirements or professional standards, enhancing reputation, attracting and retaining talent, responding to stakeholder expectations, achieving strategic and action plan goals (which ones?) included in PLOCAN strategic plan and action plan (for further detail, please refer to the WG survey answers), mitigating risk, forming new collaborations, Diversifying research activities, fostering socio-economic impact of PLOCAN activities
Open Science	Attractive to funding, compliance with legal requirements or professional standards, enhancing reputation attracting and retaining talent, responding to stakeholder expectations, Achieving strategic and action plan goals (which ones?) included in PLOCAN strategic plan, action plan and Observatory data policy (for further detail, please refer to the WG survey answers), mitigating risk, forming new collaborations Diversifying research activities, fostering socio-economic impact of PLOCAN activities

Science Education	Attractive to funding, compliance with legal requirements or professional standards, enhancing reputation, attracting and retaining talent, responding to stakeholder expectations, achieving strategic and action plan goals (which ones?), included in PLOCAN strategic plan, action plan and Observatory data policy (for further detail, please refer to the WG survey answers), mitigating risk, forming new collaborations, diversifying research activities
Ethics	Attractive to funding, compliance with legal requirements or professional standards, enhancing reputation, attracting and retaining talent, responding to stakeholder expectations, achieving strategic and action plan goals (which ones?), included in PLOCAN strategic plan, action plan and Observatory data policy (for further detail, please refer to the WG survey answers), mitigating risk, forming new collaborations, diversifying research activities

Interviewees were asked to share in what way the organisation identified itself as interdisciplinary. To elicit dimensions of this value, we presented a list of interdisciplinary topics in M&M research and asked how relevant they are for the RPFOs and how likely their research and teaching would involve these dimensions. The results are presented in the table below.

Interdisciplinary topics	PLOCAN
Is your organisation Interdisciplinary?	Stakeholders: the organisation collaborates with more than 600 stakeholders from the whole QH in more than 90 projects; employees possess a range of backgrounds and skills (physics, engineering, law, business management, biology, etc… PhD, executive masters, MBAs), interdisciplinary research activities: on cross-cutting themes, participation in IA, RIA and CSA projects and diverse initiatives that cover, several blue economy sectors (Renewable energies, Coastal and Maritime tourism, Marine biotechnology, Aquaculture, etc.), for example, to initiatives to foster a smooth transition to clean energy, the protection and exploitation of marine biodiversity, including technology transfer, etc., participate in SwafS projects such as GRRIP. Open access to PLOCAN´s interdisciplinary infrastructures and value-added solutions and services, for example, monitoring and data collection facilities, ocean observatories, test site for accelerating offshore technologies, VIMAS, innovation and science education, etc…
Interdependencies of the environment & human rights to connect across sectors	The organisation is interested and already collaborating with stakeholders on this topic via the following projects (among others): AORAC, AANChOR, Biodiversa3, Biodivclim, Forward, Oceanset, EMSO ERIC, Ris3Net2, SmartBlueF, SUSME Projects (2nd Tier): e.g., Atlantos, MUSICA, Biodivclim, Biodiversa, Blue-gift, COOSW, Desal +, E5DES, Ecomarport, EMSO ERIC, EU Marine Robots, EuroSea, FiXO3, Flotant, IFADO, Interagua, Jerico-S3, Jonas, Marcet II, Marinet 2, MAWADIPOL, Musica, OceanLit, Oceanset, Pivotbouy, Redsud, Ris3Net2, SmartblueF, Starport, Symbiosis, Watereye, Wavepiston, WEP
Sharing Knowledge in science dialogue with civil society	The organisation is interested and already collaborates with other stakeholders on this topic via the following projects (among others), Projects: GRRIP, Educational Passages, EDUROV´s, AANChOR (WP6 Ocean Literacy), AORA-CSA, Atlantos, Marinet, BIOdiversa,

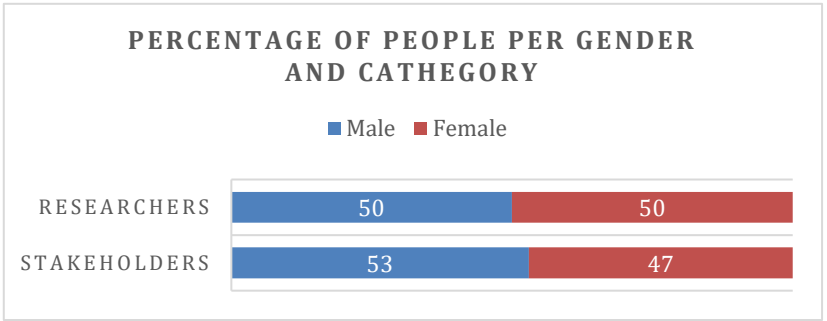
climate-proofing fisheries for equity and sustainability, integrating traditional knowledge of local fisheries	The organisation is interested and already collaborates with other stakeholders on this topic via DESPESCA, AANChOR (JAs on fisheries and biodiversity), Tropos, Entropi,
Marine bio-diversity and hidden trade-offs in the deep sea	The organisation is interested in and already collaborates with other stakeholders on this topic via PivotBuoy, Flotant, Tropos, Entropi, Música
Empowering sustainable and equitable "blue societies": cultural heritage, marginalized knowledge, practices and economies	The organisation is and already collaborates with other stakeholders on this topic via SmartblueF, RIS3Net2, Interreg MAC, Regional and local support to fairs and blue growth-related events

A.3.3 Comparison of researchers' and stakeholders' opinions in PLOCAN

This section compares opinions among stakeholders and researchers from PLOCAN for the questions in the bottom-up surveys to verify correspondences between the opinions provided by stakeholders and those of researchers.

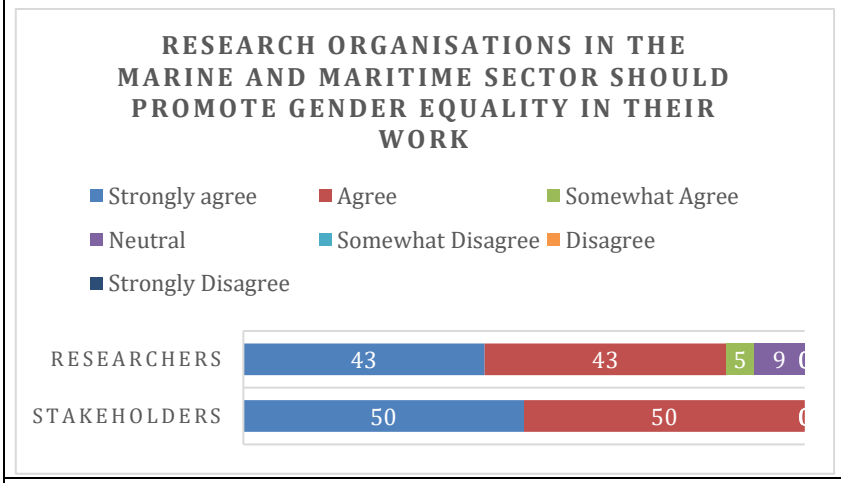
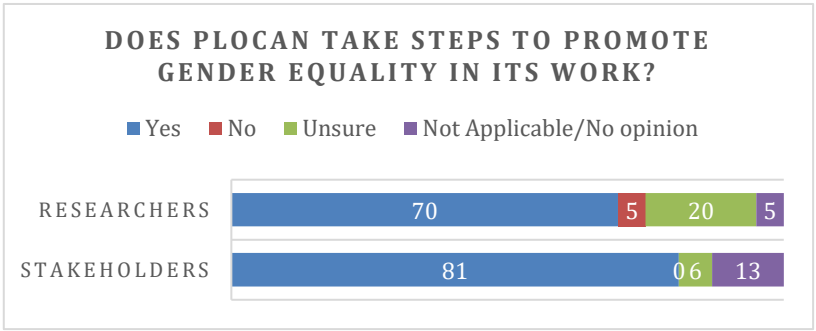
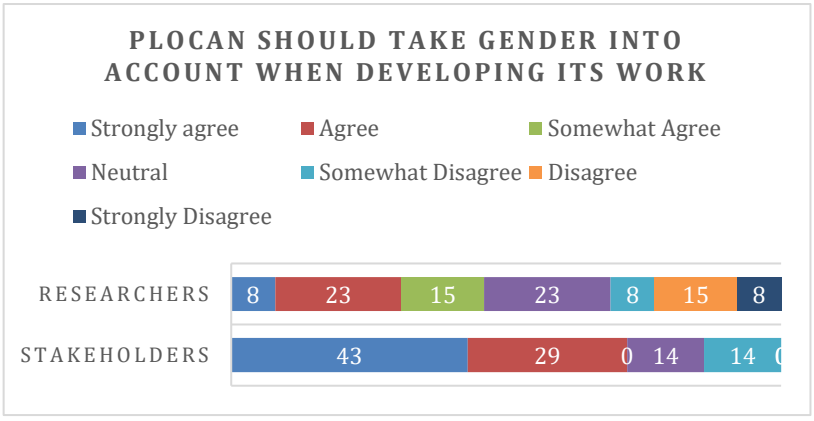
The graphs provide a visual representation of the stakeholders' and researchers' opinions PLOCAN. Furthermore, the Pearson correlation index was calculated for the questions with answers in the 7-point Likert scale, as it can be treated as a grouped form of a continuous scale. We cannot consider answers with five or less values (containing responses such as: Yes, No, Unsure, I do not Know), as they do not return us an image that can be considered as approximating a continuous variable. Pearson's correlation index provides a measure that assumes values between -1 and +1, where +1 corresponds to a perfect positive correlation, 0 corresponds to an absence of correlation and -1 corresponds to a perfect negative correlation. The correlation is classified as high if its value is greater or equal to 0,7; it is medium for values greater than or equal to 0,3 and less than 0,7. The correlation is low for values that are lower than 0,3.

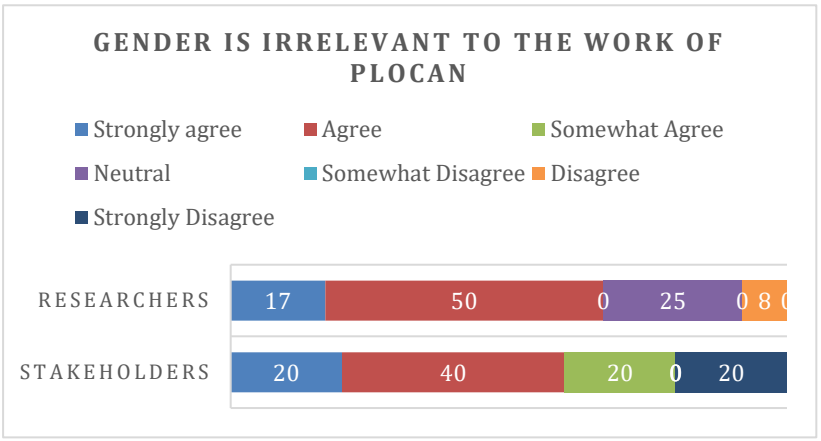
GENDER EQUALITY

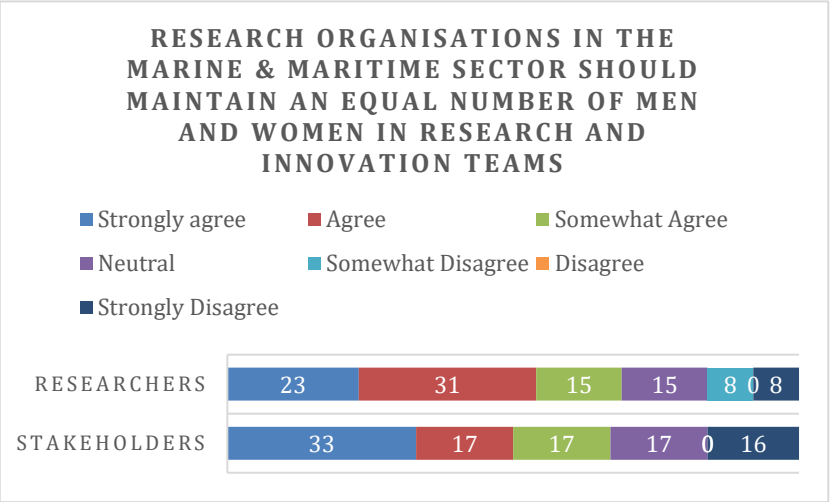


23 researchers took part in the survey and only 16 provided responses on their gender. 50% of researchers are men and 50% women.

18 stakeholders participated in the survey and 53% of stakeholders who responded were men, and 47% are women.

	All the stakeholders and 91% of researchers agreed at different levels that organisations should promote gender equality in their work, while 9% of researchers were neutral in this respect. ***Correlation=0,99***
	The majority of researchers (70%) and stakeholders (81%) are aware of the steps that the organisation has taken to promote Gender Equality in its work; however, 20% of researchers and 6% of the stakeholders are unsure of that. 5% of researchers think that PLOCAN has taken no steps. 5% of researchers and 13% of the stakeholders do not have an opinion
	46% of researchers and 72% of stakeholders agreed at different levels that PLOCAN should take gender into account when developing its work. 23% of researchers and 14% of stakeholders were neutral. 31% of researchers disagreed at different levels, and 14% of stakeholders Somewhat disagreed in this respect. We observe a very low value for correlation. Researchers provided answers distributed among all the seven values of the Likert scale, while the majority of

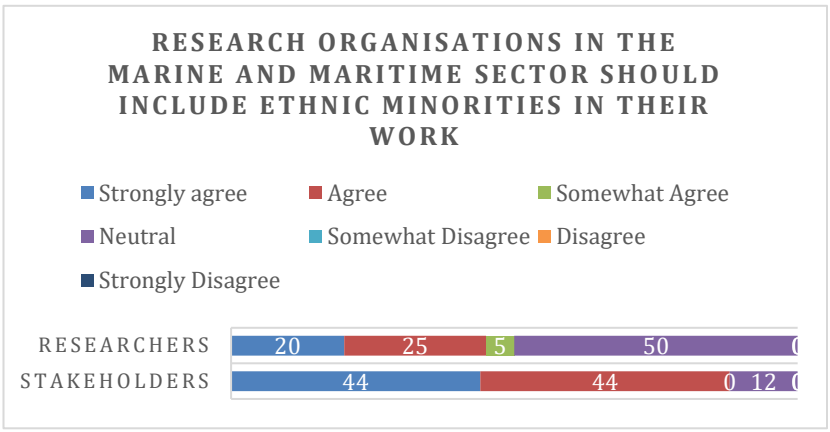
	stakeholders agreed at different levels in taking gender into account when developing work in the organisation (only a small percentage was neutral and similarly a small percentage somewhat disagreed). ***Correlation=0,02***
	67% of researchers and 80% of stakeholders agreed at different levels that ethnic differences are irrelevant to the work of PLOCAN. 25% of researchers were neutral, and 8% disagreed. 20% of stakeholders Strongly disagreed in this respect. We can observe that researchers and stakeholders have opinions that have a medium correlation; indeed, we observe that there are differences in the level of agreement between researchers and stakeholders. There is a percentage of stakeholders who somewhat agreed (not observed for researchers). Moreover, a percentage of researchers were neutral and a small percentage that Disagreed (not observed for the stakeholders). Similarly, there is a percentage of stakeholders who Strongly Disagreed (not observed for researchers).

	Researchers and stakeholders have a different perception and a different feeling (related to the different levels of agreement). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,54***
	Researchers have similar opinions if Research organisations in the marine & maritime sector should maintain an equal number of men and women in research and innovation teams. Many researchers and stakeholders do not agree in this respect. 69% of researchers and 67% of stakeholders agreed at different levels in this respect, 15% of researchers and 17% of stakeholders were neutral. Finally, 16% of researchers disagreed at different levels, and 16% of stakeholders strongly disagreed in this respect. ***Correlation=0,7***

The answers to the bottom-up survey questions related to Gender Equality sometimes return similar answers, and sometimes there are strong differences in the levels of correspondence between the stakeholders' and researchers' opinions.

It is suggested to promote a debate on gender issues involving researcher and stakeholders considering these differences.

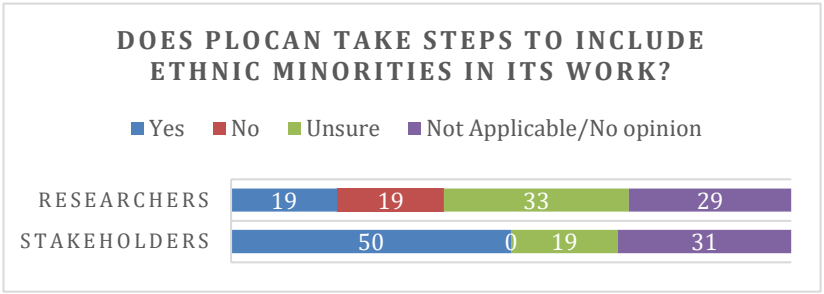
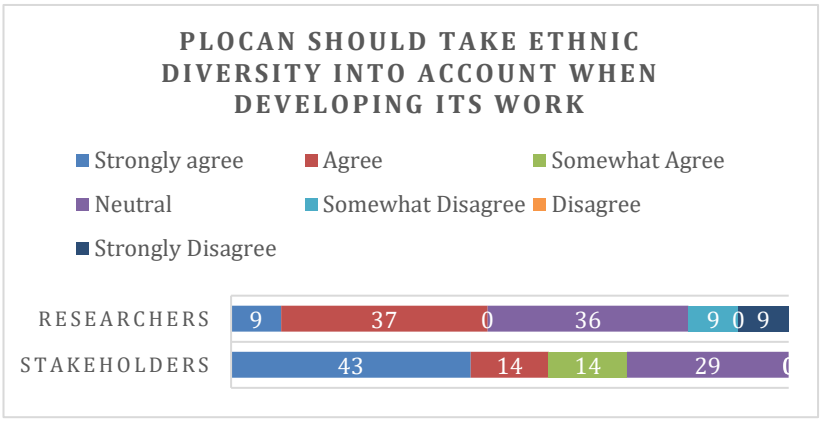
ETHNIC MINORITY

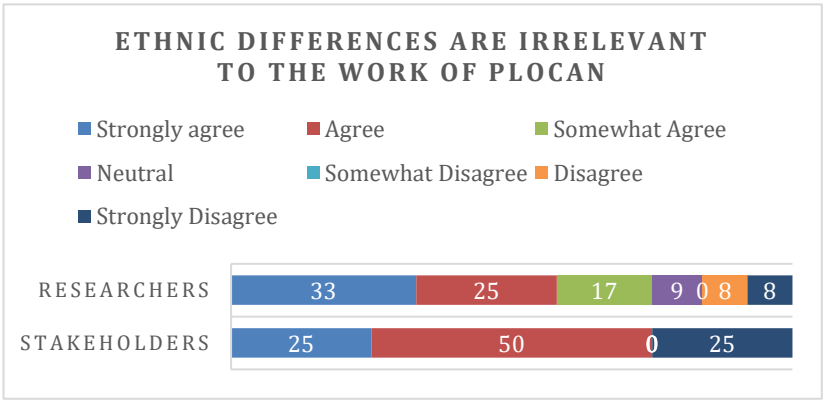


88% of stakeholders and 50% of researchers agreed at different levels that organisations should include ethnic minorities in their work. 50% of researchers and 12% of stakeholders were neutral. No one disagreed.

We can observe that researchers and stakeholders have opinions that have a medium correlation; indeed, we observe that there are differences in the level of agreement between researchers and stakeholders. There is a percentage of researchers who somewhat agreed (not observed for stakeholders). Moreover, 50% of researchers and only 12% of stakeholders were neutral.

These differences suggest us that, even if 50% of researchers and the majority of stakeholder agreed, they have a different perception and a different feeling (related to the different levels of agreement or neutrality). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a

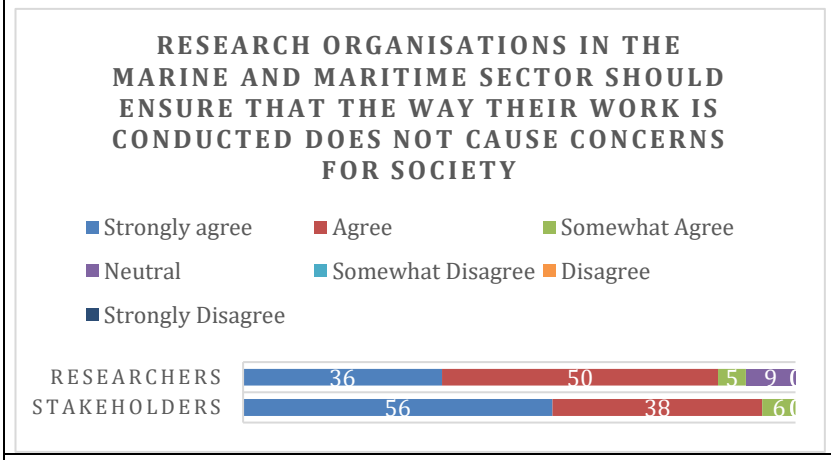
	different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,49***
	There are very different opinions about the steps that the organisation has taken to include Ethnic Minorities in its work. 19% of researchers and 50% of stakeholders are aware of this respect. 33% of researchers and 19% of stakeholders are unsure of that. 29% of researchers and 31% of stakeholders do not have an opinion. 19% of researchers think that the organisation did not take steps on that.
	46% of researchers and 71% of stakeholders agreed at different levels that PLOCAN should take Ethnic diversity into account when developing its work. 36% of researchers and 29% of stakeholders were neutral. 18% of researchers disagreed at different levels in this respect. We can observe that researchers and stakeholders have opinions that have a medium correlation; indeed, we observe that there are differences in the level of agreement between researchers and stakeholders. There is a percentage of stakeholders who somewhat agreed (not

	observed for researchers). Moreover, a small percentage of researchers disagreed, and a small percentage strongly disagreed (not observed for the stakeholders). Note that the values of percentages related to the seven levels of the Likert scale are very different. These differences suggest that researchers and stakeholders have a different perception and a different feeling (related to the different levels of agreement). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,33***
	75% of researchers and 75% of stakeholders agreed at different levels that ethnic differences are irrelevant to the work of PLOCAN. 9% of researchers were neutral. Finally, 16% of researchers disagreed at different levels, and 25% of stakeholders strongly disagreed in this respect. We can observe that researchers and stakeholders

	have opinions that have a medium correlation; indeed, we observe that even if the majority of researchers and stakeholders agreed, there are differences in the level of agreement between them. There is a percentage of researchers who somewhat agreed (not observed for stakeholders). Moreover, a percentage of researchers were neutral, and a small percentage that disagreed (not observed for the stakeholders). These differences suggest that, even if the majority of researchers and stakeholders agreed, they have a different perception and a different feeling (related to the different levels of agreement). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,63***

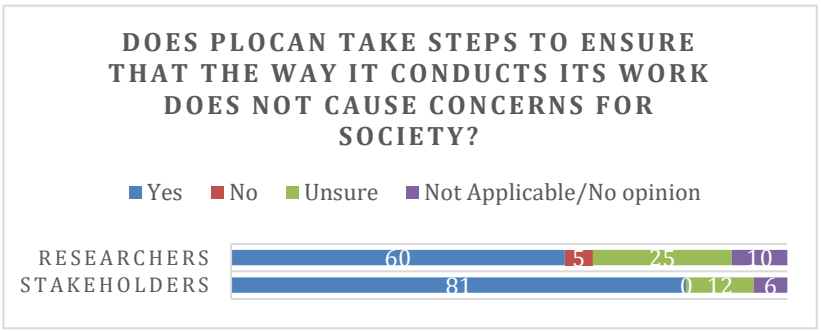
The answers to the bottom-up survey questions related to Ethnic Minority returns moderate correspondence between the stakeholders and researchers' opinions in PLOCAN. Furthermore, both researchers and stakeholders frequently chose the options: "Neutral", "Unsure", "No opinion/Not applicable" concerning the steps taken by the organisation on Ethnic minorities. It is suggested to promote a debate on including minorities with researcher and stakeholders.

CONCERNS FOR SOCIETY



All stakeholders, and 91% of researchers agreed at different levels that Research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society. 9% of researchers were neutral and no one disagreed on that.

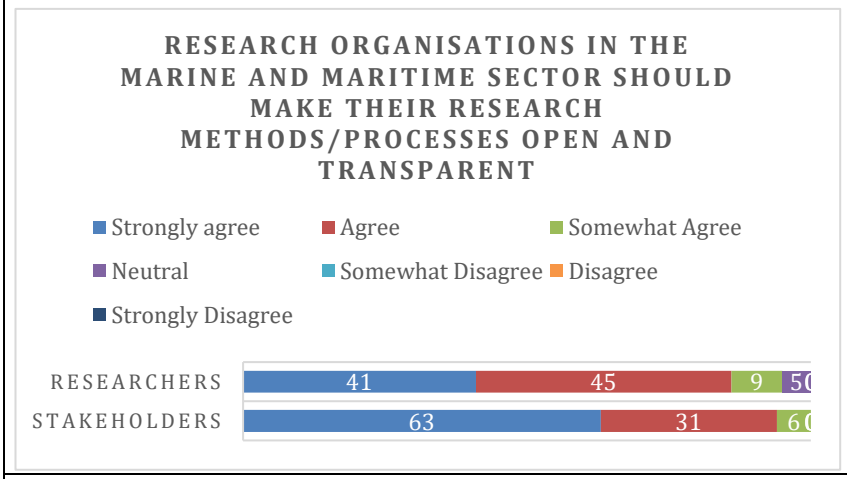
Correlation=0,9



The majority of researchers (60%) and stakeholders (81%) think that PLOCAN takes steps for avoiding any concerns for society. 25% of researchers and 12% of stakeholders are unsure in this respect. 5% of researchers think that PLOCAN did not take any step in this regard. 10% of researchers and 6% of stakeholders do not have a specific opinion.

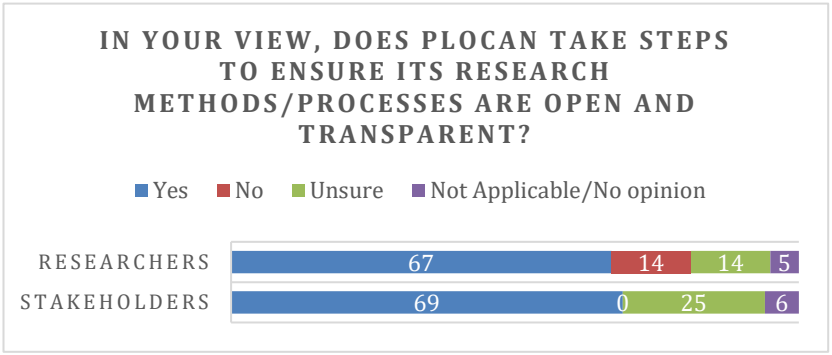
The answers to the questions in the bottom-up survey related to Concerns for Society shows a strong correspondence between the stakeholders and researchers' opinions in PLOCAN. They are aware of the importance of considering concerns for society. They seem to be aware of the steps taken by the organisation. For this reason, no specific issues emerged in this respect.

OPEN SCIENCE

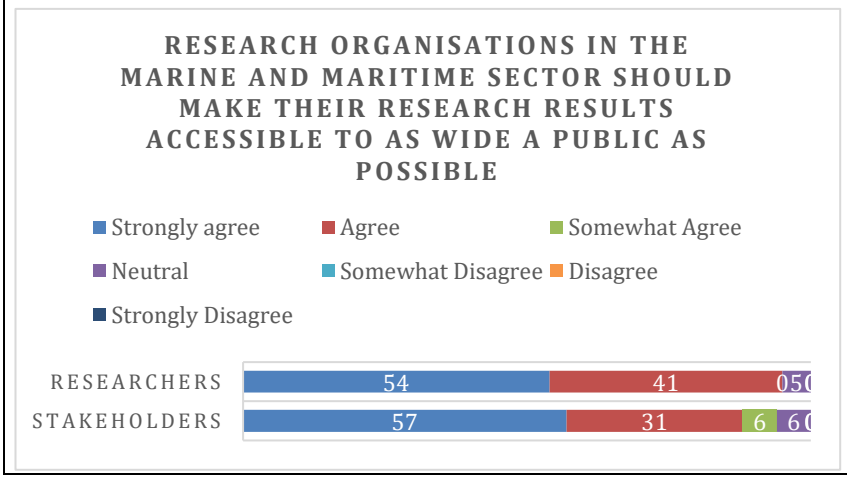


All the stakeholders and 95% of researchers agreed at different levels that research organisations in the M&M sector should make their research methods/processes open and transparent. 5% of researchers were neutral in this respect.

Correlation=0,9

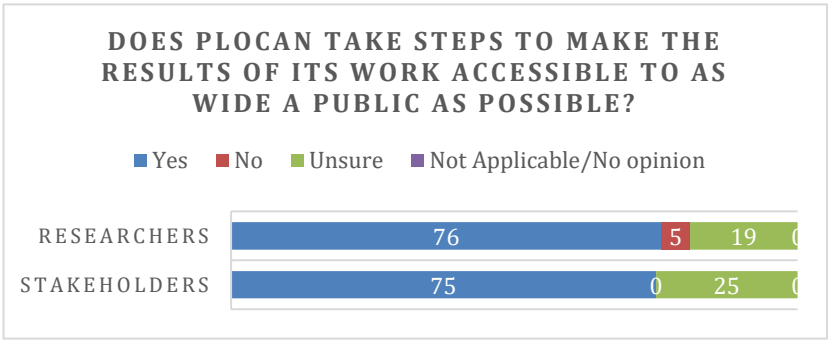
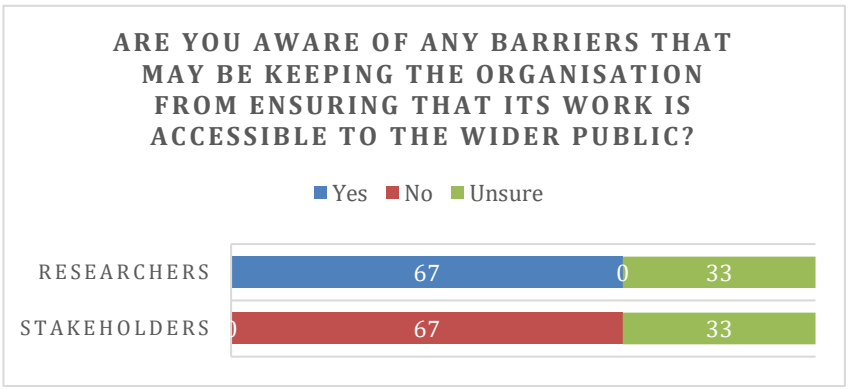
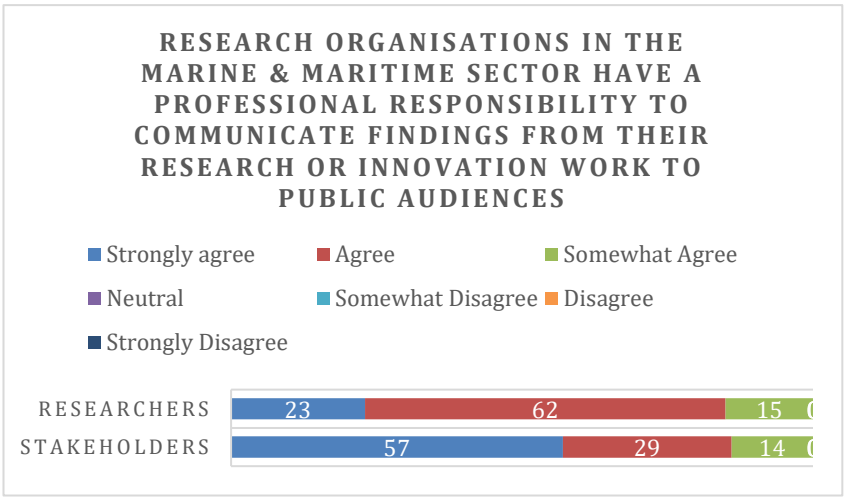


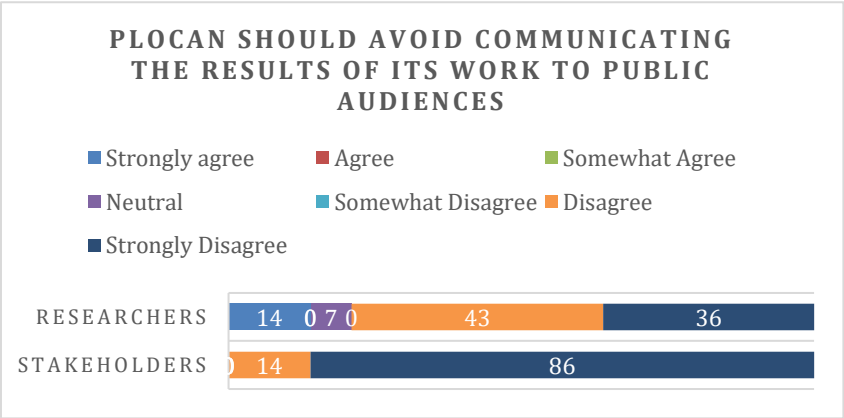
The majority of researchers (67%) and stakeholders (69%) think that PLOCAN takes steps to ensure openness and transparency within its research methods and processes. 14% of researchers and 25% of stakeholders are unsure in this respect; 5% of researchers and 6% of stakeholders does not have any opinion and, 14% of researchers believe that PLOCAN did not take any step.

