



Work Package 7

D7.1: Report on RRI Trials



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List of abbreviations

AP	Action Plan
ETH	Ethics
GE	Gender Equality
GOV	Governance
IUML	Sea and Littoral Research Institute (Institut Universitaire Mer et Littoral)
M&M	Marine and Maritime
NGO	Non-governmental Organisation
OA	Open Access
PLOCAN	Oceanic Platform of the Canary Islands (PLATAFORMA OCEANICA DE CANARIA)
PUB	Public Engagement
QH	Quadruple Helix
RFO	Research Funding Organisation
RPO	Research Performing Organisation
RRI	Responsible Research and Innovation
SCI	Science Education
SME	Small and medium sized enterprises
SU	Swansea University
UN SDGs	United Nations Sustainable Development Goals



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1. Introduction

Deliverable (D7.1) reports on the progress made by GRRIP's five case study sites¹ researching on marine and maritime (M&M) issues in their attempts to institutionalise the RRI dimensions ('keys') – Gender Equality (GE), Public Engagement (PUB), Open Access (OA), Science Education (SCI), and Ethics (ETH) – prioritised by the European Commission, and associated governance (GOV) mechanisms.

Prior work (refer to deliverables: D3.1, D3.2, D6.1) within the project led to the adoption of a range of interventions that can help to embed RRI. This included consideration of the work of the European Commission's 'Expert Group on Policy Indicators for RRI' which examined possible indicators for eight areas² (viz. what we recognise as including the six *original*³ European Commission defined RRI keys), the MoRRI indicators⁴ and the UNESCO Recommendation on Science and Scientific Researchers⁵ (Strand et al., 2015). Later, the governance key from RRI was dropped from the EC's policy discourse (Owen et al. 2021). However, after much debate within the GRRIP consortium, it was decided to focus on the six 'original' RRI keys.

These reference materials highlighted the need to put in place a well-rounded approach where interventions would not simply relate to procedures or policy changes but also to the understandings and awareness of them, and the manner in which they were put into action. In other words, the sites would need to select RRI keys that related to their interests and needs and would also need to demonstrate their commitment to them – for example, via policy and procedural changes and RRI related training initiatives.

The report follows on from Deliverable (D6.1) that focused on the identification of relevant RRI interventions by the five RPOs&RFO and the subsequent creation of Action Plans (APs) – with indicators to facilitate monitoring – with governance frameworks, mechanisms, and associated processes and practices to implement the five RRI 'keys'.

D7.1 integrates outputs and learnings arising from the adoption of the QH approach (see Carayannis and Campbell, 2009; and Franc and Karadžija, 2019) in research and innovation. Adopting a QH approach (and, therefore, taking account of different perspectives), extends what could otherwise be restricted thinking around RRI. This has meant that consortium members (including the five sites) developed their research approach in a way that aimed not

¹ These are the four research performing organisations (RPOs) and one dual function RPO and research funding organisation (RFO), they are also referred to as 'sites' or the five "RPOs&RFO".

² The six RRI keys and other two were: 'sustainability' (part of which, of course, relates to the environment) and 'justice/inclusion'

³ The sixth key was governance. See Owen et al. (2021).

⁴ The MoRRI (Monitoring Responsible Research and Innovation) project identified and tested, in different EU contexts, 'core' indicators for RRI. See Yagmaei and van der Poel (2020).

⁵ The UNESCO (United Nations Educational, Scientific and Cultural Organisation) Recommendation on Science and Scientific Researchers was set out in 2017 to guide member states and the work of researchers in ethical and principled ways – including providing enabling environment for science and research, 'priority areas' relating to UN ideals, human rights and the harnessing of human capital. See

https://en.unesco.org/themes/ethics-science-and-technology/recommendation_science .

just to foster industry, government, and university collaborations but also included (as pointed to by Carayannis and Campbell, 2009) the ‘media-based and culture-based public’. The targeted interventions adopted (for the five RRI keys) aim to foster changes in institutional cultures – albeit that part of those changes would be a process extending beyond the end of the GRRIP project. All sites saw the potential of such collaborations, formalised through the GRRIP project interventions, as building (and sharing) knowledge - potentially, helping to lay the foundations for cultural changes within the organisations.

In marine science, gender equality and public engagement keys of RRI demand particular attention. The M&M sector has skewed gender balance and marine research tends to trigger significant involvement from various actors (e.g., governmental and non-governmental organisations) and public audiences who have an interest and/or knowledge (or statutory role) about the marine environment and human and climate change impacts. The M&M sector represents, therefore, a particularly interesting context for exploring RRI’s opportunities and challenges. Exploring RRI in a marine context can provide insights into the connection between RRI and many of the UN SDGs. As such Quadruple Helix (QH) discussions on RRI often focus on environmental and sustainability issues.

The broader context relating to environmental sustainability underpins many activities of the case study sites and links to the RRI interventions, for instance, in relation to the content of science education and the themes addressed through public engagement. Engagement issues pertaining to the environment, furthermore, arose frequently in the monitoring meetings that took place with the site leads⁶ as well as the need for wider equality and inclusion driven approaches (i.e., beyond gender equality) in research practices.

D7.1 is closely linked with the D8.1 Plan on Monitoring Processes and Indicators (submitted and accepted) and forms the link for D7.2 (due for completion at the end of the project). For reporting purposes (D7.1 and D7.2), various parameters are in place by which the level of success of interventions can be assessed – during the trial (initial) period (implementation till 31st January 2022) and post-project. There are indicators (and related targets⁷) to measure success of intervention implementation, and the report involves both quantitative *and* qualitative data and information.

2. Scope of the deliverable

Deliverable 7.1 (D7.1) details the level of initial progress of Action Plan (AP) implementation by the sites up until the 31st of January 2022, on their selected interventions (the RRI trials), and the monitoring and evaluation of these. It reports on GRRIP Tasks 7.5, 7.6 and 7.7, covering the implementation of AP interventions up to trial stage, the rolling out of the trials identified in WP6 and QH engagement on a selected R&I topic. This report contains the results of the formative evaluation (led by EUR) of RRI trials. It also includes the results of the surveys (analysis done by EUR) meant to assess the satisfaction levels of the QH representatives of

⁶ Site leads are the PIs of the five implementing marine and maritime RPOs and RFO of the GRRIP project.

⁷ Targets are the operational success criteria developed by the sites as part of the Action Plans.

the five sites who were engaged in various discussion or provided inputs on research and innovation challenges and needs in the marine and maritime sector.

3. Implementation of the RRI Interventions

The number of interventions chosen by the RPOs & RFO, (and the keys to which they relate), varies as indicated in **Table 1**. The variation depended on the particular context in which the sites operate and the existing levels of their RRI ‘maturity’ (see D5.2 RPO & RFO Audit Reports).

Table 1: Number of interventions selected by the five case study sites to institutionalise RRI

RRI pillars	MaREI	Swansea University	PLOCAN	IUML	WavEC
Gender Equality	2 (1)	3 (1)	6	1 (1)	4
Public Engagement	4	7 (1)	6	2	3
Science Education	1	0	2	1	2
Open Access	2 (1)	2	4 (1)	0	1
Ethics	3 (1)	2	2	0	1
Governance	15 (2)	7 (1)	10	14	13
Total RRI interventions	27 (5)	21 (3)	30 (1)	18 (1)	24

Note: Each of the intervention keys relates to one or more milestones. Out of the five sites, four sites included milestones as being potentially met after the end of the project. The total number of interventions across the RRI pillars that will continue beyond project are indicated in brackets. Swansea University added an intervention related to SCI in the last quarter of 2021.

The total number of milestones for the selected RRI interventions till project end is set out in **Table 2**.

Table 2: Total number of milestones within the selected RRI interventions

RRI pillars	MaREI	Swansea University	PLOCAN	IUML	WavEC
Gender Equality	8 (1)	6 (1)	33	5 (1)	21
Public Engagement	17	14 (1)	20	7	8
Science Education	3	0	9	5	8
Open Access	7 (1)	4	16 (1)	0	5
Ethics	13 (2)	4	9	0	4
Governance	51 (2)	14 (1)	39	52	40
Total RRI milestones	99 (6)	42 (3)	126 (1)	69 (1)	86 (0)

Note: The number of milestones to be potentially met after the end of the project is noted in brackets (not included in total).

4. The monitoring process

The GRRIP monitoring methodology was set out in D8.1 Plan on Monitoring Processes and Indicators. It affirmed that the 'RRI Action Plans include a series of *practical* [our emphasis] interventions to support institutions to perform ongoing self-analysis and institutional change related to RRI'. D6.1 and D8.1 also reported on the way in which AP development had been supported by mutual learning workshops organised by each case study site which included discussion with QH members.

The APs for implementing RRI interventions were developed by the five sites, and as part of action plan development indicator dashboards were prepared to aid in monitoring their progress and these, augmented by the data collected, aimed (as reported in D8.1 Plan on Monitoring Processes and Indicators) to answer the following questions. Monitoring meetings with the sites commenced in June 2021.

- Are the pre-identified outputs related to the APs being produced and as efficiently as planned?
- What are the issues, uncertainties, risks and challenges faced or foreseen that need to be taken into account?
- What decisions need to be made concerning changes to the planned work (set out in the APs) in subsequent stages?

The RPOs&RFO tracked their own progress in relation to the APs. Such progress has been, through the monitoring meetings (and associated correspondence and dialogues), externally checked for a sample of interventions. Procedural notes for, and key outcomes of, the meetings and follow-up interactions for each of the five case study sites are provided below. A summary note has been produced (see Section 5) of the work of each site that bears testimony to some of their successes and challenges.

The monitoring meetings have been undertaken for all the five sites on approximately a quarterly basis. The first 'round' took place in June and July 2021. These and other interactions acted as spaces for information sharing, verifying progress and discussion about barriers encountered and opportunities anticipated and/or realised. In all cases, the sites were spontaneous in providing information (both prior to and/or in the monitoring meetings). The case study sites also hold their own monthly meetings to share experiences, discuss potential challenges and identify potential solutions.

The monitoring meetings involved both DMU staff (Elmina Homapour and/or Malcolm Fisk)⁸, staff from Erasmus University Rotterdam (Xiaoyue Tan), and the UCC Project Manager (Indrani Mahapatra). The meetings were convened and chaired by Malcolm Fisk (MF). Preparations by MF and IM for the meetings included:

⁸ Elmina Homapour left DMU in August 2021. MF took over full responsibility for DMU's role within the GRRIP project post her departure. Colm Kearns (DCU) participated in the first round of meetings as WP7 leader.

- Consideration of issues / challenges emerging (or having emerged) for the RPOs & RFO more generally (e.g., as reported by partners in Steering Group meetings).
- Selecting a theme or themes that would be pursued in the meetings and would link with general or specific concerns of the GRRIP project.⁹
- Noting dates of recent or imminent milestones (to facilitate checks on progress).
- Determining specific questions that would be raised in relation to (a) milestones; and (b) the selected theme.
- Sending the monitoring meeting ‘proforma’ (see below and Annex A) to the RPOs&RFO in advance of the meetings in order to prompt them in relation to specific activities to fulfil the various interventions; and to enable them to consider the broader issues and themes.¹⁰

Whilst the proforma is, in each case, unique to the specific site, an opening question gives the organisation the opportunity to provide a general update on their progress, problems encountered, etc. A truncated version of the proforma is offered in **Annex A**. This indicates the starting point for each monitoring meeting. The blank areas in the proforma were completed by MF after the meeting and agreed with the respective GRRIP case study site.

4.1. Progress in implementing the RRI trials

Precise information was obtained from the RPOs&RFO with regard to progress made up to 31st January 2022. This enabled an initial assessment of the extent, during the trial period, as to which milestones for the relevant interventions had, at this point, been met or missed.

In order to obtain precise information on the progress towards milestones for each of the RPOs&RFO, all sites were provided with a spreadsheet prepared by MF (based on the indicator dashboards prepared by the case study sites). This spreadsheet included *only* those interventions with milestones on or before 31st January 2022. Two columns were added in order for them to indicate whether the milestone (and the associated target) was, on the applicable date

- met;
- work in progress;
- work on hold; or
- not met.

Guidance provided to the five case study sites suggested the inclusion of comments to indicate

- any relevant matters relating to the milestones met;
- where the targets had been exceeded;
- the nature of any delays;
- the reasons why work might be ‘on hold’; or

⁹ Note that ‘themes’ utilised for two of the (sets of) monitoring meetings were, respectively, the links of the approaches of the RPOs & RFO to the UN SDGs; and risk management.

¹⁰ Note that some sites chose to complete the proforma in advance of the monitoring meeting.

- if the intervention might no longer be applicable or require reviewing.

A follow-up on the responses sent by the sites enabled, in part using the additional information provided, a refining of the categorisation to ensure that (a) for work in progress that there had been ‘meaningful preparatory work’ undertaken; and (b) that the reasons for any work on hold were clear.

Ten interventions across the sites include milestones dated *beyond* the end of the project. However, progress made in the project period is being monitored (monitoring will be up to September 30th, 2022). The number of milestones for interventions in respect of each RRI key due to be met in the initial period by 31st January 2022) is set out in **Table 3**. What is clear from Table 3 is the extent to which at the outset there was some front-loading of milestones by PLOCAN and WavEC (in both cases especially for Gender Equality, Public Engagement and Science Education); and a back-loading for all RPOs & RFO in respect of Open Access and Ethics (excepting IUML - no interventions for these RRI keys).

The matter of front-loading has been taken into consideration when analysing and reporting on the milestones met (and targets that apply to each) in view of some being impacted by the COVID 19 pandemic. These affected, in particular, interventions and milestones best fulfilled through face-to-face activities which were focused on raising awareness and consulting with staff members and a wider range of stakeholders.

Table 3: Total number of milestones for each of the RRI interventions and number of milestones met on 31st January 2022

	MaREI	Swansea University	PLOCAN	IUML	WavEC
Gender Equality	4 (2)	3 (3)	32 (28)	1 (0)	19 (12)
Public Engagement	14 (12)	6 (6)	18 (7)	5 (5)	6 (5)
Science Education	2 (2)	0	9 (0)	4 (4)	7 (5)
Open Access	3 (1)	1 (0)	11 (2)	0	4 (3)
Ethics	3 (3)	2 (2)	9 (0)	0	3 (3)
Governance	32 (20)	10 (9)	28 (25)	39 (35)	33 (29)
Total (number and % milestones met)	58 (40) (69%)	22 (20) (90%)	107 (62) (58%)	49 (41) (84%)	72 (57) (79%)

Note: The number of milestones to be reached by 31st January 2022 is noted in brackets. The table *excludes* milestones post 31st January 2022; it includes three MaREI milestones that relate to an intervention ‘Setting up leadership group to address researcher well-being and career enhancement opportunities’ (see Annexe 2) that was taken forward by the host university, however, no specific action was needed to be completed by MaREI as outlined in the action plan (in D6.1).

The required information was received promptly from all the five case study sites on the basis of which analysis was undertaken¹¹. This, in turn, indicated where further information and/or clarifications needed to be sought – as a prelude to the final analysis included in this report.

Table 4 provides a breakdown of the information received from the five GRRIP sites in respect of progress during the trial period. The table is not meant for benchmarking or comparison purposes of RRI implementation success across the five sites, as the interventions chosen, and approaches to achieve them, are different. Furthermore, they all have different governance structures –one is nested within a University, one is a funded Centre with collaboration of many universities, one is a Research Federation, one is a non-profit private organisation, another an arms-length public research body.