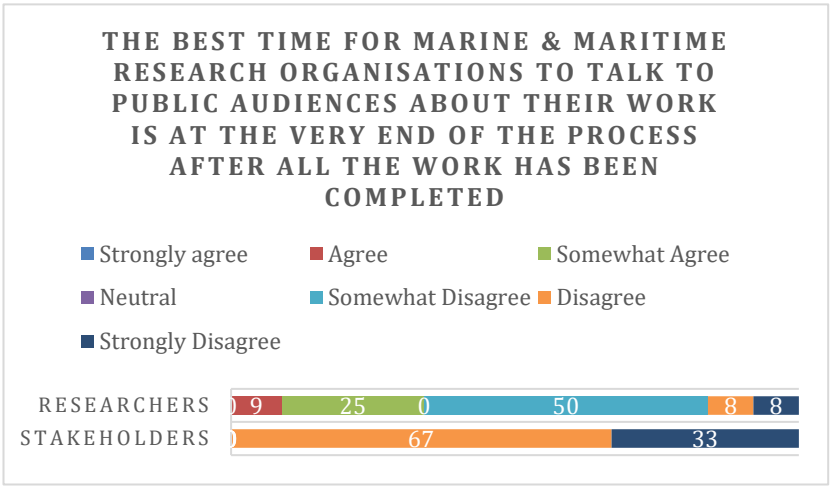


95% of researchers and 94% of stakeholders agreed at different levels that the M&M sector should make their research results accessible to as wide a public as possible; only 5% of researchers and 6% of stakeholders were neutral.

Correlation=0,98

	76% of researchers and 75% of stakeholders think that PLOCAN take steps to make the results of its work accessible to as wide a public as possible. Only 5% of researchers think that no steps are taken, 19% of researchers and 25% of stakeholders are unsure in this respect.
	67% of researchers say they are aware of barriers that may be keeping PLOCAN from ensuring that its work is accessible to the wider public and 67% of stakeholders say they are not aware of barriers in this respect. 33% of researchers and 33% of stakeholders are unsure in this respect.
	All researchers and stakeholders agreed at different levels that research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to the public. We can observe that researchers and stakeholders have opinions that have a medium correlation even if all of them agreed that research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or

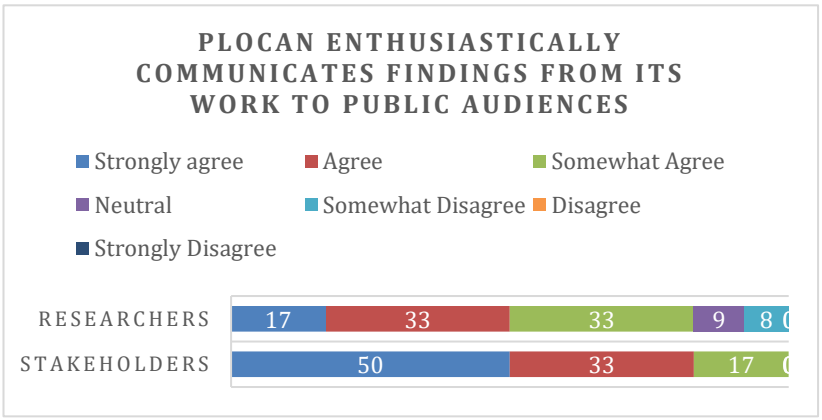
	innovation work to the public. There are significant differences in the level of agreement between them. ***Correlation=0,63***
	All stakeholders and 79% of researchers disagreed at different levels that PLOCAN should avoid communicating the results of its work to the public. 14% of researchers strongly agreed, and 7% were neutral in this respect. We can observe that researchers and stakeholders have opinions that have a medium correlation, due to the difference in the disagreement levels, even if all of them disagreed at different levels that PLOCAN should avoid communicating the results of its work to the public. Only a small percentage of researchers strongly agreed, and a small percentage is neutral in this respect (not present among the stakeholders). ***Correlation=0,65***



All stakeholders disagreed or strongly disagreed that the best time for marine & maritime research organisations to talk to the public about their work is at the very end of the process after all the work has been completed. Researchers have very different opinions in this respect; indeed, only 9% agreed, and 25% somewhat agreed in this respect, and the remaining 66% disagreed at different levels on that.

We observe a very low and negative value for correlation. Indeed, researchers provided answers distributed among five of the seven values of the Likert scale, while stakeholders on two values only. The percentages of answers associated with the different values of the Likert scale are very different, and changes (considering researchers and stakeholders) are quite independent. The correlation is low and negative.

Correlation= -0,22



All stakeholders and 83% of researchers agreed at different levels that PLOCAN enthusiastically communicates findings from its work to the public. 9% of researchers were neutral, and 8% of them strongly disagreed in this respect.

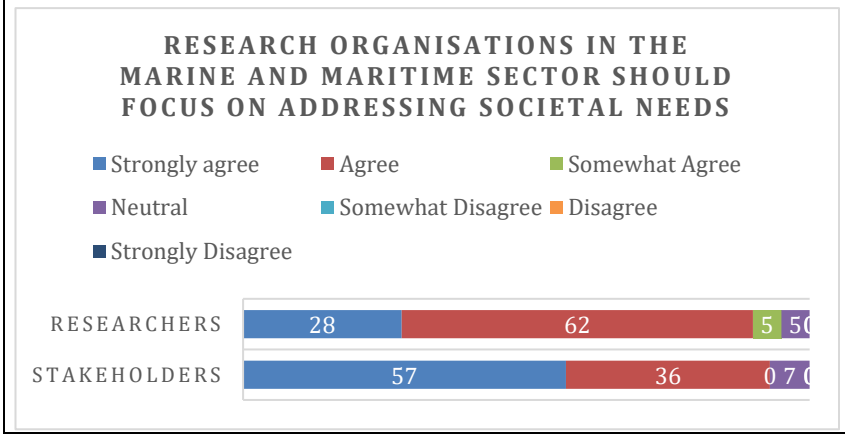
We observe that researchers and stakeholders have opinions that have a medium correlation.
There are differences in the level of agreement between the researchers. There is a percentage of researchers who were neutral (not observed for stakeholders) and a small percentage that somewhat disagreed (not observed for the stakeholders).

These differences suggest us that, even if the majority of researchers and all stakeholder agreed, they have a different perception and a different feeling (related to the different levels of agreement). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes,

	policies, and data of the organisation. ***Correlation=0,63***

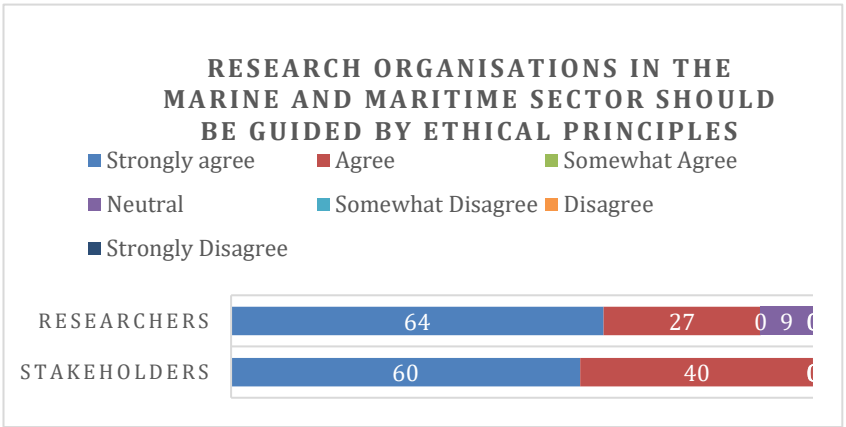
Comparing the stakeholders' and researchers' answers show moderate to strong correspondences in their opinions, except for the phase of the research process in which the public must be involved. Therefore, actions should be taken to increase researchers' awareness about the importance of talking to the public at the very end of the process after all the work has been completed, but throughout the research and innovation process. Furthermore, both researchers and stakeholders frequently chose the options: "Unsure", "No opinion/Not applicable" for the questions about the steps taken by PLOCAN to make research open, or to make results accessible as much as possible. Therefore, it is suggested that PLOCAN communicates better the steps it takes for Open Science and stimulates a discussion to strengthen Open Access.

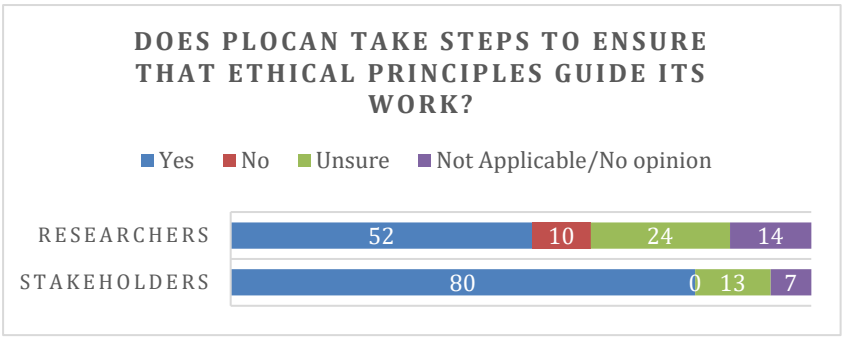
SOCIETAL NEEDS

	95% of researchers and 93% of stakeholders agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs, 5% of researchers and 7% of stakeholders were neutral. ***Correlation=0,76***

No specific issues.

ETHICS

	91% of researchers and all stakeholders agreed at different levels that research organisations in the M&M sector should be guided by ethical principles, while 9% of researchers were neutral. ***Correlation=0,96***



The majority of researchers (52%) and the majority of stakeholders (80%) think PLOCAN take steps to ensure that ethical principles guide its work, while 10% of researchers believe that no steps were taken.
24% of researchers and 13% of stakeholders are unsure in this respect. 14% of researchers and 7% of stakeholders do not have any opinion.

No specific issues emerged concerning Ethics, as stakeholders' and researchers' opinions have a very high correspondence. They mainly believe that Ethics is crucial for guiding research, and they feel that the organisation is active in this respect. Researchers frequently chose the options: "Unsure" and "No opinion/Not applicable", and interestingly, 10% of the staff responded "no" for the question about the steps taken by PLOCAN. Therefore, it is suggested that PLOCAN communicates better with its staff the actions it takes and policies it follows for addressing Ethics.

A.4 SU

A.4.1 Observations from the objective data collected in the Top-Down Survey

The University of Swansea has many defined governance structures and dedicated staff for managing the different RRI keys. Some governance structures need to be established, as specified below. Governance structures and dedicated staff are set up at the university level. Decision-makers and controllers are already defined for the organisation, and they are involved in defining policies and controlling processes related to the RRI keys. The policies are well and clearly formalised in the different documents and are available on the University website that also provides guidelines covering s RRI keys: Open Access, Ethics and Research Integrity, and Public Engagement. The processes identified and managed by the policies cover all the main issues addressed by each RRI key. Most of the data for monitoring progresses with respect to the different RRI key are collected and available. The organisation organises training covering RRI keys.

SU is very active in Gender equality, which is evident from the documents provided for the audit. First of all, Swansea University has defined a Strategic Equality Plan, 2020-2024. Swansea University has a unit with explicit responsibility to promote gender equality. The group organises many activities that involve the staff and arranges for trainings.
The main documents are:

Department Application. Bronze and Silver Award: https://www.swansea.ac.uk/media/Department-Application--Swansea-University-Biosciences-Silver.pdf

Athena SWAN Feedback – April 2018
https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_3ngdn1NpWIzLkWV0/WJskZKAthena_SWAN_Award Feedback April 2018 - Swansea University Biosciences.docx

Equality Annual Report, 1 April 2018 - 31 March 2019
https://www.swansea.ac.uk/media/Equality-Annual-Report-2019.pdf

Our Gender Journey
https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_IgaEUMSpY340uVP0/kiHFH6Our-Gender-Journey.pdf

Concordat Action Plan January 2019 to December 2020.
https://www.swansea.ac.uk/media/Concordat-Action-Plan-January-2019-December-2020.pdf

Swansea University, Strategic Equality Plan, 2020-2024
https://www.swansea.ac.uk/media/Strategic-Equality-Plan-2020-2024.pdf

Concerning Open Access SU has four documents that guide researchers submitting publications, provides a guide for authors on open access, provide information on the Open Access policies and guidelines to follow for submitting open access publications:

Open Access & REF Compliance for Swansea University Researchers:
https://libguides.swansea.ac.uk/ld.php?content_id=31856584

Open Access essential:
https://libguides.swansea.ac.uk/ld.php?content_id=32064769

Swansea University Open Access Policy:
https://libguides.swansea.ac.uk/ld.php?content_id=31917476

Open Access for Swansea University Researchers:
https://libguides.swansea.ac.uk/ld.php?content_id=32109466

Concerning Public Engagement, SU has four documents providing:

the public Engagement strategy plan
https://staff.swansea.ac.uk/media/Swansea-university-Public-Engagement-Strategy-FINAL-Nov-2019.pdf

the document elaborated for the process of developing a Civic Mission Strategy,
https://s3-eu-west-1.amazonaws.com/qa-survey-system/storage/5e615df3fc68bb19a13fa824/q_eiGBrDY1RiJIBYn0/lgwyuzCivic Mission Strategy.docx

materials for developing the skills in public engagement are in SU's website
https://www.swansea.ac.uk/research/research-with-us/postgraduate-research/presentation-and-public-engagement/

and the website of an exhibition centre of SU.

https://www.swansea.ac.uk/research/research-with-us/postgraduate-research/presentation-and-public-engagement/

SU does not have staff members with the responsibility to promote public engagement, but one important issue is the establishment of a Civic Mission Committee.

SU should appoint staff members with the responsibility *to address the promotion of public engagement, and actions should be planned within the Action Plan to promote public engagement also in relation to the Civic Mission Committee.*

Trainings on Public Engagement are carried out, but data were not available in the format asked in GRRIP.
Concerning the Research Ethics/Research Integrity policies, SU formalised in one document its policies
https://www.swansea.ac.uk/media/P1415-956-Research-Integrity---Policy-Framework-updated-Jan-2020.pdf
https://www.swansea.ac.uk/science/cosethics/
and it has bodies such as the Research Ethics and Governance Committee and its sub-Committees. All the activities in SU deeply take into account ethics and integrity.

Concerning Science Education, SU is active and made available an online course for science education related to Ecology, Botany and Animal Behaviour (https://canvas.swansea.ac.uk/courses/20062). SU has members responsible for giving practical support to researchers in conducting science education and literacy work and, funding is provided for Science Education. Trainings for staff are organised. However, SU did not collect data in the format required.
SU does not centrally record details of research and innovation collaborations with external stakeholders and hence could not return detailed information.
Actions should be planned within the Action Plan to record information about research and innovation collaborations with external stakeholders.

Objective quantitative data provided by the organisation (data available to the consortium and the evaluators):
The staff composition is relatively balanced between women and men, but sometimes its distribution is not balanced; for example, there are more men in Grade 8 and at Professorial grade. We observe that more men than women are in positions with higher salaries and more women than men left the organisation (mainly with the lower salary level). We also observe that women have more fixed-term contracts, while men have more permanent contracts; it could be one reason why women more than men left the organisation in the last two years.

There is a high level of institutionalisation of the RRI keys with governance structures, documents and processes in SU. However, actions should be planned to understand the unbalanced distribution of male and female researchers as per grades and salaries so that necessary action can be taken to improve the situation.

The majority of employees are from white ethnic backgrounds, but people of mixed ethnicity and other groups work in SU. More people belonging to other ethnic groups left the organisation compared to the white ethnic group.
No data was provided related to trainings.

In the action plan, SU should include actions to collect data related to RRI training activities and data related to engagement and collaborations with external stakeholders to facilitate monitoring activities and measure organisational change.

A.4.2 Main elements from the interviews

This section is divided into two parts: part A and part B.
Part A describes the barriers and possible resolutions, as discussed during the interview. In particular, the interview enabled us to extend information acquired about the advantages and barriers in implementing RRI, complementing information coming from researchers and stakeholders' opinions (Bottom-up survey) and actions suggested to overcome these barriers.
Part B specifies how RRI could contribute to realizing the goals of the organisation. We know from the literature and from preliminary findings of the GRRIP audit process that the single most important barrier to the design and implementation of RRI in organisations is a misalignment of incentives and responsibilities. Usually, organisations face the misalignment of RRI and the specific performance goals of an organisation. The questions in this section try to assess the gaps between what exists in the organisation and where the organisation would like to find itself in the future.
The interviews have identified no specific barriers but actions for improving the RRI implementation. Relevant actions emerged among others for pushing RRI implementation in the organisation: 1) Review of practices, 2) Incentivise staff and 3) Facilitate feedback from students and QH.

Part A: Barriers and Actions

Starting point	Action
1a How does the RRI initiative help deliver the organisation's performance goals?	1b What needs to be done so that RRI initiative will help deliver the organisation's performance goals?
Answer: RRI can improve the integrity of the organisation. It can provide a supportive and positive working environment where staff, students and QH members are empowered to carry out collaborative research, learn and teach. It can result in greater self-confidence and enjoyment of all members leading to personal growth, which in turn leads to organisational growth.	**Answer:** • Evidence from other institutions • SMART objectives (Specific, Measurable, Achievable, Realistic, and Timely) actions need to be developed. • Support individuals (all positions) • Acting to create a positive working environment with everything you do, you'll achieve the goals anyway.
2a How are RRI considerations incorporated into business decisions on key topics such as recruitment, research topics and methodology, working with 3rd parties, application for funding, collaboration or other initiatives?	2b What needs to be done so that RRI considerations are incorporated into business decisions?
Answer Not sure if they are explicitly incorporated. Business decisions are based on income potential. Most income is generated by REF results (publications and Journal Impact Factors). RRI seems to be still secondary to these criteria. This translates into business decisions.	**Answer:** Need to be relevant for decision-makers (SMT) • Need to save money • Need to enhance the reputation • Need to attract students • Need to increase grants • Need to assist complying with legislation

	Or need a leader who is convinced by the inherent importance of RRI so that evidence of the business aspects are not mandatory.
3a To what extent are managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?	3b What must be done, so that managers (and other employees) evaluated and held accountable for the RRI performance of the organisation, either directly or indirectly?
Answer: • Gender balance (AthenaSWAN): high reputation factor, can enhance chances of promotion. • Public engagement: nice to do, for some promotion enhancing • Open access data: REF relevant (all accountable) • Science teaching: can be promotion relevant for teaching staff, not for research staff • Ethics approval compulsory integrated with all research and teaching (animal welfare, Home Office licence)	**Answer:** • Key performance indicators (Personal Development Review PDR) • Promotion Criteria • Change of mindset •
4a What mechanisms are in place to monitor and respond to what is working and what is not?	4b What mechanisms are in place to monitor and respond to what is working and what is not?
Answer: Established: • Ethics committee • AthenaSWAN/HR gender balance • REF (open access data) • Science teaching Not established • Public engagement	**Answer:** Established: • Ethics committee • AthenaSWAN/HR gender balance • REF (open access) Not established • Science teaching Not established • Public engagement
5a How effectively does an organisation create the conditions to enable RRI implementation (e.g., inclusive environment)?	5b What can be done to create the conditions that enable RRI implementation (e.g., inclusive environment)?
Answer: • Generally, an inclusive environment • Leadership is very open to discussions on improvements	**Answer:** • Review of practices • Incentivise staff • Facilitate feedback from students and QH

Part B: Acquiring buy-in: the ROI of RRI

How can the RRI dimensions promote your organisation's goals?

RRI dimensions	SU

Gender equality, diversity and inclusion	The values of the organisation align with gender equality, diversity, and inclusion. The organisation is committed to working towards EDI goals. (see top-down audit report)
Social Engagement	The motivation for social engagement stems from the aspiration to undertake ecological research with impact. This is mainly achieved through a) industrial collaboration b). innovation (spin-out companies, patents filed), c). community engagement.
Open Science	REF (Research Excellence Framework) requirement (see top-down audit report)
Science Education	Integral to the organisation (see top-down audit report).
Ethics	Fully integrated process (see top-down audit report)

Interviewees were asked to share in what way their organisation identified itself as interdisciplinary. To elicit dimensions of this value, we presented a list of interdisciplinary topics in M&M research. We asked how relevant they are for the RPFOs and how likely their research and teaching would involve these dimensions. The results are presented in the table below.

Interdisciplinary topics	SU
Is your organisation Interdisciplinary?	The research is interdisciplinary in terms of collaboration between science and engineering disciplines, for example, marine ecology and water chemistry, environmental science and geomorphology, benthic ecology and engineering. There is less collaboration between more distant disciplines, such as Science and Art/History/Social Sciences
Interdependencies of the environment & human rights to connect across sectors	This would fit with existing projects.
Sharing Knowledge in science dialogue with civil society	This would fit with existing projects.
climate-proofing fisheries for equity and sustainability, integrating traditional knowledge of local fisheries	This would fit with existing projects.
Marine biodiversity and hidden trade-offs in the deep sea	We have currently no deep-sea research project. We have though staff with some knowledge on the topic.
Empowering sustainable and equitable "blue societies": cultural heritage, marginalized knowledge, practices and economies	This would fit with existing projects.

A.4.3 Comparison of researchers and stakeholders' opinions in SU

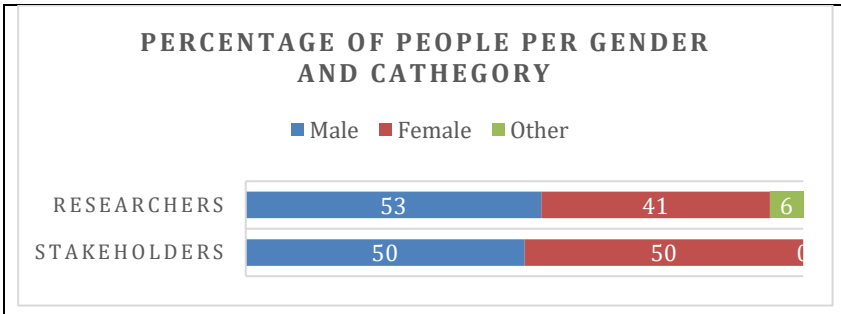
This section compares opinions among stakeholders and researchers from SU for the questions in the bottom-up surveys to verify correspondences between the opinions provided by stakeholders and those of researchers.

The graphs provide a visual representation of the opinions of the stakeholders' and researchers' in SU.

Furthermore, the Pearson correlation index was calculated for the questions with answers in the 7-point Likert scale, as it can be treated as a grouped form of a continuous scale. We cannot consider answers

with five or less values (containing responses such as: Yes, No, Unsure, I do not Know), as they do not return us an image that can be considered as approximating a continuous variable. Pearson's correlation index provides a measure that assumes values between -1 and +1, where +1 corresponds to a perfect positive correlation, 0 corresponds to an absence of correlation and -1 corresponds to a perfect negative correlation. The correlation is classified as high if its value is greater or equal to 0,7; it is medium for values greater than 0,3 and less than 0,7. The correlation is low for values that are lower than 0,3.

GENDER EQUALITY

<table>
<tr>
<td> 
</td>
<td>17 researchers participated in the bottom-up survey at SU. They were more men (53%) than women (41%), and 6% indicate Others.
16 stakeholders participated with 50% men and 50% women.</td>
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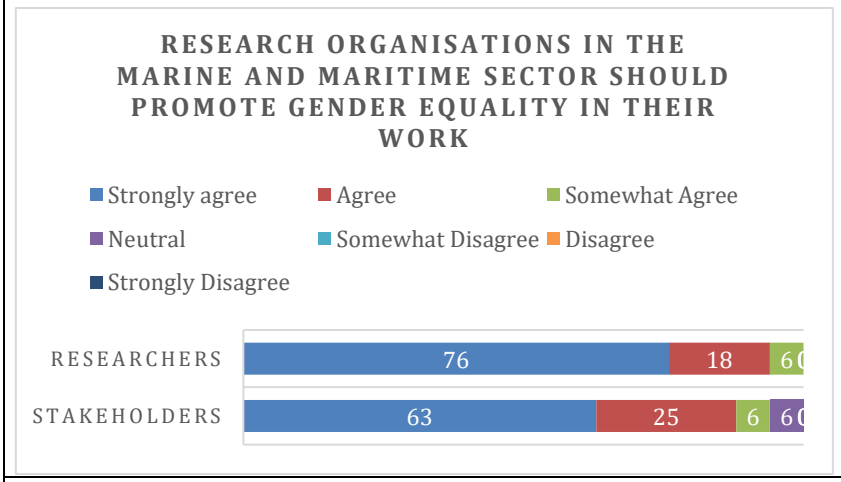
<td> 
</td>
<td>All the researchers and 94% of stakeholders agreed at different levels that organisations should promote gender equality in their work, while 6% of stakeholders were neutral in this respect.

Correlation=0,99</td>
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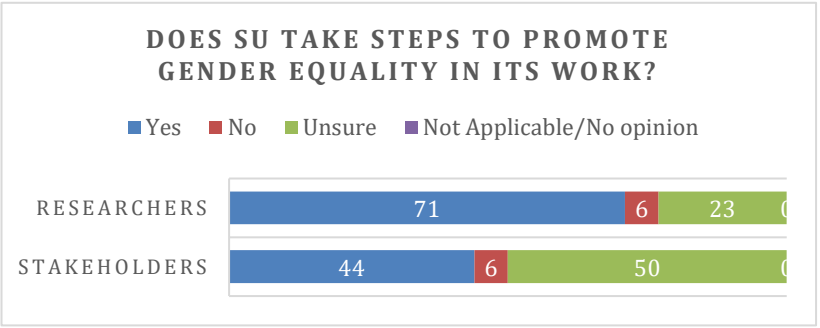
<tr>
<td> 
</td>
<td>The majority of researchers (71%) and 44% stakeholders are aware of the steps that the organisation has taken to promote Gender Equality in its work; however, 23% of researchers and 50% of the stakeholders are unsure. 6% of researchers and 6% of stakeholders think that SU has taken no steps.</td>
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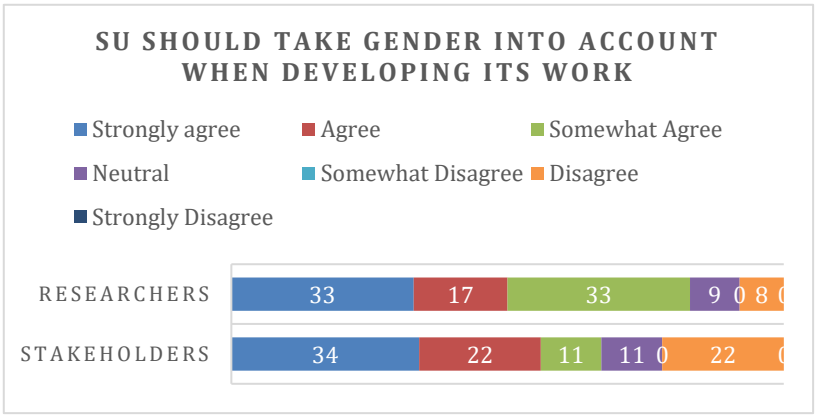
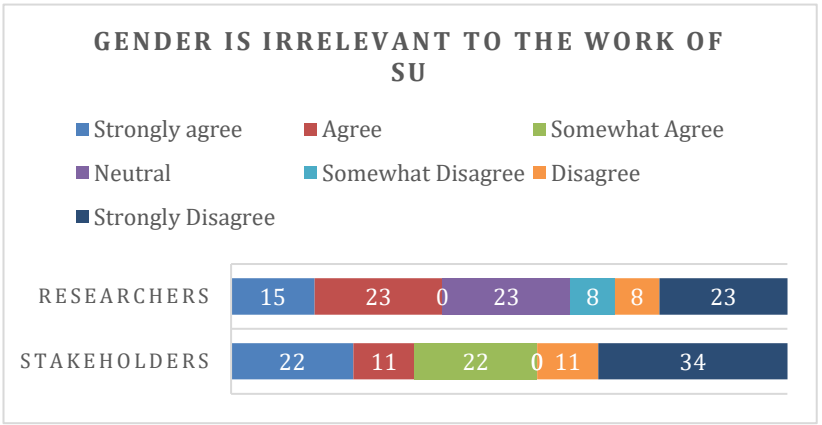
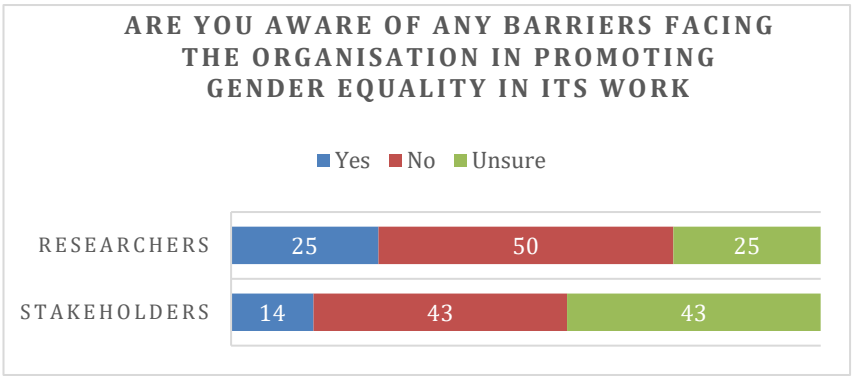
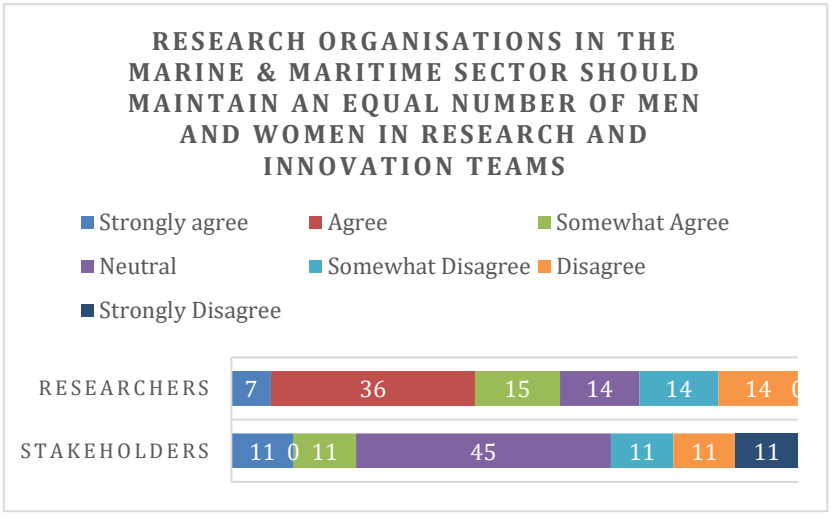
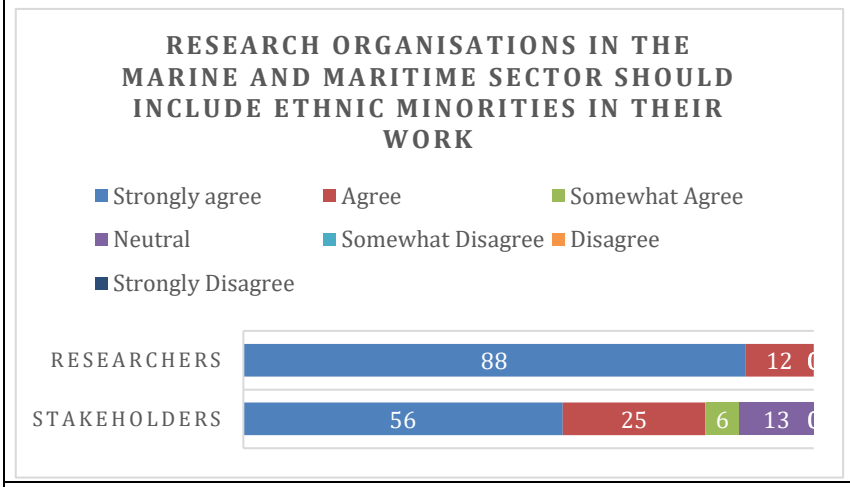
	83% of researchers and 67% of stakeholders agreed at different levels that SU should take gender into account when developing its work. 9% of researchers and 11% of stakeholders were neutral. 8% of researchers and 22% of stakeholders disagreed in this respect. We can observe that researchers and stakeholders have opinions that have a medium correlation; we observe that there are differences in the level of agreement between them, even if the majority of researchers and stakeholders agreed. There are differences between the percentages of the Likert scale. ***Correlation=0,67***
	38% of researchers and 55% of stakeholders agreed at different levels that gender is irrelevant to the work of SU. 23% of researchers were neutral. 39% of researchers and 45% of stakeholders disagreed at different levels We observe a very low value for correlation. Researchers provided answers distributed among six of the seven values of the Likert scale (the option of Somewhat agree was not chosen by any of the respondents who are

	researchers). In contrast, the stakeholders did not provide any answer with the neutral and the Somewhat disagree values. ***Correlation=0,04***
	Only 25% of researchers and 14% of stakeholders are aware of any barriers facing the organisation in promoting gender equality in its work. 50% of researchers and 43% of stakeholders who answered say that they are not aware of this respect. 25% of researchers and 43% of stakeholders are unsure.
	Researchers and stakeholders have very different opinions if research organisations in the marine & maritime sector should maintain an equal number of men and women in research and innovation teams. 58% of researchers and 22% of stakeholders agreed at different levels in this respect, 14% of researchers and 45% of stakeholders were neutral. Finally, 28% of researchers and 33% of stakeholders disagreed at different levels in this respect. We observe a very low and negative value for correlation. Indeed, researchers and stakeholders provided

	answers distributed among six of the seven values of the Likert scale. Researchers did not provide any answer with the Strongly disagree value. Stakeholders did not provide any answer with Agree value. Comparing the researchers' and stakeholders' percentages of answers associated with the values of the Likert scale, they are very different in some of the values of the Likert scale and, they are slightly inversely proportional. Indeed, stakeholders did not provide any answer with Strongly agree and Agree. ***Correlation=-0,27***

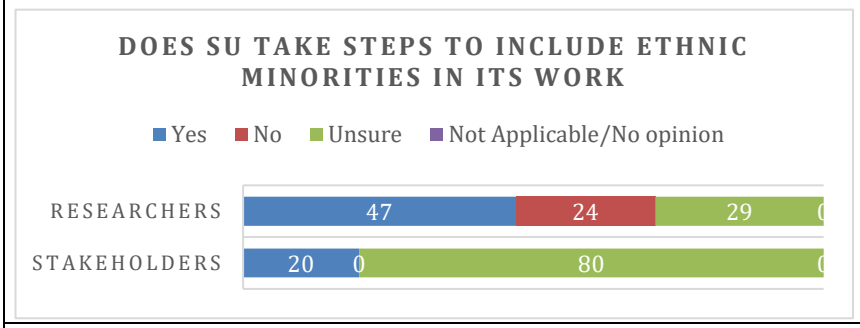
The answers to the questions related to Gender Equality in the bottom-up survey return moderate or strong correspondence between the stakeholders' and researchers' opinions, except for the question about gender irrelevance. Nearly 40% and 55% respectively, of the researchers and stakeholders, agreed that gender is irrelevant to the work of SU. This indicates that discussions involving researchers and stakeholders should be planned in SU; they should aim to establish a common understanding of the situation and improve collective awareness on Gender Equality in research.