Table 4: RRI-related intervention milestones met and unmet for the initial period (as of 31st January 2022)

Milestone status	MaREI	Swansea University	PLOCAN	IJML	WavEC
Total no. of milestones till Jan 2022	58	22	107	49	72
Milestones met	40 (69%)	20 (91%)	62 (58%)	39 (80%)	57 (79%)
Milestones not met: Work in progress (1)	6 10.34%	2 9%	45 42%	5 10%	4 6%
Milestones not met: Work on hold (2)	6 10.34%	0	0	5 10%	1 1%
Milestones not met: Other (3)	6 10.34%	0	0	0	10 14%
Milestones not met (1+2+3) = 4	18	2	45	10	25
Milestones Feb to Dec 2022 - project end (5)	41	20	19	20	14
Total no. of milestones till Dec 2022	99	42	126	69	86
Number of Milestones to be met by Dec 2022 (4+5)	59 60%	22 52%	64 51%	30 43%	39 45%

Note: The total number of milestones in this table omits those that are after the end of the GRRIP project. Percentages is calculated based on the milestones till Jan 2022, and

1. Work in progress: If meaningful preparatory work has been undertaken, but milestones were not met on the date mentioned.
2. Work on hold: If work on a particular intervention was either not started due to certain considerations or was started but then could not proceed.
3. Other: Issues due to staffing, project budget limitations.

¹¹ All information was received by DMU by 14th February 2022

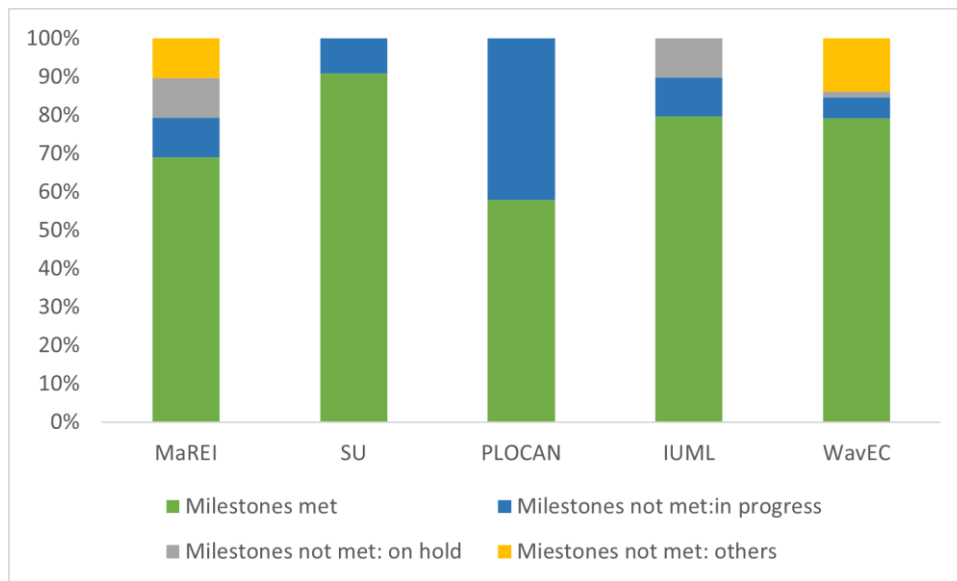


Figure 1: Status of interim milestones related to implementation of RRI related interventions

Table 4 and the bar chart (Figure 1) show that all the sites were successful in meeting most of the milestones set out in their APs by the end of the trial period. This was notably the case for Swansea University, IUML, and WavEC for which it is inferred that there was very high ‘success rate’. For MaREI, the lower rate is explained in part by work being ‘on hold’ pending meetings, and decisions at a higher institutional level. Both PLOCAN and WavEC experienced staffing changes (e.g., turnover) during the trial period and COVID-19 impacted business and service priorities, for instance, several priorities changed in 2020 and 2021 (training topics and its “urgency” was one of these), meaning that some intended early milestones needed to be postponed. This resulted in changes to work plans - particularly evident for PLOCAN (where 38 milestones were deferred from 2021 to 2022). Ninety percent of PLOCAN’s unmet milestones were related to training on the five RRI pillars and collecting training attendance data and analysing them. However, reflecting the fact that meaningful preparatory work has been undertaken, progress for these milestones is recorded as ‘work in progress’ (see **Table 7**). For PLOCAN (under 60%) the extent of ‘work in progress’ relates to training courses re-prioritisation partly impacted by COVID 19 and staffing issues.

In terms of the total number of milestones to be met in the remainder of the project (at least in terms of numbers), the biggest challenge appears to be for MaREI with 59 milestones (i.e., approximately 60% of their overall total) and PLOCAN could also face a challenge with 64 milestones not attained by January 31st, 2022.

Matters Arising from Monitoring Meetings

Many of the matters arising from monitoring meetings are specific to the particular RPO & RFO. The tailored feedback given to them was instrumental in helping them keep on track towards completion or operationalising of the interventions in their respective APs. **Tables 5 to 9** and the Annexe provide more detail regarding the progress by each site. The Annexe



represents the delays in achieving an activity on a particular date, however, by 31st January 2022 many activities were completed (reflected in the Tables from 3 to 9).

In all cases the importance of timely progress was emphasised in the meetings. Each site was reminded that the main marker of their progress was with respect to the milestones achieved as milestones met indicates that there is either some interest to engage with RRI AP implementation or there is momentum to embed a particular RRI dimension in practices, processes, and policies. RRI related changes are being implemented. The broader context was one, however, where it was affirmed to the RPOs & RFO that their success was not dependent on the *full* achievement of *all* the interventions. In any case, the milestones for a few of the interventions (noted in **Table 2**) were set beyond the end of the project.

5. Overview of site progress on RRI trials

5.1. MaREI

MaREI, is the Science Foundation Ireland's centre for energy, climate and marine research and innovation. The MaREI Centre (an RPO) is co-ordinated by University College Cork (UCC) and has 13 partner institutes from across Ireland and hosts more than 200 researchers – and works (often with industry partners from SMEs to multi-nationals) to inform policy and deliver research relevant to society in the areas of energy transition, climate action and the blue economy.

The Centre is part of the College of Science, Engineering and Food Science and is coordinated by the Environmental Research Institute (ERI) in UCC. MaREI is influential at both Irish and wider European levels. Whilst the focus is on implementing RRI interventions in the marine aspect of research and innovation conducted at MaREI, the wider context of the host university (UCC) and the parent institution (ERI) are important reference points. GRRIP related interventions are discussed with members of a Working Group; and with an external core group of advisors – as a subset of the QH, drawn from industry, government and policy makers, academia and the wider community.

5.1.1. Action Plan Progress

Tables 4 and 5 indicate that 69% of interim intervention milestones were met (as of 31st January, 2022). Notable is the fact that twelve of the 40 milestones achieved were at the 'exceptional' rather than 'acceptable' level (these operational success criteria were part of the action plans prepared by the sites and is in D6.1). These mostly related to Public Engagement and promotion of the QH approach - where multiple stakeholders were engaged in mutual learning and knowledge transfer activities. For instance, MaREI organised a virtual QH workshop on 1st June 2021 ('Shaping the Future of Marine and Maritime Communities') to facilitate discussion and deliberation on the challenges, and innovation and research opportunities for the marine and maritime communities in the south-western region of Ireland. Forty-five QH representatives participated and considered issues in the areas of: i) climate change, ii) marine energy, iii) marine environment, iv) food security, v) blue economy, jobs, and skills. In preparation for the workshop, participants were placed in five groups (as per the five topics) with attention to each given to gender balance and representation from





the four main sectors of the QH. There were 9 to 11 participants per topic. After the workshop, MaREI circulated the draft report to the participants and included participant's feedback in the final version. The final report is available on the GRRIP website.¹² The success of such engagement was attested to in responses to a survey conducted with the workshop participants and is noted in Section 8.1.

Details of past MaREI projects (focused on marine research) with Triple Helix and QH¹³ partnerships are being documented to provide a baseline to establish the trends within research projects undertaken within MaREI.

With regard to the open access RRI key, it can be noted that the University is part of the IREL initiative (Irish Research eLibrary) funded by the government's Department of Further and Higher Education, Research, Innovation and Science. This supports researchers at participating universities to publish their research in open access format in the journals which have been negotiated by the IREL based on the LIBER principles.¹⁴

Several of the milestones that were not met (as of 31st January 2022) related to MaREI's position within the ERI / University and the need for decisions on interventions requiring endorsement at the ERI / University level. MaREI's response has been to engage with the University's decision-making structures and endeavour to stimulate necessary changes relating to RRI interventions, at the supra-level. Some delays were due to limited budget for staff time in GRRIP and the fact that MaREI is a soft-funded research centre.

With regard to the recruitment of and support for RRI champions, this has found many staff, though very interested in RRI, unwilling to carry that title on account of their many responsibilities. MaREI's response has been to actively seek the informal commitment of such staff members and who are willing to be supportive of (and spread the message about) the interventions relating to their roles and interests.

Overall, satisfactory momentum has been established. And, whilst there is an ongoing challenge relating to GRRIP's aspirations and the established University's governance structure, good overall progress is envisaged during the remainder of the project.

Milestones with respect to public engagement and science education training were met. Furthermore, every two years at MaREI, a training needs analysis (TNA) survey is undertaken for researchers, with initiatives then planned to meet any deficits. The last TNA survey (completed in May 2020) found a majority of researchers expressing the need for training around designing engaging visual material and improving their communication skills in order to write and create for lay audiences.

¹² Available at: <https://grrip.eu/shaping-the-future-of-marine-and-maritime-communities-virtual-workshop-summary-report/>

¹³ The 'Quadruple Helix' model of knowledge is concerned with the bringing together of academia, industry, government and media-based and culture-based public'. See Carayannis and Campbell (2009).

¹⁴ The IREL principles for Open Access publisher agreements from 2020 are used by European research and national libraries to deal with publishers of electronic journals and for licensing.



A survey to understand time spent by researchers on public engagement and science communication activities and the associated barriers and challenges was undertaken in July 2021. A report of the survey was prepared which helped to understand MaREI’s baseline with respect to these activities and was discussed with senior management. The survey showed that 63% of respondents (n=46 for UCC, response rate: 66%) spend up to 2hrs a week (or 5% of their time) on outreach, communication and dissemination activities (including knowledge sharing via news articles, websites, social media, video, newsletters, etc), while a further 24% spend between 2-7 hours a week (or 5% - 18% of their time), and 13% are spending 20% or more of their time on these activities. Additionally, 52% of the respondents spend up to 2 hrs a week to engage with non-academic stakeholders (such as, public, policy makers, funding bodies, industry, etc.), 30% spend between 2-7 hours a week, and 14% are spending one day or more a week (with one person employed full time for engagement activities). This indicates, public engagement and outreach are embedded in MaREI.

Table 5: MaREI – Progress with regard to RRI intervention implementation

RRI pillars	Milestone not met: Other	Milestone not met: Work on hold	Milestone not met: Work in progress	Milestone met	Interim milestones: total
Gender Equality	-	1	1	2	4
Public Engagement	-	-	2	12	14
Science Education	-	-	-	2	2
Open Access	2	-	-	1	3
Ethics	-	1	1	3	5
Governance	4	4	2	20	32
Total*	6 (10.34%)	6 (10.34%)	6 (10.34%)	40 (69%)	58

Note: Three milestones of one intervention relating to mentorship are excluded in view of the University College Cork putting these in place without GRRIP stimulus. *Percentage in brackets are calculated with total interim milestones that were to be met by 31st January 2022.

Monitoring meetings took place on 23rd June and 4th November 2021. Detailed feedback regarding interventions was sought in February 2022 to facilitate the analysis provided for interventions. A dialogue ensued in March in order to clarify some matters regarding the documented progress – as reported in this Deliverable.

5.2. Swansea University

Swansea University is a non-profit higher educational institution. It is the Department of Biosciences within the University that is the partner within the GRRIP project. The Department employs nearly 100 people, of whom about 40 are closely associated with marine research.

The Department maintains a strong focus on living marine organisms and their ecology, and it offers undergraduate and post-graduate marine biology degree courses. Whilst the focus is on implementing RRI interventions *within* the Department, where possible it also informs wider University policies. However, the Department’s governance, policy and practice frameworks at the highest levels must necessarily align with those of the University. Across the Biosciences department staff dedicated to the pillars of Open Access, Ethics, Public Engagement, Science Education were identified within the project. The Head of Department is, furthermore, an active contributor to RRI discussions. Due to staff working commitments, the Working Group does not meet collectively – but representatives of individual RRI pillars report to all staff at regular departmental meeting.

Table 6: Swansea University (Department of Biosciences) – Progress with regard to RRI intervention implementation

RRI pillars	Milestone not met: Other	Milestone not met: Work on hold	Milestone not met: Work in progress	Milestone met	Interim milestones: total
Gender Equality	-	-	-	3	3
Public Engagement	-	-	-	6	6
Science Education	-	-	-	-	-
Open Access	-	-	1	-	1
Ethics	-	-	-	2	2
Governance	-	-	1	9	10
Total*	0	0	2 (10%)	20 (90%)	22

*Percentage in brackets is calculated with total interim milestones that were to be met by 31st January 2022.

5.2.1. Action Plan Progress

Tables 4 and 6 indicate that 90.1% of interim intervention milestones (i.e., as of January 31st 2022) were met despite concerns about potential delays as a consequence of uncertainties relating to organisational changes at the University, from a College to a Faculty based structure. The new framework is now established where departments and schools are nested within Faculties. Such changes, along with delays in initiating actions relating to the interventions, meant that the recruitment of RRI champions was compromised. Eight of the twenty-two milestones achieved were at the ‘exceptional’ level. These relate, in the main, to



training provision on Gender Equality and Public Engagement. Indeed, a notable focus has been placed on public engagement (QH related) whereby success has been achieved in raising awareness of, and interest about RRI, among a wide range of stakeholder groups (e.g., schools, community groups, SMEs and other commercial bodies) – though less ‘academic’ terms have generally been used. Such awareness has resulted in new projects and stronger research partnerships with the University.¹⁵

A workshop (‘The Future of Coastal Communities in Swansea and South Wales’) was held to better understand what stakeholders from industry, government, and the wider society perceived to be the main challenges in the coming years for their region and to find out what research would be beneficial to *them*.¹⁶ Thirty-one people from industry, wider society, governmental organisations, and academia attended. Breakout groups discussed challenges to the coastal and marine environment, the outcomes of which gave suggestions on research topics and highlighted hurdles that could be faced in the collaborative research approaches envisaged. Through this dialogue it was realised that people were more open when the University went *out* to the communities rather than community members being invited *in*. The Officer of Industry Engagement of Swansea University, who was present at the workshop, was enthused by the discussions and concluded that the need to engage with communities should be a priority in addition to their efforts to engage with industry. Please see Section 8.2 for results on quality of involvement survey filled by the participants of the workshop (and an onsite meeting at Mumbles Sea Wall, Swansea) organised by SU.

A further focus of the GRRIP work has been on gender equality. However, the University’s restructuring has been challenging and led to uncertainty and deferred high level decision-making. It transpires that the Department of Biosciences has remained intact (helped by its successes in student recruitment) but the placing of the Athena Swan Committee is unclear – and, therefore, the flexibility for the Department in relation to its GRRIP actions for this RRI key. The ambition is to have a gender equality champion more closely linked to marine research. Just two milestones were not met. One of these related to the documentation of Open Access communication. Other milestones for Open Access occur late in 2022. And the second one related to ‘citizen science’. The citizen science actions were closely linked to a funding proposal to the UK Research Funding body UKRI. If successful this would have allowed the development of twelve citizen science projects throughout the university, including two marine science ones. The funding proposal was unsuccessful. This illustrates that the success of RRI action implementation may depend on additional external funding. However, SU participated as a panel member in a Time4CS event to discuss about citizen science engagement in marine research. Work is ongoing to identify RRI related training needs and opportunities for marine researchers and students. SU conducted several education and awareness raising sessions with primary school students on the need of coastal defence structures and the importance these structures promoting marine biodiversity. This

¹⁵ This event was jointly funded by GRRIP and through a Higher Education Funding Council for Wales (HEFCW) programme. See <https://grrip.eu/wp-content/uploads/2022/02/SU-Marine-stakeholder-workshop-report-Sep-2021.pdf>

¹⁶ This follows the objectives for Task 6.5 and feeds into Task 7.6 (addressed in this Deliverable).





necessitated that SU re-visit its RRI APs and a further intervention (on science education) has now been added to the APs,

Active engagement takes place with the Department's Management Team and, where appropriate, directly seeking to influence the decision-making structures at a higher (University) level - with a view to ensuring that the need for RRI interventions are recognised.

Monitoring meetings took place on 15th June and 5th October 2021. Detailed feedback regarding interventions was sought in February 2022 to facilitate the analysis provided for interventions. A dialogue ensued in March order to clarify some matters regarding the documented progress – as reported in this Deliverable.

5.3. PLOCAN

The Oceanic Platform of the Canary Islands (PLOCAN), an RPO, is categorised as a unique scientific and technological infrastructure (Infraestructuras Científicas y Técnicas Singulares, ICTS), one of 29 recognised in Spain.¹⁷ It is co-funded by the Ministry of Science, Innovation and Universities of the Spanish government, the Canary Islands government and by the European Regional Development Fund (ERDF) under the Operational Programme of the Canary Islands; with the objective of facilitating research, 'technological development and pioneering innovation in the marine and maritime fields' available to both public and private bodies.¹⁸ PLOCAN offers both onshore and offshore experimental facilities and laboratories that are operational throughout the year. The organisation is leading or involved in large national, EU and international marine/maritime projects.

There are in all, 55 staff (as of January 2022) and PLOCAN is an active participant in 51 European projects. Responsibility for the GRRIP related interventions is vested in a working group coordinated by a lead staff member. PLOCAN's work is guided by (two) Advisory Boards, supported by its C-Level and developed by the GRRIP Working Group. There is a close alignment of PLOCAN's work with six of the UN SDGs.

¹⁷ The number is correct for 2018

¹⁸ Per the Ministerio de Ciencia, Innovación y Universidades (2018) 'Updated Map of Unique Scientific and Technical Infrastructures (ICTS)'.



Table 7: PLOCAN – Progress with regard to RRI intervention implementation

	Milestone not met: Other	Milestone not met: Work on hold	Milestone not met: Work in progress	Milestone: met	Interim milestones: total
Gender Equality	-	-	4	28	32
Public Engagement	-	-	11	7	18
Science Education	-	-	9	-	9
Open Access	-	-	9	2	11
Ethics	-	-	9	-	9
Governance	-	-	3	25	28
Total*	0	0	45 (42.1%)	62 (57.9%)	107

*Percentage in bracket is calculated with total interim milestones that were to be met by 31st January 2022.

5.3.1. Action Plan Progress

Tables 4 and 7 indicate that most (57.9%) of interim intervention milestones (i.e., by January 31st, 2022) were met. For those milestones that remained unmet it can be noted that preparatory work for *all* of these had commenced. Of the 107 milestones, an ‘exceptional’ level of achievement is evident for the development of the Gender Equality policy (signed off by the PLOCAN Director in March 2021). This extends beyond gender by endeavouring to ensure that there is no unjustified discrimination in the hiring, training and development of staff for reasons of age, gender, disability, marital status, pregnancy and maternity, political opinion, religion, race/ethnicity or sexual orientation.

The gender equality pillar of RRI can be noted as a particular focus for PLOCAN representing over a quarter of the intervention targets. The GRRIP project was, in fact, a stimulus for the development of written policies on and a plan for gender equality - with a gender equality ‘unit’ being established to address the issues of concern and respond to new Spanish legislation (relating to public organisations with 50 or more employees). During the remaining period of the GRRIP project, feedback from staff will be sought in relation to the plan’s implementation and efficacy.

As per its Action Plan PLOCAN undertook a focused RRI trial for public engagement in March 2021. This comprised moderated discussions with representatives of the QH for mainland Spain, the Canary Islands and *for the sector as a whole* in Europe on the topic of authorisations and permits for offshore renewable energy deployment. It sought to co-identify ways forward for sustainable and faster innovations in offshore renewable energy. A position paper from the workshop was prepared (in Spanish) and circulated to participants and competent



authorities. A survey was completed by EUR to assess the success of the engagement (See Section 8.3).

With regard to the challenges faced, it can be noted that some delays (due to staff changes but also, as noted earlier, arising from business and service priorities) were evident as of January 31st, 2022. Meaningful work on some of the interventions had, however, been undertaken – with these recognised, therefore, as ‘work in progress’ and with some milestones re-set. Many of the re-set milestones are for RRI training (e.g., steps in the development of training plans for Public Engagement, Science Education, Ethics, and Open Access). Such work will support PLOCAN’s intent to do further justice to the QH engagement. Their existing networks can be noted as extending from government bodies to schools.

Steps towards the setting up of an RRI ‘unit’ and selection of RRI champions is work in progress. Work is also ongoing with regard to updating PLOCAN’s IP rights agreements to protect researchers in collaborative projects and during competitive accesses to PLOCAN facilities and services. The GRRIP WG, reconstituted in April 2021, is positioned to ensure good progress towards meeting intervention milestones. Major challenges, as the remaining interventions are pursued, are not anticipated – though some delays may occur in organising meetings that draw together necessary people.

Monitoring Meetings took place on 23rd June and 4th November 2021. Detailed feedback regarding interventions was sought in February 2022 to facilitate the analysis provided for interventions. A dialogue ensued in March order to clarify some matters regarding the documented progress – as reported in this Deliverable.

5.4. IUML

The Sea and Littoral Research Institute (Institut Universitaire Mer et Littoral, IUML) is an interdisciplinary research federation recognised by the French Ministry of Research in 2004 and National Centre for Scientific Research in 2012 as Federation. It has more than 850 researchers in twenty-two laboratories and research units across eight institutions - Nantes Université, CNRS, IFEMER, Centrale Nantes, Le Mans Université, French Maritime Academy (ESNM), French Academy for Marine Affairs (ENSAM), and Université Bretagne Sud.

IUML is hosted by Nantes Université and operates as both an RPO and a RFO (Research Funding Organisation). It works with government, industry and third sector organisations. There are 7 ‘core’ IUML staff (and, therefore, no specific HR resource). The unit coordinates a marine and coastal research cluster and leads related education and research in the Pays de La Loire region of north-western France - sharing know-how, expertise and equipment; developing, funding and managing multi-disciplinary projects. IUML’s governance, policy and practice frameworks would align with those of the host universities.

A significant barrier to implementation of several of the selected interventions is the fact that IUML is not in charge of the internal organisation of the member laboratories some of which are within *other* universities with different governance structures. IUML’s primary attention



to RRI interventions is, therefore, given to what it may do itself and how their work can be adopted and operationalised in those other contexts.

GRRIP related interventions are guided by a Working Group, consisting of champions for specific RRI pillars, and a wider QH stakeholder group. The operating plan for GRRIP interventions is determined by a four-member Executive Committee. GRRIP progress is reported to a Management Committee (comprised of the 22 directors of the member research units) that meets every 6 months. A stakeholder committee was drawn from industry, government and policy makers, academia and the wider community and meets every six months - with RRI interventions and plans of actions are discussed.

Table 8: IUML – Progress with regard to RRI intervention implementation

	Milestone not met: Other	Milestone not met: Work on hold	Milestone not met: Work in progress	Milestone: met	Interim milestones: total
Gender Equality	-	-	1	-	1
Public Engagement	-	-	-	5	5
Science Education	-	-	-	4	4
Open Access	-	-	-	-	-
Ethics	-	-	-	-	-
Governance	-	5	4	35	39
Total*	0	5 (10%)	5 (10%)	39 (80%)	49

*Percentage in brackets is calculated with total interim milestones that were to be met by 31st January 2022.

5.4.1. Action plan progress

Tables 4 and 8 indicate nearly four in five (79.6%) of interim intervention milestones (i.e., as of January 31st, 2022) were met. This is most notable in relation to the building of relationships with regional bodies and the development of tools that will facilitate meeting the milestones and targets relating to public engagement (and, crucially, what are envisaged as sustainable ongoing relationships within the region). The issue of ‘citizen science’ is being considered to be potentially useful in this context. Among the 49 milestones, an exceptional level of achievement is evident for the plan/ roadmap developed for Public Engagement and the number of activities done with citizens. This plan, presented to the GRRIP stakeholder committee in a meeting on 30th November 2021, included a proposal for a venue (the House of the Sea) that can support regular public engagement activities to take place. The engagement with the GRRIP stakeholder committee helped to transform this original idea into a mobile structure: the Van of IUML. Section 8.4 details the results on quality of involvement survey filled by the participants of these stakeholder committee of IUML.



Three milestones related to benchmarking process with other funders who have incorporated RRI into the research funding calls were put on hold. A milestone related to examining RRI dimensions in funding calls was categorised as work in progress as meaningful work was done but the milestone was not met. These delays were due to staffing issues (maternity leave and limited budget in GRRIP to hire extra staff).

IUML, however, reported some difficulties that arose on account, first, of the initial unfamiliarity of their staff and that of federation members with the RRI concept; and second, in establishing an organisational framework that would enable contact to be established and maintained with stakeholder groups (including those within the wider community / regional context).

Crucially, IUML is, wherever appropriate, 'tapping into' existing regional fora (and events) to assist in their engagement activities. Notable is that it has conducted four surveys with the wider public to understand potential research areas and science education needs. The events at which the surveys were conducted were, respectively, the Festival of Science (4th October 2021) in relation to the 'Ship of the Future' and at the SeaEnergy Conference (September 2021) where attendees were asked to respond to questions related to challenges and opportunities of offshore renewable energy. In the Festival of Science, in addition to the survey, a discussion around what kind of ship should or could be developed and what is needed to support such innovation was held. All these surveys were co-opted and disbursed either with industry or with NGOs.

Two surveys were deployed by students on a field trip to Malta (November 2021). One of the surveys was on 'Port of the Future'. The questions in the survey were related to the challenges that ports can face due to global warming and what kind of R&D activities were needed to design the port of future. In the second survey, climate change impacts on coastal cities related to climate change impacts on coastal cities were addressed, and views gathered about needed research activities - including those relating to climate explored public understanding on the effects of climate change on littoral areas and the kind of R&D activities needed to design adaptation measures.

Familiarity with RRI and its keys is now more widespread. The challenge envisaged in the final phase of GRRIP, relates to IUML's position within Nantes Université *and* other universities that host some of the federation's members. The realities around the governance frameworks of host universities and institutes for the participating laboratories are, of course, recognised. Nevertheless, the GRRIP lead has attested to their ongoing endeavours to influence relevant policy and procedural changes among IUML members, for example, for gender equality.

With regard to IUML's role as a RFO, there has been significant success. For the year 2021, there was €40,000 designated for funding proposals (under IUML control) to stimulate interdisciplinary work between laboratories. The call for the disbursement of the funds (made in June 2021) asked applicant researchers to explain how their proposals would address one RRI dimension and one SDG. Six proposals were funded with the successful researchers/teams required to submit a three-minute video of their proposed research for wider dissemination to the public.





Recognition, throughout, has been demonstrated in IUML's activities as *both* an RPO and RFO.

Monitoring meetings took place on 12th July and 14th October 2021. Detailed feedback regarding interventions was sought in February 2022 to facilitate the analysis provided for interventions. A dialogue ensued in March order to clarify some matters regarding the documented progress – as reported in this Deliverable.

5.5. WavEC

WavEC Offshore Renewables (WavEC) is based in Lisbon, Portugal. It is a non-profit RPO that employs approximately 20 staff and is dedicated to the development and promotion of offshore renewable energy. WavEC achieves its objectives through providing technical and strategic support to companies, research and development organisations and public bodies. Its focus includes technology design testing and optimisation, environmental assessments, policy support, and dissemination – and has become an increasingly important reference point for industry and government bodies.

Responsibility for the GRRIP related interventions is guided by an RRI Working Group and an Advisory Board that includes coordinators from all six 'areas' of WavEC's work (extending from 'strategic studies and communication' to 'numerical modelling'). There are weekly meetings at WavEC to report overall progress, which includes member of the Working Group. Progress related to GRRIP interventions is discussed in these meetings. The Board of Directors has overall responsibility for WavEC's work. GRRIP interventions are under the responsibility of two members of the Working Group Good communication between all parties is facilitated by the small size of the organisation and the absence of multiple levels of hierarchy. Communication flows horizontally and decisions can be made faster, at the point-of-need.

Substantial attention is given to networking and responding to the training needs of their clients and partners. A highlight is their 'Annual Seminar' (see below for a note on the 2021 event) that has taken place since 2008 and draws a wide range of international stakeholders

5.5.1. Action plan progress

Tables 4 and 9 indicate that two thirds (66.7%) of interim intervention milestones were met as of 31st January 2022, though a limited progress is indicated for Gender Equality. It can be noted, however, that preparations for the signing off of a gender equality plan had been undertaken¹⁹ – with gender issues being a particular focus for WavEC. Among the 75 milestones, an 'exceptional' level of achievement is evident for 10 milestones.

¹⁹ The five interventions labelled 'work in progress' (the sign off and commencement of training in relation to gender equality) were made place in February 2022.



Table 9: WavEC – Progress with regard to RRI intervention implementation

	Milestone not met: Other	Milestone not met: Work on hold	Milestone not met: Work in progress	Milestone: met	Interim milestones: total
Gender Equality	5	-	2	12	19
Public Engagement	1	-	-	5	6
Science Education	1	-	1	5	7
Open Access	-	-	1	3	4
Ethics	-	-	-	3	3
Governance	3	1	-	29	33
Total*	10 (14%)	1 (1%)	4 (6%)	57 (79%)	72

*Percentage in brackets are calculated with total interim milestones that were to be met by 31st January 2022.

A particular positive relates to the WavEC Annual Seminar which, last year (2021) was undertaken in collaboration with the Embassy of Japan (to Portugal). The GRRIP project was highlighted to an international audience that included 239 participants (including representation from 13 European countries). 50% of participants were from business and 20% from academia; the remainder from the government (9%) and wider society. The purpose of the GRRIP project (and the underpinning RRI keys) has, furthermore, been explained to staff working on different funded projects.

WavEC identified RRI training needs after discussion with its staff and a training plan was approved by the management. But QH engagement has been a key challenge. Part of that challenge relates to the organisation’s difficulty in organising meetings on research and innovation topic involving QH members in view of WavEC’s limited contacts with Civil Society Organisations (CSOs) and local citizens. Moreover, WavEC’s engineering service focus and its small size means that it initially had limited expertise (and hence the authority) to talk about the RRI dimension to its stakeholders. Needless to say, that WavEC does organise public engagement activities for various marine renewable energy projects at the planning stage – however, bringing together members from all four constituent parts of the QH as required by the GRRIP project, has been a challenge for the organisation. Staff turnover has affected WavEC’s GRRIP WG, with this being reconstituted for the third time in 2022 (since 2019).