ETHNIC MINORITY

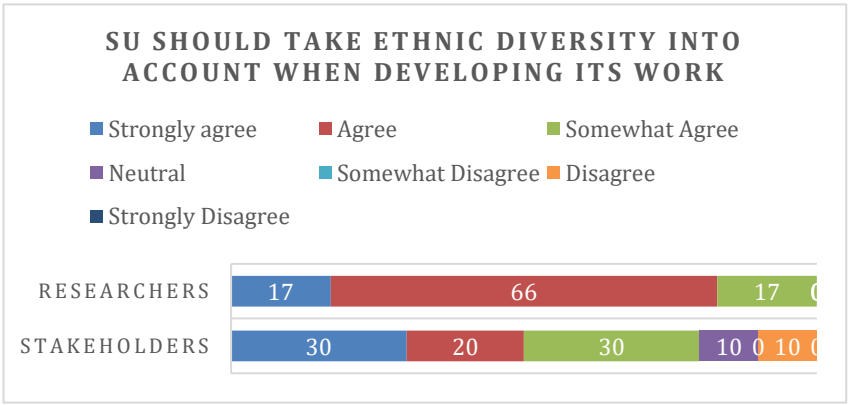


All researchers and 87% of stakeholders agreed at different levels that organisations should include ethnic minorities in their work. 13% of stakeholders were neutral on that.

Correlation=0,94



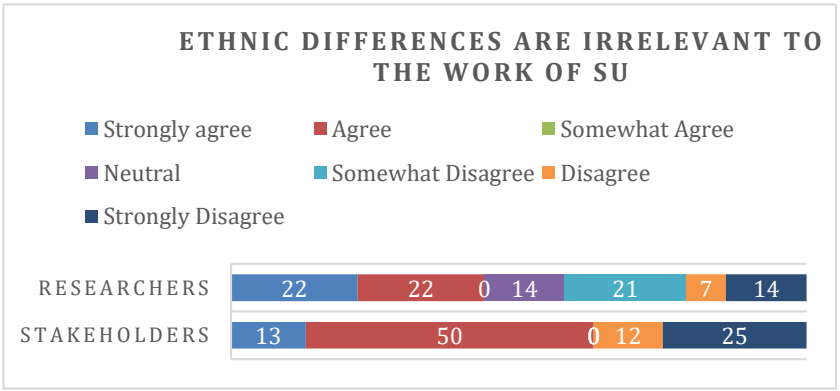
47% of researchers and 20% of stakeholders are aware that SU take steps to include ethnic minorities in its work. 24% of researchers think that the organisation did not take steps on that.

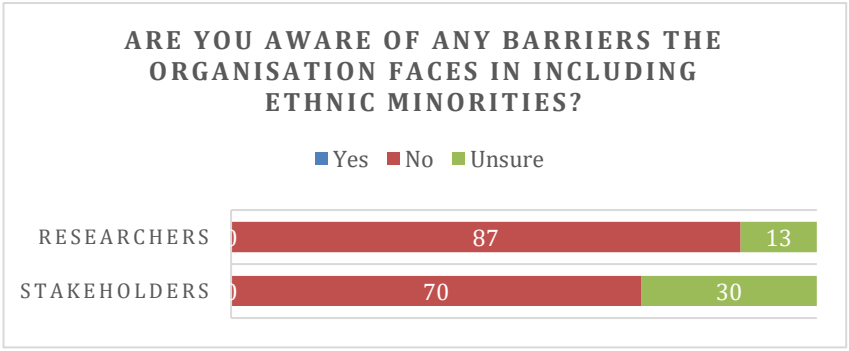


All researchers and 80% of stakeholders agreed at different levels that SU should take Ethnic diversity into account when developing its work. 17% of researchers and 30% of stakeholders were neutral. 10% of stakeholders disagreed in this respect.

We can observe that researchers and stakeholders have opinions that have a medium correlation; even if all researchers and the majority of stakeholders agreed,

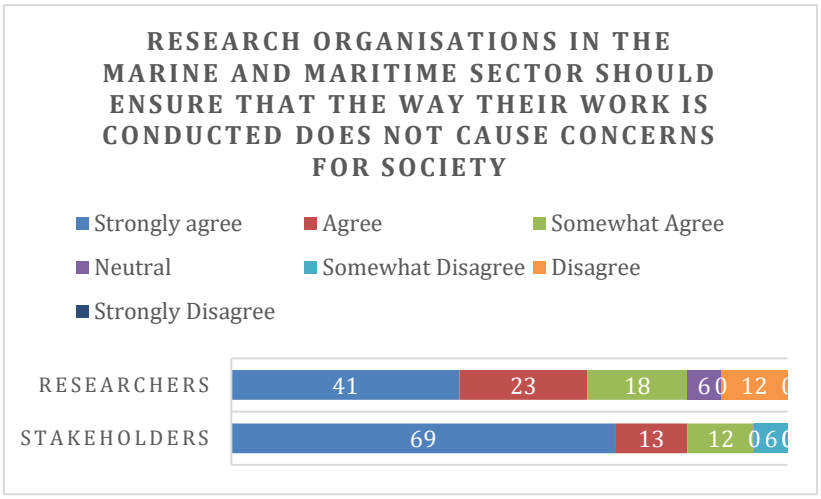
there are differences in the level of agreement between them. A percentage of stakeholders were Neutral (not observable between

	researchers), and a small percentage disagreed (not observable between researchers). These differences suggest that, even if the majority of researchers and all stakeholders agreed, they have a different perception and a different feeling (related to the different levels of agreement); this could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,49***
	44% of researchers and 63% of stakeholders agreed at different levels that ethnic differences are irrelevant to SU's work. 14% of researchers were neutral. Finally, 42% of researchers and 37% of stakeholders disagreed. We can observe that researchers' and stakeholders' opinions have a medium correlation due to the differences in the choices in the Likert scale. Moreover, we observe a percentage of Neutral researchers and a somewhat disagreed

	percentage, both not observed for stakeholders. These differences suggest that, even if the majority of researchers and all stakeholder agreed, they have a different perception and a different feeling (related to the different levels of agreement). This could be related to the differences connected to the point of view of people employed and part of the organisation, and people who collaborate as a stakeholder and, they could have a different knowledge of all the internal processes, policies, and data of the organisation. ***Correlation=0,43***
	Neither researchers nor stakeholders say they are aware of any barriers the organisation faces in including ethnic minorities; indeed, 87% of researchers and 70% of the stakeholders say that they are not aware in this respect. Finally, 13% of researchers and 30% of stakeholders are unsure.

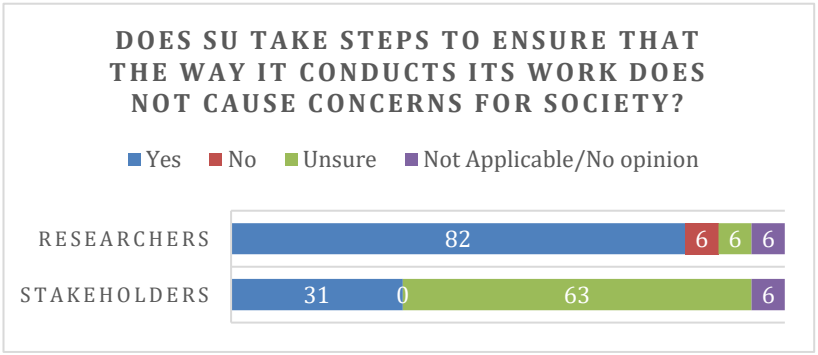
The answers to the bottom-up survey related to Ethnic Minority return stakeholders' and researchers' opinions with moderate or strong correspondences. Furthermore, both researchers and stakeholders chose the options "Unsure" for the question on steps taken by SU, and majority of stakeholders and researchers were not aware of any barriers that SU faces in including ethnic minorities. Therefore, SU is suggested to communicate better the steps it takes for including minorities.

CONCERNS FOR SOCIETY



82% of researchers and 94% of stakeholders agreed at different levels that research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society. 6% of researchers were neutral in this respect, 12% disagreed and, 6% of stakeholders somewhat disagreed on that.

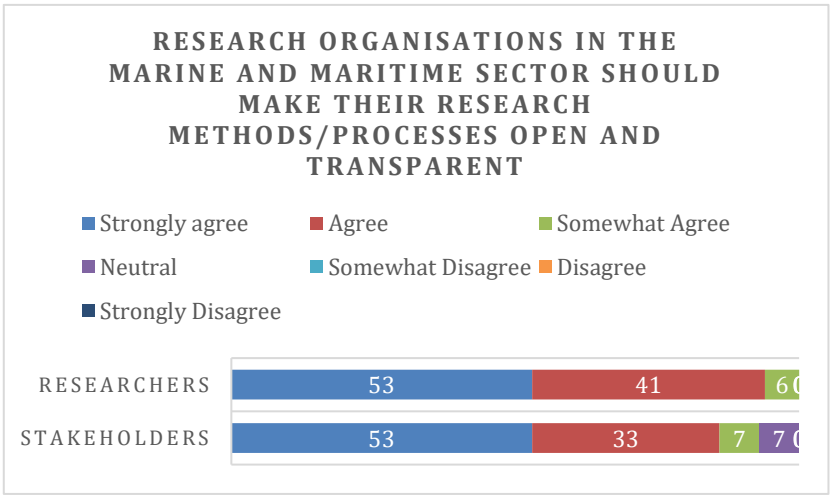
Correlation=0,88



The majority of researchers (82%) and 31% of stakeholders think that SU takes steps to avoid any concerns for society. 6% of researchers and 63% of stakeholders are unsure in this respect. 6% of researchers think that SU does not take any step for this purpose. 6% of researchers and 6% of stakeholders do not have a specific opinion.

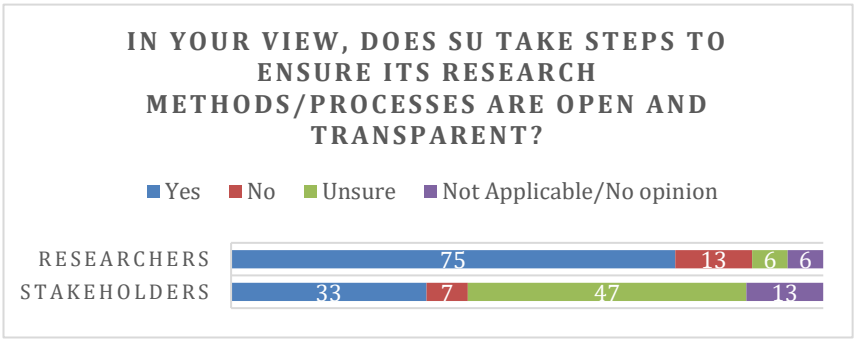
The answer to the questions in the bottom-up survey related to Concerns for Society has a strong correspondence between the stakeholders' and researchers' opinions. They are aware of the importance of considering concerns for society. However, many stakeholders chose the options "Unsure" for the question on steps taken by SU. It is suggested that SU communicates better the steps it takes to ensure that the way SU conducts its work does not cause concerns for society.

OPEN SCIENCE

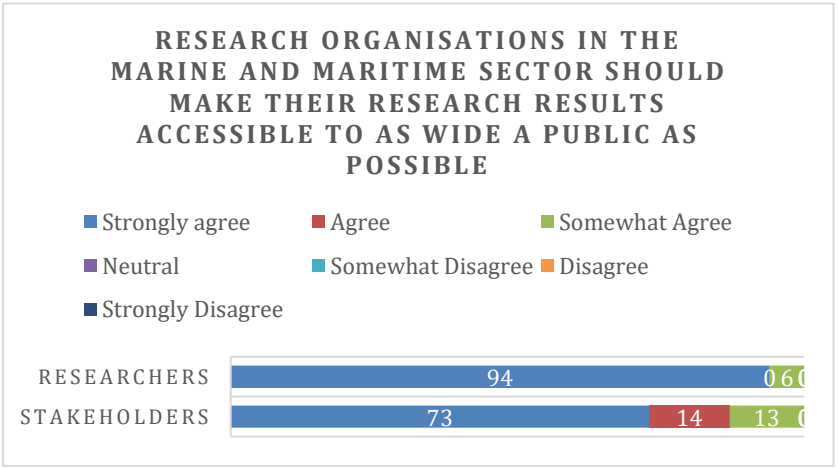


All the researchers and 93% majority of stakeholders agreed at different levels that research organisations in the M&M sector should make their research methods/processes open and transparent. 7% of stakeholders were neutral in this respect.

Correlation=0,98

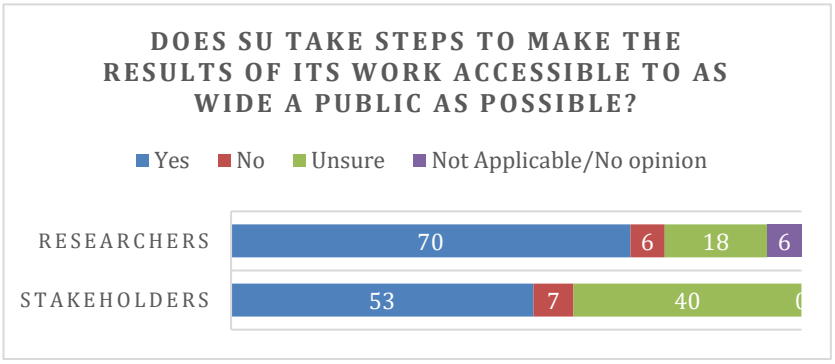
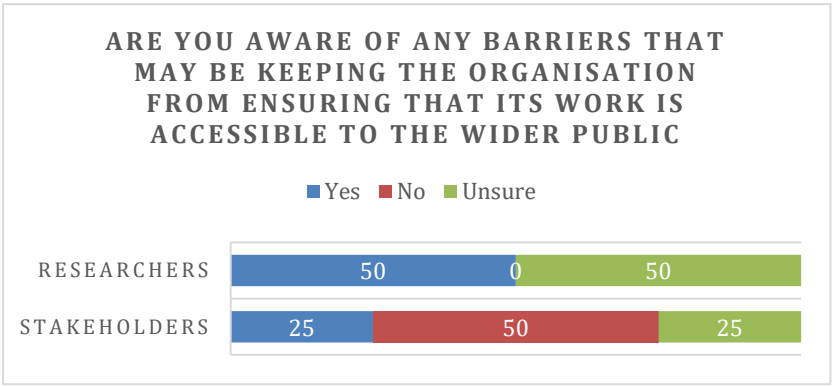
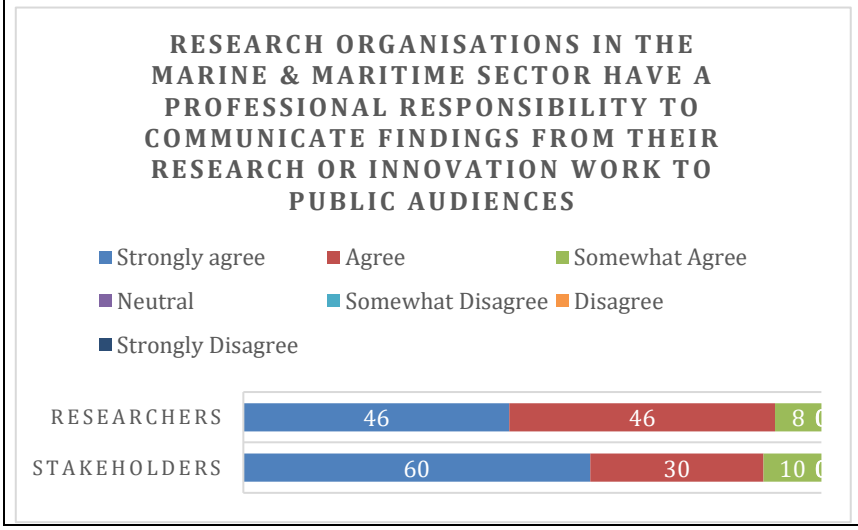


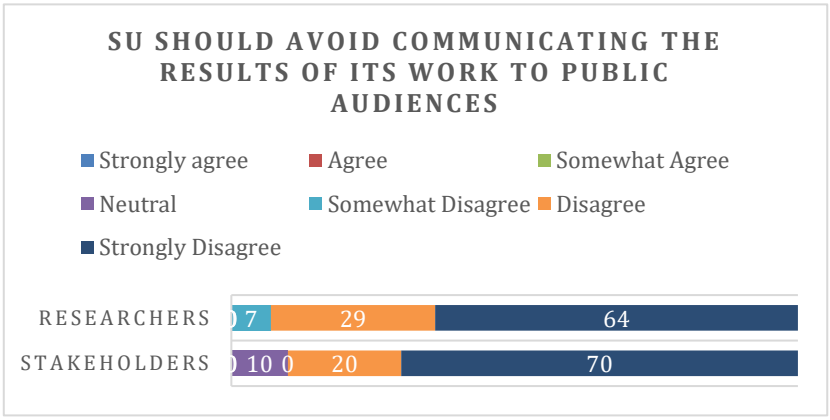
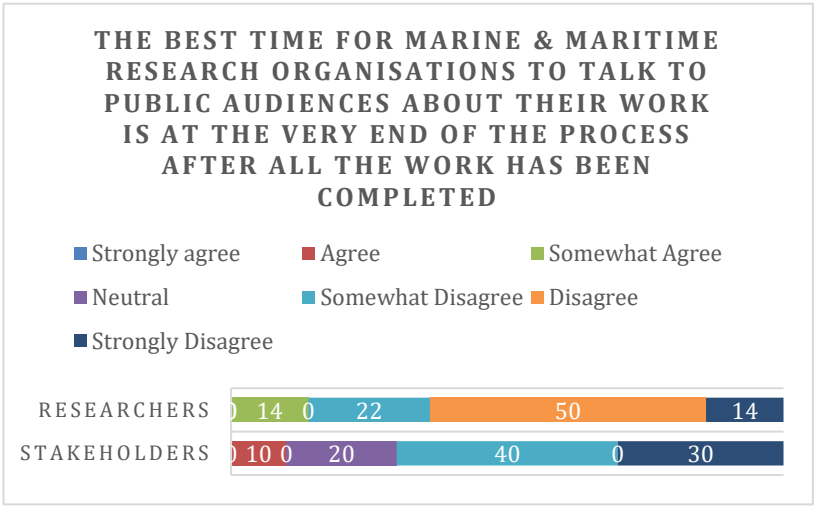
75% of researchers and 33% of stakeholders think that SU takes steps to ensure openness and transparency within its research methods and processes. 6% of researchers and 47% of stakeholders are unsure about this respect; 6% of researchers and 15% of stakeholders did not have any opinion. 13% of researchers and 7% of stakeholders believe that SU did not take any step.

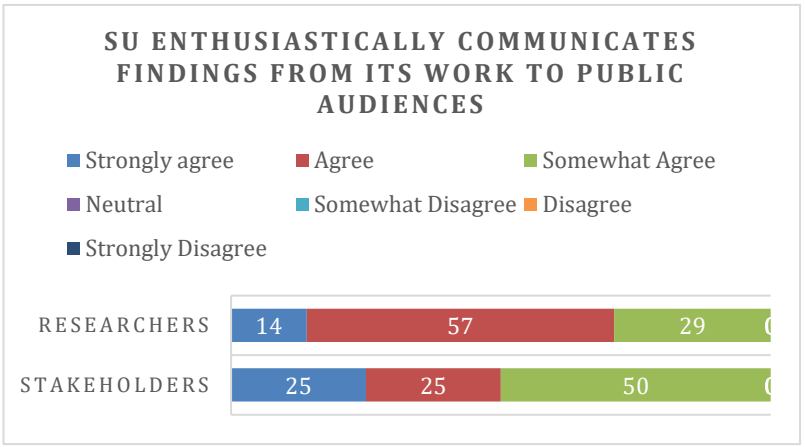


All researchers and stakeholders agreed at different levels that the M&M sector should make their research results accessible to as wide a public as possible.

Correlation=0,98

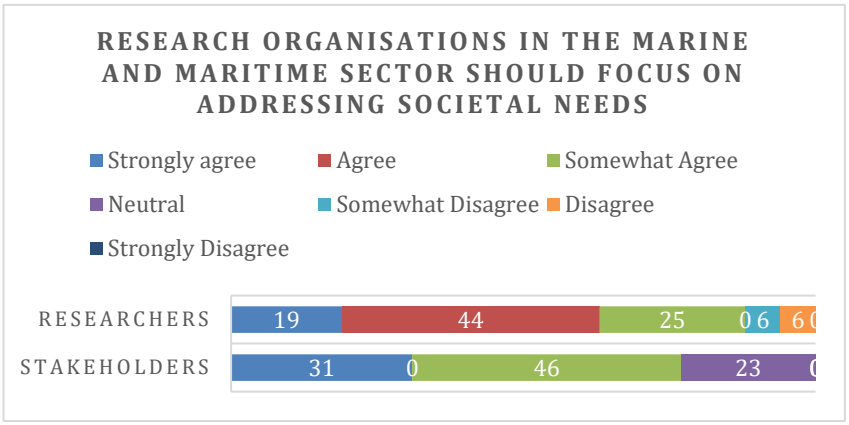
	70% of researchers and 53% of stakeholders think that SU takes steps to make the results of its work accessible to as wide a public as possible. Only 6% of researchers and 7% of stakeholders think that no steps were taken, 18% of researchers and 40% of stakeholders are unsure in this respect. Finally, 6% of researchers do not have any opinion.
	50% of researchers and 25% of stakeholders say they are aware of barriers that may be keeping SU from ensuring that its work is accessible to the wider public and all 50% of stakeholders say they are not aware of barriers in this respect. 50% of researchers and 25% of stakeholders are unsure in this respect.
	All researchers and stakeholders agreed at different levels that research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to the public. ***Correlation=0,93***

	All researchers and 90% of stakeholders disagreed at different levels that SU should avoid communicating its work results to the public. 7% of researchers strongly agreed, and 10% of stakeholders were neutral in this respect. ***Correlation=0,97***
	Researchers and stakeholders have very different opinions that the best time for marine & maritime research organisations to talk to the public about their work is at the very end of the process; only 14% of researchers somewhat agreed, and 10% of stakeholders agreed on this. 20% of stakeholders were neutral. 86% of researchers and 70% of stakeholders disagreed on that at different levels. We observe a very low and negative value for correlation. Researchers and stakeholders provided answers distributed among four (different) of the seven Likert scale's values. Researchers did not provide any answer with the Strongly agree, the Agree and the Neutral values. Stakeholders did not provide any answer with

	Strongly agree, Somewhat agree and Disagree values. Comparing the researchers' and stakeholders' percentages of answers associated with the values of the Likert scale, they are very different, and slightly inversely proportional (a low and negative correlation). ***Correlation=-0,07***
	All researchers and stakeholders agree at different levels that SU enthusiastically communicates findings from its work to the public. ***Correlation=0,7***

The stakeholders' and researchers' answers show strong correspondence, except for the question on the phase of the research process in which the public should be involved. Taking into account this issue, actions should be taken to increase researchers' awareness about the importance to talk to the public not only at the very end of the process after all the work has been completed, but throughout the research and innovation process. Furthermore, many researchers and stakeholders chose the options: "Unsure", "No opinion/not applicable" and "No" for the questions about the steps taken by SU and the barriers of engaging with the public. Therefore, it is suggested that SU communicates the steps it takes to make its research widely accessible to the public.

SOCIETAL NEEDS



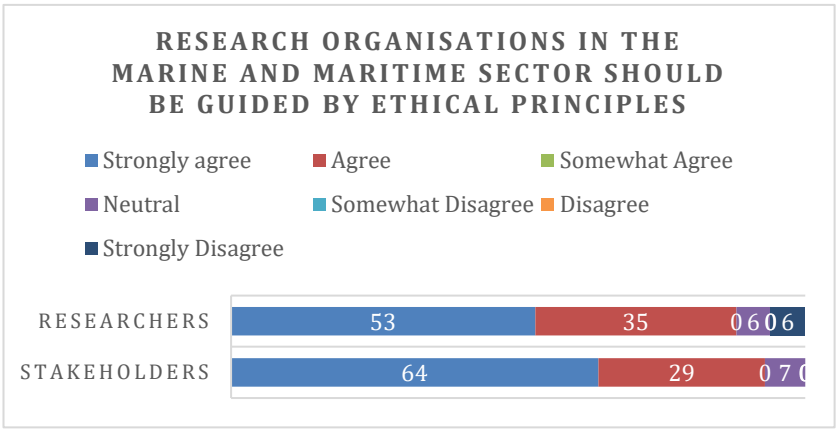
88% of researchers and 77% of stakeholders agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs, 23% of stakeholders were neutral, and 12% of researchers disagreed at different levels.

Though researchers and stakeholders agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs, we observe a very low value for correlation. Researchers provided answers distributed among five of the seven Likert scale values, and stakeholders provided answers distributed among three of the seven values of the Likert scale.

Correlation=0,17

Stakeholders and researchers' answers, upon comparison, show a very low level of correspondence even if they generally believe that addressing societal needs are crucial for guiding research; this indicates that they have different perceptions about the level of importance. Moreover, 23% of stakeholders chose the option: "Neutral" for the question whether organisations in the marine and maritime sector should focus on addressing societal needs. Therefore, SU is suggested to engage its stakeholders and understand the reason behind the neutral choice.

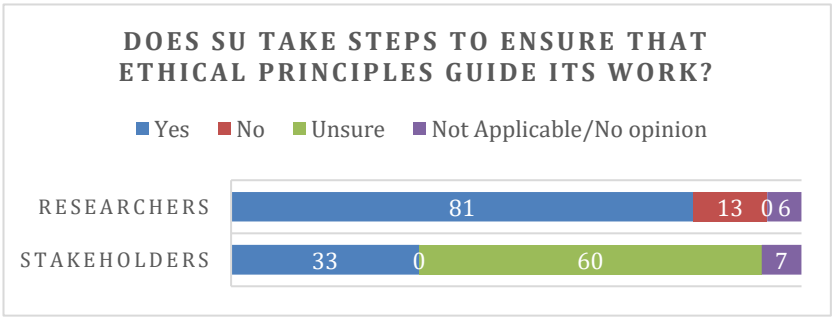
ETHICS



88% of researchers and 93% of stakeholders agreed at different levels that ethical principles should guide research organisations in the M&M sector; 6% of researchers and 7% of stakeholders were neutral. 6% of researchers strongly disagreed.

It is suggested that SU will understand why some of its employees/ staff do not believe that organisations in M&M sector should follow ethical principles.

Correlation=0,98



81% of researchers and 33% of stakeholders think that SU takes steps to ensure that ethical principles guide its work, while 13% of researchers believe that no steps were taken. 60% of stakeholders are unsure in this respect. 6% of researchers and 7% of stakeholders do not have any opinion.

No specific issues emerged concerning Ethics, as stakeholders' and researchers' opinions have a very high correspondence, and they agreed that ethical principles should guide research organisations; however 6% of the researchers strongly disagreed that ethical principles should guide research organisations in the M&M sector. 67% of the stakeholders chose the options: "Unsure", "No opinion/ not applicable" for the question about the steps taken by SU. Therefore, SU is suggested to communicate to its stakeholders, the steps it takes to address ethical concerns in research and also to understand why some of the researchers strongly disagreed.