Monitoring Meetings took place on 16th June, 28th July, and 20th October 2021. Detailed feedback regarding interventions was sought in February 2022 to ascertain the progress of the interventions. A dialogue ensued in March order to clarify some matters regarding the documented progress – as reported in this Deliverable.

6. Main themes and issues from the monitoring meetings

The main themes and issues arising from the monitoring meetings during the initial (trial) period are summarised as follows. They should not be considered as conclusive in view of the further work being undertaken and the range of interventions to be made, and linked milestones to be achieved, that build on the trial. It is anticipated, however, that most of the themes and issues which have impacted on the project so far will remain in place - though the emphases on them will vary. It follows that other themes and issues may be added and discussed in D7.2 'Final RRI Action Plan Implementation Report'.

6.1. Delays in Commencement of the Trials

The timescales originally set for the project were overly optimistic and perhaps were unrealistic. Some delay occurred, therefore, *relative* to the original timescales. Other delays have been a consequence of staff turnover, absences, and sometimes procedural matters – for instance, obtaining approvals for activities associated with the interventions (see 2 below).²⁰ COVID-19 has also been a factor in delaying the 'activation' of the trials (*viz.* relating to interventions in the period to January 31st, 2022) – most notably for those RRI keys that relate to what would normally be face-to-face engagement (e.g., organising QH events).

6.2. Impediments due to Governance Structures

Impacting on three of the RPOs&RFO is the fact that they are hosted by universities (in two cases also involving collaborations with *other* universities). The GRRIP RRI staff have had, therefore, to recognise the special nature of the (higher level) governance structures and consider their impact on their selected interventions. Whilst they found it possible to move forward on some interventions with relative ease, for others this was not the case – with difficulties (and delays) sometimes emerging, most notably, for gender equality policy and practice frameworks (especially in case of MaREI and IUML where partner universities have these in place). A positive outcome is the extent to which the human resources (HR) departments within the host universities were (and continue to be) engaged - as a result of which changes are, to some extent, being made. D7.2 will document the outcomes from such endeavours. But, in the meantime, some delays have been, and are being, encountered.

6.3. Time and Resource Limitations

Impediments were also evident where accomplishment of the interventions depended on re-sourced, non-GRRIP staff members. Progress was assisted, however, where the specific agendas were already in the consciousness of the individuals, departments and/or host organisation concerned.

6.4. Staff Knowledge, Skills, Influence and Training

Staff primarily involved, and who lead the GRRIP work within the RPOs&RFO organisations, are at middle or senior management levels. There is no doubt regarding their knowledge, skills and their commitment to the project objectives - but they are all subject to (and

²⁰ With regard to the RPOs & RFO it must be remembered that they were, in most cases dependent on the endeavours of one or two staff members, albeit with some support from other staff.

sometimes hampered by) the bureaucracies (of varying onerousness) within their organisations. The site leads reported, however, their ability to both raise awareness and inform decision-making at the ‘top’ levels (either directly or indirectly). Some were better positioned to do so by virtue of sitting on relevant decision-making boards and committees. More broadly there has been strong interest by GRRIP staff across all sites in the merits of training – for themselves, other staff (including for ‘champions’ recruited to promote and assist in RRI adoption) and the wider range of QH representatives (including those external to the sites). Delivering training on RRI to the QH was, however, hampered due to COVID-19; hence a ‘train the trainer’ approach was adopted, in part, to support the site leads in organising QH events. At the same time, some of the case study sites can access specific training provision for various RRI keys – this being most notably the case for University College Cork and Swansea University. Evident from the GRRIP project, however, is that *all* RPOs&RFO made some reassessment of their training requirements (or offerings) and included them as RRI related interventions.

6.5. RRI Champion Recruitment

The delays in commencement of the trials (and, notably, the COVID-19 factor and continued working from home) directly impacted on the priority given by some RPOs&RFO to identifying and recruiting RRI champions. The key issue that arose was the importance of not raising expectations prematurely (that would have been a consequence of recruitment in advance of readiness to move forward with interventions set out in the APs). From January 31st, 2022 it was the case that with increased momentum anticipated for the remainder of 2022 (relating to planned interventions), some original milestones and targets for the recruitment of and support for RRI champions may not be reached. This follows the preference of some RPOs&RFO to continue working directly with individuals who are prepared to play a part in supporting (and promoting) RRI related interventions - but who are reluctant to carry (or do not want) the ‘label’ of champion. Part of the reason for such reticence relates to what some sites have reported as the perceived narrowness of some RRI keys (e.g., not addressing inequality issues beyond gender); unfamiliarity with (or discomfort about) the terms RRI and QH (when pursuing, for instance, public engagement activities); and the additional (voluntary) work and time commitment that GRRIP brings. It follows that some of the GRRIP interventions that specifically relate to RRI champions in the way proposed in the APs might be difficult to achieve; despite the fact that a relatively wide range of research staff are likely to have been engaged in RRI-related activities.

6.6. Staff Turnover

Several of the RPOs&RFO experienced staff turnover (or / and being on maternity leave) as a result of which new or temporary appointments needed to be made - requiring time to be set aside for recruitment and the necessary briefings and training for new recruits. In other cases, GRRIP related work had to be carried out, at least temporarily, by senior staff alongside their other responsibilities. Each of these factors contributed to delays. It is notable, however, that each RPOs&RFO acted speedily and made sure that appointments were made in a timely manner. This minimised what otherwise might have been more substantial delays that could have jeopardised achievement of the ultimate goals of the project. Staff turnover also

affected some of the GRRIP WGs, which had been formed early in the project. As a consequence, one site (WavEC) reconstituted their GRRIP WG thrice between 2019 and 2022.

6.7. Commitment to Good Practice

The responses of the RPOs&RFO to the monitoring meetings, leaves no doubt as to their commitment to the good practices that are explicit in the goals of the GRRIP project and reflected in the interventions.²¹ Importantly, the nature of this commitment is reflected by the understanding of the site leads of the RRI and wider context - including the QH and attention to 'environmental sustainability'. There was, in fact, a shared understanding by staff of the approaches being pursued.²² Included was recognition of governance as fundamental to the operationalisation of RRI dimensions and linking directly with the ability to influence institutional cultural change.

6.8. QH Engagement

QH engagement was undertaken for Action Plan development and for the RRI trials / early interventions. In recognition of the importance of the QH, strong emphasis has been given throughout to involving a wide range of stakeholders – from within and outside their organisations.²³ These endeavours had to be scaled down to a large extent on account of the COVID pandemic, but it was encouraging to note the consideration given to (and enthusiasm for) such involvement / engagement. The RPOs&RFO, furthermore, shared the positive feedback they received from the participants after the event²⁴ and heightened their recognition of the need to substitute terms such as QH or RRI (perceived as academic jargon) with simpler and more understandable terms. An ongoing challenge for QH engagement relates to RRI linked *institutional* change. This is concerned with the way in which stakeholders can be *engaged in* (rather than be simply consultees) the work of the sites. Helping with this issue, it can be noted that, for two sites, stakeholder groups have been established to advise them on their RRI implementation strategies.²⁵

²¹ Such commitment remains evident in the early phase of evaluation meetings to be reported here and in D8.3 Four Evaluation Stage Reports.

²² It can be noted that the UN SDGs are linked with human rights issues – it being, perhaps, regrettable that these are not more greatly highlighted in the RRI context. See Ruggie (2013). With regard to 'good practice' a useful discussion was offered in Sakkas et al (2008). This affirmed (in summary) that good practice (a) is represented by ways of working based on a set of principles ... to fulfil aims and objectives associated with appropriate political, economic and social goals; (b) promotes what is right, not what is expedient; (c) is informed, relevant and can be innovative; (d) contributes to health, wellbeing and inclusion; (e) acknowledges and addresses disadvantage encountered due to environmental factors, disability or prejudice; (f) challenges, where appropriate, the *status quo* and raises questions about the way in which things have been done in the past; and (g) is accessible and able to be shared so that others can adopt it and adapt it.

²³ The Quadruple Helix (QH) carries importance within the GRRIP project because it is believed that plurality of views can help in designing robust research and innovation. Significantly, it has been recognised in the EU context as a potential means (building on prior work around the 'Triple Helix') of accelerating research, contributing to innovation and economic development. See Cavallini et al (2016).

²⁴ The multi-stakeholder workshops conducted by PLOCAN, MaREI and Swansea University were held in March, June and September 2021 respectively (noted earlier).

²⁵ The sites in question are IUML and MaREI. In both cases members have been drawn from industry, government, academia and the wider community. IUML has testified (see GRRIP's Spring Newsletter at: <https://grrip.eu/wp-content/uploads/2022/05/GRRIP-Spring-Newsletter-2022-5.pdf>) to establishing their

6.9. Openness

The relevance and importance of openness (in relation to the RPOs&RFO activities) was fully recognised and, with provisos (see below), have been supported by the sites. Commitment was, therefore, high to adopting practices that are open around raising public awareness (and knowledge) on marine and maritime matters. The RPOs&RFO work is, however, albeit to a varying extent, with companies and therefore, there was recognition that commercial confidentiality and Intellectual Property (IP) issues would, in some circumstances, make it difficult to share project outputs from collaborative work. This includes those outputs that relate to the open access publication of academic work, especially data.

7. Reporting on formative evaluation

At the trial stage of AP implementation, a formative evaluation was conducted to check the status of changes that are occurring within each case study site. This evaluation study mainly relied on semi-structured interviews with site leads and several staff members from different levels of the organisation to check whether there are any changes due to the interventions (or what changes happened). Twenty-one interviews in total were conducted with interviewees from the five case study sites from November 2021 till the middle of March 2022, including five interviews with the six site leads.²⁶ Questions were posed on interviewees' RRI knowledge, perceived usefulness of RRI, perceived meaningful changes brought or to be brought by RRI AP implementation, facilitators for and barriers to AP implementation within their organisations. Attention was also given to staff's awareness of RRI implementation and site leads' satisfaction with the AP implementation in their organisations. The interview audios were analysed with ATLAS.ti. Further details about the process and the analysis of the mid-term evaluation interviews will be part of GRRIP D8.3: Four Evaluation Stage Reports. The sections below list the main findings and the implications for each of the five case study sites.

7.1. MaREI

7.1.1. Site lead's satisfaction with RRI AP implementation

The site lead chose "Neither satisfied nor dissatisfied"²⁷ when he was asked to rate his satisfaction level with the RRI AP implementation at MaREI. He was satisfied with progress of implementation of some of the interventions on QH engagement, mutual learning, and RRI trainings, for instance, while he was dissatisfied with some RRI AP implementation, such as interventions on gender equality and identification of RRI champions.

7.1.2. Staff's awareness of RRI AP implementation

Four staff members (of total 50 in marine research) from MaREI were interviewed. They demonstrated their awareness of RRI AP implementation from adequate to mostly high level.

committee as important in stimulating their thinking regarding the resources required; potential risks and their mitigations. MaREI has constituted a core QH group of five people from industry, academia, CSO and government and policy making bodies to discuss and update progress about the RRI interventions.

²⁶ Number of staff interviewed: IUML and WavEC= 2 each; MaREI, SU, and PLOCAN = 4 each.

²⁷ The options were: very dissatisfied, dissatisfied, neither satisfied nor dissatisfied, satisfied, very satisfied.



Three out of four interviewees knew a lot about the RRI APs and the implementation process of the AP at MaREI.

7.1.3. RRI knowledge level and perceived usefulness of RRI for the organisation

According to the answers given by the interviewees on their interpretations of RRI, it is interpreted that staff at MaREI are knowledgeable about RRI. Most of the interviewees were familiar with RRI key elements and understood the philosophical basis of RRI concepts and RRI practices. For example, one interviewee mentioned the evolving nature of the RRI concept and the challenges it has brought for the implementation of RRI APs.

All the interviewees considered RRI to be useful.

7.1.4. Perceived meaningful changes by RRI AP implementation

According to the site lead, two major meaningful changes were perceived: the importance of QH engagement concept was recognised by the local stakeholders and the university; and the mutual learning across the five GRRIP sites were growing. The interviewees suggested that more RRI awareness (to gender equality, to open access, etc.), more buy-in from society for designing products was important to bring about RRI changes.

7.1.5. Facilitators for RRI AP implementation

Interviewees mentioned a number of facilitators for RRI AP implementation at MaREI, including building shared interests for all involved parties (for QH engagement and mutual learning); aligning with the University (for training programs); creating a work group with members who support and work on RRI keys; communicating tangible benefits of RRI practice; continued communications with all stakeholders; continued implementation of RRI APs; raising staff's awareness on RRI and building their RRI knowledge and skills; influencing the youth using multiple means, such as social media, RRI champions, TV programme, etc.

7.1.6. Barriers to RRI AP implementation

Lack of resources (personnel, funding, etc.), for example to find the right candidates to act as RRI champions who can deal with the extra workload and commitments, short fixed-term work contracts for junior researchers; lack of clear guidance on attaining Athena Swan; difficult to design RRI metrics to track progress; reluctance to change; and the evolving nature of RRI concepts which makes it difficult to understand RRI concepts as a whole were perceived as barriers to RRI AP implementation at MaREI.

7.1.7. Implications for further steps

According to the interview data, MaREI is making important progress in QH engagement, mutual learning for RRI, establishing work group for RRI implementation, and RRI training, but experiencing setbacks in implementing the committed gender equality interventions and finding RRI champions. Several meaningful changes brought about by RRI implementation were mentioned by site lead and interviewees. However, MaREI is still facing internal reluctance to change, limited commitment to date from senior management team, and alignment issues with the host university (UCC), which has better strategies and practices in place.





Strengthening communications regarding RRI AP implementation with all relevant parties, particularly with the university management team and the senior management of MaREI, continuing the implementation of RRI interventions that have been previously established, and designing effective monitoring and evaluation system to track and assess RRI related institutional change would be helpful.

7.2. Swansea University

7.2.1. Site lead's satisfaction with RRI AP implementation

The site lead chose “Neither satisfied nor dissatisfied” when asked to rate her satisfaction level with the RRI AP implementation at SU. She indicated that she was satisfied with the GRRIP process but dissatisfied with colleagues’ reluctance to practice RRI. It took long time to convince people and have some solid evidence for strong RRI APs.

7.2.2. Staff's awareness of RRI AP implementation

Four staff members (of 40 marine staff in the Department of Biosciences) from SU were interviewed. They demonstrated their awareness of RRI AP implementation at middle level. In reality, they knew about the RRI APs and the implementation process of the AP at SU, but not much about the details.

7.2.3. RRI knowledge level and perceived usefulness of RRI for the work organisation

All the staff interviewees from SU knew about RRI key elements and RRI practices, but only to sufficient level. Site lead was very knowledgeable about the RRI concept.

The staff who were interviewed considered RRI to be useful. Site lead acknowledged that RRI concept was still new to the staff members. Strong evidence of benefits brought by RRI interventions was needed.

7.2.4. Perceived meaningful changes by RRI AP implementation

According to the site lead, the RRI AP implementation, particularly the ones with QH engagement, has brought several meaningful changes, for example, better connections between stakeholders and the university; empowerment of the stakeholders to interact with the university; changes in scientists’ mindsets with regard to QH engagement. According to the staff interviewees, they perceived that public engagement activities were more visible, well organised and available to all the employees. They also informed that there was an increase in RRI awareness due to communication via emails; the Athena Swan programme contributed to positive changes regularly; more attention was given to work-life balance; new performance assessment with emphasis on creating impact, not just on publications was in use.