A.5 WavEC

A.5.1 Observations from the objective data collected in the Top-Down Survey

WavEC has about twenty-five employees. The policies concerning the RRI aspects as a whole are not formalised in strategic and planning documents, but the staff follows an informal set of rules. The RRI key of Open Access has dedicated staff members with the responsibility to provide support.
The organisation's strategic management structure carries out the governance of the aspects related to RRI keys. Data related to RRI keys are partially collected and very few RRI-related trainings are organised in WavEC.

Regarding Gender equality, WavEC has clear policies defined in the "Equal Opportunities Policy" document of the organisation. Gender equality is promoted in jobs applications and recruitment.
WavEC does not have any staff member with an explicit responsibility related to Gender Equality and did not organise trainings in the last two years on gender equality.

It is therefore suggested to identify people who can be assigned responsibility on Gender Equality related activities.

Concerning Open Access, WavEC does not have written policies or procedures and data.
Concerning the engagement of external stakeholders, WavEC centrally records data of research and innovation collaborations.
Concerning Research Ethics and Research Integrity, WavEC has a policy document illustrating the principles to follow. WavEC does not have procedures for ethics review, and procedures to follow if a researcher or staff member feels there has been immoral or unethical behaviour.
Concerning Science Education/Outreach WavEC has neither written policies nor any staff members explicitly responsible for providing practical support. Some initiatives related to Science education were carried out, but no data were collected.

It is suggested that the Action Plan includes the development of written policies and processes (and improve those already available) for Open Access, Public Engagement, Research Ethics and Research Integrity, and Science Education/Outreach. It is recommended that dedicated staff members who can support these RRI aspects are identified and roles assigned. It is understood that (due to the small size of the organisation) the documentation would be simpler than in big organisations. It is advised that trainings related to RRI- aspects are organised and data collected.

<u>Objective quantitative data provided by the organisation (data available to the consortium and the evaluators):</u>
The staff composition is relatively balanced between women and men. Women are distributed from the grade 1 (the lowest) to the grade 5 (with grade we mean the position level in career), while men from Grade 2 to Grade 6. This distribution is reflected in the salary level. More men than women left the organisation in the past two years, and both men and women had fixed term and permanent contracts. All the employees in WavEC are of white ethnicity, and the staff who left the organisation were of white ethnicity.
WavEC did not organise trainings related to the RRI aspects or did not collect data about trainings till 2020.

A.5.2 Main elements from the interviews

This section is divided into two parts: part A and part B. Part A describes the barriers and possible resolutions, as discussed during the interview. In particular, the interview enabled us to extend information acquired about the advantages and barriers in implementing RRI, complementing information coming from researchers and stakeholders' opinions (Bottom-up survey) and actions suggested to overcome these barriers.
Part B specifies how RRI could contribute to realizing the goals of the organisation? We know from the literature that the single most important barrier to the design and implementation of RRI in organisations is a misalignment of incentives and responsibilities. Usually, there are inherent tensions between RRI practice and the specific performance goals of an organisation. The questions in this section try to assess the gaps between what exists in the organisation and where the organisation would like to find itself in the future.

Part A: Barriers and Actions

Starting point	Action
1a How does the RRI initiative help deliver the organisation's performance goals?	1b What needs to be done so that RRI initiative will help deliver the organisation's performance goals?
Answer: It helps the organisation to be more open and collaborative to the society, creating business opportunities in emerging markets.	**Answer:** To orient the team for the RRI initiative so that it becomes adopted and institutionalised. To position RRI as "business as usual".
2a How are RRI considerations incorporated into business decisions on key topics such as recruitment, research topics and methodology, working with 3rd parties, application for funding, collaboration or other initiatives?	2b What needs to be done so that RRI considerations are incorporated into business decisions?
Answer: In recruitment, gender issues are taking into consideration. On other key decisions, there is less awareness of RRI practices.	**Answer:** Training to all staff on RRI. Resources available for its implementation. Incentive its adoption by all.
3a To what extent are managers (and other employees) evaluated and held accountable for the organisation's RRI performance, either directly or indirectly?	3b What must be done so that managers (and other employees) evaluated and held accountable for the organisation's RRI performance, either directly or indirectly?
Answer: Presently it is not incorporated in the evaluation of the organisation's performance.	**Answer:** To institutionalise and have it adopted as internal procedures.
4a What mechanisms are in place to monitor and respond to what is working and what is not?	4b What mechanisms are in place to monitor and respond to what is working and what is not?
Answer: WavEC has been audited and certified with ISO 9001 that considers some management procedures and respective monitoring.	**Answer:** Questions 4b and 4a are the same.

5a How effectively does an organisation create the conditions to enable RRI implementation (e.g., inclusive environment)?	5b What can be done to create the conditions that enable RRI implementation (e.g., inclusive environment)?
Answer: When the organisation incorporates critical discussions around this initiative and concrete action; When RRI is included in the organisation's vision, mission and values.	**Answer:** Not sure about the difference between this question and questions 5a. So, we just rephrased: By incorporating critical discussions around this initiative and concrete actions in the organisation; By including in the organisation's vision, mission and values.

Part B: Acquiring buy-in: the ROI of RRI

How can the RRI dimensions promote your organisation's goals?

RRI dimensions	WavEC
Gender equality, diversity and inclusion	Funding, because European and national funding projects have a section asking for some of the RRI pillars, so when there is a requirement in a proposal for taking into consideration, we have to do so.
Social Engagement	Both social engagement and open science help promote our work, encouraging collaboration which is also a goal.
Open Science	We want to promote our organisation by promoting papers and reports on our websites and our social-networks.
Science Education	N/A
Ethics	Our organisation is a national reference. Our seminars are known in Europe as a reference. Our reputation as a consultancy is central to our business, so we must follow the key trends to maintain our position as an example and reference for the national environment.

Interviewees were asked to share in what way their organisation identified itself as interdisciplinary. To elicit responses, we presented a list of interdisciplinary topics in M&M research. We asked how relevant they are for the RP(F)Os and how likely their research and teaching would involve these dimensions. The results are presented in the Table below.

Interdisciplinary topics	WavEC
Is your organisation Interdisciplinary?	Yes, there is a high level of interdisciplinarity, as it targets participants with different backgrounds and interest in engineering, biology, economic sciences, policy-making and governance
Interdependencies of the environment & human rights to connect across sectors	It is related to our ongoing projects on licencing processes and environmental monitoring methodologies for marine energy development
Sharing Knowledge in science dialogue with civil society	It is related to our ongoing projects on public outreach and educating local communities on marine energy benefits.
climate-proofing fisheries for equity and sustainability, integrating traditional knowledge of local fisheries	It is related to our ongoing services related to the ocean clean up.

Marine bio-diversity and hidden trade-offs in the deep sea	It is related to our ongoing activities on environmental monitoring and fields campaigns.
Empowering sustainable and equitable "blue societies": cultural heritage, marginalized knowledge, practices and economies	This is less relevant, as it is not related to our ongoing projects.

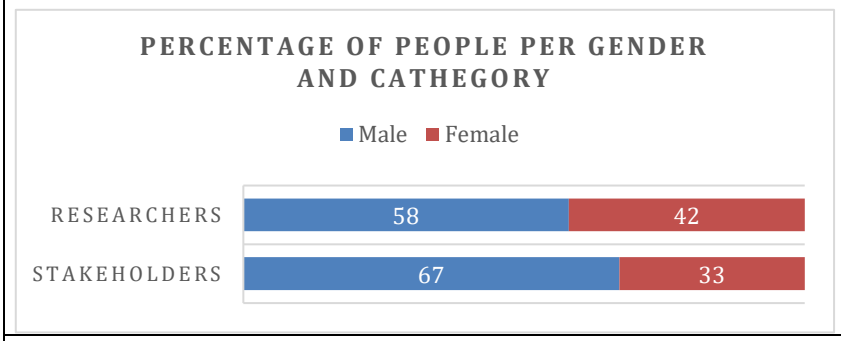
A.5.3 Comparison of researchers' and stakeholders' opinions in WavEC

This section compares opinions among stakeholders and researchers from WavEC for the questions in the bottom-up surveys to verify correspondences between the opinions provided by stakeholders and those of researchers.

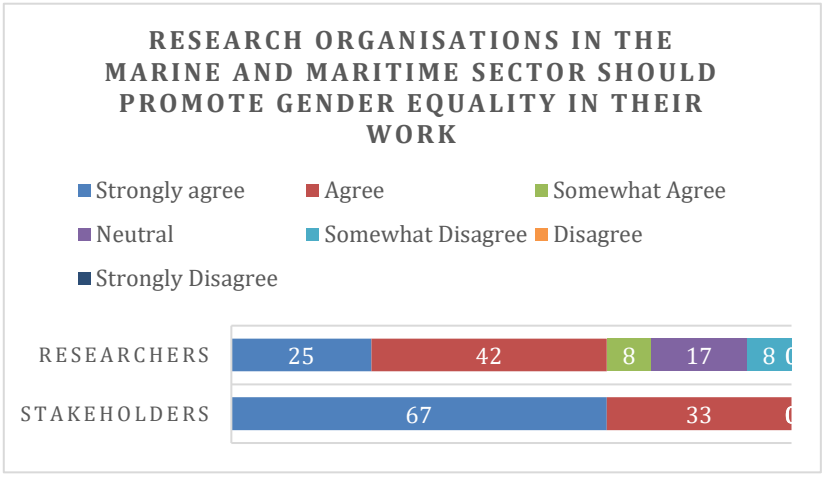
The graphs provide a visual representation to verify if the stakeholders' and researchers' opinions in each organisation are related.

We did not consider the Pearson correlation values between the researchers' and stakeholders' answers, as the number of stakeholders who responded to the questions of the bottom-up survey was equal to or less than 3.

GENDER EQUALITY

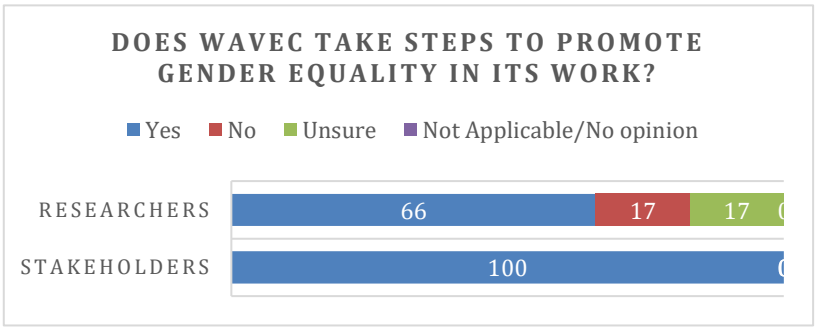
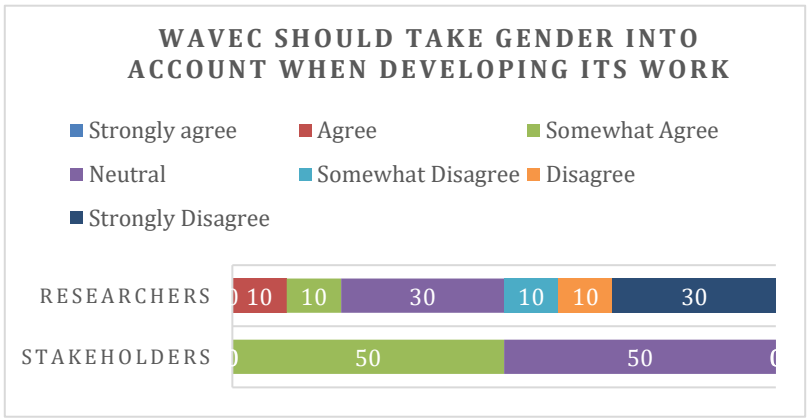
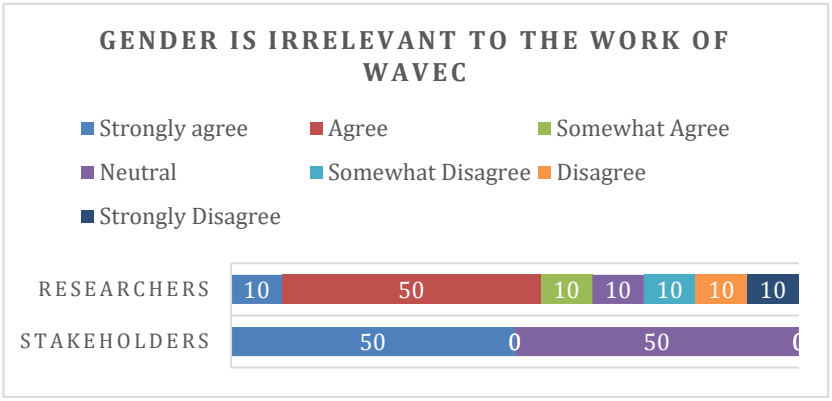


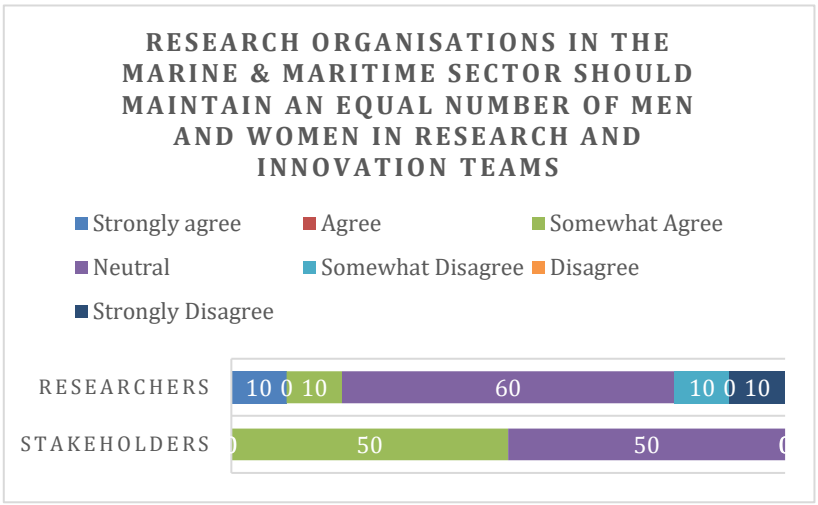
12 Researchers participated in the survey from WavEC, 58% men and 42% women. Three stakeholders participated (2 men and 1 woman).



All stakeholders and 75% of researchers agreed at different levels that research organisations in the M&M sector should promote gender equality in their work. 17% of researchers were neutral, and 8% somewhat disagreed in this respect.

Since only 3 stakeholders answered this question, we do not provide the correlation.

	All stakeholders and the majority (66%) of researchers who answered are aware of the steps that the organisation has taken to promote Gender Equality in its work; 17% of researchers think that no steps were taken in this respect and 17% are unsure. Since only 3 stakeholders answered this question, we do not provide the correlation.
	20% of researchers agreed at different levels, and 1 stakeholder somewhat agreed that WavEC takes gender into account when developing its work. 30 % of researchers and 1 of the stakeholders was neutral in this respect (only 2 stakeholders provided an answer to this question). Finally, 40% of researchers disagreed at different levels. Since only 2 stakeholders answered this question, we do not provide the correlation.
	Only 2 stakeholders answered this question; 1 of them strongly agree, the second one is neutral that Gender is irrelevant to the work of WavEC. 70% of researchers agreed at different levels that Gender is irrelevant to the work of WavEC. Since only 2 stakeholders answered this question, we

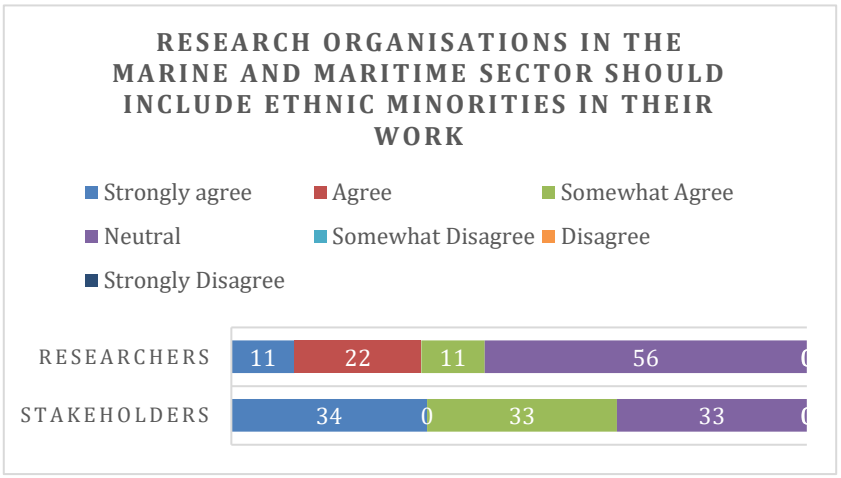
	do not provide the correlation.
	20% of researchers agreed at different levels, and 20% disagreed at different levels for the question that research organisations in the M&M sector should maintain an equal number of men and women in R&I teams; 60% were neutral. Only 2 stakeholders provided an answer to this question. One somewhat agreed and the second one was neutral. Since only 2 stakeholders answered this question we do not provide the correlation.

The answers to the bottom-up survey show us that it is necessary to improve the awareness about gender relevance in the organisation's work and the importance of taking gender into account when planning research and innovation activities.

Furthermore, both researchers and stakeholders sometimes chose the options: "Neutral", "Unsure", "No opinion/not applicable" or they indicated that they were unaware or did not know the answer to a particular question.

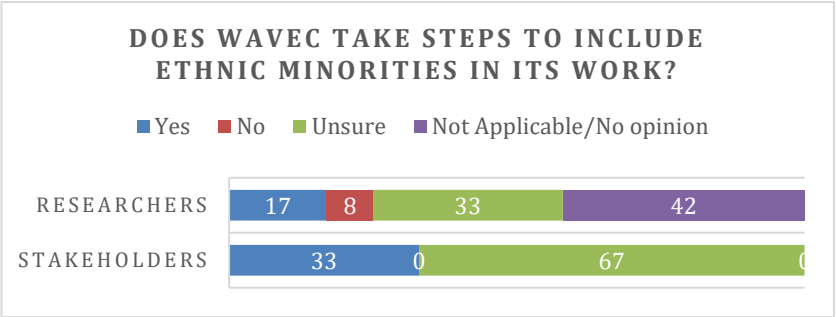
WavEC is suggested to promote a debate on gender issues involving researcher and stakeholders. WavEC should better communicate the steps it takes in promoting gender equality. WavEC is also suggested to understand why only some stakeholders provided an answer.

ETHNIC MINORITY



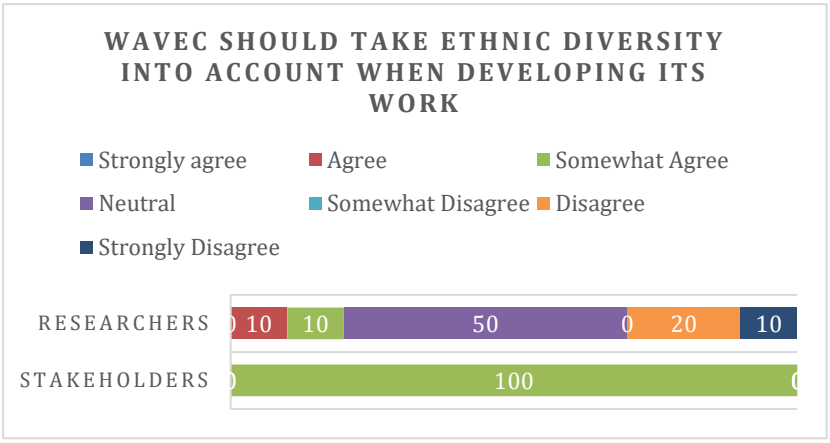
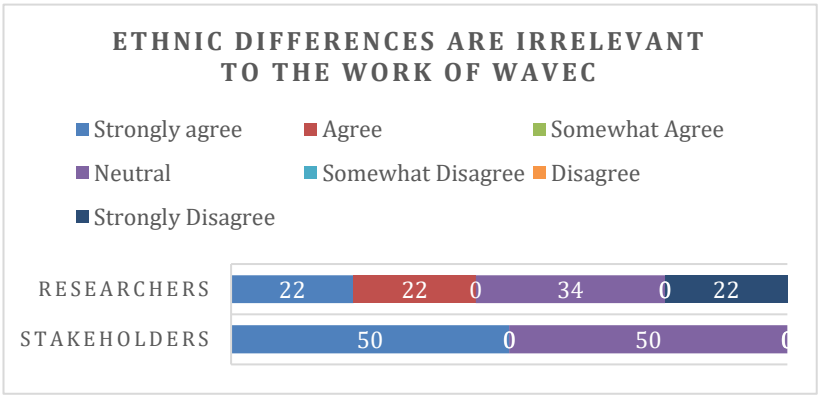
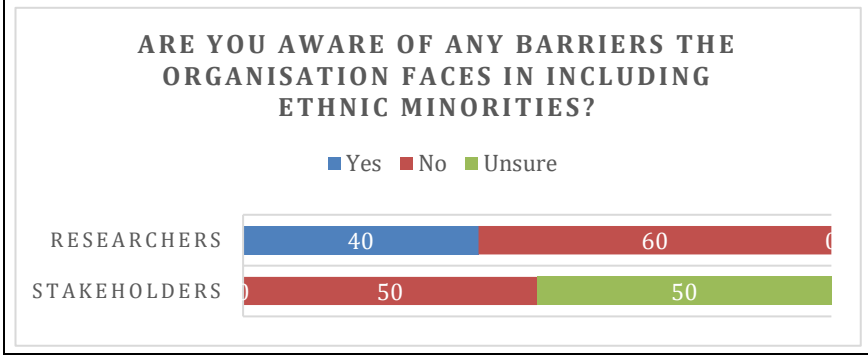
All stakeholders who participated in the survey agreed on this at different levels (67%) or were neutral (33%), while 44% of researchers agreed at different levels and, 56% were neutral for the survey question whether research organisations in the M&M sector should include ethnic minorities in their work.

Since only 3 stakeholders answered this question, we do not provide the correlation.



17% among researchers are aware of the organisation's steps to include ethnic minorities in its work. 33% of them are unsure, 8% think that the organisation does not take any steps, and 42% do not have an opinion.

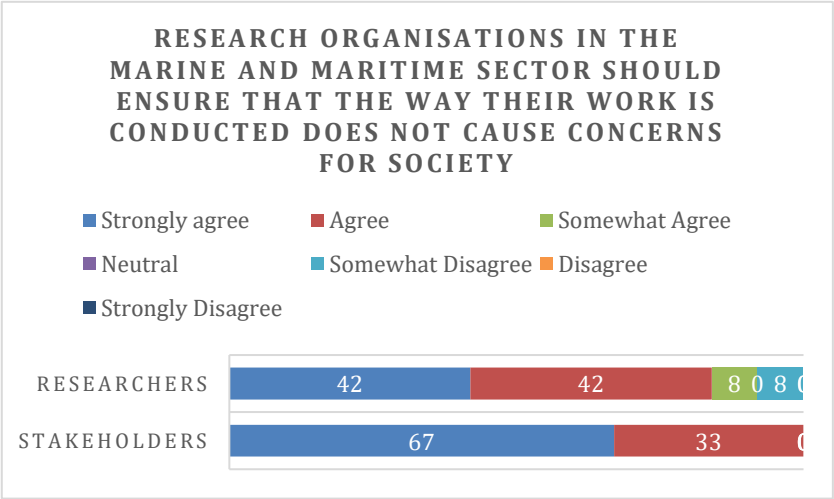
Of the three stakeholders who participated in the survey, 1 among the stakeholders who answered is aware of the organisation's steps to include Ethnic Minorities and 2 among them are unsure.

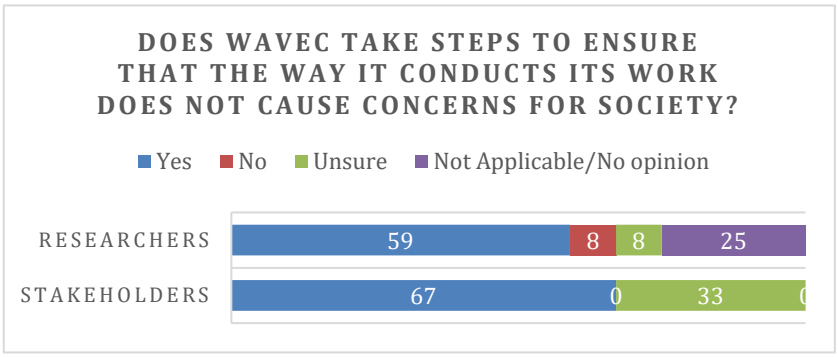
	20% of researchers agreed at different levels that WavEC should take ethnic diversity into account when developing its work. 50% of researchers were neutral in this respect, and 30% disagreed at different levels. Only 2 stakeholders answered this question and they selected the option somewhat agree. Since ≤3 stakeholders answered this question we do not provide the correlation.
	44% of researchers agreed at different levels that ethnic differences are irrelevant to the work of WavEC. 34% was neutral and, 22% of researchers strongly disagreed in this respect. Only 2 stakeholders answered this question; one of them strongly agreed and one was neutral that ethnic differences are irrelevant to the work of WavEC. Since ≤3 stakeholders answered this question we do not provide the correlation in this case.
	40% of researchers are aware of barriers that the organisation faces in including ethnic minorities. 60% of researchers are not aware in this respect. Only two stakeholders responded to this question. One said they were not

	aware of any barrier; the other one responded as being unsure.

The answers to the questions in the bottom-up survey related to ethnic minority return many opinions. We did not calculate the correlation of answers from researchers and stakeholders as ≤3 stakeholders participated in the survey and responded to the various questions.
Very few researchers agreed about the need to take ethnic diversity into account when the organisation is going to develop its work. Furthermore, both researchers and stakeholders sometimes chose the options: "Neutral", "Unsure", "No opinion/Not applicable" or they didn't know or were unaware. WavEC is suggested to promote a debate in including minorities involving researcher and stakeholders. Furthermore, it is suggested that WavEC communicates the steps taken in including minorities.
Finally, WavEC is suggested to take actions to understand the reason of the neutrality of many researchers and why only some stakeholders provided an answer.

CONCERNS FOR SOCIETY

	92% of researchers agreed at different levels that research organisations in the M&M sector should ensure that the work they do does not cause concerns for society, but 8% of researchers somewhat disagreed in this respect. Of the 3 stakeholders who participated in the survey, two of them strongly agreed and 1 agreed that research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society. Since only 3 stakeholders answered this question, we do not provide the correlation in this case.

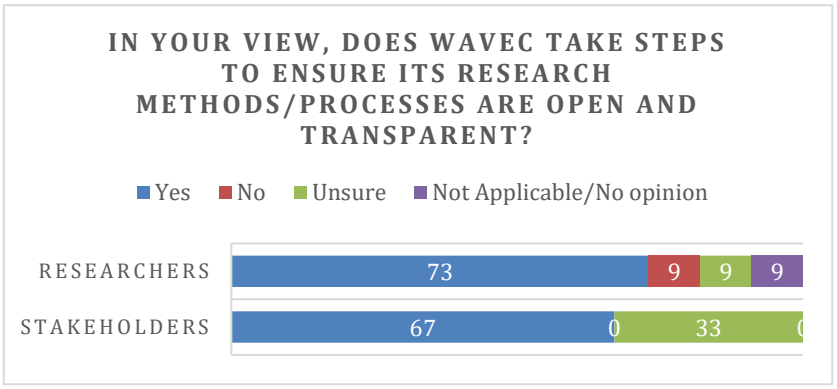


The majority of researchers (59%) think that WavEC takes steps for avoiding any concerns for society. 8% of them believe that WavEC did not take any step for this purpose, 8% are unsure and 25% of them chose the opinion "no opinion/ not applicable".

Of the 3 stakeholders who participated in the survey, 2 of them think that WavEC takes steps for avoiding any concerns for society, and 1 is unsure.

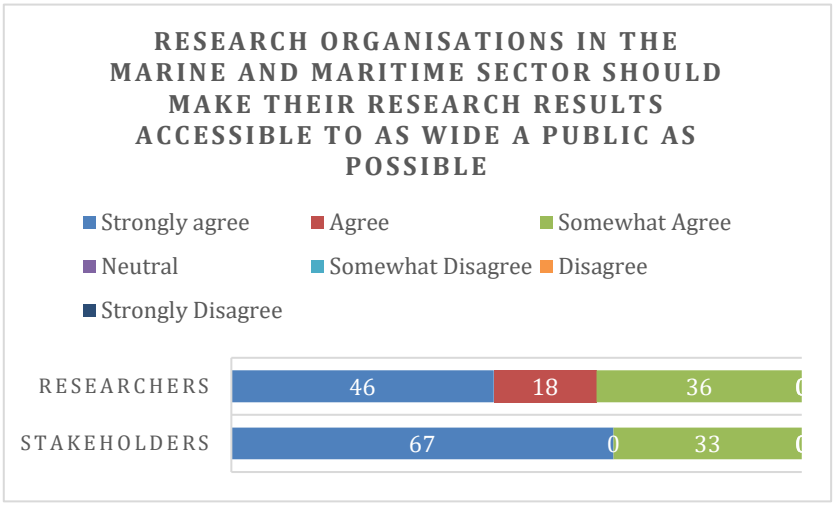
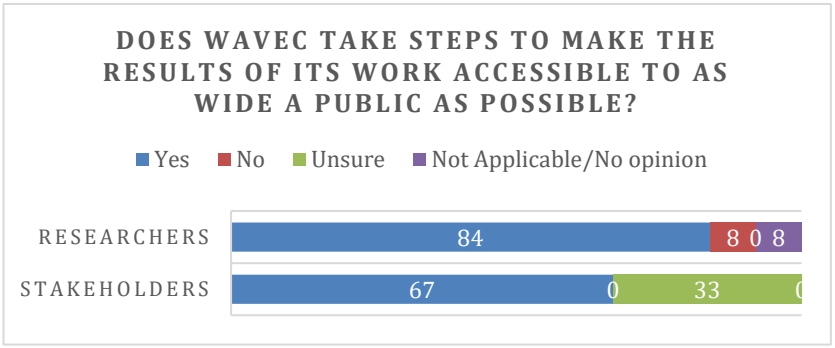
The answers to the questions in the bottom-up survey related to concerns for society return us researchers' and stakeholders' opinions in WavEC, indicating their awareness of the importance of considering concerns for society. However, both researchers and stakeholders frequently chose the options: "Unsure", "No opinion/not applicable". It is suggested to promote a debate on steps and barriers for reducing concerns for society.

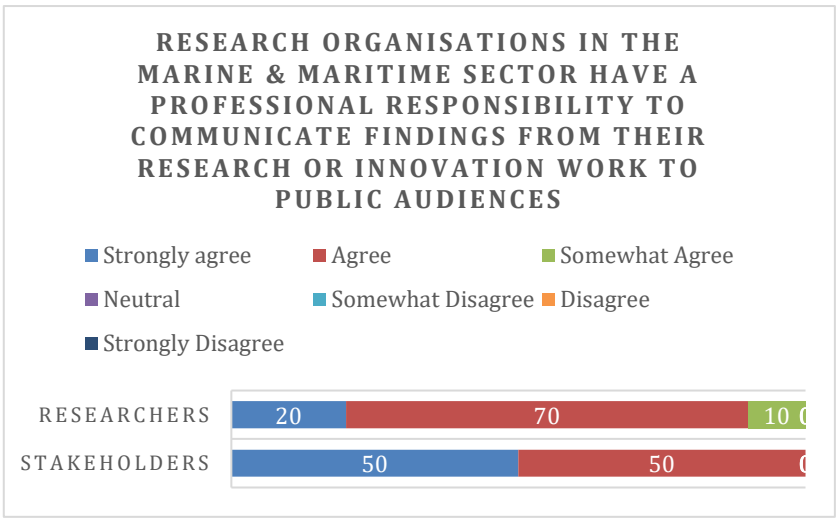
OPEN SCIENCE



73% of researchers think that WavEC take steps to ensure openness and transparency within its research methods and processes, 9% were unsure, 9% think that WavEC took no steps, and 9% of researchers do not have any opinion.

Of the 3 stakeholders who participated in the survey; 2 of them think that WavEC take steps to ensure openness and transparency within its research methods and processes, and 1 is unsure.