7.2.5. Facilitators for RRI AP implementation

Many facilitating factors were identified by the interviewees about RRI implementation, such as finding the right stakeholders who have interests in engaging with the University, and collaboration with other agencies, such as government, funding agencies, etc. Furthermore, proactively seizing every opportunity to communicate RRI, establishing good cooperation with management teams was seen to be important. Making RRI events more visible and



making them available to employees, using bottom-up approach to let the employees initiate some RRI-related activities, more clear communication during staff meetings on RRI implementation were identified to be supportive of RRI implementation. Moreover, the existing RRI policies and strategies at the university level was seen to influence (and acted as a facilitating factor) RRI implementation at department level.

7.2.6. Barriers to RRI AP implementation

Lack of leadership support from the University level, difficulty to communicate on RRI AP implementation within the organisation, and some senior staff's reluctance to change were perceived as barriers to RRI AP implementation at SU.

7.2.7. Implications for further steps

Based on the interviews, it is apparent that SU have made good progress with respect to its implementation of some RRI APs, particularly in QH engagement, but that they are also facing difficulties for some RRI APs, which hinders their progress to a mature level. The site lead has made visible efforts to raise staff's awareness of the RRI APs and their implementation. Interviewees in general felt positive towards RRI and thought that meaningful changes (e.g., more interactions with stakeholders, more female role models, a new way of assessment with emphasis on quality of the research, etc.) were brought about by some RRI APs, such as public engagement events and the Athena Swan programme. The GRRIP site lead still faced challenges for some RRI APs, such as establishment of an RRI Working group (due to staff turnover) and regular meetings with them, fixed-term research staff and gender equality, and APs on open access.

7.3. PLOCAN

7.3.1. Site lead's satisfaction with RRI AP implementation

The site lead of PLOCAN chose "Satisfied" and admitted that there was still room to improve when she was asked to rate her satisfaction level with the RRI AP implementation at PLOCAN.

7.3.2. Staff's awareness of RRI AP implementation

Four staff members (of 55 total employees) from PLOCAN were interviewed. Based on their answers, they demonstrated their awareness of RRI AP implementation from middle to high level, with mostly (three out of four) high level. Three out of four interviewees indicated that they knew a lot about the RRI APs and the implementation process of these AP at PLOCAN.

7.3.3. RRI knowledge level and perceived usefulness of RRI for the work organisation

According to the answers given by the interviewees on their interpretations of RRI, that knowledge levels on RRI amongst PLOCAN staff was from sufficient to advanced level. Two staff interviewees knew about RRI key elements and RRI practices, while the site lead and other staff interviewees knew much better about the RRI concepts.

All interviewees were positive about the usefulness of RRI.



7.3.4. Perceived meaningful changes by RRI AP implementation

From the site lead's perspective, RRI AP implementation allowed more alignment with EU and national legislation on gender equality and helped the organisation to exert positive societal impact. According to the staff, more collaborations with stakeholders, clearer understanding of RRI elements, higher awareness of RRI practices in daily work, and better well-being of the employees were perceived.

7.3.5. Facilitators for RRI AP implementation

CEO and senior management support and commitment for RRI AP implementation, resources and expertise from GRRIP project, collaborative efforts from all levels of the organisation for RRI AP implementation, and good communication on RRI AP implementation within the organisation and with the stakeholders were mentioned as facilitators for RRI AP implementation at PLOCAN.

7.3.6. Barriers to RRI AP implementation

For PLOCAN, lack of resources (personnel, funding, and time) was cited to be the key obstacle of RRI AP implementation.

7.3.7. Implications for further steps

Based on the interview data, it is clear that staff at PLOCAN are actively implementing RRI APs in the organisation and have achieved considerable success in RRI AP implementation. It is understood that many staff from different departments of PLOCAN are working together for the implementation of RRI APs. Most of the staff believe in the philosophy of GRRIP. All interviewees felt positive towards RRI and were satisfied with their implementation of RRI APs. Although not all the staff members had extensive knowledge of RRI, they were confident of the benefits of RRI to their organisation and had high level of awareness of the APs being implemented in their organisation. Particularly, the development of gender equality plan was perceived to be a very successful endeavour in PLOCAN. The RRI interventions were perceived to have brought about several meaningful changes to PLOCAN, and the keys to the success of the implementation of RRI APs are the commitment from the staff at all levels; efficient management of the RRI working group; and GRRIP experts' support. COVID, lack of human resources, lack of financial resources, limited time from personnel for addressing related legal issues were said to be the main barriers to implementation of RRI APs, but work progressed despite these. Support from the organisation as a whole and resources planning (e.g., the establishment of Gender equality unit and related tasks) guarantees the sustainability of the APs. In brief, PLOCAN sets good example of implementing RRI APs in a small-to-medium organisation in the marine and maritime sector.

7.4. IUML

7.4.1. Site lead's satisfaction with RRI AP implementation

IUML's site lead chose "Satisfied" when he was asked to rate his satisfaction level with the RRI AP implementation at IUML. He mentioned that he was critical of RRI at the beginning of the process because of limited knowledge of RRI but felt satisfied with the implementation of the APs so far. He mentioned eighty percent of APs were implemented. The site lead shared

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positive experiences with regard to the initiatives on implementation of RRI funding calls, using different tools for QH engagement and engaging stakeholders at regional level. The site lead also shared challenging experiences in implementation of the gender equality actions at the research federation level.

7.4.2. Staff's awareness of RRI AP implementation

Two staff members (of 7 total employees) from IUML were interviewed. Based on their answers, they demonstrated their awareness of RRI AP implementation from middle to high level. For example, one was aware of AP implementation and was involved in discussions on promoting RRI at IUML. He was collecting and analysing information available on best practices for promoting gender equality and doing observatory research on gender equality in his work unit. The second interviewee indicated high level of awareness of RRI implementation at IUML by listing several specific actions taking place at IUML.

7.4.3. RRI knowledge level and perceived usefulness of RRI for the work organisation

According to the answers given by the interviewees on their interpretations of RRI, there is a dearth of RRI knowledge at IUML. Staff interviewees demonstrated a sufficient level of RRI knowledge. They lacked awareness of the term as such, but practice of RRI facets existed.

All the interviewees expressed positively about the usefulness of RRI.

7.4.4. Perceived meaningful changes of RRI AP implementation

One of the biggest meaningful changes brought by RRI AP-implementation, which was mentioned by the site lead, is that the site lead could use tools (e.g., survey, QH engagement workshop, etc.) to better answer calls for responsible research and innovation. Staff members found it difficult to share what meaningful changes were brought by RRI AP implementation.

7.4.5. Facilitators for RRI AP implementation

Support from GRRIP partners (RRI knowledge for instance) and supportive Work-Group members were found to be effective facilitators for RRI AP implementation by the site lead. In addition, staff interviewees suggested setting up specific targets for evaluation purposes to understand changes that were brought about by RRI implementation.

7.4.6. Barriers to RRI AP implementation

It was mentioned that IUML was still at early stage of promoting RRI at the regional scale. Lack of communications between the senior management team and the staff on RRI AP implementation should be tackled as a barrier.

7.4.7. Implications for further steps

Based on the interview data, it is evident that, although the implementation of RRI APs is still at early stage at the regional level for IUML, and it is still difficult to perceive many meaningful changes brought about by the implementation of RRI APs, the implementation in general is satisfactory. IUML is making steady progress in public engagement, QH engagement, science education, and gender equality aspects. IUML Staff are aware of these actions as well.



Regular communication with all staff on the implementation of RRI APs and conducting RRI trainings among staff is important for wider uptake of RRI and its practice in everyday lives of researchers. Increased mutual learning activities with other GRRIP sites, more support from external sources, and setting up specific targets to monitor and evaluate RRI interventions would be helpful for bringing about more meaningful changes at IUML.

7.5. WavEC

7.5.1. Site lead's satisfaction with RRI AP implementation

The site leads chose "Satisfied" when they were asked to rate their satisfaction levels with the RRI AP implementation at WavEC. They mentioned that they need to complete all the RRI APs to reach their highest level of satisfaction.

7.5.2. Staff's awareness of RRI AP implementation

Two staff members (out of 18 total employees) from WavEC were interviewed. Based on their answers, it was inferred that awareness of RRI AP implementation was at middle/adequate level. For example, one knew about the RRI APs and its implementation process, but not much about the details, while the other one knew little about the RRI APs and its implementation process.

7.5.3. RRI knowledge level and perceived usefulness of RRI for the work organisation

The interviews indicated that WavEC staff were aware of RRI and all interviewees mentioned that they found RRI to be useful.

7.5.4. Perceived meaningful changes by RRI AP implementation

The site leads expressed that all staff at different levels would be more aware of the relevance of the RRI and when they conform to the RRI guidelines on a daily basis, only then meaningful changes can be brought about in how they do research. According to the staff interviewees, budget for open-access publications was available, and attention and awareness of the staff on RRI were raised, which should in turn improve balance in gender and other equality and diversity aspects.

7.5.5. Facilitators for RRI AP implementation

Easy access to leadership, active participation of the board and team members, and inclusion of social science researchers in the projects were mentioned as facilitators for RRI AP implementation at WavEC. Additionally, they shared that setting up goals or metrics for monitoring and evaluation purposes with regard to RRI AP implementation could facilitate the RRI AP implementation.

7.5.6. Barriers to RRI AP implementation

Several barriers were raised by the interviewees from WavEC for RRI AP implementation, including difficulty in getting active participation of stakeholders because the total number of the stakeholders was small; unconscious bias against females; high costs for open access; and lack of human resources with diverse backgrounds and sufficient RRI-related training.



7.5.7. Implications for further steps

According to the interview data, the implementation of the RRI AP was going on well at WavEC but was still at early stage. Both of the site representatives were satisfied with the implementation at this stage and felt positive towards RRI. They felt positive towards the implementation of gender equality plan, RRI training, and the structure of working-group (including four researchers working on HR, finance, public engagement, and gender equality respectively, and the president of the board). Based on the interview data overall, although changes brought about in the organisation were not obvious yet, the attention to the necessity to make a change has been raised, and they expected that all staff at different levels would be more aware of the relevance of implementing RRI Action Plans and confirm to the guidelines on a daily basis, and therefore adopt best practices in research. The small size of the organisation (less than 20 employees) and flat structure allows for easy decision-making process, and horizontal communication and active participation of the board and team members for discussion and implementations of the RRI APs. Effective evaluation system with specific targets or metrics to measure the achievements in research and dissemination would facilitate the implementation of RRI APs further. Mutual learning from other sites, regarding raising staff's awareness of the implementation of RRI APs, promoting gender equality, RRI training, open access, and public engagement are recommended.

8. Evaluation of RRI trials

Tasks 7.5 and 7.6 in the GA mention the activities of rolling out and implementation of RRI trials, which included QH engagement on an identified research and innovation topic. The five sites, i.e., MaREI, PLOCAN, SU, IUML, and WavEC, carried out different forms of QH engagement events (workshops, meetings, panel discussions) during the AP implementation stage. As such, the evaluation of these trials was done by using a quality of involvement survey.²⁸ Survey questions were slightly customised (the structure was same) to the sites' needs and programmed in Qualtrics and then distributed to participants via emails sent by site leads post the event. In this section, the analyses of the survey data to assess the respondents' perceptions on the quality of their involvement in the event, their general feelings towards the QH event, respondents' likelihood to join a marine QH platform, and some qualitative feedback information are presented.²⁹ It is expected that these findings would provide a clear picture of the perceptions of the participants of these QH engagement events organised by the sites and how to better organise further QH engagement activities in the future. The findings also provide inputs towards establishing a marine QH platform which is part of WP9.

²⁸ More detailed information about this survey can be found in GRRIP D8.2: Evaluation Plan, Annex 2. The survey is a significantly adapted version of the Participatory Process Evaluation Survey created by Eric Jensen (ICoRSA), and handed over to EUR, and which had some questions common in the M&E Report of the TeRRIFICA project. The modification to this survey was done in a consultative way, and the process was led by Xiaoyue Tan (EUR) with inputs from Indrani Mahapatra, Ruth Callaway, and Ana Brito e Melo.

²⁹ Further findings of the survey will be reported in GRRIP D4.4: Reflection and Evaluation report

Table 10: Overview of QH engagement events and survey details of the five sites

Site	Details of the event	Type of event	Total number of participants	Number of valid responses	Data collection dates
MaREI	Shaping the Future of Marine and Maritime Communities: A multistakeholder workshop	Workshop (on-line)	45*	16	1st June – 23rd July 2021
SU (event 1)	Discussion on eco-engineering solutions for sea walls	On-site meeting at Mumbles Seawall (Swansea, UK)	12	8	24th May – 1st June 2021
SU (event 2)	The Future of Coastal Communities in Swansea and South Wales: A multistakeholder workshop	Workshop (on-line)	21**	11	24th Sept. – 28th Sept. 2021
PLOCAN	Authorisations and permits for offshore renewable energy	Workshop (on-line)	24	5	1st June – 18th June 2021
IUML	QH engagement to discuss on public engagement strategies	Meeting (on-site)	11	8	30th August – 8th October 2021
WavEC[‡]	Offshore Wind Supply Chain in Portugal	Workshop/Panel discussion (hybrid event)	80	11	12th April – 26th April 2022

*MaREI: Participants excluding the plenary speaker, two organisers, and five moderators. Organised with UNIC CityLabs project (H2020 project - Grant agreement no. 101004042)
 ** SU: Excludes six moderators and speakers
 ‡ WavEC: This event was organised under the aegis of the TWIND project (H2020 project - Grant agreement no. 857631); Survey sent to 68 participants.

Table 11 presents the overview of the QH survey data by sites. The number of stakeholders engaged by each event varied. The percentages of valid responses also varied by events. The valid responses are from the participants who agreed with the informed consent for the survey study, and they completed at least 70% of the survey questions. Participants who did not agree with the informed consent or did not complete enough questions, for example, just answered few questions about their demographic information, were not included in the analysis. It should be noted that filling out surveys are voluntary in nature, however, the completion rates (range: 16 -72%) are overall at a satisfactory level (typical survey response rates are 5-30%).

The following sections contain the demographic information of the survey respondents and the analysis of the survey data (and presents the quality of involvement, respondents’ general feelings towards the QH event, and respondents’ likelihood of joining a Marine QH platform). Implications of the survey findings are also discussed.

A 7-point Likert scale (strongly disagree to strongly agree) was used for the statements which were meant to evaluate the quality of involvement of the event. Questions were also designed to assess the respondents’ feelings towards the event. The scale used for this was from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”. Since the questions asked to assess quality of the engagement and feelings about the event are tabulated, and due to the small sample size, the mode value is provided.

8.1. MaREI

In total nineteen people (of the 45 participants) replied to the survey, of which 18 started the survey. Among these responses, 16 responses were analysed as valid.

8.1.1. Demographic details of survey respondents

About 81% of the respondents were Irish and almost all survey respondents lived in Ireland. Similarly, 81% of the respondents were employed full-time, while one respondent was a student, another one was self-employed, and one did not share their employment status.