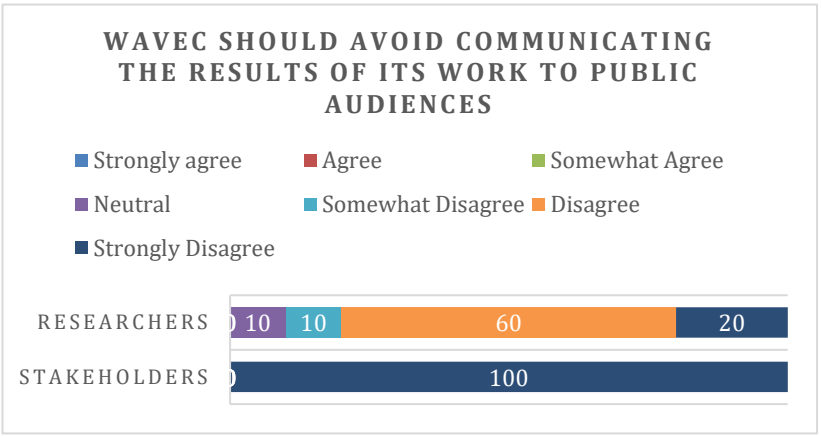
	Researchers agreed at different levels that the M&M sector should make their research results accessible to as wide a public as possible. Of the 3 stakeholders who participated in the survey; 2 of them strongly agree that the M&M sector should make their research results accessible to as wide a public as possible, and 1 somewhat agreed. Since only 3 stakeholders answered this question, we do not provide the correlation.
	The majority of researchers (84%) think that WavEC take steps to make the results of its work accessible to as wide a public as possible; 8% of them think that no steps were taken, and 8% chose the opinion “no opinion/ not applicable”. Of the 3 stakeholders who participated in the survey; 2 of them believe that WavEC take steps in this respect, and 1 is unsure.



All researchers and stakeholders who provided an answer agreed at different levels that research organisations in the M&M sector have a professional responsibility to communicate findings from their research or innovation work to the public.

Only 2 stakeholders provided their responses to this question; 1 strongly agreed and the other agreed that research organisations in the M&M sector have a professional responsibility to communicate findings from their research or innovation work to the public.

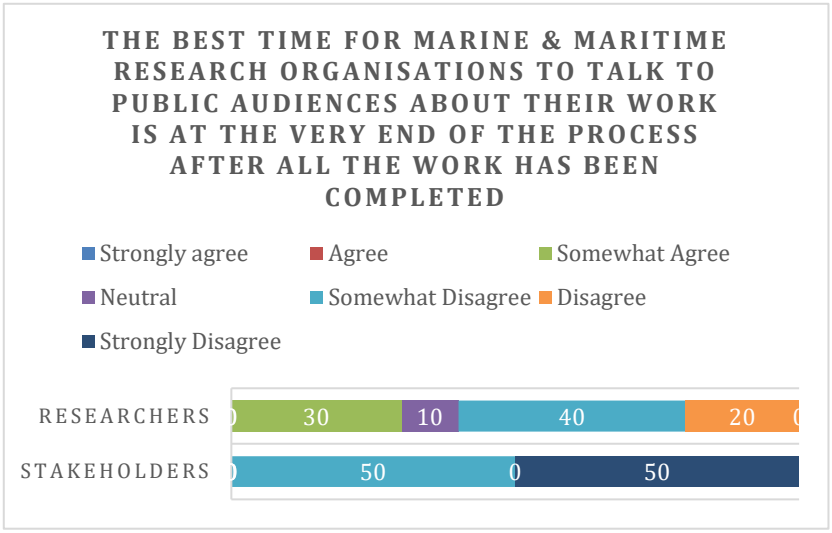
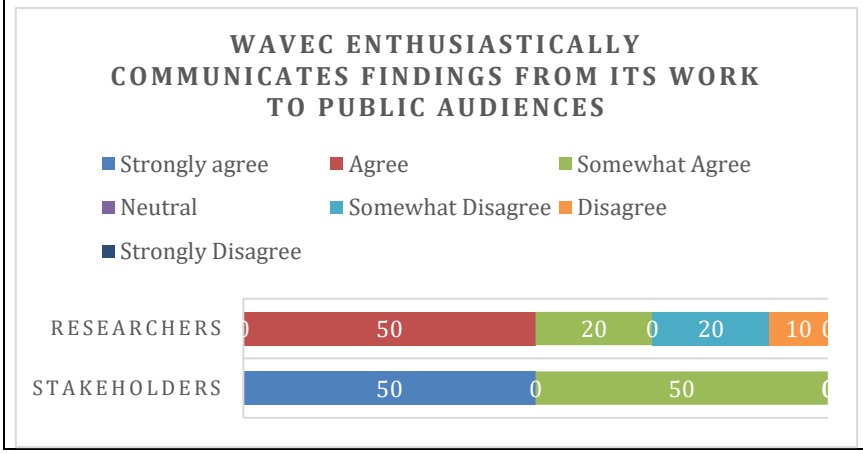
Since only 2 stakeholders answered this question, we do not provide the correlation.



90% of researchers disagreed at different levels that WavEC should avoid communicating the results of its work to the public.

Only 2 stakeholders provided an answer to this question, and they strongly disagreed.

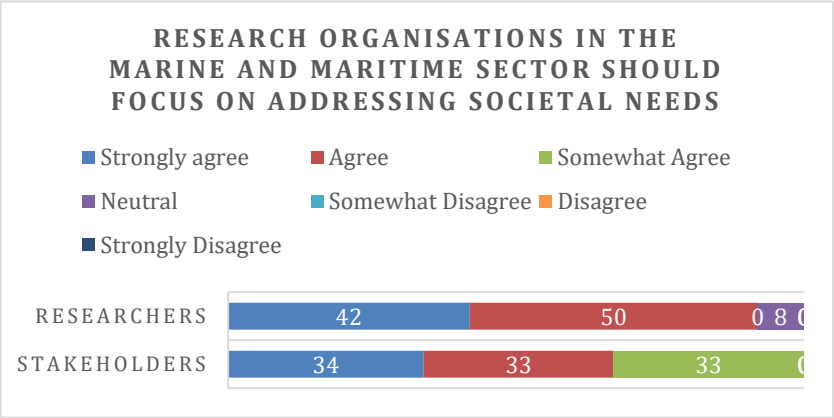
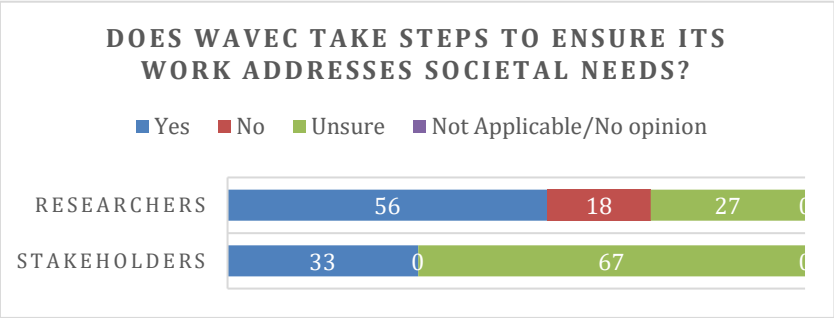
Since only 2 stakeholders answered this question, we do not provide the correlation.

	30% of researchers somewhat disagreed that the best time for M&M research organisations to talk to the public about their work is at the very end of the process after all the work has been completed. 10% of them were neutral, and 60% disagreed at different levels on this issue. Only 2 stakeholders answered; 1 somewhat disagreed, and 1 strongly disagreed that the best time for M&M research organisations to talk to the public about their work is at the very end of the process after all the work has been completed. Since only 2 stakeholders answered this question, we do not provide the correlation.
	70% of researchers agreed at different levels that WavEC enthusiastically communicates findings from its work to the public; 30% of them disagreed on that at different levels. Since only 2 stakeholders answered this question, we do not provide the correlation.

The stakeholders' and researchers' answers have mainly responses that are in the range coming from "somewhat agree" to "strongly agree", except for the phase of the research process in which the public should be involved and the perception of WavEC communication activities (more positive among the stakeholders than among researchers, even though only ≤3 stakeholders provided their answers). Considering this issue actions should be taken for increasing researchers' awareness about the importance to talk to public not only at the very end of the process after all the work has been completed.

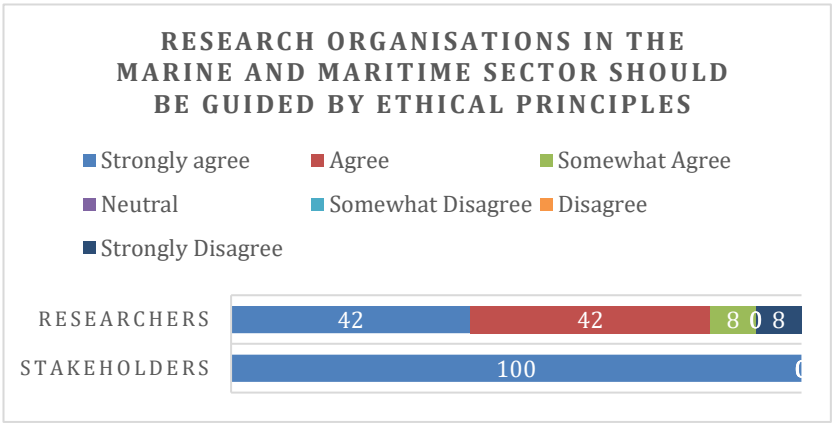
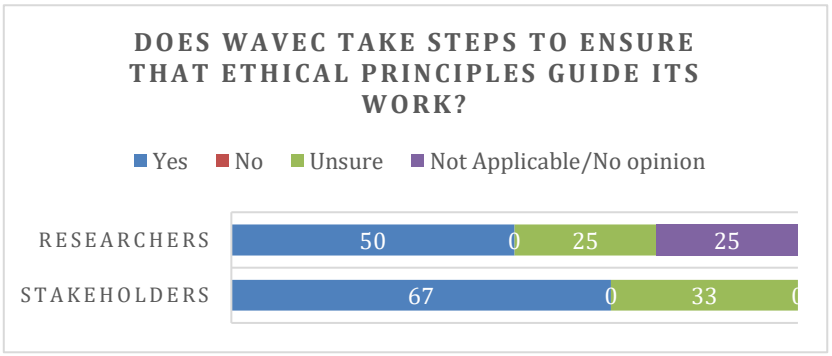
Furthermore, some stakeholders chose the option: "Unsure", for the questions about the steps taken by WavEC. Therefore, WavEC is suggested to communicate better its actions for addressing Open Science. Since for some questions, stakeholders surveyed did not respond, WavEC is suggested to understand why only some stakeholders provided an answer.

SOCIETAL NEEDS

<table>
<tr>
<td> 
</td>
<td>92% of researchers agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs, and 8% of researchers were neutral in this respect.
Of the 3 stakeholders who participated in the survey; 1 responded as strongly agree, the second one as agree, and the third one as somewhat agree.
Since only 3 stakeholders answered this question, we do not provide the correlation.</td>
</tr>
<tr>
<td> 
</td>
<td>The majority of researchers (56%) and only 33% of stakeholders think that WavEC has taken steps to ensure its work addresses societal needs, and 18% of researchers believe that no steps have been taken. 67% of stakeholders and 27% of researchers are unsure in this respect.</td>
</tr>
</table>

The stakeholders' and researchers' answers show us that they agree that research organisations in the marine and maritime sector should focus on addressing societal needs. Many researchers and stakeholders chose the options: "Unsure", for the question about the steps taken by WavEC. Therefore, WavEC is suggested to communicate better the steps it takes to address Societal Needs.

ETHICS

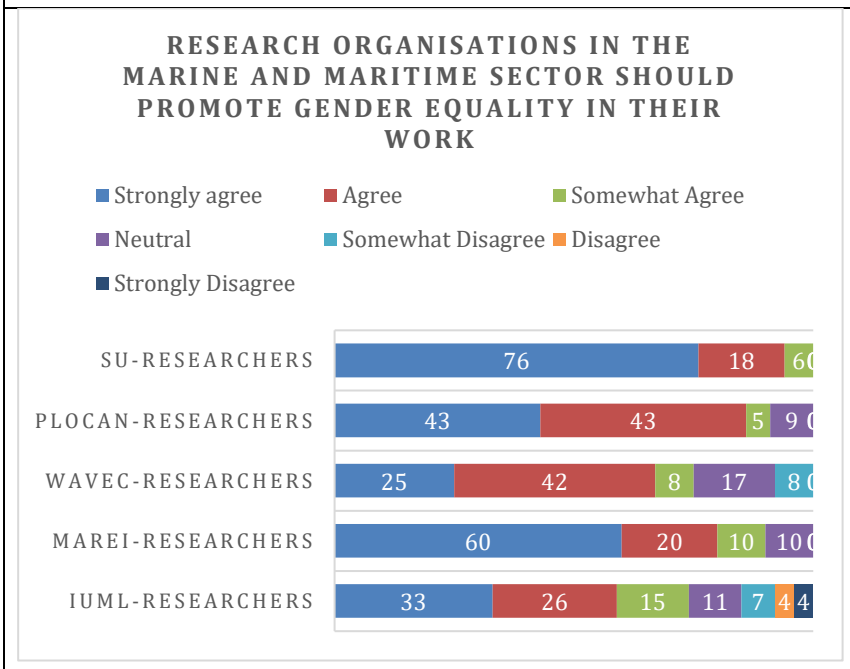
	92% of researchers agreed at different levels that ethical principles should guide research organisations in the M&M sector; only 8% of researchers strongly disagreed on this. All stakeholders strongly agreed that ethical principles should guide research organisations in the M&M sector. Since only 3 stakeholders answered this question we do not provide the correlation in this case.
	The majority of stakeholders (67%) and 50% of researchers think that WavEC takes steps to ensure that ethical principles guide its work; 25% of them are unsure. The remaining 25% of researchers do not have an opinion. Of the three stakeholders who participated in the survey; 2 of them believe that WavEC take steps to ensure that ethical principles guide its work, and 1 is unsure. Since only 3 stakeholders answered this question we do not provide the correlation in this case.

Stakeholders' and researchers' answers to the question if they agreed that ethical principles should guide research organisations show that they agree on that at different levels. Many researchers and one stakeholder chose (of the 3 who took part in the survey) the options: "Unsure", for the question about the steps taken by WavEC. Therefore, WavEC is suggested to communicate better the steps it takes for addressing Ethics, especially for its own staff. Finally, WavEC is suggested to take actions to understand why only some stakeholders provided an answer.

Appendix B – horizontal analysis among organisations

B.1 Researchers horizontal analysis

This section compares the answers of the bottom-up survey provided by the researchers of the five RP(F)Os, showing their graphical representation and providing the correlation between the responses.
This comparative analysis aims to understand if some characteristics of the organisation, such as the size, the formalization of policies in documents, etc., influence the researchers' perception.
This analysis should not be perceived as a benchmarking exercise of the 5 organisations as the number of respondents does not represent a valid statistical sample. The analysis is presented here to support and enrich reflective processes in the organisations and promote discussions with regard to the RRI dimensions.
Please note that the correlation is classified as high if its value is greater or equal to 0,7, it is medium for values greater than or equal to 0,3 and less than 0,7. The correlation is low for values that are lower than 0,3.
The first row of the following tables contains the question; the second row contains the graph and its associated comment for the five organisations. This approach is repeated for all the questions of the bottom-up survey.

A= Research organisations in the marine and maritime sector should promote gender equality in their work	
	The majority of researchers in all the five organisations agreed at different levels that research organisations in the M&M sector should promote gender equality in their work. Only 8% of researchers from WavEC somewhat disagreed, and 15% from SU disagreed at different levels. 10% to 17% of respondents (in four of the five organisations) were neutral in this respect.

The correlation matrix of the answers given by the five organisations' researchers to question A shows all very high values (except for the correlation equal to 0,50 between WavEC and SU and the correlation equal to 0,59 between MaREI and WavEC). This aspect, considering that for all organisation the majority of researchers agreed at different levels, makes evident a uniformity in the awareness for promoting gender equality which is independent from the organisation's size (based on the number of employees),

and its type: Policies and practices on gender equality are defined at different levels in all the organisations.

MaREI

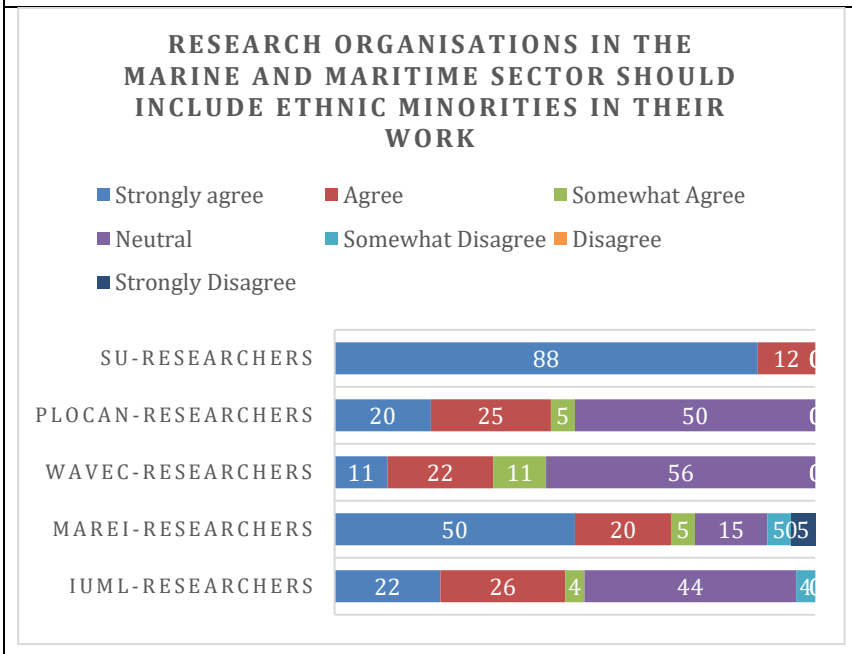
```
CORRELATION
     /VARIABLES =  A_IUML_Researchers A_MaREI_Researchers A_WavEC_Researchers A_PLOCAN_Researchers A_SU_Researchers
     /PRINT = TWOTAIL SIG.
```

Correlations

		A_IUML_Researchers	A_MaREI_Researchers	A_WavEC_Researchers	A_PLOCAN_Researchers	A_SU_Researchers
A_IUML_Researchers	Pearson Correlation	1,00	,92	,83	,95	,86
	Sig. (2-tailed)		,004	,021	,001	,012
	N	7	7	7	7	7
A_MaREI_Researchers	Pearson Correlation	,92	1,00	,59	,84	,98
	Sig. (2-tailed)	,004		,159	,018	,000
	N	7	7	7	7	7
A_WavEC_Researchers	Pearson Correlation	,83	,59	1,00	,91	,50
	Sig. (2-tailed)	,021	,159		,004	,252
	N	7	7	7	7	7
A_PLOCAN_Researchers	Pearson Correlation	,95	,84	,91	1,00	,79
	Sig. (2-tailed)	,001	,018	,004		,034
	N	7	7	7	7	7
A_SU_Researchers	Pearson Correlation	,86	,98	,50	,79	1,00
	Sig. (2-tailed)	,012	,000	,252	,034	
	N	7	7	7	7	7

**

B= Research organisations in the marine and maritime sector should include ethnic minorities in their work



The researchers in all five organisations agreed at different levels or were neutral that research organisations in the M&M sector should include ethnic minorities in their work. There are differences in the percentage with which researchers agreed or were neutral.

Finally, 4% of respondents from IUML somewhat disagreed on that, and 10% from MaREI disagreed at different levels.

The researchers' answers to question B (as in the stakeholders' answers to question B in section B.2) return a correlation matrix containing values that vary greatly. The highest correlation values are between IUML and WavEC (0.93), IUML and PLOCAN (0.99), MaREI and SU (0.95), and WavEC and PLOCAN (0.97). Low correlation values (sometimes negative as in the case of WavEC and SU) was also found out. As for the case of gender equality, it seems that the size of the organisation is not explicitly connected with the answers provided in question B on ethnic minorities.

SU seems to be the most aware organisation with regard to ethnic composition as it gathers data regarding ethnicity of staff members. Even if the majority of the staff members are “White”, there are also other ethnic or mixed groups. This can be an element that has stimulated a reflection on the importance to promote diversity and inclusiveness. SU, MaREI and PLOCAN are the organisations that have formalised policies and strategies, which are available publicly; SU and MaREI have specific boards or structures dedicated to EDI issues ; they follow the governance structures of Universities in which they are housed in or are part of. PLOCAN had explicitly defined official documents, but no structures or staff members were assigned for the purpose; however, it is a small organisation and informal communication can be facilitated. The explication and formalisation of structures, documents, actions, codes, and policies on the RRI issues seem to stimulate dynamism and changes in the staff’s mindset and improve that organisations' maturity level. The presence of boards or structures is important, in particular, for large organisations.

```
CORRELATION
      /VARIABLES =  B_IUML_Researchers B_MaREI_Researchers B_WavEC_Researchers B_PLOCAN_Researchers B_SU_Researchers
      /PRINT = TWOTAIL SIG.
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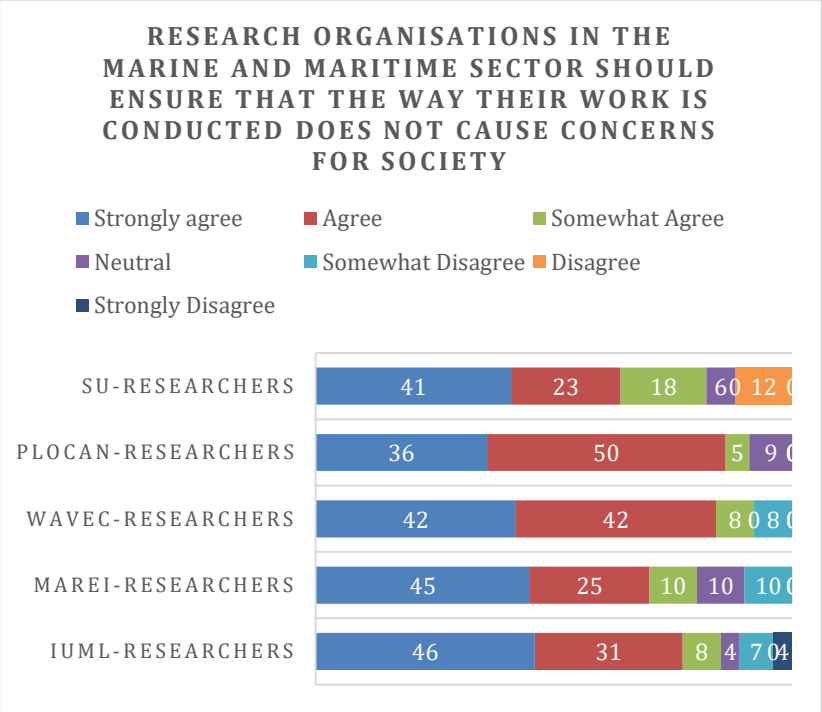
Correlations

		B_IUML_Researchers	B_MaREI_Researchers	B_WavEC_Researchers	B_PLOCAN_Researchers	B_SU_Researchers
B_IUML_Researchers	Pearson Correlation	1,00	,51	,93	,99	,25
	Sig. (2-tailed)		,238	,002	,000	,593
	N	7	7	7	7	7
B_MaREI_Researchers	Pearson Correlation	,51	1,00	,22	,44	,95
	Sig. (2-tailed)	,238		,636	,327	,001
	N	7	7	7	7	7
B_WavEC_Researchers	Pearson Correlation	,93	,22	1,00	,97	-,05
	Sig. (2-tailed)	,002	,636		,000	,916
	N	7	7	7	7	7
B_PLOCAN_Researchers	Pearson Correlation	,99	,44	,97	1,00	,17
	Sig. (2-tailed)	,000	,327	,000		,715
	N	7	7	7	7	7
B_SU_Researchers	Pearson Correlation	,25	,95	-,05	,17	1,00
	Sig. (2-tailed)	,593	,001	,916	,715	
	N	7	7	7	7	7

**

C= Research organisations in the marine and maritime sector should ensure that the way their work is conducted does not cause concerns for society



The majority of researchers in all the five organisations agreed at different levels that research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society. Percentages of respondents that change from 4% to 10% were neutral in four organisations. 8% of respondents in WavEC and 10% in MaREI somewhat disagreed in this respect. Finally, 13% of respondents from IUML disagreed on that at different levels.

The majority of researchers for all the five organisations agreed at different levels (with percentages for each level that does not change a lot from an organisation to another) that research organisations in the marine and maritime sector should ensure that the way their work is conducted does not cause concerns for society. Small percentages somewhat disagreed or strongly disagreed in WavEC, MaREI, SU and IUML No specific issues were observed, which can be directly linked to the size of the organisations.

The correlation matrix of the researchers' answers (in a similar way to stakeholders, see B 5.2) to question C shows all high values which could be due to the fact that all the organisations have official documents related to ethics and research integrity. It could be important in the next phases (Action Plan and Monitoring) to understand why some researchers disagreed at different levels.

```
CORRELATION
    /VARIABLES = C_IUML_Researchers C_MaREI_Researchers C_WavEC_Researchers C_PLOCAN_Researchers C_SU_Researchers
    /PRINT = TWOTAIL SIG.
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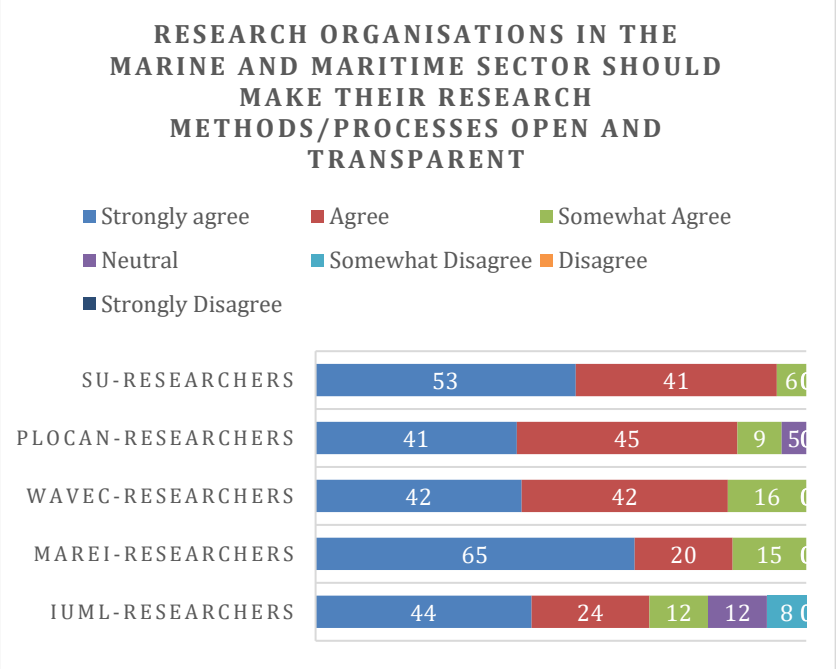
Correlations

		C_IUML_Researchers	C_MaREI_Researchers	C_WavEC_Researchers	C_PLOCAN_Researchers	C_SU_Researchers
C_IUML_Researchers	Pearson Correlation	1,00	,97	,96	,88	,88
	Sig. (2-tailed)		,000	,000	,009	,009
	N	7	7	7	7	7
C_MaREI_Researchers	Pearson Correlation	,97	1,00	,91	,82	,88
	Sig. (2-tailed)	,000		,005	,025	,009
	N	7	7	7	7	7
C_WavEC_Researchers	Pearson Correlation	,96	,91	1,00	,95	,83
	Sig. (2-tailed)	,000	,005		,001	,021
	N	7	7	7	7	7
C_PLOCAN_Researchers	Pearson Correlation	,88	,82	,95	1,00	,75
	Sig. (2-tailed)	,009	,025	,001		,051
	N	7	7	7	7	7
C_SU_Researchers	Pearson Correlation	,88	,88	,83	,75	1,00
	Sig. (2-tailed)	,009	,009	,021	,051	
	N	7	7	7	7	7

**

D= Research organisations in the marine and maritime sector should make their research methods/processes open and transparent	
	All the researchers in three of the five organisations and the majority of the remaining two agreed at different levels that research organisations in the M&M sector should make their research methods/processes open and transparent. 5% of researchers from PLOCAN and 12% from IUML were neutral in this respect. 8% of respondents from IUML somewhat disagreed on that.

The correlation matrix of the researchers' answers to question D shows very high values as the percentages of respondents who strongly agreed, agreed or somewhat agreed.

PLOCAN, MAREI, and SU have written policies and official documents on Open access. Some of them also have specialised boards or structures in the organisation dedicated to the RRI issue. WavEC does not have specific documents or structures, but it follows practices shared in the organisation and compliant with EU values and norms. IUML has no official policy or strategic documents and has no established boards or structures for this purpose. It is also the only organisation with a percentage of researchers who somewhat disagreed that research organisations in the marine and maritime sector should make their research methods/processes open and transparent.

PLOCAN and WavEC (which are small organisations with about 50 employees or less), have results with a correlation value equal to 0,99. Even if WavEC does not have specific documents or structures related to openness, the organisation's small size (25 employees) is facilitative of informal communication and sharing process.

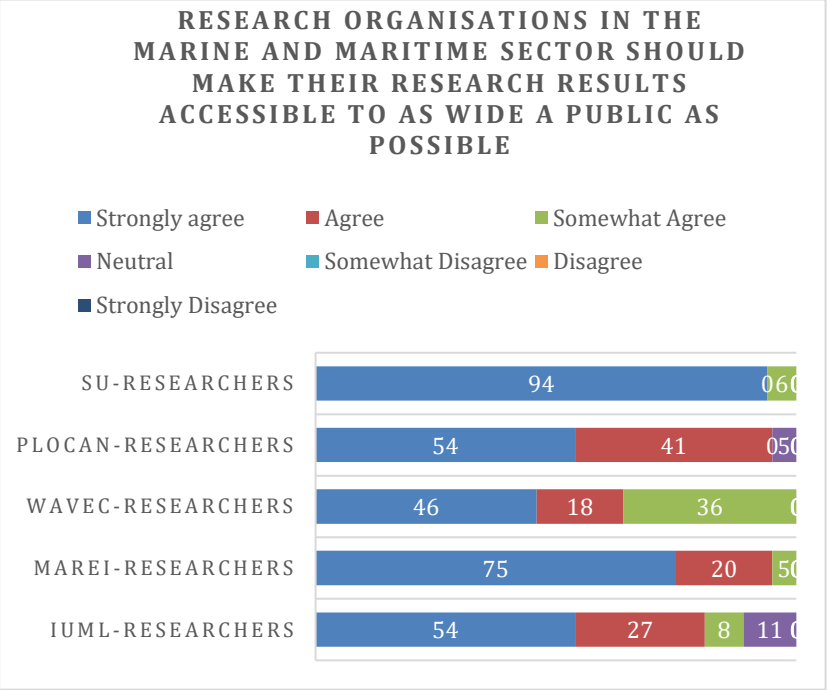
```
CORRELATION
    /VARIABLES = D_IUML_Researchers D_MaREI_Researchers D_WavEC_Researchers D_PLOCAN_Researchers D_SU_Researchers
    /PRINT = TWOTAIL SIG.
```

Correlations

		D_IUML_Researchers	D_MaREI_Researchers	D_WavEC_Researchers	D_PLOCAN_Researchers	D_SU_Researchers
D_IUML_Researchers	Pearson Correlation	1,00	,94	,88	,88	,93
	Sig. (2-tailed)		,001	,009	,009	,002
	N	7	7	7	7	7
D_MaREI_Researchers	Pearson Correlation	,94	1,00	,84	,80	,90
	Sig. (2-tailed)	,001		,018	,032	,006
	N	7	7	7	7	7
D_WavEC_Researchers	Pearson Correlation	,88	,84	1,00	,98	,97
	Sig. (2-tailed)	,009	,018		,000	,000
	N	7	7	7	7	7
D_PLOCAN_Researchers	Pearson Correlation	,88	,80	,98	1,00	,97
	Sig. (2-tailed)	,009	,032	,000		,000
	N	7	7	7	7	7
D_SU_Researchers	Pearson Correlation	,93	,90	,97	,97	1,00
	Sig. (2-tailed)	,002	,006	,000	,000	
	N	7	7	7	7	7

**

E= Research organisations in the marine and maritime sector should make their research results accessible to as wide a public as possible



The researchers in the five organisations agreed at different levels that research organisations in the M&M sector should make their research results accessible to as wide a public as possible. Only 5% of respondents from PLOCAN and 11% from IUML were neutral in this respect.