Table 11: Demographic details of the survey respondents

Variable		Results	Comments
Age	<40 years	28.8%	One respondent did not provide details
	40-49 years	37.5%	
	50-59 years	37.5%	
Sex	Male	25%	
	Female	62.5%	
	Prefer not to say	12.5%	
Education	Bachelors (or equivalent) degree	6.3%	One respondent chose “Others”
	Masters (or equivalent) degree	50%	
	Doctoral (or equivalent) degree	37.5%	

Percentage distribution of QH respondents (MaREI's workshop)

Category	Percentage
Universities or RPOs	50%
SMEs or Business	18.7%
Policy makers and Government	18.7%
Others	12.5%

Past QH involvement experience: Around 69% of the respondents confirmed that they participated in similar activities organised by MaREI and/or UCC before, whereas 25% of the respondents reported they did not participate in similar activities organised by MaREI and/or UCC before. One answered “Unsure” for this question.

8.1.2. Quality of involvement

When measured with 7-point Likert scale for the statements evaluating the quality of involvement of the event, the mode³⁰ is 6 indicating that participants agreed to the positive statements. The modes of the two negative statements were 2, which meant “Disagree”. This indicates that respondents feel extremely positive about their interactions with MaREI at UCC, they felt they had opportunities to actively participate, and their contributions to the process were valued. The details can be found in Table 13.

Table 12: Ratings by workshop participants on statements to assess quality of involvement (MaREI)

Statements on quality of involvement	Mode
I was able to actively participate.	6
My contribution to the process was valued.	6
The process was poorly managed.	2
I had a clear understanding of the expectations for my contribution to the process.	6
I needed more information to fully participate.	2
All voices have been heard and discussed.	6
The overall presentations were relevant.	6
Sufficient efforts were put in place to interact with the stakeholders	6
As a stakeholder, I feel positive towards my interaction with MaREI at UCC.	6

Note. 1 = “Strongly disagree”; 2 = “Disagree”; 3 = “Somewhat disagree”; 4 = “Neutral”; 5 = “Somewhat agree”; 6 = “Agree”; 7 = “Strongly agree”.

8.1.3. Respondents’ general feelings towards the QH event

Table 13 presents the average scores on respondents’ feelings towards the event. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers

³⁰ In case of multiple modes, the lowest value is reported.

indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”. From the data below, it can be inferred that respondents felt positively towards the event, particularly they were satisfied with their involvement and felt good about it and found it easy to participate in the workshop and were clear about their contribution/participation. Perhaps because the event was held online, some respondents felt somewhat less comfortable.

Table 13: Survey Respondents’ general feelings towards the QH event by MaREI

General feelings	Mode
My involvement in the workshop has been... - Satisfying: Disappointing	3
My involvement in the workshop has been... - Comforting: Frustrating	2
My involvement in the workshop has been... - Good: Bad	2
My involvement in the workshop has been... - Clear: Confusing	2
My involvement in the workshop has been... - Easy: Difficult	3

Note. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”.

8.1.4. Likelihood of joining a Marine QH platform

The survey had a question which aimed to explore the willingness of the respondent to join a platform/network that was focused on marine and maritime issues. The question was: “If it were possible, how likely would it be that you would join a platform where you can easily communicate with activity organisers and other interested parties (from academic, industry, citizens, governmental organisations, etc.) in the Marine and Maritime sector?” As can be seen from the Figure 2 below, more than 90 % of the respondents indicated that they are likely to join a QH platform in the marine and maritime sector.

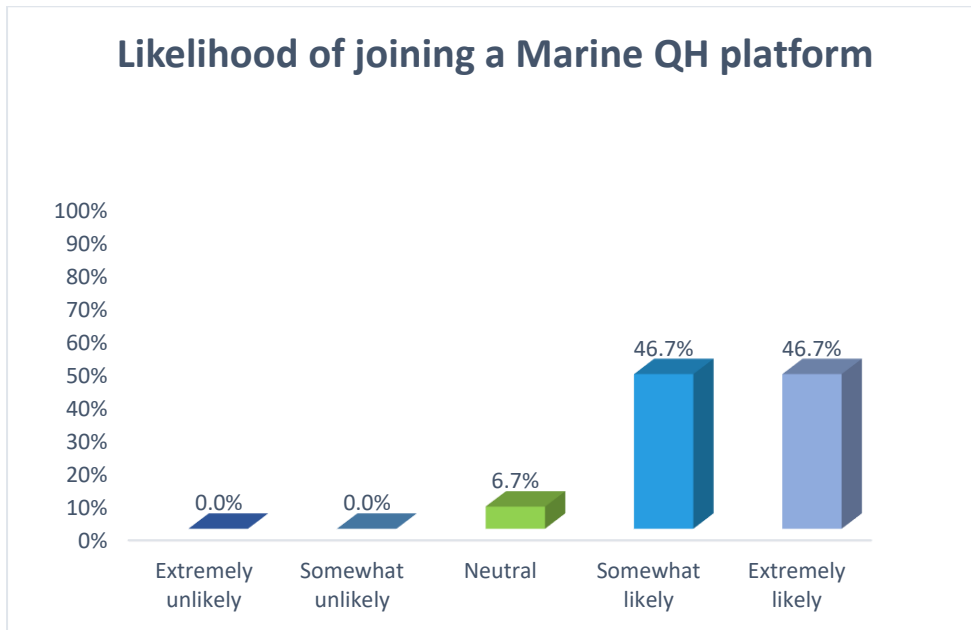


Figure 2 Likelihood of joining a Marine QH platform reported by the survey respondents (n=15) who participated in a QH engagement workshop organised by MaREI.

8.1.5. Example quotes from respondents

Few quotes (unedited) from the stakeholders who participated in the survey study in response to the question: “Is there anything else you would like to add relating to the interaction you had with MaREI or future interaction/engagement activities to be held by MaREI?” are below. From the quotes it can be inferred that the stakeholders were appreciative of the engagement event and the moderators, which is in line with the survey findings reported above. Excitement and a little bit of uncertainty were felt by the stakeholders who attended the engagement event for the first time.

“It was relevant, enjoyable and my involvement felt useful. That latter in particular was rewarding. I was very impressed at being allocated a break-out room in which I had expertise and consequently an opportunity to contribute positively. It was clearly well-planned and considerable thought had been put into how best to run it. I hope that it will lead to further collaboration between the local community and MaREI.”

“Very well facilitated particularly within a COVID context. The facilitator actively tried to engage each member of the break-out group and made sure that everyone had an opportunity to voice their opinion. It’s the first time I’ve attended a virtual stakeholder workshop and I wasn’t sure how it would turn out. Well done to all involved for hosting a professional event with a diverse audience”

“I joined late so it was no fault of MaREI that I didn’t fully grasp what I needed to do when in the breakout room initially. It was well managed and easy to follow. Curious to know were the responses gathered though materially useful to the wider goal?”

8.1.6. Implications from the survey findings

Based on the survey data it is inferred that MaREI held a successful QH engagement workshop. Stakeholders felt positively towards their interactions with MaREI at UCC and most of them were likely to join a Marine QH platform. The RRI trial with QH engagement by MaREI at UCC is a good example of QH engagement practices in research performing organisation like MaREI and paves the way for the establishment of a marine QH platform, which is an important legacy of the GRRIP project.

8.2. Swansea University

Event 1

Ten people in total replied to the survey which was sent linked to a QH on-site meeting at Mumbles Seawall (Swansea, Wales, UK) in connection with a collaborative eco-engineering project between 24th May 2021 – 1st June 2021.

8.2.1. Demographic details of survey respondents

Among these responses, 8 responses were considered valid (female=2; male=6). 87.5% of the respondents were employed full-time. 12.5% of the respondents were retired.

Table 14: Demographic details of the survey respondents (Event 1 – onsite QH meeting of SU)

Variable	Results	Comments	
Age	<50 years	37.5%	
	50-59 years	25%	
	>60 years	25%	
Education	Bachelors (or equivalent) degree	62.5	One respondent chose “Others” for education
	Masters (or equivalent) degree	12.5	
	Doctoral (or equivalent) degree	12.5	

Percentage distribution of Quadruple helix respondents

Category	Percentage
Business (particularly, SMEs)	12.5%
Civil Society/ NGO	37.5%
RPOs	12.5
Policy making organisations	25%
Others (local government)	12.5%

Past QH involvement experience

62.5% of the respondents confirmed that they participated in similar activities organised by SU before. 37.5% of the respondents reported they did not participate in similar activities.

8.2.2. Quality of involvement (Event 1 - onsite meeting)

When measured with 7-point Likert scale for the statements evaluating the quality of involvement of the event, the mode for the positive statements were 6 or above which means almost all statements were agreed with, and the mode for the two negative statements were close to 2, which meant “Disagree”. It means respondents felt very positively towards the interactions with SU.

Table 15: Ratings by participants on statements to assess quality of involvement (SU Event 1)

Statements on quality of involvement	Mode
I was able to actively participate.	7
My contribution to the process was valued.	6
The process was poorly managed.	2
I had a clear understanding of the expectations for my contribution to the process.	6
I needed more information to fully participate.	2
All voices have been heard and discussed.	6
The overall presentations were relevant.	6
Sufficient efforts were put in place to interact with the stakeholders	6
As a stakeholder, I feel positive towards my interaction with Swansea University.	6

Note. 1 = “Strongly disagree”; 2 = “Disagree”; 3 = “Somewhat disagree”; 4 = “Neutral”; 5 = “Somewhat agree”; 6 = “Agree”; 7 = “Strongly agree”.

8.2.3. Respondents’ general feelings towards the QH event (Event 1)

Below are the mode values on respondents’ feelings towards the event. Judging from the transformed data below, respondents felt very positively towards the engagement, and they felt very satisfied, felt good to be involved, and found it easy to participate and they felt they had very good clarity with regard to their involvement.

Table 16: Respondents’ general feelings towards the onsite QH meeting of SU (Event 1)

General feelings	Mode
My involvement in the workshop has been... - Satisfying: Disappointing	3
My involvement in the workshop has been... - Comforting: Frustrating	3
My involvement in the workshop has been... - Good: Bad	3
My involvement in the workshop has been... - Clear: Confusing	3
My involvement in the workshop has been... - Easy: Difficult	3

Note. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”.

8.2.4. Likelihood of joining a Marine QH platform (Event 1)

75% of the respondents indicated that they are likely to join a QH platform for the Marine and Maritime sector. Only one participant felt reluctant to join the QH platform, while another chose the neutral option.

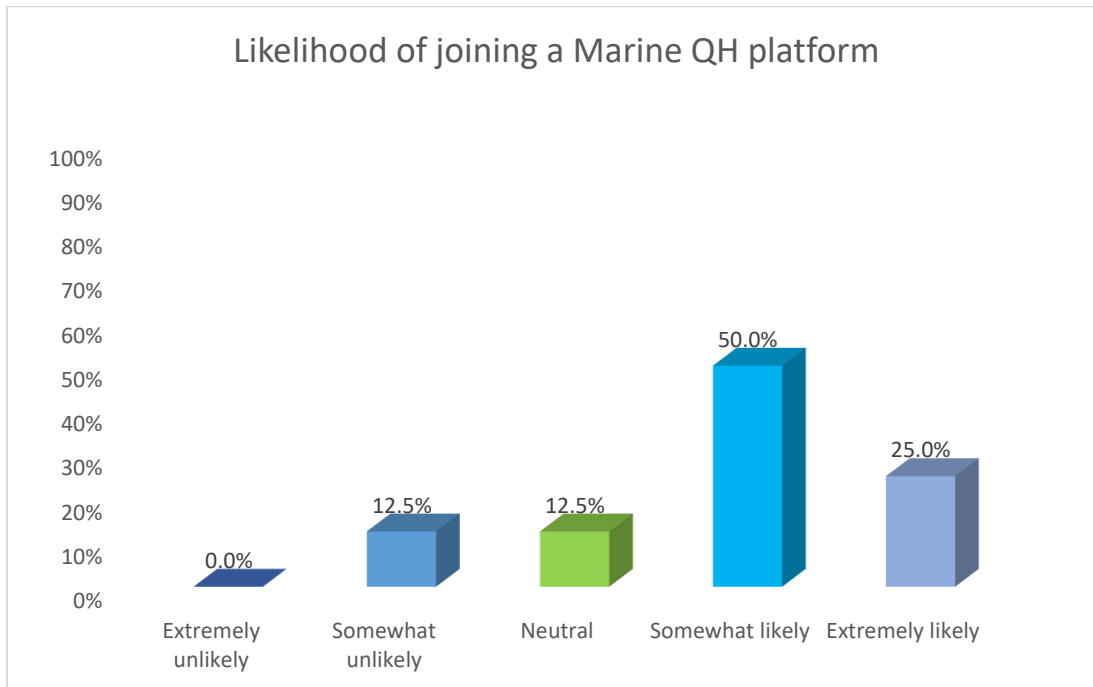


Figure 3 Likelihood of joining a Marine QH platform reported by survey respondents (n=8) who participated in a QH meeting organised by SU (event 1).

8.2.5. Sample Quotes from respondents (Event 1)

Below are few quotes (unedited but anonymised) from the stakeholders who participated in the survey study in response to the question which aimed to explore overall comments about the meeting and future collaborations. The quotes indicate that the respondents felt positively towards their involvement in the engagement, and that there were clear instructions and objectives of the workshop provided by the GRRIP site lead, and the relationship between stakeholders and SU is healthy and sustainable.

“The uni staff I dealt with were professional in their interactions.”;

“I hold a few positive relationships with staff at Swansea University and am familiar with their work. However, I do not know the broad research areas of Swansea University Marine Department nor do I know how much scope there could be for us to work together / influence it.”;

“Our journey with the seawall project was an incredible experience with clear directions, explanations and input from XXX (name of the Site lead) every step of the way.”;

“The process has been positive, and we would be keen to expand and develop such relationships”.

Event 2: QH engagement workshop by SU

The quality of involvement survey was sent post the event “The Future of Coastal Communities in Swansea and South Wales”. Responses were collected between 24th September 2021 – 28th September 2021 and 16 people attempted to fill the survey.

8.2.6. Demographic details of survey respondents

Amongst these, 11 responses (female=7; male=4) were valid and were included in the analysis. 81.8% of the respondents were British and 9.1% were South African/Irish. 91% of the respondents were living in UK, while 9 % were living in Ireland.

Table 17: Demographic details of the survey respondents (Event 2- SU QH Workshop)

Variable	Results	Comments	
Age	<30 years	18.2%	
	40-49 years	36.4%	
	50-59 years	27.3%	
	>60 years	18.1%	
Education	Bachelors (or equivalent) degree	18.2%	
	Masters (or equivalent) degree	27.3%	One respondent chose “Others”
	Doctoral (or equivalent) degree	45.5%	
Employment	Full-time	72.7%	One participant chose (other) worked as “Community councilor”
	Part-time	18.2%	

Percentage distribution of Quadruple helix respondents

Category	Percentage
Business (SMEs)	18.2%
Civil society/non-governmental organisation	18.2%
Government	18.2%
RPOs/University	45.4%

Past QH involvement experience

27.3% of the respondents confirmed that they participated in similar activities organised by SU before. 72.7% of the respondents reported they did not participate in similar activities.

8.2.7. Quality of involvement (Event 2)

When measured with 7-point Likert scale for the statements evaluating the quality of involvement of the event, all but one mode value for the positive statements were 6 and more, which meant “agree” and “strongly agree”. Respondents felt very positive about their opportunities to actively participate, felt their contribution during the interaction was valued,

and that the presentation that was delivered as part of the event was relevant and efforts were put in place to interact with them, etc. Respondents strongly disagreed with the statement: “The process was poorly managed.”

Table 18: Ratings by participants on statements to assess quality of involvement of SU (Event 2)

Statements on quality of involvement	Mode
I was able to actively participate.	7
My contribution during the interaction was valued.	6
The process of conducting the interaction was poorly managed.	1
I had a clear understanding of the expectations for my contribution during the interaction.	6
I needed more information to fully participate.	2
My opinions have been heard and discussed.	6
The presentation was relevant.	6
Sufficient efforts were put in place to interact with me	6
As a stakeholder, I feel positive towards my interaction with Swansea University.	6

Note. 1 = “Strongly disagree”; 2 = “Disagree”; 3 = “Somewhat disagree”; 4 = “Neutral”; 5 = “Somewhat agree”; 6 = “Agree”; 7 = “Strongly agree”.

8.2.8. Respondents’ general feelings towards the QH event (Event 2)

Table 20 details the respondents’ feelings towards the event. The figures in the table indicate that the respondents felt very positive towards the event, particularly they felt satisfied, felt good to be involved and found it easy to participate and they felt they had clarity with regard their involvement. Again, perhaps because most of them had no experience for QH engagement with SU before, and the workshop was an online event, some of them did not feel highly comfortable during the workshop.

Table 19: Respondents’ general feelings towards the QH event by SU for Event 2

General feelings	Mode
My involvement in the workshop has been... - Satisfying: Disappointing	3
My involvement in the workshop has been... - Comforting: Frustrating	0
My involvement in the workshop has been... - Good: Bad	3
My involvement in the workshop has been... - Clear: Confusing	3
My involvement in the workshop has been... - Easy: Difficult	3

Note. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”.

8.2.9. Likelihood of joining a Marine QH platform (Event 2)

Of the nine respondents who answered the question on their likelihood of joining a Marine QH platform, all indicated that they were somewhat likely or extremely likely to join the platform. This can be seen in Figure 4.

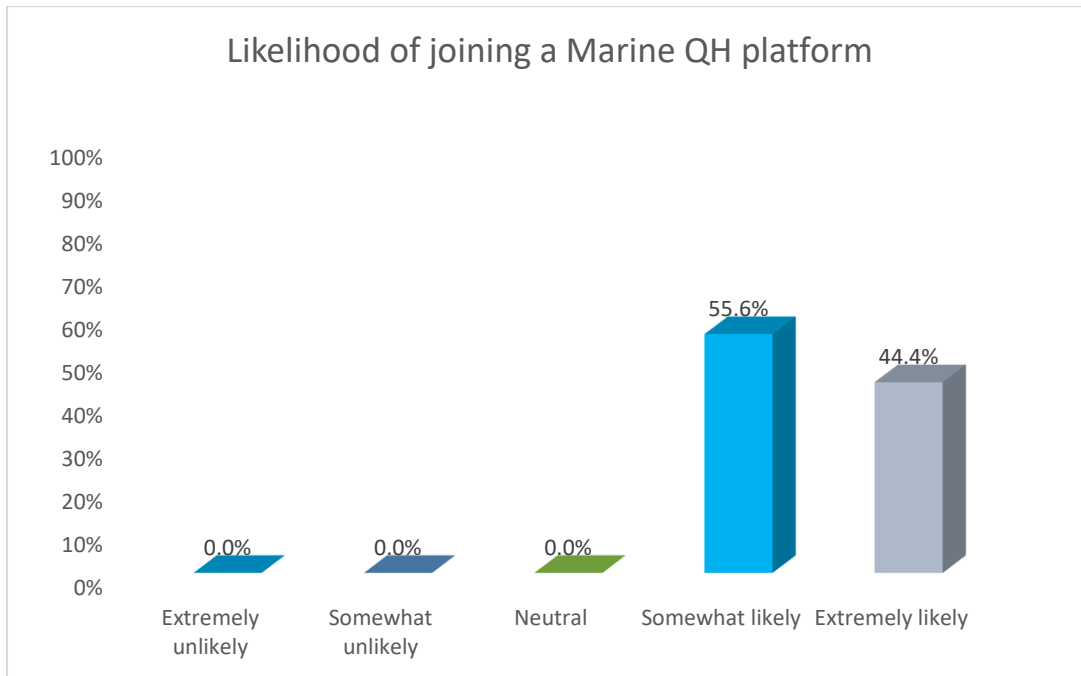


Figure 4: Likelihood of joining a Marine QH platform reported by survey respondents (n=9) who participated in a QH engagement workshop by SU (event 2)

8.2.10. Sample quotes from respondents (Event 2)

Few quotes (unedited) from the stakeholders who participated in the survey study in response to the question: “Is there anything else you would like to add relating to the interaction you had with SU or future interaction/engagement activities to be held by SU?” are provided below. From the quotes it can be inferred that the stakeholders found the event interesting and inspiring and expressed interest to be invited in other events by SU, which is in line with the survey findings reported above.

“Hosting workshops at locations away from the uni /swansea can permit inclusivity of a broader spectrum of stakeholders.”

“Excellent to hear how much research and the joint working specifically with Bangor University, really does support a wider pan Wales approach. The LINK platform was new to us, I've since shared wider. Good to make new contacts, in Government we value the research to support our policy making.”

“Only that I would like to be included in future events”

“I thought it was really interesting and useful. I work for a small charity and after a difficult 18 months with all the covid restrictions etc. it's easy to lose motivation but I found the workshop really inspiring.”

8.2.11. Implications from the survey findings (Events 1 and 2)

Based on the survey findings, SU held two successful QH engagement events. Stakeholders felt positive towards their interactions with SU and most of them were likely to join a Marine QH platform. The RRI trials of QH engagement by SU set good examples for QH engagement practices in a research-performing organisation like SU and paves the way for the establishment of a Marine QH platform, which is an important legacy of the GRRIP project.

8.3. PLOCAN

Ten people in total responded to the survey between 1st June 2021 and 18th June 2021. Among these responses, 5 responses (female =3; male=2) were analysed as valid responses.

8.3.1. Demographic details of survey respondents

All the respondents were Spanish living in Spain. 60% of the respondents were at Masters' (or equivalent) level and 40% of the respondents were at Doctoral (or equivalent) level and all were employed full-time.

Percentage distribution of QH respondents (PLOCAN)

Category	Percentage
Industry and SMEs	60%
NGOs	20%
RPOs/University	20%
Government	0%

Past QH involvement experience

80% of the respondents confirmed that they participated in similar activities organised by PLOCAN before. 20% of the respondents reported they did not participate in similar activities before.

8.3.2. Quality of involvement

When measured with 7-point Likert scale for the statements evaluating the quality of involvement of the event, all mode values for the positive statements were 6 or 7, which means "Agree" or "Strongly Agree". Particularly, respondents felt very positive towards their interaction with PLOCAN. Respondents strongly disagreed with the statement: "The process was poorly managed.". They mentioned they had opportunities to actively participate, and that all voices were heard, and points raised were discussed.

Table 20: Ratings by workshop participants of PLOCAN on statements to assess quality of involvement

Statements on quality of involvement	Mode
I was able to actively participate.	7
My contribution to the process was valued.	6
The process was poorly managed.	1
I had a clear understanding of the expectations for my contribution to the process.	6
I needed more information to fully participate.	4
All voices have been heard and discussed.	6
The overall presentations were relevant.	6
Sufficient efforts were put in place to interact with the stakeholders	6
As a stakeholder, I feel positive towards my interaction with PLOCAN.	7

Note. 1 = “Strongly disagree”; 2 = “Disagree”; 3 = “Somewhat disagree”; 4 = “Neutral”; 5 = “Somewhat agree”; 6 = “Agree”; 7 = “Strongly agree”.

8.3.3. Survey respondents’ general feelings towards the QH event

From Table 22, it can be inferred that respondents felt very positive towards the event. They all were satisfied, felt good, were comfortable, and were clear about their involvement. They found it very easy to be involved in the workshop.

Table 21: Respondents’ general feelings towards the QH event by PLOCAN

General feelings	Mode
My involvement in the workshop has been... - Satisfying: Disappointing	2
My involvement in the workshop has been... - Comforting: Frustrating	2
My involvement in the workshop has been... - Good: Bad	2
My involvement in the workshop has been... - Clear: Confusing	2
My involvement in the workshop has been... - Easy: Difficult	3

Note. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”.

8.3.4. Likelihood of joining a Marine QH platform

All the respondents indicated that they are likely to join a marine QH platform (40%: Somewhat likely, 60%: Extremely likely).

8.3.5. Sample Quotes from respondents

Two sample quotes (unedited) provided by the respondents are below. The qualitative statements are consistent with the ratings on quality of involvement and their general feelings towards the engagement event.

“It was very good and interesting”;

“I'm satisfied with the workshop.”

8.3.6. Implications from the survey findings

Based on the survey data, it can be inferred that PLOCAN held a successful QH engagement workshop where the participants felt very positive in their interactions with PLOCAN and all of them were likely to join a marine QH platform. The trial of QH engagement by PLOCAN sets up a very good example of QH engagement practices for small to medium sized research performing organisation in the marine and maritime sector like PLOCAN and paves the way for the establishment of a marine QH platform. However, the number of the valid survey responses is relatively small, which might negatively affect the representativeness of the survey sample for the group of stakeholders who participated in the workshop organised by PLOCAN.

8.4. IUML

Of the 13 respondents to the survey during 30 August 2021 – 8th Oct. 2021, eight responses (female =2; male =6) were analysed as valid responses.

8.4.1. Demographic information of the respondents

The survey was translated in French and then again translated back to English for analysis.

Table 22: Demographic information of the respondents

Variable		Results
Age	30-39 years	37.5%
	40-49 years	37.5%
	50-59 years	25%
Education	Masters (or equivalent) degree	62.5%
	Doctoral (or equivalent) degree	37.5%
Employment	Full-time	87.5%
	Part-time	12.5%

Percentage distribution of Quadruple helix respondents

50% of the respondents were from national governmental organisations and 50% of the respondents were from university or similar research performing organisations.

Past QH involvement experience

50% of the respondents confirmed that they had participated in similar activities organised by IUML before, whereas 50% of the respondents reported they did not participate in similar activities.

8.4.2. Quality of involvement

When measured with 7-point Likert scale for the statements evaluating the quality of involvement of the event, respondents disagreed with the statement “The process was poorly managed.” Respondents in general recognised the efforts from IUML in interacting with them, and felt positive towards their interactions with IUML, but there was scope of improvement. As the modes indicated, respondents were neutral with respect to whether their contribution were valued and that all voices were heard and concerns discussed.

Table 23: Ratings by participants on statements to assess quality of involvement (IUML meeting)

Statements on quality of involvement	Mode
I was able to actively participate.	6
My contribution to the process was valued.	4
The process was poorly managed.	2
I had a clear understanding of the expectations for my contribution to the process.	4
I needed more information to fully participate.	3
All voices have been heard and discussed.	4
The overall presentations were relevant.	4
Sufficient efforts were put in place to interact with the stakeholders	5
As a stakeholder, I feel positive towards my interaction with IUML.	5

Note. 1 = “Strongly disagree”; 2 = “Disagree”; 3 = “Somewhat disagree”; 4 = “Neutral”; 5 = “Somewhat agree”; 6 = “Agree”; 7 = “Strongly agree”.

8.4.3. Respondents’ general feelings towards the QH event

Judging from the transformed data in Table 25, respondents’ feelings towards this event indicates that there is some scope of improvement, however, they felt satisfied with their involvement.

Table 24: Respondents’ general feelings towards the QH event by IUML

General feelings	Mode
My involvement in the workshop has been... - Satisfying: Disappointing	2
My involvement in the workshop has been... - Comforting: Frustrating	0
My involvement in the workshop has been... - Good: Bad	0
My involvement in the workshop has been... - Clear: Confusing	0
My involvement in the workshop has been... - Easy: Difficult	0

Note. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”.

8.4.4. Likelihood of joining a Marine QH platform

As can be seen in Figure 5, majority (87.5%) of the respondents indicated that they were somewhat or extremely likely to join a QH platform for the Marine and Maritime sector.

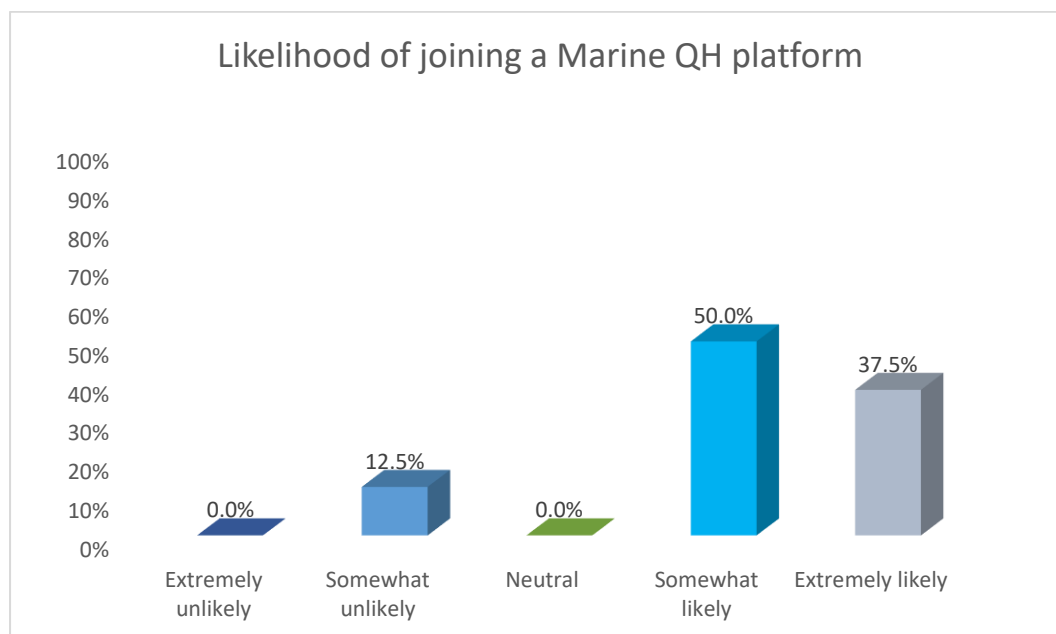


Figure 5: Likelihood of joining a Marine QH platform reported by survey respondents (n=8) of IUML’s QH advisory group

8.4.5. Sample Quotes from respondents

Below are three quotes from the respondents. According to the quotes, the workshop raised attention to the importance of QH engagement activities by IUML.

1. “il faut communiquer davantage sur les enjeux "sciences humaines" autour des EMR” [In French]; “we must communicate more about the "human sciences" issues around MREs” [Translated into English using google translate]

2. “On maintient et renforce nos liens à l'avenir!” [In French]; “We maintain and strengthen our ties in the future!” [Translated into English using google translate]
3. “Répondre à des appels à projets sur la valorisation des bioressources marines” [In French]; “Respond to calls for projects on the development of marine bioresources” [Translated into English using google translate]

8.4.6. Implications from the survey findings

Based on the survey data, IUML have held a satisfactory QH engagement meeting. Stakeholders felt somewhat positive towards their interactions with IUML and most of them were likely to join a Marine QH platform. However, there is scope for improvement.

8.5. WavEC

Of the 17 people who filled out the survey between 12th April 2022 and 26th April 2022, eleven responses (male =10; prefer not to say=1) were analysed as valid.