The correlation matrix of the researchers' answers (in a similar way to stakeholders, see Section B.2) to question E shows very high values. We observe that WavEC has the lowest correlation values with the other organisations. We also observe that WavEC has the higher percentage of researchers who somewhat agreed (the lower level of agreement) that research organisations in the marine and maritime sector should make their research results accessible to as wide a public as possible. This result could be related to its small size (the smallest organisation among the five involved in the study). Indeed, this can be due to the need to avoid opening any result and protecting the results' Intellectual Property Rights to maintain the organisation's competitiveness in the market.

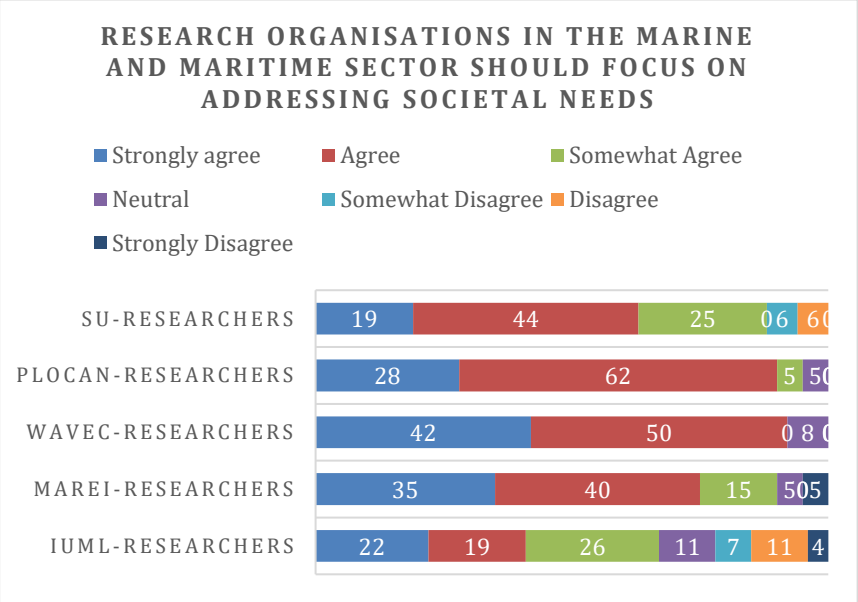
```
CORRELATION
      /VARIABLES =  E_IUML_Researchers E_MaREI_Researchers E_WavEC_Researchers E_PLOCAN_Researchers E_SU_Researchers
      /PRINT = TWOTAIL SIG.
```

Correlations

		E_IUML_Researchers	E_MaREI_Researchers	E_WavEC_Researchers	E_PLOCAN_Researchers	E_SU_Researchers
E_IUML_Researchers	Pearson Correlation	1,00	,96	,78	,96	,87
	Sig. (2-tailed)		,001	,040	,001	,010
	N	7	7	7	7	7
E_MaREI_Researchers	Pearson Correlation	,96	1,00	,78	,90	,96
	Sig. (2-tailed)	,001		,037	,006	,000
	N	7	7	7	7	7
E_WavEC_Researchers	Pearson Correlation	,78	,78	1,00	,66	,75
	Sig. (2-tailed)	,040	,037		,106	,052
	N	7	7	7	7	7
E_PLOCAN_Researchers	Pearson Correlation	,96	,90	,66	1,00	,75
	Sig. (2-tailed)	,001	,006	,106		,053
	N	7	7	7	7	7
E_SU_Researchers	Pearson Correlation	,87	,96	,75	,75	1,00
	Sig. (2-tailed)	,010	,000	,052	,053	
	N	7	7	7	7	7

**

F= Research organisations in the marine and maritime sector should focus on addressing societal needs



The majority of researchers at the five organisations agreed at different levels that research organisations in the M&M sector should focus on addressing societal needs. 5 to 11% of respondents (in four of the five organisation) were neutral in this respect. 5% of respondents in MaREI Strongly disagreed; 22% in IUML disagreed at different levels.

The correlation matrix of the researchers' answers (differently from stakeholders, see section B.2) to question F shows medium or high values. The medium values can be observed between IUML with MaREI, IUML with WavEC, and IUML with PLOCAN. IUML has a trend that is similar to SU. IUML, SU and MaREI are the only organisations where researchers have disagreed at different levels. This result could be influenced by the organisation's activity type. IUML, SU and MaREI are universities or housed in universities. Sometimes researchers and professors are worried that only applied research will be promoted, thereby risking curiosity-driven basic research that can significantly impact society, but not in the short term.

In the next phases, it is suggested that attempts are made to discuss and find the correct balance between the need to go deeper in theoretical research and also addressing societal needs.

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CORRELATION
  /VARIABLES = F_IUML_Researchers F_MaREI_Researchers F_WavEC_Researchers F_PLOCAN_Researchers F_SU_Researchers
  /PRINT = TWOTAIL SIG.
```

Correlations

		F_IUML_Researchers	F_MaREI_Researchers	F_WavEC_Researchers	F_PLOCAN_Researchers	F_SU_Researchers
F_IUML_Researchers	Pearson Correlation	1,00	,69	,50	,48	,74
	Sig. (2-tailed)		,084	,258	,272	,058
	N	7	7	7	7	7
F_MaREI_Researchers	Pearson Correlation	,69	1,00	,95	,91	,85
	Sig. (2-tailed)	,084		,001	,004	,016
	N	7	7	7	7	7
F_WavEC_Researchers	Pearson Correlation	,50	,95	1,00	,94	,74
	Sig. (2-tailed)	,258	,001		,002	,059
	N	7	7	7	7	7
F_PLOCAN_Researchers	Pearson Correlation	,48	,91	,94	1,00	,87
	Sig. (2-tailed)	,272	,004	,002		,011
	N	7	7	7	7	7
F_SU_Researchers	Pearson Correlation	,74	,85	,74	,87	1,00
	Sig. (2-tailed)	,058	,016	,059	,011	
	N	7	7	7	7	7

**

G= Research organisations in the marine and maritime sector should be guided by ethical principles

The majority of researchers of the five organisations agreed at different levels that ethical principles should guide research organisations in the M&M sector. 6% of SU respondents, 9% from PLOCAN and 4% from IUML, were neutral. 6% from SU and 8% from WavEC strongly disagreed.

The correlation matrix of the researchers' answers (in a similar way to stakeholders, see Section B.2) to question G show all high values. There is a general alignment within the researchers' opinions at the five organisations that ethical principles should guide research organisations in the marine and maritime sector. This finding reflects the inclusion of ethical practices in all the organisations and coherent with the availability of official documents related to ethics and research integrity in each organisation. This result is independent of the type of organisation. Moreover, projects funded by large funding bodies and multilateral or bilateral agencies and scientific journals have usually asked for the adoption of ethical behaviour in the research activities; such requirements can provide support to or stimulate change in researchers' mindset in this respect. However, we also observe that some researchers at SU (6%) and WavEC (8%) strongly disagreed.

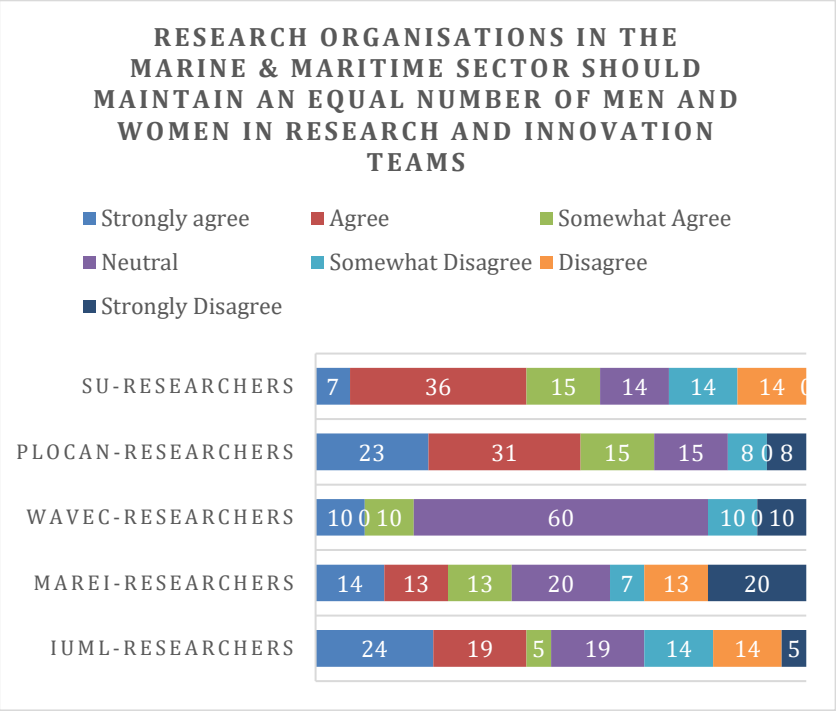
```
CORRELATION
      /VARIABLES =  G_IUML_Researchers G_MaREI_Researchers G_WavEC_Researchers G_PLOCAN_Researchers G_SU_Researchers
      /PRINT = TWOTAIL SIG.
```

Correlations

		G_IUML_Researchers	G_MaREI_Researchers	G_WavEC_Researchers	G_PLOCAN_Researchers	G_SU_Researchers
G_IUML_Researchers	Pearson Correlation	1,00	,95	,96	,96	,98
	Sig. (2-tailed)		,001	,001	,001	,000
	N	7	7	7	7	7
G_MaREI_Researchers	Pearson Correlation	,95	1,00	,86	,98	,95
	Sig. (2-tailed)	,001		,013	,000	,001
	N	7	7	7	7	7
G_WavEC_Researchers	Pearson Correlation	,96	,86	1,00	,86	,95
	Sig. (2-tailed)	,001	,013		,013	,001
	N	7	7	7	7	7
G_PLOCAN_Researchers	Pearson Correlation	,96	,98	,86	1,00	,97
	Sig. (2-tailed)	,001	,000	,013		,000
	N	7	7	7	7	7
G_SU_Researchers	Pearson Correlation	,98	,95	,95	,97	1,00
	Sig. (2-tailed)	,000	,001	,001	,000	
	N	7	7	7	7	7

**

H= Research organisations in the marine & maritime sector should maintain an equal number of men and women in research and innovation teams



Researchers of the five organisations have very different opinions that research organisations in the M&M sector should maintain an equal number of men and women in research and innovation teams.

The correlation matrix shows that (as for the stakeholders, see Section B.2) the answers from researchers to Question H generally have a medium or low correlation, sometimes negative (making evident the difference in opinions and the different percentages in choices of the options in the 7-point Likert scales for each of the organisation). Some correlation values are greater than 0,5, i.e., correlation MaREI - WavEC (0.55), and PLOCAN - SU (0.58). The differences in the opinions seem to be independent of the organisations' size and types.

Some opinions from interviews expressed their concern that a quota system could produce “positive discrimination” and underlined the meritocracy's importance. This could be one of the reasons for so many types of answers to this question.

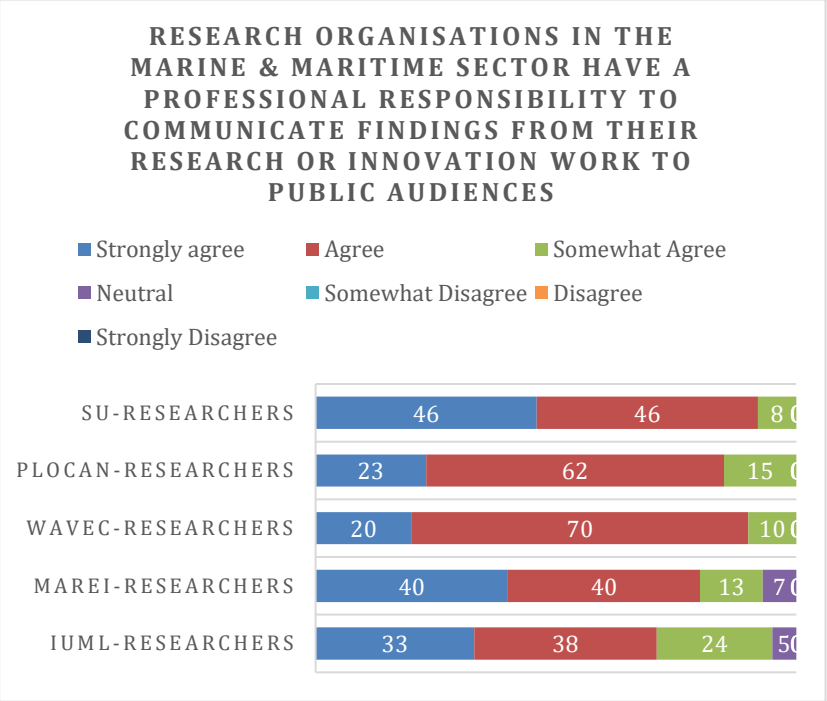
```
CORRELATION
  /VARIABLES = H_IUML_Researchers H_MaREI_Researchers H_WavEC_Researchers H_PLOCAN_Researchers H_SU_Researchers
  /PRINT = TWOTAIL SIG.
```

Correlations

		H_IUML_Researchers	H_MaREI_Researchers	H_WavEC_Researchers	H_PLOCAN_Researchers	H_SU_Researchers
H_IUML_Researchers	Pearson Correlation	1,00	-,10	,21	,50	,33
	Sig. (2-tailed)		,823	,645	,250	,472
	N	7	7	7	7	7
H_MaREI_Researchers	Pearson Correlation	-,10	1,00	,55	,03	-,36
	Sig. (2-tailed)	,823		,198	,955	,430
	N	7	7	7	7	7
H_WavEC_Researchers	Pearson Correlation	,21	,55	1,00	,01	-,17
	Sig. (2-tailed)	,645	,198		,985	,721
	N	7	7	7	7	7
H_PLOCAN_Researchers	Pearson Correlation	,50	,03	,01	1,00	,58
	Sig. (2-tailed)	,250	,955	,985		,173
	N	7	7	7	7	7
H_SU_Researchers	Pearson Correlation	,33	-,36	-,17	,58	1,00
	Sig. (2-tailed)	,472	,430	,721	,173	
	N	7	7	7	7	7

**

I= Research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to public



The majority of researchers of the five organisations agreed at different levels that research organisations in the M&M sector have a professional responsibility to communicate findings from their research or innovation work to the public. 5% from IUML and 7% from MaREI were neutral in this respect.

The correlation matrix of the researchers' answers to question I all show high values.

There is a general alignment on the opinions in the five organisations. It is related to a general agreement on the need to communicate findings of research to the Public (the level most addressed in each organisation is Agree). This, jointly with the high values for correlation, indicates a substantial uniformity in the opinions of the researchers in the different organisations.

In this case, we observe that the maximum values for correlations are related to the organisation's size and type. With 0,95 between IUML and MaREI, 0,92 between IUML and SU, 0,99 between MaREI and SU

(that are universities or housed in universities) and, 0,99 between WavEC and PLOCAN that are small research organisations.

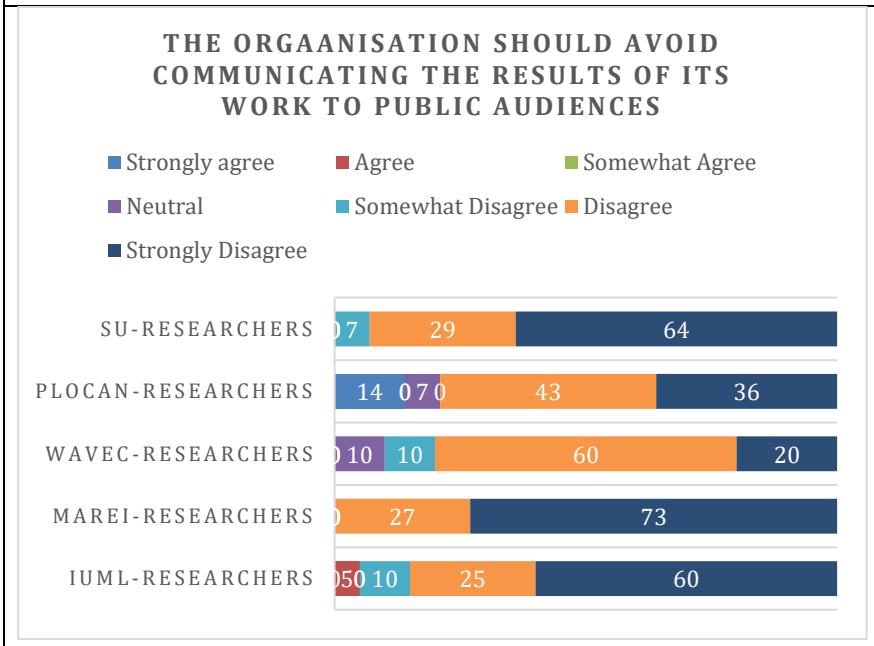
```
CORRELATION
      /VARIABLES =  I_IUML_Researchers I_MaREI_Researchers I_WavEC_Researchers I_PLOCAN_Researchers I_SU_Researchers
      /PRINT = TWOTAIL SIG.
```

Correlations

		I_IUML_Researchers	I_MaREI_Researchers	I_WavEC_Researchers	I_PLOCAN_Researchers	I_SU_Researchers
I_IUML_Researchers	Pearson Correlation	1,00	,95	,82	,88	,92
	Sig. (2-tailed)		,001	,024	,009	,004
	N	7	7	7	7	7
I_MaREI_Researchers	Pearson Correlation	,95	1,00	,82	,86	,99
	Sig. (2-tailed)	,001		,024	,012	,000
	N	7	7	7	7	7
I_WavEC_Researchers	Pearson Correlation	,82	,82	1,00	,99	,83
	Sig. (2-tailed)	,024	,024		,000	,022
	N	7	7	7	7	7
I_PLOCAN_Researchers	Pearson Correlation	,88	,86	,99	1,00	,86
	Sig. (2-tailed)	,009	,012	,000		,012
	N	7	7	7	7	7
I_SU_Researchers	Pearson Correlation	,92	,99	,83	,86	1,00
	Sig. (2-tailed)	,004	,000	,022	,012	
	N	7	7	7	7	7

**

L= The organisation should avoid communicating the results of its work to the public



The majority of the five organisations' researchers disagreed at different levels that the organisation should avoid communicating the results of its work to the public. Only 5% of researchers from IUML agreed on that. 7% of respondents from PLOCAN and 10% from MaREI were neutral.

The responses to this question show a general alignment in the opinions of the researchers at the five organisation (as in the previous question). This was a check question (used to verify responses).
The correlation matrix of the researchers' answers to question L shows medium or high values. The medium values are observed in WavEC's correlation with other organisations (except the correlation with PLOCAN that is high). In all other cases, there are high values. Responses provided and the presence of medium values of correlation return us information that is only partially coherent with the previous question's answers. As already explained for question E, this result could be related to these two

organisations' small size. Indeed, this can be due to the need to avoid opening any result, and protecting the IPR of the results to maintain the organisation's competitiveness in the market.

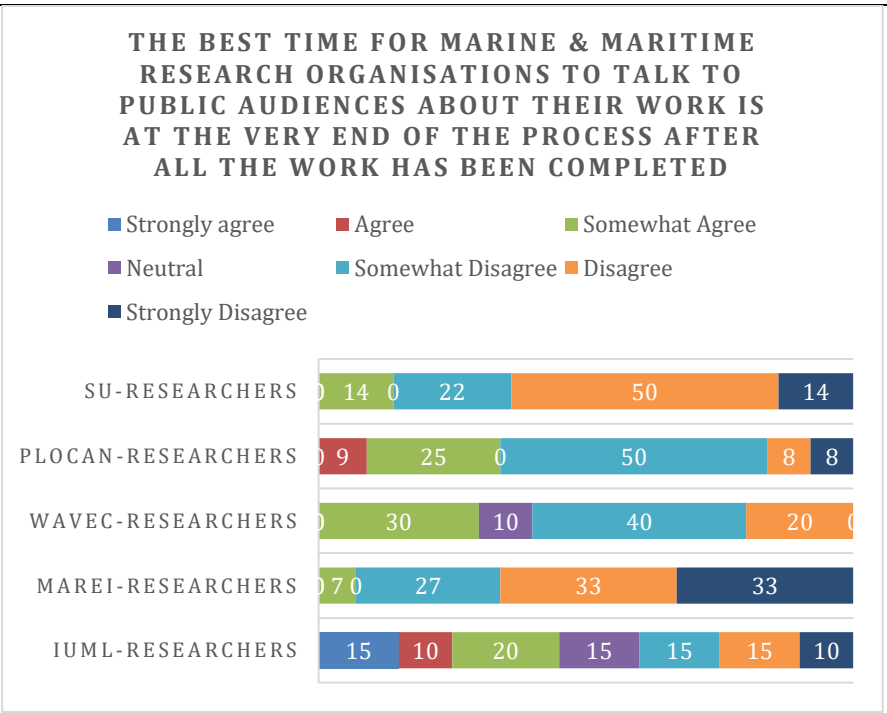
```
CORRELATION
  /VARIABLES = L_IUML_Researchers L_MaREI_Researchers L_WavEC_Researchers L_PLOCAN_Researchers L_SU_Researchers
  /PRINT = TWOTAIL SIG.
```

Correlations

		L_IUML_Researchers	L_MaREI_Researchers	L_WavEC_Researchers	L_PLOCAN_Researchers	L_SU_Researchers
L_IUML_Researchers	Pearson Correlation	1,00	,99	,48	,75	,99
	Sig. (2-tailed)		,000	,273	,050	,000
	N	7	7	7	7	7
L_MaREI_Researchers	Pearson Correlation	,99	1,00	,46	,78	,99
	Sig. (2-tailed)	,000		,298	,037	,000
	N	7	7	7	7	7
L_WavEC_Researchers	Pearson Correlation	,48	,46	1,00	,83	,53
	Sig. (2-tailed)	,273	,298		,020	,222
	N	7	7	7	7	7
L_PLOCAN_Researchers	Pearson Correlation	,75	,78	,83	1,00	,80
	Sig. (2-tailed)	,050	,037	,020		,029
	N	7	7	7	7	7
L_SU_Researchers	Pearson Correlation	,99	,99	,53	,80	1,00
	Sig. (2-tailed)	,000	,000	,222	,029	
	N	7	7	7	7	7

**

M= The best time for marine & maritime research organisations to talk to public about their work is at the very end of the process after all the work has been completed



Researchers at the five organisations have very different opinions on the question whether the best time for M&M research organisations to talk to public about their work is at the very end of the process after all the work has been completed. The majority of respondents from four of the five organisation (except IUML) disagreed on that at different levels.

The correlation matrix of the answers given by the researchers to question M shows low values, due to the different opinions (there are very different levels of agreement and disagreement, or neutrality) of the respondents within the different organisations. The only high values are between MaREI and SU (0.80), and WavEC and PLOCAN (0.86). Talking to the public about the research work before the end of the process can open some criticalities also identified in the interviews, such as the management of

ethical issues and IPR. The different opinions make evident the need to discuss and address these criticalities.

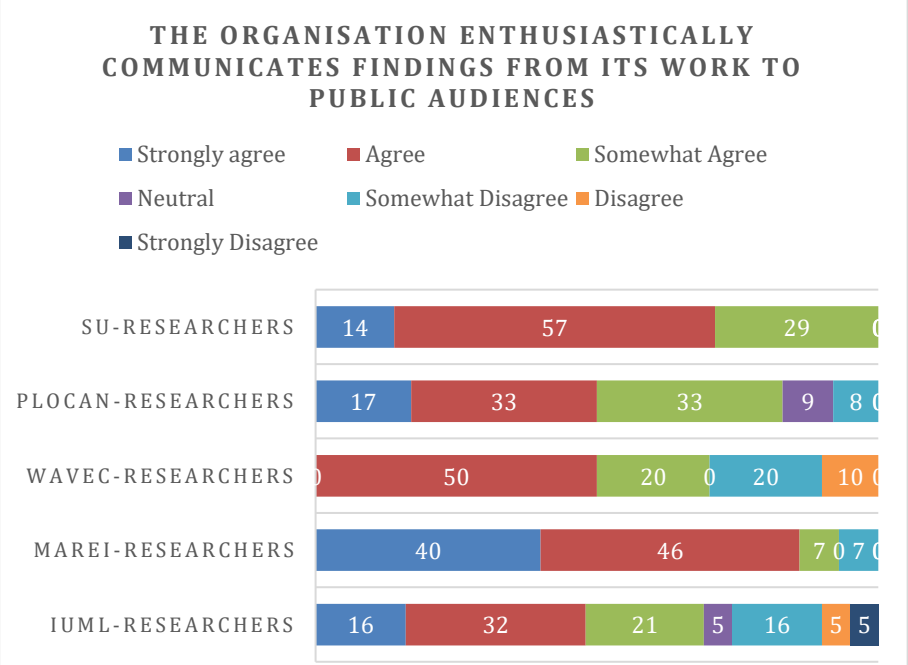
```
CORRELATION
    /VARIABLES = M_IUML_Researchers M_MaREI_Researchers M_WavEC_Researchers M_PLOCAN_Researchers M_SU_Researchers
    /PRINT = TWOTAIL SIG.
```

Correlations

		M_IUML_Researchers	M_MaREI_Researchers	M_WavEC_Researchers	M_PLOCAN_Researchers	M_SU_Researchers
M_IUML_Researchers	Pearson Correlation	1,00	-,18	,66	,30	,19
	Sig. (2-tailed)		,704	,106	,510	,681
	N	7	7	7	7	7
M_MaREI_Researchers	Pearson Correlation	-,18	1,00	,34	,37	,80
	Sig. (2-tailed)	,704		,460	,419	,032
	N	7	7	7	7	7
M_WavEC_Researchers	Pearson Correlation	,66	,34	1,00	,86	,50
	Sig. (2-tailed)	,106	,460		,014	,255
	N	7	7	7	7	7
M_PLOCAN_Researchers	Pearson Correlation	,30	,37	,86	1,00	,28
	Sig. (2-tailed)	,510	,419	,014		,548
	N	7	7	7	7	7
M_SU_Researchers	Pearson Correlation	,19	,80	,50	,28	1,00
	Sig. (2-tailed)	,681	,032	,255	,548	
	N	7	7	7	7	7

**

N= The organisation enthusiastically communicates findings from its work to public



The majority of researchers of the five organisations agreed at different levels that the organisation enthusiastically communicates findings from its work to public. Only 5% of respondents from IUML and 9% from PLOCAN is neutral on that. 7% of respondents from MaREI and 8% from PLOCAN somewhat disagreed. 30% from WavEC and 26% from IUML disagreed at different levels on that.

The correlation matrix of the answers given by the researchers to question N shows medium or high values, contrary to what was observed in the case of stakeholders. The answers to the question indicate that the majority of researchers think that their organisations are sharing and communicating findings of

research activities, but the levels of agreement are very different. We do not observe any connection between the correlations of responses and the type and size of the organisations.

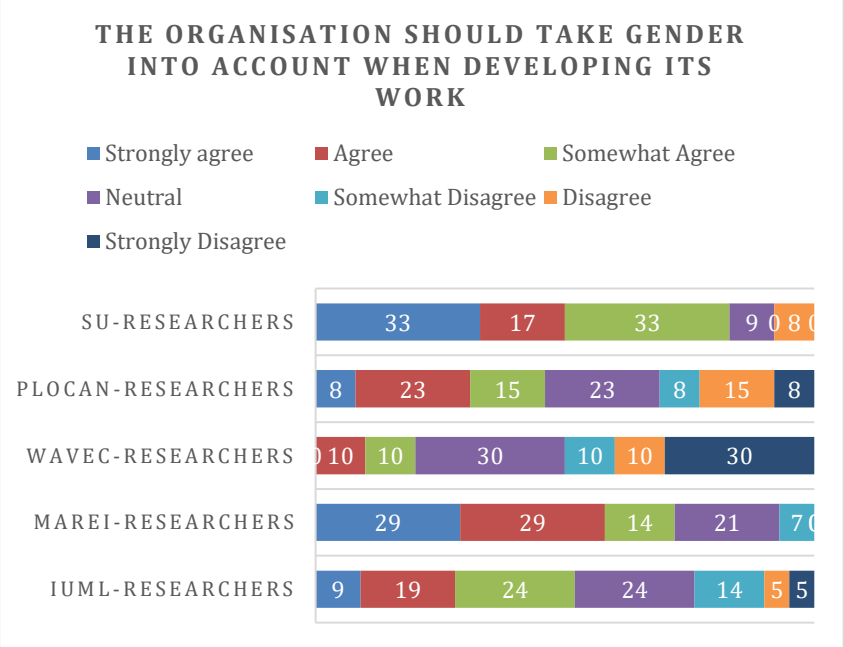
```
CORRELATION
     /VARIABLES =  N_IUML_Researchers N_MaREI_Researchers N_WavEC_Researchers N_PLOCAN_Researchers N_SU_Researchers
     /PRINT = TWOTAIL SIG.
```

Correlations

		N_IUML_Researchers	N_MaREI_Researchers	N_WavEC_Researchers	N_PLOCAN_Researchers	N_SU_Researchers
N_IUML_Researchers	Pearson Correlation	1,00	,77	,87	,89	,92
	Sig. (2-tailed)		,042	,011	,007	,003
	N	7	7	7	7	7
N_MaREI_Researchers	Pearson Correlation	,77	1,00	,53	,63	,75
	Sig. (2-tailed)	,042		,220	,130	,052
	N	7	7	7	7	7
N_WavEC_Researchers	Pearson Correlation	,87	,53	1,00	,68	,84
	Sig. (2-tailed)	,011	,220		,092	,017
	N	7	7	7	7	7
N_PLOCAN_Researchers	Pearson Correlation	,89	,63	,68	1,00	,90
	Sig. (2-tailed)	,007	,130	,092		,006
	N	7	7	7	7	7
N_SU_Researchers	Pearson Correlation	,92	,75	,84	,90	1,00
	Sig. (2-tailed)	,003	,052	,017	,006	
	N	7	7	7	7	7

**

O= The organisation should take gender into account when developing its work



The researchers at the five organisations have very different opinions on whether the organisation should take gender into account when developing its work.

The majority of researchers in MaREI and SU agreed at different levels in this respect.

We see that in the question “A= Research organisations in the marine and maritime sector should promote gender equality in their work” there was a general agreement and positive values for correlation. Question (O= The organisation should take gender into account when developing its work) is more specific, considering gender in the workplace. This implies having in mind actions necessary to take gender into account, its strengths and weaknesses. As expected, the correlation matrix of the answers given by the researchers to question O shows medium and low values (sometimes negative values), by the respondents' different opinions. The medium values of correlation are between MaREI

and SU, and PLOCAN and IUML. We observed that the majority of researchers only in MaREI and SU agreed at different levels on question O. They are the two organisations that have defined and implemented an equality plan and are from the academic sector. They can share their experience with the other organisations, which can analyse these experiences to verify what they can include in their RRI Action plans, according to their specificity and size.

```
CORRELATION
    /VARIABLES = O_IUML_Researchers O_MaREI_Researchers O_WavEC_Researchers O_PLOCAN_Researchers O_SU_Researchers
    /PRINT = TWOTAIL SIG.
```

Correlations

		O_IUML_Researchers	O_MaREI_Researchers	O_WavEC_Researchers	O_PLOCAN_Researchers	O_SU_Researchers
O_IUML_Researchers	Pearson Correlation	1,00	,52	,11	,66	,34
	Sig. (2-tailed)		,235	,816	,109	,451
	N	7	7	7	7	7
O_MaREI_Researchers	Pearson Correlation	,52	1,00	-,35	,43	,64
	Sig. (2-tailed)	,235		,441	,330	,123
	N	7	7	7	7	7
O_WavEC_Researchers	Pearson Correlation	,11	-,35	1,00	,24	-,61
	Sig. (2-tailed)	,816	,441		,599	,150
	N	7	7	7	7	7
O_PLOCAN_Researchers	Pearson Correlation	,66	,43	,24	1,00	,09
	Sig. (2-tailed)	,109	,330	,599		,855
	N	7	7	7	7	7
O_SU_Researchers	Pearson Correlation	,34	,64	-,61	,09	1,00
	Sig. (2-tailed)	,451	,123	,150	,855	
	N	7	7	7	7	7

**

P= The organisation should take ethnic diversity into account when developing its work

In three of the five organisations the majority of researchers agreed at different levels that the organisation should take ethnic diversity into account when developing its work (i.e., in their research objectives, processes, and methods). In WavEC, only 20% of respondents agreed at different levels on that. Very different percentages (from 8% to 50%) of respondents from four organisations were neutral (except SU). 8% from MaREI Somewhat disagreed in this respect. 18% of respondents from PLOCAN, 30% from WavEC and 21% from IUML disagreed at different levels.

We see that in the question "B= Research organisations in the marine and maritime sector should include ethnic minorities in their work" there was a general agreement or neutrality; however, the correlation varies greatly. The question "P= The organisation should take ethnic diversity into account when developing its work" is more specific, as it considers taking into account ethnic diversity in research activities (e.g., when defining research objectives and implementing research processes and methods). This implies having in mind actions necessary to take ethnic diversity into account and its strengths and weaknesses.

SU seems to be the most aware organisation on the importance of taking ethnic diversity into account when developing the work in the organisation; as already explained, SU provided data on ethnicity, and even if there is the majority of the staff members who are "White", there are also other ethnic groups or mixed groups, creating a multi-ethnic work environment.

MaREI did not provide data on ethnicity (as ethnicity data are not collected at the UCC-HR level); however, it has official documents, structures, and policies covering the different axis of RRI, creating the stimuli for promoting inclusion in the organisation. UCC also has an EDI Unit.

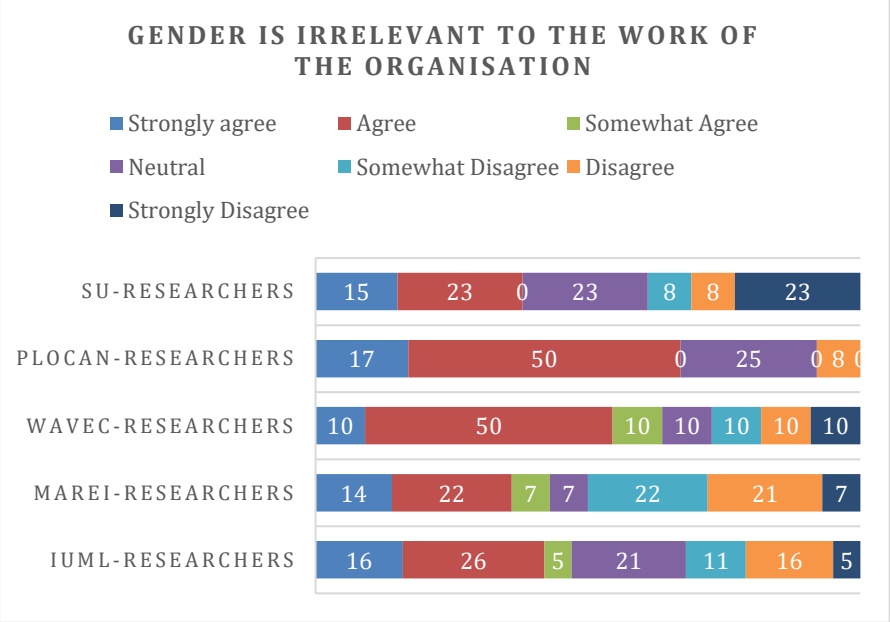
The correlation matrix of the answers given by the researchers to the question P shows medium and high values, except for a correlation equal to -0,20 between MaREI and WavEC (indeed in MaREI, the majority agreed at different levels, and in WavEC the majority were neutral or disagreed at different levels on question P) and a correlation equal to -0,24 between WavEC and SU (indeed in SU all agreed at different levels, and in WavEC the majority were neutral or disagreed at different levels). We did not observe higher correlations between organisations that are similar per dimension or type.

```
CORRELATION
    /VARIABLES = P_IUML_Researchers P_MaREI_Researchers P_WavEC_Researchers P_PLOCAN_Researchers P_SU_Researchers
    /PRINT = TWOTAIL SIG.
```

Correlations

		P_IUML_Researchers	P_MaREI_Researchers	P_WavEC_Researchers	P_PLOCAN_Researchers	P_SU_Researchers
P_IUML_Researchers	Pearson Correlation	1,00	,58	,48	,77	,44
	Sig. (2-tailed)		,174	,273	,042	,324
	N	7	7	7	7	7
P_MaREI_Researchers	Pearson Correlation	,58	1,00	-,20	,50	,96
	Sig. (2-tailed)	,174		,662	,248	,001
	N	7	7	7	7	7
P_WavEC_Researchers	Pearson Correlation	,48	-,20	1,00	,51	-,24
	Sig. (2-tailed)	,273	,662		,238	,604
	N	7	7	7	7	7
P_PLOCAN_Researchers	Pearson Correlation	,77	,50	,51	1,00	,51
	Sig. (2-tailed)	,042	,248	,238		,240
	N	7	7	7	7	7
P_SU_Researchers	Pearson Correlation	,44	,96	-,24	,51	1,00
	Sig. (2-tailed)	,324	,001	,604	,240	
	N	7	7	7	7	7

**

Q= Gender is irrelevant to the work of the organisation	
	The researchers of the five organisations have very different opinions if Gender is irrelevant to the work of the organisation. Still, we can observe that the responses are not very different, considering the different organisations (as emerges from the correlation).

Similarly to Question "O= The organisation should take gender into account when developing its work" also question "Q= Gender is irrelevant to the work of the organisation" is more specific than the question "A= Research organisations in the marine, and maritime sector should promote gender equality in their work".

The correlation matrix of the researchers' answers from the different organisations to question Q shows medium values and two high values, except for the correlation between MaREI and SU, which is equal to -0,11.

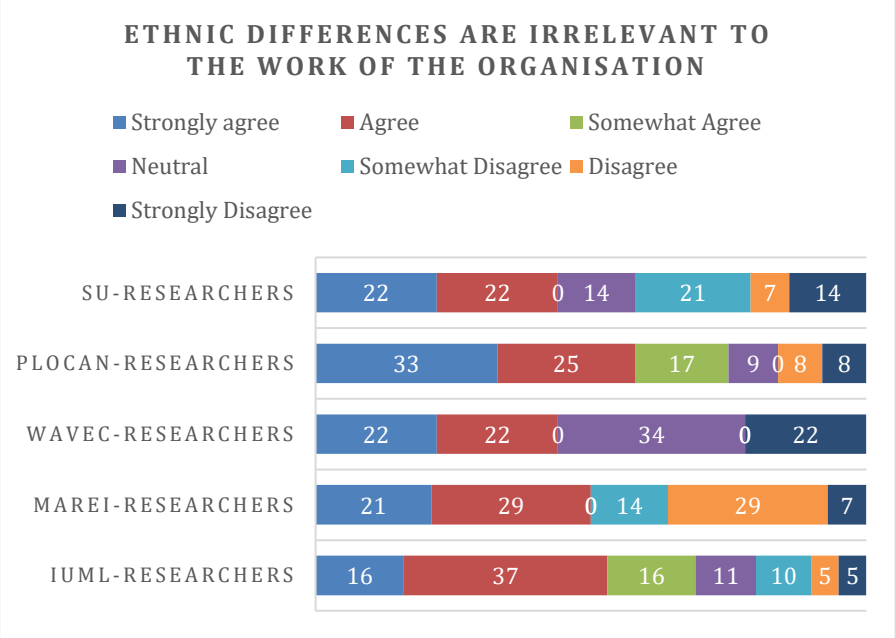
The responses provided seems to be not coherent with the other answers related to Gender equality. This suggests that researchers interpreted the question in different manners. We did not observe higher correlations between organisations that are similar in size or type. A discussion about the relevance of gender on the work organisation and clarifications in the next steps could be useful.

```
CORRELATION
  /VARIABLES = Q_IUML_Researchers Q_MaREI_Researchers Q_WavEC_Researchers Q_PLOCAN_Researchers Q_SU_Researchers
  /PRINT = TWOTAIL SIG.
```

Correlations

		Q_IUML_Researchers	Q_MaREI_Researchers	Q_WavEC_Researchers	Q_PLOCAN_Researchers	Q_SU_Researchers
Q_IUML_Researchers	Pearson Correlation	1,00	,47	,66	,91	,51
	Sig. (2-tailed)		,289	,109	,004	,239
	N	7	7	7	7	7
Q_MaREI_Researchers	Pearson Correlation	,47	1,00	,46	,31	-,11
	Sig. (2-tailed)	,289		,295	,499	,807
	N	7	7	7	7	7
Q_WavEC_Researchers	Pearson Correlation	,66	,46	1,00	,85	,42
	Sig. (2-tailed)	,109	,295		,015	,353
	N	7	7	7	7	7
Q_PLOCAN_Researchers	Pearson Correlation	,91	,31	,85	1,00	,60
	Sig. (2-tailed)	,004	,499	,015		,153
	N	7	7	7	7	7
Q_SU_Researchers	Pearson Correlation	,51	-,11	,42	,60	1,00
	Sig. (2-tailed)	,239	,807	,353	,153	
	N	7	7	7	7	7

**

R= Ethnic differences are irrelevant to the work of the organisation	
	The researchers in the five organisations have very different opinions on whether Ethnic differences are irrelevant to the work of the organisation. These differences emerge also comparing the opinions per organisation.

Similarly to Question “P= The organisation should take ethnic diversity into account when developing its work” also question “R= Ethnic differences are irrelevant to the work of the organisation” is more specific of the question “B= Research organisations in the marine and maritime sector should include ethnic minorities in their work”.

We observe that responses to the question R are sometimes contradictory compared to the answers that researchers gave to the question P.

The correlation matrix of the researchers' answers from the different organisations to question R shows medium and low values, sometimes slightly negative values. As for the Gender issues, also for Ethnic diversity, providing some positive and concrete examples can give the idea of advantages and disadvantages of diversity and inclusion

This situation suggests that the researchers interpreted the question in different ways. A discussion and a clarification on the relevance of ethnic differences in the work organisation as a next step could be useful in this aspect. We did not observe higher correlations between organisations that are similar per dimension or type.

```
CORRELATION
      /VARIABLES =  R_IUML_Researchers R_MaREI_Researchers R_WavEC_Researchers R_PLOCAN_Researchers R_SU_Stakeholders
      /PRINT = TWOTAIL SIG.
```

Correlations

		R_IUML_Researchers	R_MaREI_Researchers	R_WavEC_Researchers	R_PLOCAN_Researchers	R_SU_Stakeholders
R_IUML_Researchers	Pearson Correlation	1,00	,36	,24	,63	,37
	Sig. (2-tailed)		,422	,605	,128	,409
	N	7	7	7	7	7
R_MaREI_Researchers	Pearson Correlation	,36	1,00	-,17	,32	,42
	Sig. (2-tailed)	,422		,722	,479	,344
	N	7	7	7	7	7
R_WavEC_Researchers	Pearson Correlation	,24	-,17	1,00	,34	,46
	Sig. (2-tailed)	,605	,722		,452	,300
	N	7	7	7	7	7
R_PLOCAN_Researchers	Pearson Correlation	,63	,32	,34	1,00	,25
	Sig. (2-tailed)	,128	,479	,452		,595
	N	7	7	7	7	7
R_SU_Stakeholders	Pearson Correlation	,37	,42	,46	,25	1,00
	Sig. (2-tailed)	,409	,344	,300	,595	
	N	7	7	7	7	7

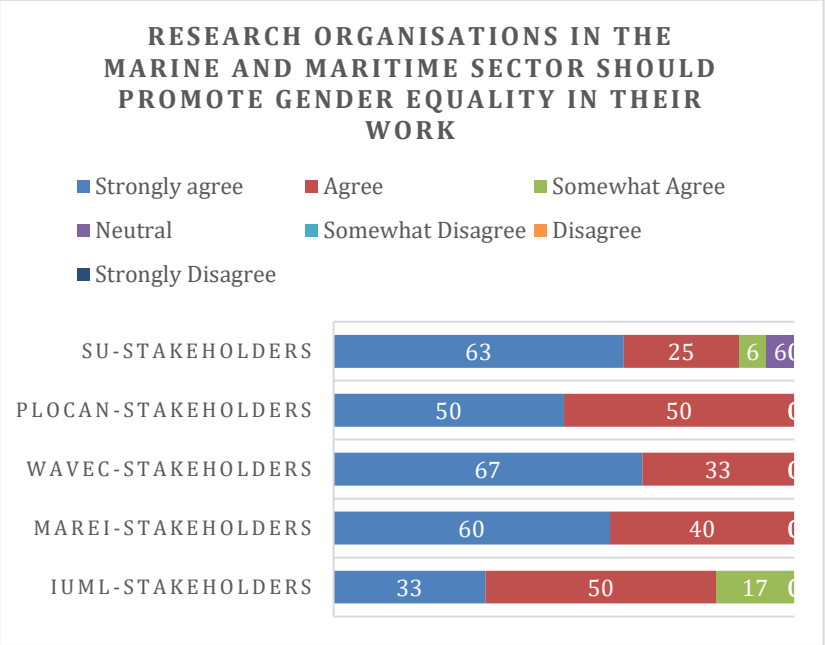
B.2 Stakeholders horizontal analysis

The bottom-up survey collected some opinions from stakeholders of the five RP(F)Os. This section compares the answers provided, showing their graphical representation and provides the correlations between the different responses.

As for researchers in Appendix B1, this comparative analysis aims to understand if there is a similar perception of the RRI dimensions between the RP(F)Os' stakeholders, according to the organisations' characteristics (such as the existence of clear policies or practices defined and made public on RRI, the size of the organisation, the type of the organisation and so on). This analysis should not be perceived as a benchmarking exercise of the 5 organisations, as the number of respondents does not represent a valid statistical sample (MaREI and IUML had responses from 6 stakeholders, and WavEC had responses from 3 stakeholders, of which some survey questions were incompletely filled). The analysis is presented here to support and enrich reflective processes in the organisations and promote discussions with regard to the RRI dimensions. Moreover, we did not compute the correlations for questions that received 3 or less responses to some questions.

As a reminder, the correlation is classified as high if its value is greater or equal to 0,7, it is medium for values greater than 0,3 and less than 0,7. The correlation is low for values that are lower than 0,3. NA in the correlation tables indicates that the correlation was not calculated, as the number of responses from stakeholders for a particular question were ≤3.

The first row of the following table contains the question; the second row contains the graph and its associated comments. This approach is repeated for all the questions in the survey to the stakeholders.

A= Research organisations in the marine and maritime sector should promote gender equality in their work	
	The stakeholders of all the five organisations agreed at different levels that research organisations in the M&M sector should promote gender equality in their work. Only 6% of stakeholders from SU were neutral in this respect. Only 3 stakeholders responded from WavEC.

The stakeholders of all the organisations, except for SU, agreed (at different levels) more than researchers that research organisations in the marine and maritime sector should promote gender equality in their work (e.g., when defining research objectives and implement research processes and methods).

The following table shows the correlation matrix of the five organisations' answers to question A. High correlation values are observed between the responses of stakeholders from all the organisations. The computation of the correlation of WavEC with the other organisation is not done (i.e., NA in the tables below) as only 3 stakeholders provided their answers.

We did not observe higher correlations between organisations that are similar in size or type. It could be interesting to receive feedback from other stakeholders of WavEC (as small number of participants responded) to the above question.

```
CORRELATION
    /VARIABLES = A_IUML_Stakeholders A_MaREI_Stakeholders A_WavEC_Stakeholders A_PLOCAN_Stakeholders A_SU_Stakeholders
    /PRINT = TWOTAIL SIG.
```

Correlations

		A_IUML_Stakeholders	A_MaREI_Stakeholders	A_WavEC_Stakeholders	A_PLOCAN_Stakeholders	A_SU_Stakeholders
A_IUML_Stakeholders	Pearson Correlation	1,00	,84	NA	,92	,71
	Sig. (2-tailed)		,018		,003	,073
	N	7	7		7	7
A_MaREI_Stakeholders	Pearson Correlation	,84	1,00	NA	,97	,96
	Sig. (2-tailed)	,018			,000	,001
	N	7	7		7	7
A_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
A_PLOCAN_Stakeholders	Pearson Correlation	,92	,97	NA	1,00	,87
	Sig. (2-tailed)	,003	,000			,010
	N	7	7		7	7
A_SU_Stakeholders	Pearson Correlation	,71	,96	NA	,87	1,00
	Sig. (2-tailed)	,073	,001		,010	
	N	7	7		7	7

**

B= Research organisations in the marine and maritime sector should include ethnic minorities in their work	
	The stakeholders of all the five organisations agreed at different levels or were neutral that Research organisations in the marine and maritime sector should include ethnic minorities in their work (e.g., when defining research objectives and implement research processes and methods). There are differences in the percentage with which stakeholders agreed or were neutral. These differences are also the reason for the different values of correlation. Only 3 stakeholders responded from WavEC.

The stakeholders' answers to question B return a correlation matrix containing values that vary greatly. The computation of the correlation of WavEC with the other organisation is not done as only 3 stakeholders provided their answers.

IUML, MaREI and SU, have a similar trend for stakeholders as in the case of researchers. The highest correlation values are between MaREI and PLOCAN (0.95), MaREI and SU (0.95) and PLOCAN and SU (0.89). Generally, except for SU, the percentage of stakeholders agreed in each organisation (at different levels) that research organisations in the marine and maritime sector should include ethnic minorities in their work is higher with respect to the researchers' percentage. This could also be related to the multi-ethnic staff in SU who creates the basis for comprehending the importance of including ethnic minorities. Involving stakeholders in mutual learning actions and open discussions with researchers can clarify the advantages and disadvantages of including ethnic minorities in the organisation's work. We did not observe higher correlations between organisations that are similar in size or type. It could be interesting to receive feedback from other stakeholders of WavEC (as small number of participants responded) to the above question.

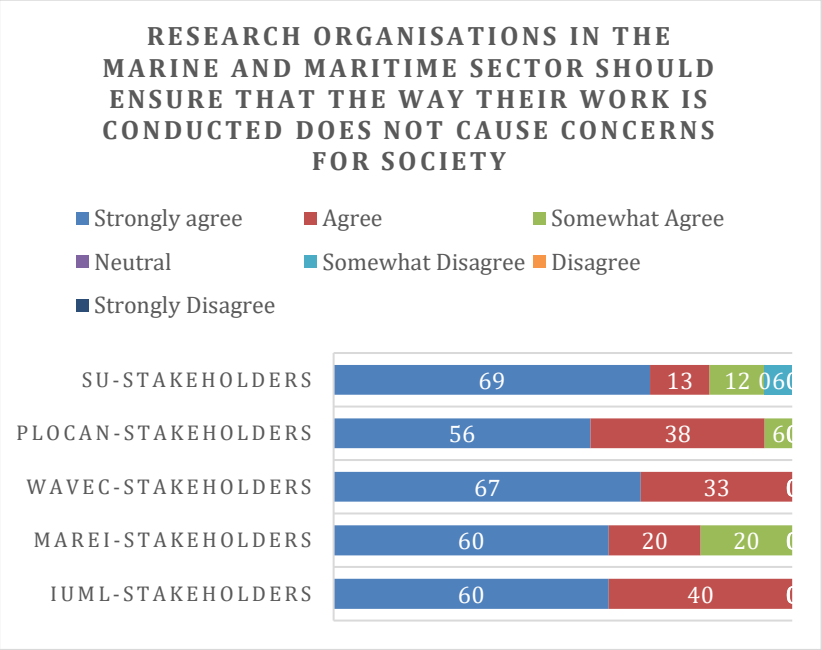
```
CORRELATION
  /VARIABLES = B_IUML_Stakeholders B_MaREI_Stakeholders B_WavEC_Stakeholders B_PLOCAN_Stakeholders B_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		B_IUML_Stakeholders	B_MaREI_Stakeholders	B_WavEC_Stakeholders	B_PLOCAN_Stakeholders	B_SU_Stakeholders
B_IUML_Stakeholders	Pearson Correlation	1,00	,34	NA	,24	,56
	Sig. (2-tailed)		,456		,603	,192
	N	7	7		7	7
B_MaREI_Stakeholders	Pearson Correlation	,34	1,00	NA	,95	,95
	Sig. (2-tailed)	,456			,001	,001
	N	7	7		7	7
B_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
B_PLOCAN_Stakeholders	Pearson Correlation	,24	,95	NA	1,00	,89
	Sig. (2-tailed)	,603	,001			,007
	N	7	7		7	7
B_SU_Stakeholders	Pearson Correlation	,56	,95	NA	,89	1,00
	Sig. (2-tailed)	,192	,001		,007	
	N	7	7		7	7

**

C= Research organisations in the marine and maritime sector should ensure that the way their work is conducted does not cause concerns for society



The stakeholders of all the five organisations agreed at different levels that research organisations in the M&M sector should ensure that the way their work is conducted does not cause concerns for society. Only 6% of stakeholders from SU somewhat disagreed in this respect.

Already the majority of researchers in all the five organisations agreed at different levels on that; however, the level of agreement for stakeholders is shifted in the direction of the strongly agreed value.

We can underline that this shift is related to the fact that the stakeholders are from different kinds of organisations and from society, and they connect research and society in their role.

Only 3 stakeholders responded from WavEC.

The correlation matrix of the stakeholders' answers to question C shows all very high values.
No specific issues and dependencies of correlations were observed related to the size and type of the organisations involved. The computation of the correlation of WavEC with the other organisation is not done as only 3 stakeholders provided their answers. It could be interesting to receive feedback from other stakeholders of WavEC (as small number of participants responded) to the above question.

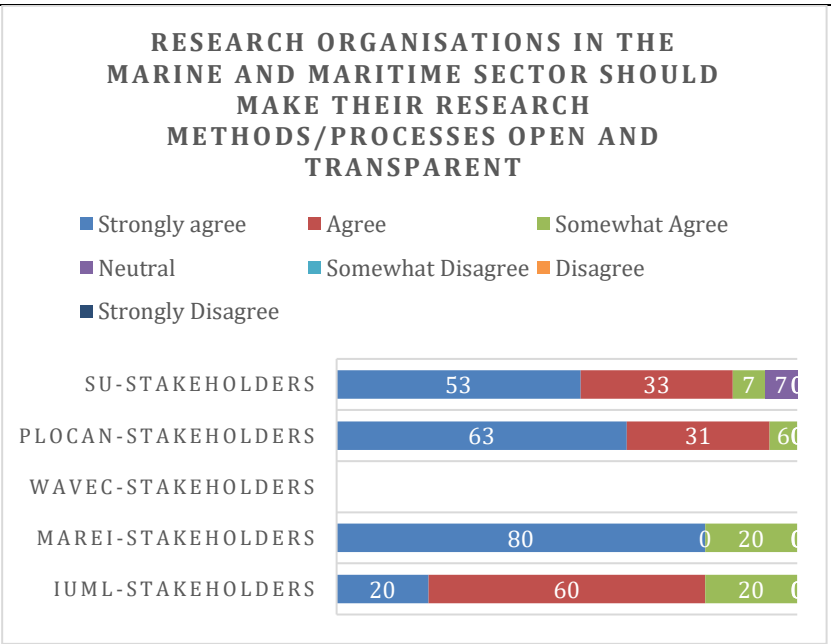
CORRELATION
/VARIABLES = C_IUML_Stakeholders C_MaREI_Stakeholders C_WavEC_Stakeholders C_PLOCAN_Stakeholders C_SU_Stakeholders
/PRINT = TWOTAIL SIG.

Correlations

		C_IUML_Stakeholders	C_MaREI_Stakeholders	C_WavEC_Stakeholders	C_PLOCAN_Stakeholders	C_SU_Stakeholders
C_IUML_Stakeholders	Pearson Correlation	1,00	,89	NA	1,00	,87
	Sig. (2-tailed)		,008		,000	,011
	N	7	7		7	7
C_MaREI_Stakeholders	Pearson Correlation	,89	1,00	NA	,91	,97
	Sig. (2-tailed)	,008			,004	,000
	N	7	7		7	7
C_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
C_PLOCAN_Stakeholders	Pearson Correlation	1,00	,91	NA	1,00	,88
	Sig. (2-tailed)	,000	,004			,010
	N	7	7		7	7
C_SU_Stakeholders	Pearson Correlation	,87	,97	NA	,88	1,00
	Sig. (2-tailed)	,011	,000		,010	
	N	7	7		7	7

**

D= Research organisations in the marine and maritime sector should make their research methods/processes open and transparent



The stakeholders of four of the five organisations agreed at different levels that research M&M sector should make their research methods/processes open and transparent. Only 7% of stakeholders from SU were neutral in this respect. No-one from WavEC provided answers.

The correlation matrix of the stakeholders' answers to question D shows high values, except for the IUML-MaREI and IUML-PLOCAN correlations who have a medium value. In the next steps, it could be interesting to receive feedback from WavEC's stakeholders who did not answer the survey question.

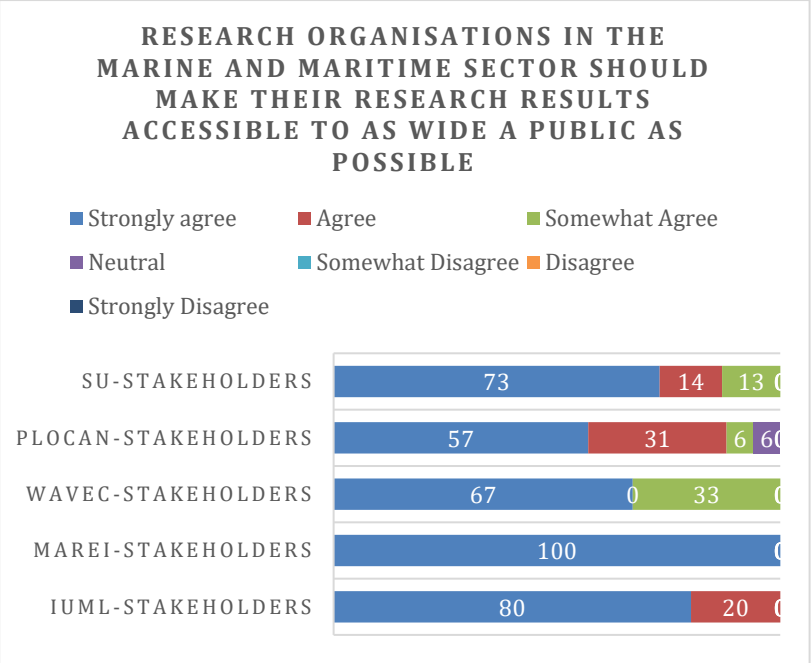
```
CORRELATION
    /VARIABLES = D_IUML_Stakeholders D_MaREI_Stakeholders D_WavEC_Stakeholders D_PLOCAN_Stakeholders D_su_Stakeholders
    /PRINT = TWOTAIL SIG.
```

Correlations

		D_IUML_Stakeholders	D_MaREI_Stakeholders	D_WavEC_Stakeholders	D_PLOCAN_Stakeholders	D_su_Stakeholders
D_IUML_Stakeholders	Pearson Correlation	1,00	,30		,42	,92
	Sig. (2-tailed)		,560		,412	,009
	N	6	6		6	6
D_MaREI_Stakeholders	Pearson Correlation	,30	1,00		,99	,64
	Sig. (2-tailed)	,560			,000	,120
	N	6	7		7	7
D_WavEC_Stakeholders	Pearson Correlation					
	Sig. (2-tailed)					
	N					
D_PLOCAN_Stakeholders	Pearson Correlation	,42	,99		1,00	,73
	Sig. (2-tailed)	,412	,000			,064
	N	6	7		7	7
D_su_Stakeholders	Pearson Correlation	,92	,64		,73	1,00
	Sig. (2-tailed)	,009	,120		,064	
	N	6	7		7	7

**

E= Research organisations in the marine and maritime sector should make their research results accessible to as wide a public as possible



The stakeholders of the five organisations agreed at different levels that research organisations in the M&M sector should make their research results accessible to as wide a public as possible. Only 6% of stakeholders from PLOCAN were neutral in this respect.

Generally, the percentage of stakeholders who agreed at different levels was observed to be slightly higher than for researchers. The percentage of stakeholders who strongly agreed is higher for stakeholders than researchers for all, except to SU. Only 3 stakeholders responded from WavEC.

The correlation matrix of the answers given by the stakeholders to question E shows all high values. The high level of agreement and the high values for correlation indicate that the opinions of the organisations' stakeholders are quite independent from the dimension and the type of the RP(F)Os. The computation of the correlation of WavEC with the other organisation is not done as only 3 stakeholders provided answers.

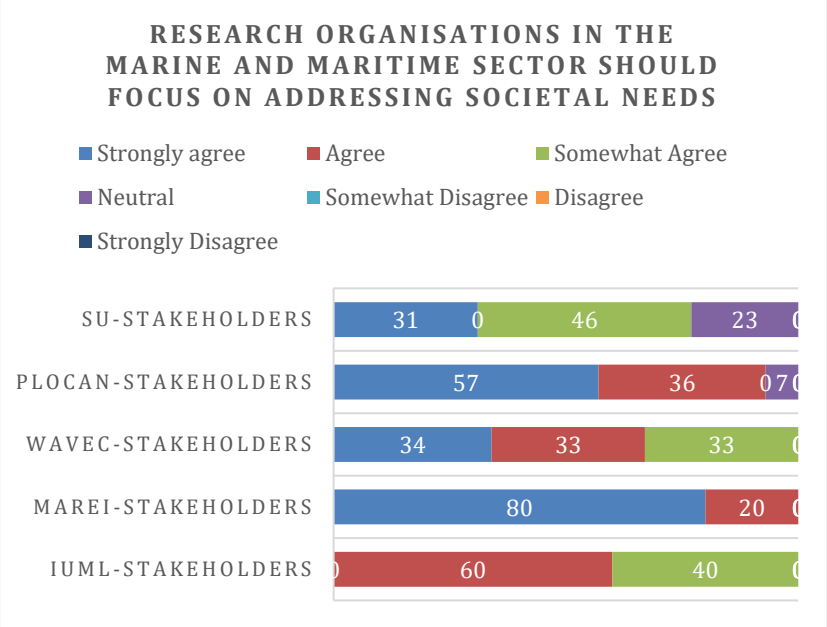
```
CORRELATION
  /VARIABLES = E_IUML_Stakeholders E_MaREI_Stakeholders E_WavEC_Stakeholders E_PLOCAN_Stakeholders E_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		E_IUML_Stakeholders	E_MaREI_Stakeholders	E_WavEC_Stakeholders	E_PLOCAN_Stakeholders	E_SU_Stakeholders
E_IUML_Stakeholders	Pearson Correlation	1,00	,97	NA	,96	,98
	Sig. (2-tailed)		,000		,001	,000
	N	7	7		7	7
E_MaREI_Stakeholders	Pearson Correlation	,97	1,00	NA	,86	,97
	Sig. (2-tailed)	,000			,012	,000
	N	7	7		7	7
E_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
E_PLOCAN_Stakeholders	Pearson Correlation	,96	,86	NA	1,00	,93
	Sig. (2-tailed)	,001	,012			,002
	N	7	7		7	7
E_SU_Stakeholders	Pearson Correlation	,98	,97	NA	,93	1,00
	Sig. (2-tailed)	,000	,000		,002	
	N	7	7		7	7

**

F= Research organisations in the marine and maritime sector should focus on addressing societal needs



The stakeholders of the five organisations agreed at different levels and more than researchers that research organisations in the M&M sector should focus on addressing societal needs. Only 23% from SU and 7% of stakeholders from PLOCAN were neutral in this respect.

The stakeholders' higher level of agreement with respect to the researchers' answers can also be related to the role (if they are policymakers, decision-makers, etc.) that many stakeholders play.

We also observe different trends between the different levels of agreement in the five organisations. Only 3 stakeholders responded from WavEC.

The correlation matrix of the stakeholders' answers to question F shows high, medium, and low values (sometimes negative). They agree at different levels except for SU with 23% neutral and PLOCAN with 7% neutral. The differences are mainly due to the different trends between the different stakeholders' agreement levels in the five organisations. There were no stakeholders who disagreed (at different levels), which is in contrast to the researchers (see the question F in section B.1).
IUML and SU generally have low correlation values with other organisations. There is a correlation of 0,93 between MaREI and PLOCAN. The computation of the correlation of WavEC with the other organisation is not applicable as only 3 stakeholders provided their answers.
Even if the need to focus on societal needs is perceived in all the organisation, some organisations have a higher percentage of the value strongly agree. It could be useful that these organisations share their experiences and understanding that can be used in other organisations (lessons learnt). We did not observe any connection with the size and the type of the organisations. The computation of the correlation of WavEC with the other organisation is not done as only few stakeholders provided their answers.

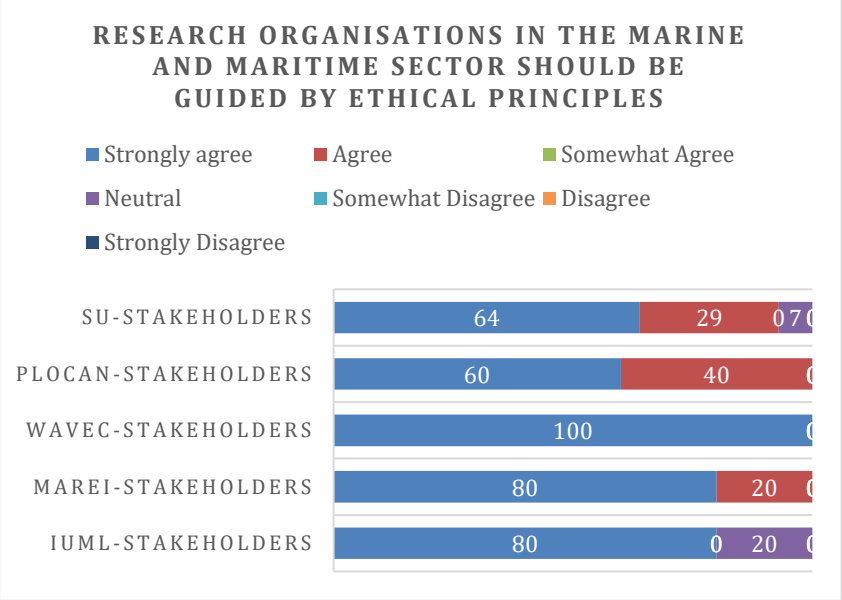
```
CORRELATION
  /VARIABLES = F_IUML_Stakeholders F_MaREI_Stakeholders F_WavEC_Stakeholders F_PLOCAN_Stakeholders F_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		F_IUML_Stakeholders	F_MaREI_Stakeholders	F_WavEC_Stakeholders	F_PLOCAN_Stakeholders	F_SU_Stakeholders
F_IUML_Stakeholders	Pearson Correlation	1,00	-,05		,21	,14
	Sig. (2-tailed)		,914	NA	,649	,759
	N	7	7		7	7
F_MaREI_Stakeholders	Pearson Correlation	-,05	1,00		,93	,31
	Sig. (2-tailed)	,914		NA	,002	,502
	N	7	7		7	7
F_WavEC_Stakeholders	Pearson Correlation					
	Sig. (2-tailed)	NA	NA	NA	NA	NA
	N					
F_PLOCAN_Stakeholders	Pearson Correlation	,21	,93		1,00	,19
	Sig. (2-tailed)	,649	,002	NA		,683
	N	7	7		7	7
F_SU_Stakeholders	Pearson Correlation	,14	,31		,19	1,00
	Sig. (2-tailed)	,759	,502	NA	,683	
	N	7	7		7	7

**

G= Research organisations in the marine and maritime sector should be guided by ethical principles



The stakeholders of the five organisations agreed at different levels and more than researchers (except for IUML) that ethical principles should guide research organisations in the marine and maritime sector. Only 7% from SU and 20% of stakeholders from IUML were neutral in this respect. No one (in contrast to some of researchers in some of the organisations) strongly disagreed. Only 2 stakeholders responded from WavEC.

The correlation matrix of the stakeholders' answers to question G shows a high correlation value of responses from the different organisations. We did not observe any connection with the dimension and the type of the organisations. The computation of the correlation of WavEC with the other organisations is not done as only 2 stakeholders provided their answers.

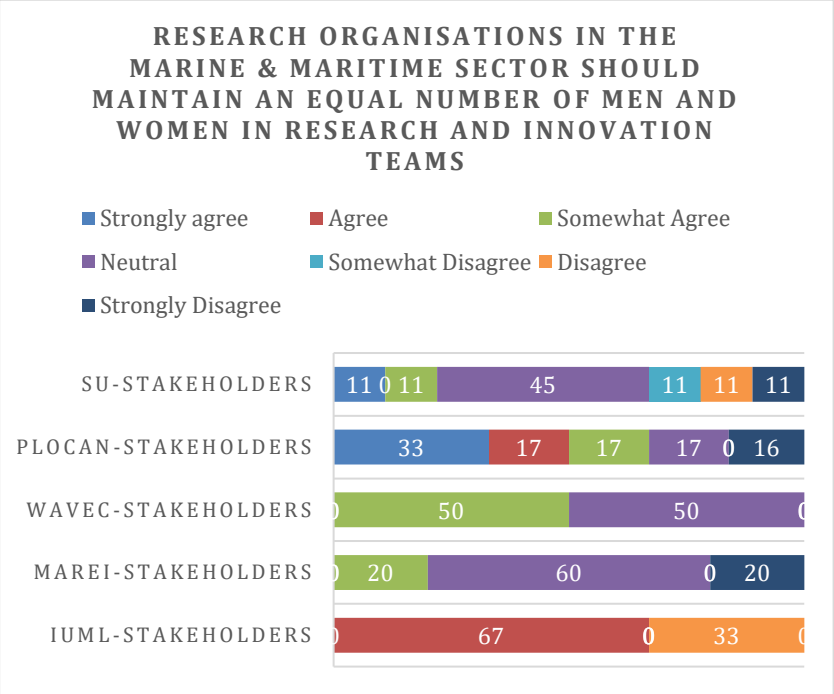
```
CORRELATION
  /VARIABLES = G_IUML_Stakeholders G_MaREI_Stakeholders G_WavEC_Stakeholders G_PLOCAN_Stakeholders G_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		G_IUML_Stakeholders	G_MaREI_Stakeholders	G_WavEC_Stakeholders	G_PLOCAN_Stakeholders	G_SU_Stakeholders
G_IUML_Stakeholders	Pearson Correlation	1,00	,93	NA	,75	,88
	Sig. (2-tailed)		,003		,053	,010
	N	7	7		7	7
G_MaREI_Stakeholders	Pearson Correlation	,93	1,00	NA	,93	,98
	Sig. (2-tailed)	,003			,003	,000
	N	7	7		7	7
G_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
G_PLOCAN_Stakeholders	Pearson Correlation	,75	,93	NA	1,00	,98
	Sig. (2-tailed)	,053	,003			,000
	N	7	7		7	7
G_SU_Stakeholders	Pearson Correlation	,88	,98	NA	,98	1,00
	Sig. (2-tailed)	,010	,000		,000	
	N	7	7		7	7

**

H= Research organisations in the marine & maritime sector should maintain an equal number of men and women in research and innovation teams



The stakeholders of the five organisations (similarly to the researchers) have very different opinions if research organisations in the M&M sector should maintain an equal number of men and women in research and innovation teams. These differences are also evident from the correlation matrix.

Note that there are strong differences between the researchers' and the stakeholders' responses if compared for each organisation. Only 2 stakeholders responded from WavEC and 3 from IUML.

The correlation matrix of the answers given by the stakeholders to the question H shows that responses in H generally have low correlation, except for the correlation between MaREI and SU (0.91).
We did not observe any connection with the size and the type of organisation. The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as only 2 and 3 stakeholders provided their answers.

```
CORRELATION
  /VARIABLES = H_IUML_Stakeholders H_MaREI_Stakeholders H_WavEC_Stakeholders H_PLOCAN_Stakeholders H_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		H_IUML_Stakeholders	H_MaREI_Stakeholders	H_WavEC_Stakeholders	H_PLOCAN_Stakeholders	H_SU_Stakeholders
H_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
H_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	,16	,91
	Sig. (2-tailed)				,724	,005
	N		7		7	7
H_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
H_PLOCAN_Stakeholders	Pearson Correlation	NA	,16	NA	1,00	,06
	Sig. (2-tailed)		,724			,891
	N		7		7	7
H_SU_Stakeholders	Pearson Correlation	NA	,91	NA	,06	1,00
	Sig. (2-tailed)		,005		,891	
	N		7		7	7

**

I= Research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to public

All the stakeholders who responded from the five organisations agreed at different levels that Research organisations in the marine & maritime sector have a professional responsibility to communicate findings from their research or innovation work to the public.

No one was neutral in this respect, which is in contrast to the opinions of the researchers at the five organisations.

Only 2 stakeholders responded from WavEC and 3 from IUML.

The correlation matrix of the stakeholders' answers from the different organisations to question I shows high values. We did not observe any specific connection with the dimension and the type of the organisations. The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as only 2 and 3 stakeholders provided their answers.

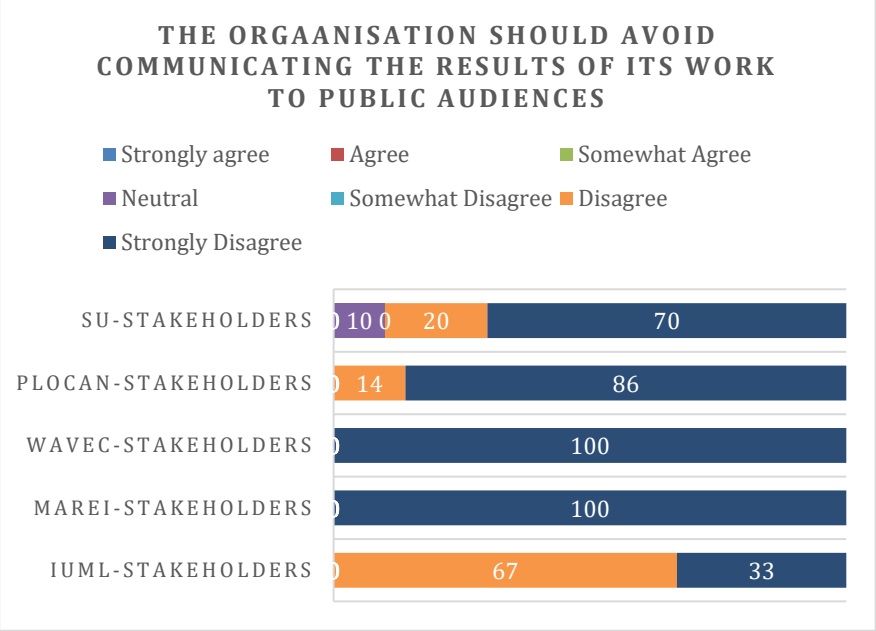
```
CORRELATION
  /VARIABLES = I_IUML_Stakeholders I_MaREI_Stakeholders I_WavEC_Stakeholders I_PLOCAN_Stakeholders I_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		I_IUML_Stakeholders	I_MaREI_Stakeholders	I_WavEC_Stakeholders	I_PLOCAN_Stakeholders	I_SU_Stakeholders
I_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
I_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	,86	,88
	Sig. (2-tailed)				,012	,010
	N		7		7	7
I_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
I_PLOCAN_Stakeholders	Pearson Correlation	NA	,86	NA	1,00	1,00
	Sig. (2-tailed)		,012			,000
	N		7		7	7
I_SU_Stakeholders	Pearson Correlation	NA	,88	NA	1,00	1,00
	Sig. (2-tailed)		,010		,000	
	N		7		7	7

**

L= The orgaanisation should avoid communicating the results of its work to public



All the stakeholders who responded from the five organisations disagreed at different levels that the organisation should avoid communicating the results of its work to the public. Only 10% of stakeholders from SU were neutral.

Only 2 stakeholders responded from WavEC and 3 from IUML.

The correlation matrix of the stakeholders' answers from the different organisations to question L shows high values. We did not observe any connection with the size and the type of the organisations. The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as ≤ 3 stakeholders provided their answers.

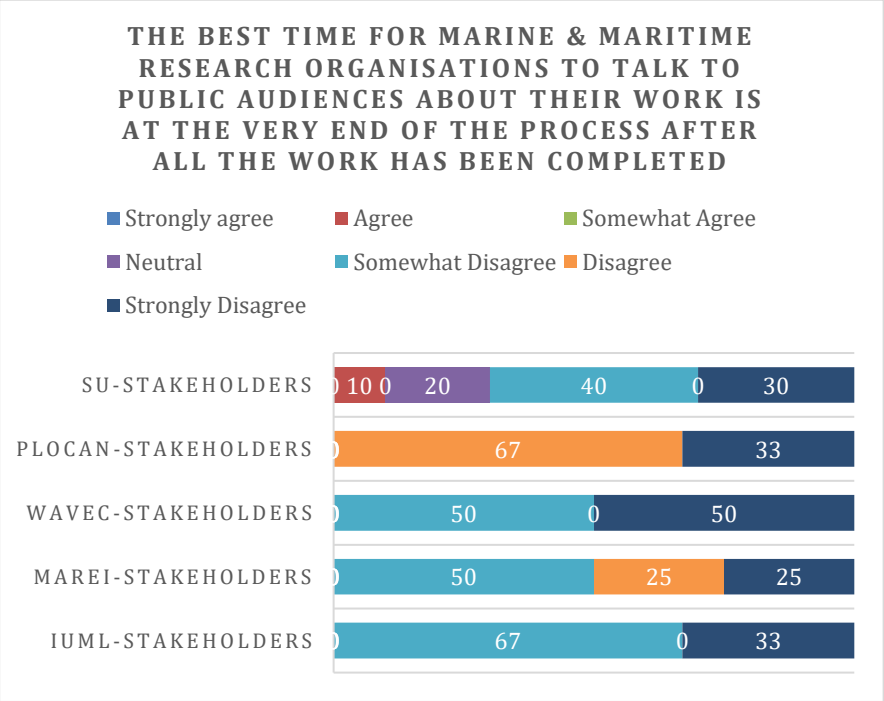
```
CORRELATION
  /VARIABLES = L_IUML_Stakeholders L_MaREI_Stakeholders L_WavEC_Stakeholders L_PLOCAN_Stakeholders L_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		L_IUML_Stakeholders	L_MaREI_Stakeholders	L_WavEC_Stakeholders	L_PLOCAN_Stakeholders	L_SU_Stakeholders
L_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
L_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	,99	,95
	Sig. (2-tailed)				,000	,001
	N		7		7	7
L_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
L_PLOCAN_Stakeholders	Pearson Correlation	NA	,99	NA	1,00	,98
	Sig. (2-tailed)		,000			,000
	N		7		7	7
L_SU_Stakeholders	Pearson Correlation	NA	,95	NA	,98	1,00
	Sig. (2-tailed)		,001		,000	
	N		7		7	7

**

M= The best time for marine & maritime research organisations to talk to public about their work is at the very end of the process after all the work has been completed



All the stakeholders of the five organisations disagreed at different levels that the best time for M&M research organisations to talk to the public about their work is at the very end of the process after all the work has been completed. Only 10% of stakeholders from SU agreed on that, and 20% were neutral. The small number of respondents influences the values of these responses in some cases. Only 2 stakeholders responded from WavEC and 3 from IUML.

The correlation matrix of the answers given by the stakeholders from the different organisations to question M (different from the case of researchers' answers to question M in section B.1) shows high values, except for the correlations involving PLOCAN, which provided responses that differ more significantly than those of the other organisations. Debates involving the stakeholders of the different organisations are suggested, to clarify the different opinions. The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as 3 or less stakeholders provided their answers.

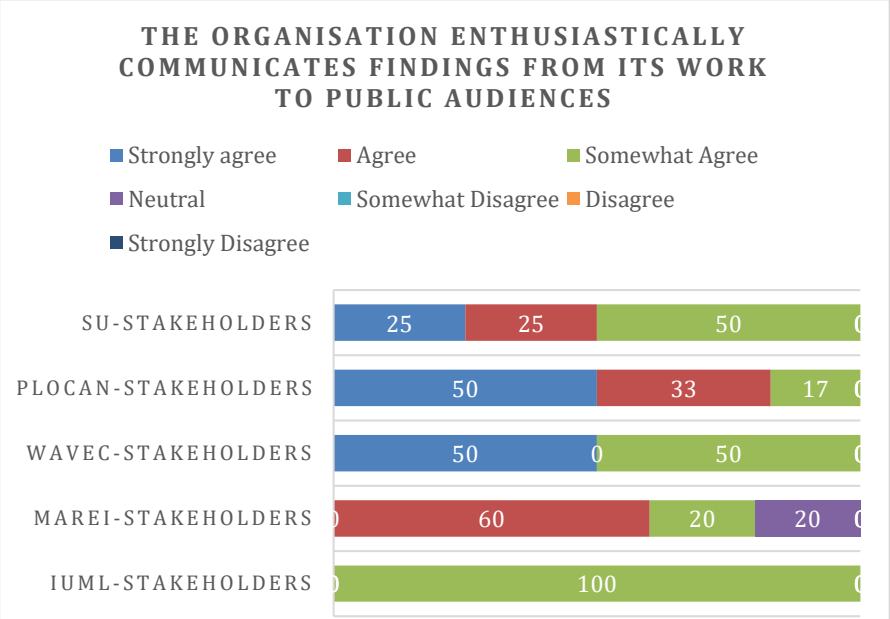
```
CORRELATION
    /VARIABLES = M_IUML_Stakeholders M_MaREI_Stakeholders M_WavEC_Stakeholders M_PLOCAN_Stakeholders M_SU_Stakeholders
    /PRINT = TWOTAIL SIG.
```

Correlations

		M_IUML_Stakeholders	M_MaREI_Stakeholders	M_WavEC_Stakeholders	M_PLOCAN_Stakeholders	M_SU_Stakeholders
M_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
M_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	,35	,69
	Sig. (2-tailed)				,448	,085
	N		7		7	7
M_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
M_PLOCAN_Stakeholders	Pearson Correlation	NA	,35	NA	1,00	-,17
	Sig. (2-tailed)		,448			,713
	N		7		7	7
M_SU_Stakeholders	Pearson Correlation	NA	,69	NA	-,17	1,00
	Sig. (2-tailed)		,085		,713	
	N		7		7	7

**

N= The organisation enthusiastically communicates findings from its work to public



All the stakeholders of the five organisations agreed at different levels that the organisation enthusiastically communicates findings from its work to public. Only 20% of stakeholders from MaREI is neutral. The small number of respondents influences the values of these responses in some cases. Only 2 stakeholders responded from WavEC and 2 from IUML.

The correlation matrix of the stakeholders' answers from the different organisations to question N shows one high value between IUML and SU; the correlation values between the other organisations are medium. This is due to the differences in the level of agreement. The actions and discussions should take note of these divergences, making evident the strengths of communicating the findings from the work to the public.
The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as only 2 stakeholders in each one of the two organisations provided their answers.

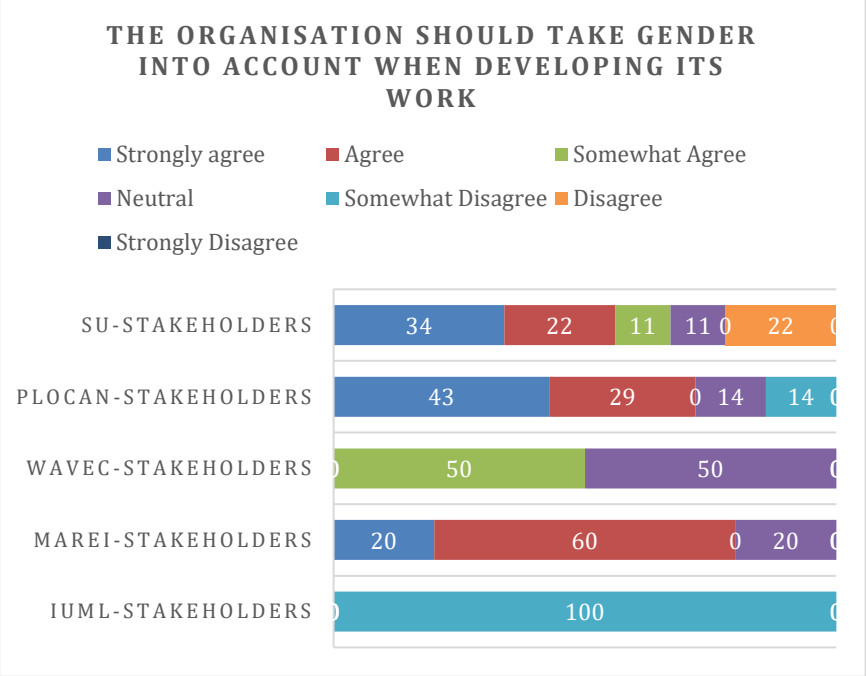
```
CORRELATION
  /VARIABLES = N_IUML_Stakeholders N_MaREI_Stakeholders N_WavEC_Stakeholders N_PLOCAN_Stakeholders N_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		N_IUML_Stakeholders	N_MaREI_Stakeholders	N_WavEC_Stakeholders	N_PLOCAN_Stakeholders	N_SU_Stakeholders
N_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
N_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	,33	,41
	Sig. (2-tailed)				,469	,364
	N		7		7	7
N_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
N_PLOCAN_Stakeholders	Pearson Correlation	NA	,33	NA	1,00	,63
	Sig. (2-tailed)		,469			,131
	N		7		7	7
N_SU_Stakeholders	Pearson Correlation	NA	,41	NA	,63	1,00
	Sig. (2-tailed)		,364		,131	
	N		7		7	7

**

O= The organisation should take gender into account when developing its work



The stakeholders of the five organisations have very different opinions if the organisation should take gender into account when developing its work. Only 2 stakeholders responded from WavEC and 3 from IUML.

The correlation matrix of the stakeholders' answers from the different organisations to question O shows medium values. Stakeholders from SU, MaREI and PLOCAN seem to have a higher awareness of this need as more stakeholders answered.
The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as 3 or less stakeholders provided their answers.
It is suggested to plan actions to improve the awareness of taking into account gender and integration issues in organisations when developing their work, research processes and methods. We did not observe higher correlations between organisations that are similar in size or type.

```
CORRELATION
  /VARIABLES = O_IUML_Stakeholders O_MaREI_Stakeholders O_WavEC_Stakeholders O_PLOCAN_Stakeholders O_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		O_IUML_Stakeholders	O_MaREI_Stakeholders	O_WavEC_Stakeholders	O_PLOCAN_Stakeholders	O_SU_Stakeholders
O_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
O_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	,65	,47
	Sig. (2-tailed)				,110	,282
	N		7		7	7
O_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
O_PLOCAN_Stakeholders	Pearson Correlation	NA	,65	NA	1,00	,66
	Sig. (2-tailed)		,110			,105
	N		7		7	7
O_SU_Stakeholders	Pearson Correlation	NA	,47	NA	,66	1,00
	Sig. (2-tailed)		,282		,105	
	N		7		7	7

**

P= The organisation should take ethnic diversity into account when developing its work

The stakeholders of the five organisations have very different opinions if the organisation should take ethnic diversity into account when developing its work.

The values of these responses in some cases, are influenced by the small number of respondents. Only 3 stakeholders responded from WavEC and 3 from IUML.

The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as only 3 stakeholders in each one of the two organisations provided their answers.

The correlation matrix of the stakeholders' answers from the different organisations to question P shows high values for MaREI - SU (0.81) and MaREI - PLOCAN (0.77).

We did not observe higher correlations between organisations that are similar in size or type.

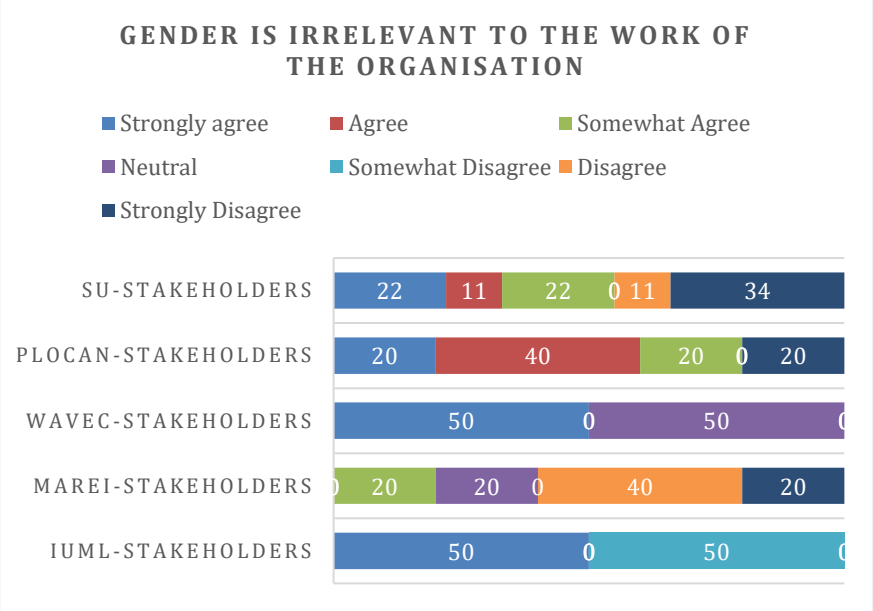
```
CORRELATION
    /VARIABLES = P_IUML_Stakeholders P_MaREI_Stakeholders P_WavEC_Stakeholders P_PLOCAN_Stakeholders P_SU_Stakeholders
    /PRINT = TWOTAIL SIG.
```

Correlations

		P_IUML_Stakeholders	P_MaREI_Stakeholders	P_WavEC_Stakeholders	P_PLOCAN_Stakeholders	P_SU_Stakeholders
P_IUML_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	NA	NA	NA	NA
P_MaREI_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	1,00 7	NA	,77 ,042 7	,81 ,028 7
P_WavEC_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	NA	NA	NA	NA
P_PLOCAN_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	,77 ,042 7	NA	1,00 7	,67 ,098 7
P_SU_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	,81 ,028 7	NA	,67 ,098 7	1,00 7

**

Q= Gender is irrelevant to the work of the organisation



The stakeholders of the five organisations have very different opinions if gender is irrelevant to the work of the organisation.

The values of these responses in some cases are influenced by the small number of respondents. Only 2 stakeholders responded from WavEC and 2 from IUML.

The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as only 2 stakeholders in each one of the two organisations provided their answers.

The correlation matrix of the stakeholders' answers to question Q shows medium and low values. There are also negative correlation values. There is a medium value (0,5) between PLOCAN and SU.

There is a need to plan and implement interventions that help raise awareness on gender equality issues.

We did not observe higher correlations between organisations that are similar in size or type.

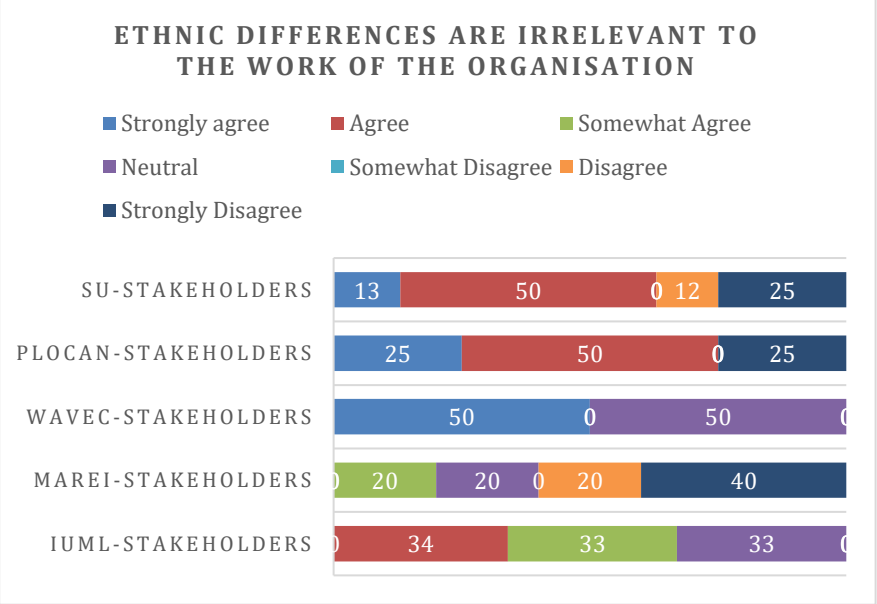
```
CORRELATION
  /VARIABLES = Q_IUML_Stakeholders Q_MaREI_Stakeholders Q_WavEC_Stakeholders Q_PLOCAN_Stakeholders Q_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		Q_IUML_Stakeholders	Q_MaREI_Stakeholders	Q_WavEC_Stakeholders	Q_PLOCAN_Stakeholders	Q_SU_Stakeholders
Q_IUML_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	NA	NA	NA	NA
Q_MaREI_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	1,00 7	NA	-,46 ,301 7	,12 ,805 7
Q_WavEC_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	NA	NA	NA	NA
Q_PLOCAN_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	-,46 ,301 7	NA	1,00 7	,50 ,249 7
Q_SU_Stakeholders	Pearson Correlation Sig. (2-tailed) N	NA	,12 ,805 7	NA	,50 ,249 7	1,00 7

**

R= Ethnic differences are irrelevant to the work of the organisation



The stakeholders of the five organisations have very different opinions if ethnic differences are irrelevant to the work of the organisation.

The small number of respondents influences the values of these responses in some cases. Only 2 stakeholders responded from WavEC and 3 from IUML.

The computation of the correlation respectively of WavEC and IUML with the other organisation is not done as 3 or less stakeholders provided their answers.

The difference in the opinions for question R is also evident from the low or negative values of the correlation matrix, except for the correlation between PLOCAN and SU (0,94). It is suggested to plan and implement actions that help raise the stakeholders' awareness of the importance of considering ethnic diversity. We did not observe higher correlations between organisations that are similar in size or type.

```
CORRELATION
  /VARIABLES = R_IUML_Stakeholders R_MaREI_Stakeholders R_WavEC_Stakeholders R_PLOCAN_Stakeholders R_SU_Stakeholders
  /PRINT = TWOTAIL SIG.
```

Correlations

		R_IUML_Stakeholders	R_MaREI_Stakeholders	R_WavEC_Stakeholders	R_PLOCAN_Stakeholders	R_SU_Stakeholders
R_IUML_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
R_MaREI_Stakeholders	Pearson Correlation	NA	1,00	NA	-,24	-,11
	Sig. (2-tailed)				,604	,808
	N		7		7	7
R_WavEC_Stakeholders	Pearson Correlation	NA	NA	NA	NA	NA
	Sig. (2-tailed)					
	N					
R_PLOCAN_Stakeholders	Pearson Correlation	NA	-,24	NA	1,00	,94
	Sig. (2-tailed)		,604			,002
	N		7		7	7
R_SU_Stakeholders	Pearson Correlation	NA	-,11	NA	,94	1,00
	Sig. (2-tailed)		,808		,002	
	N		7		7	7

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