8.5.1. Demographic information of the respondents

Above 73% of the respondents were Portuguese, remaining were of other nationalities. Around half of the respondents (54.5%) lived in Portugal, the remaining respondents lived in countries, such as Denmark, Indonesia, Spain, Sweden and the UK. Around 80% of the respondents were employed full-time, while one participant was a student, one participant was employed part-time.

Table 25: Demographic details of the survey respondents

Variable	Results
Age	<30 years 18.2%
	30-39 years 9.1%
	40-49 years 36.4%
	50-59 years 36.4%
Education	Bachelors (or equivalent) degree or others 27.3%
	Masters (or equivalent) degree 54.5%
	Doctoral (or equivalent) degree 18.2%

Percentage distribution of Quadruple helix respondents

Category	Percentage
Business	63.6%
RPOs	18.2%
Education (other than university)	9.1%
Others	9.1%

Past QH involvement experience

More than half (54.5%) of the survey respondents confirmed that they participated in similar activities organised by WavEC before and remaining reported they did not do so before.

8.5.2. Quality of involvement

When measured with 7-point Likert scale for the statements evaluating the quality of involvement of the event, the results indicate that the respondents felt the workshop was not properly managed, they did not find the presentations useful, and that there was no effort to interact with the participants. The key reason could be that organising a discussion where participants could not see each other is not ideal for QH engagement, as there are limited opportunities for the participants to contribute.

Table 26: Ratings of workshop participants on statements to assess quality of involvement

Statements on quality of involvement	Mode
I was able to actively participate.	4
My contribution to the process was valued.	4
The process was poorly managed.	5
I had a clear understanding of the expectations for my contribution to the process.	4
I needed more information to fully participate.	4
All voices have been heard and discussed.	5
The overall presentations were relevant.	1
Sufficient efforts were put in place to interact with the stakeholders	1
As a stakeholder, I feel positive towards my interaction with WavEC/TECNALIA.	1

Note. 1 = “Strongly disagree”; 2 = “Disagree”; 3 = “Somewhat disagree”; 4 = “Neutral”; 5 = “Somewhat agree”; 6 = “Agree”; 7 = “Strongly agree”.

8.5.3. Respondents’ general feelings towards the QH event

From the data presented in Table 27, it can be inferred that respondents’ feelings towards this event were somewhat positive and that the workshop design has considerable scope of improvement. Particularly, respondents were not clear on the purpose of their involvement.

Table 27: Respondents’ general feelings towards the QH event by WavEC

General feelings	Mode
My involvement in the workshop has been... - Satisfying: Disappointing	1
My involvement in the workshop has been... - Comforting: Frustrating	1
My involvement in the workshop has been... - Good: Bad	1
My involvement in the workshop has been... - Clear: Confusing	0
My involvement in the workshop has been... - Easy: Difficult	2

Note. The scale is from -3 to 3. Positive numbers indicate positive feelings (e.g., satisfying), negative numbers indicate negative feelings (e.g., disappointing), while “0” indicates “Neutral”.

8.5.4. Likelihood of joining a Marine QH platform

As can be seen from Figure 6 below, except 27.3% of respondents who were neutral for a Marine QH platform, more than 70% of the respondents indicated that they are somewhat or extremely likely to join the platform.

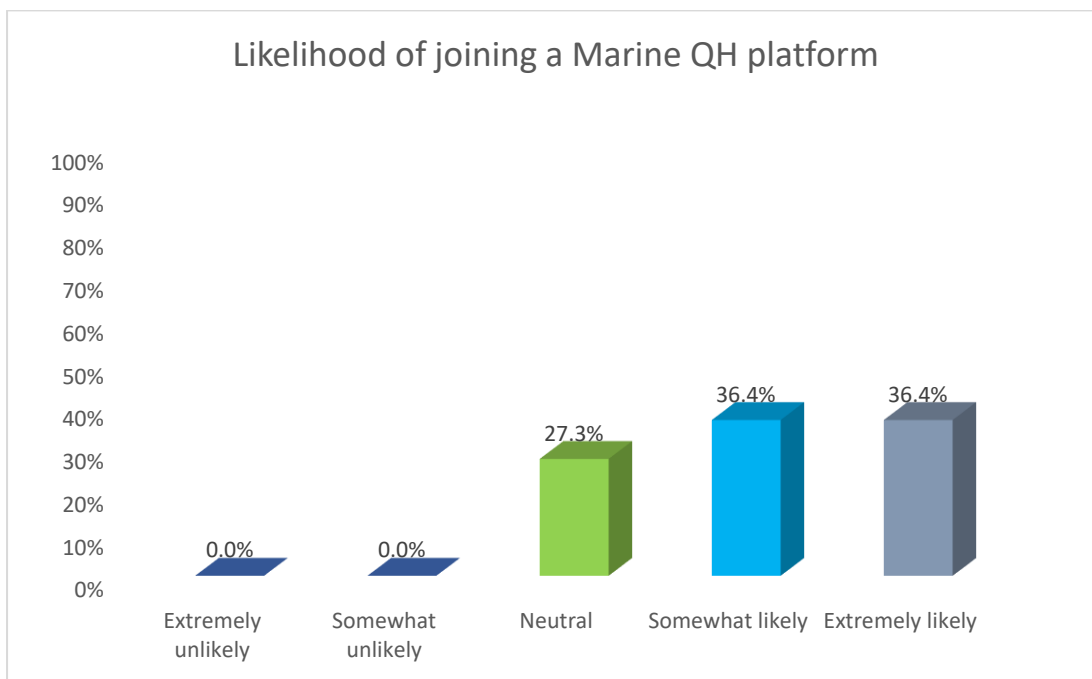


Figure 6: Likelihood of joining a Marine QH platform reported by the survey respondents (n=11) who participated in a QH engagement workshop organised by WavEC

8.5.5. Sample quotes from respondents

Few quotes (unedited) from the respondents listed below. Based on the information provided by these quotes, respondents found the insights shared during the workshop useful and wanted to be involved in other similar future events, however, respondents expected more



to be done by the organisers to improve the quality of involvement and they felt relevant people from the offshore wind energy supply chain were absent.

“Thank you for the insights and looking forward to news re the project”

“Looking for another events”

“I think that you should have allowed respondents to see who else was participating (in the zoom session) to allow for more networking.”

“The event was very light/poor. Relevant stakeholders and supply chain was not present! I'm sure that much more can be done.”

8.5.6. Implications from the survey findings

Based on the survey data, the workshop format of WavEC where a stakeholders' matrix to identify key actors in the offshore wind energy supply chain was presented did not support QH engagement. However, nearly two-thirds of the respondents indicated that they were likely to join a marine QH platform, which is an important legacy of the GRRIP project.

9. Conclusion

9.1. Monitoring

The framework for measuring progress towards milestones for the selected interventions has worked satisfactorily. The 'mix' of specific reporting and monitoring meetings has, therefore, served its purpose. Knowledge, as a consequence, is being built regarding the effectiveness of the process and how it might be improved or adjusted if it (or a modified version of it) were to be adopted for other RRI related initiatives aimed at embedding cultural change.

During the RRI trial implementation, the overall picture can be regarded as good – as *indicated* in the tables provided (see Table 4). Regarding the interventions (as set out in the APs), however, it must be affirmed that there is no expectation that the full range of interventions would necessarily be made (and milestones met) in all cases. The indications are however, that most have been achieved (with some related targets exceeded) and there is good progress towards others. Any changes to approach and progress (or change in APs) will be reported in Deliverable 7.2: Final RRI AP Implementation report.

It must be recognised, furthermore, that this is not a competition between sites. Each has their particular circumstances and have selected different numbers of interventions for their respective APs. In other words, the methodology is itself 'on trial' as much as there is an eye on the sites to establish its efficacy in helping them to take steps to foster the desired cultural (and practice) changes that were evident from their intervention choices.

Following the trial period, some acceleration in progress is anticipated as the GRRIP project approaches its end date. Further milestones will have been addressed and 'work in progress' or 'on hold' is expected to have been translated into 'milestones met'. Formal monitoring of that progress will cease on the 30th of September with full analysis of related data for all applicable interventions and milestones till then.



9.2. Overall conclusions from the formative evaluation

The formative evaluation using semi-structured interviews with site leads and staff from different levels of the case study sites has provided enriched information to better understand the status of RRI implementation and how each case study site is responding to the implementation of RRI APs. In general, based on the feedback from the site leads and staff interviewees, the RRI implementation progress is adequate. Staff interviewee awareness of the implementation RRI APs are, furthermore, satisfactory for most of the sites.

For three sites, PLOCAN, MaREI and SU, several meaningful changes from the implementation of the RRI APs were perceived by both the site leads and the interviewed staff members. PLOCAN could overcome the resource barriers and compared to other sites could bring together various staff members from all levels of the organisation for the implementation of RRI APs and could make them visible. As compared to the other sites, MaREI and SU were in relatively more advanced stages for the implementation of RRI APs at the Audit stage. These two sites demonstrated significant success in QH engagement activities during the GRRIP project. MaREI have also put significant efforts into facilitating mutual learning amongst the case study sites. However, these two sites experienced more reluctance from the senior management teams than other case study sites, which is linked to them operating under university policies and/or encountering more scepticism about RRI (not its 5 keys but the need for an overarching concept). WavEC and IUML, which were in early stages of RRI implementation at the Audit stage, have made significant progresses in their implementation of RRI APs. Although interviewed staff members could, to date, not identify significant meaningful changes brought about by RRI, the changes are likely to happen and become gradually more visible to staff in the future.

A variety of facilitating factors and barriers were mentioned during the interviews for each case study site. Support from the senior management teams, good communication between the site leads and all the other staff members, sufficient RRI training, and effective monitoring and evaluation systems were more frequently mentioned as facilitators by the interviewees. Regarding the barriers, lack of resources, including funding and competent personnel, is the common barrier for all the case study sites. Short-term work contracts and dependence of funding to continue RRI interventions were frequently mentioned by the interviewees.

Based on GRRIP project's budget and organisational size, the number of staff interviewed are satisfactory, hence sample size and representativeness are not major issues, however, selection bias could be a possible limitation of this formative evaluation study as the interviewees were identified by site leads. Monitoring and evaluating the implementation of RRI APs in each case study site will continue until the end of the GRRIP project (December 2022). It is strongly recommended that all the case study sites establish their own RRI monitoring and evaluation systems with customised indicators before the end of the project.

9.3. Overall conclusions from the evaluation of QH engagement events

GRRIP project has placed a heavy emphasis on action plans on QH engagement with the five sites. At the beginning of the project, at least three case study sites had limited experience on QH engagement. During the AP development stage, all five case study sites included QH

engagement as RRI trial interventions. At the implementation stage, online QH workshops and on-site meetings were used as RRI trial actions by different case study sites. IUML has constituted a QH group of 11 people to advise on action plans and has meetings every 6 months with this group. The QH survey with a focus on assessing quality of involvement was distributed after each of the QH engagement events. Based on the survey findings, the quality of involvement was highly satisfactory for three case study sites, including MaREI, SU and PLOCAN, satisfactory for IUML, but more or less neutral for WavEC. The quantitative ratings were in line with the qualitative feedback from the respondents.

We concluded that in general interactive QH workshops can achieve better quality of involvement than panels with speakers. In addition, a high percentage of stakeholders positively indicated their likelihood of joining a Marine QH platform. This has demonstrated the societal need for a platform for tackling societal challenges in the Marine and Maritime field together and has paved the way for the work to be done by GRRIP WP9 on establishment of such a platform.

10. References

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ANNEXE 1 MONITORING MEETINGS: PROFORMA EXTRACT

This extract is an example of the first column ‘Agenda Items’ of the proforma that also carries ‘Summary Response’ and ‘Feedback’ columns. There are usually some 10 agenda items listed. The summary response is completed by or in collaboration with the RPOs & RFO in question; and the feedback sets out suggestions, observations and required actions.

1	General report by case study site of current progress, challenges / barriers and mitigations.
Attention to follow-up actions from prior monitoring meetings including ... [AAA, BBB]	
2a	<i>Please advise on ... [issue(s) arising from previous monitoring meeting]</i>
2b	<i>With regard to [perhaps an outstanding action] ... XXXX are required to advise on the specific procedures that are in place (from management and staff perspectives).</i>
2c	<i>[Perhaps with regard to a working group meeting] Please advise on the composition of the group and the range of stakeholders engaged. Did the meeting take place and what were the key outcomes? Please give particular attention to ... XXXX</i>
2d	<i>XXXX were to evaluate [date] the training provided around XXXX. Has this evaluation taken place, how was the evaluation done, and what were the key findings?</i>
Other issues relating to interventions (and their implementation) as set out in the Action Plans	
3	XXXX were to have undertaken ... [selected implementation actions] a) [Selected RRI key and implementation action] (Number, Milestone, Date Expected); and b) [Selected RRI key and implementation action] (Number, Milestone, Date Expected) How is this work progressing? Have the milestones been met?
4	Up and coming is the requirement for the [Selected RRI key and implementation action] (Number, Milestone, Date Expected) Are plans in place to do this? What measures will be put in place to ensure its achievement?
5	The GRRIP project is ambitious in its endeavours (for all 5 RPOs & RFO) to bring about procedural <i>and</i> cultural changes. Your organisation noted [... different issues] for the planned interventions ... some of which are noted below. Please advise how you are addressing (or plan to address) them.
6	Within the project we are required to have regard for (Thematic issue). Please advise how you are taking account of this/these.
7	In tackling the challenges ahead for RRI implementation (for the next milestones) what further guidance / support do you believe might be beneficial from the wider project consortium?



ANNEXE 2 PROGRESS SUMMARIES FOR THE FIVE GRRIP SITES

These summaries bear testimony to the specific interventions undertaken – as set out in the respective Action Plans for the interim (trial) period to 31st January 2022). Some preliminary notes apply.

The summaries show the extent to which the relevant (i.e., within the trial period) interventions were completed (or not) according to the milestones set in the Action Plans developed by each of the sites. Interventions for which the first milestone is after January 31st are, therefore, not shown.

Some of the intervention ‘descriptors’ are, for reasons of space, abbreviated.

The ‘ongoing activity’ indicated by the pointers (forward arrows ⇨) relates in some cases to further milestones (for the period after January 31st) or simply to the fact that endeavours are continuing for some ‘completed’ interventions (e.g., facilitation of training that follows from the frameworks that have been put in place during the trial period).

The ticks indicate full completion of the intervention in question (according to the milestones set) but, in many, calls for continued endeavour.





MaREI PROGRESS

58 Milestones and
25 interventions to
31st January 2022

Milestone not met: Work in progress ■ Milestone not met: Work on hold ■ Milestone not met: Other ●		Intervention milestone completed ■ Intervention fully completed ✓ Further milestones / ongoing activity ⇨		1	2	3	4	5	6	7
				GE 1.1	Facilitate trainings/webinars/ workshops/awareness raising sessions on Gender Equality and awareness	■	■			⇨
GE 1.2	Initiate the application process of Athena Swan Charter for ERI - UCC	■	■			⇨				
PUB 2.1	Facilitate trainings/webinars/workshops/ awareness raising sessions on Public Engagement (PE)	■	■			⇨				
PUB 2.2	Establish mechanism(s) to track collaborations that demonstrate triple helix and / or QH models of research and innovation	■	■	■						
PUB 2.3	Organise QH engagement workshop(s) to set the research agenda in the marine and maritime sector	■	■	■	■	■	■	■	■	✓
PUB 2.4	Include consideration of periodic stakeholder engagement cycles as part of the Action Plan	■	✓			⇨				
SCI 3.1	Facilitate trainings/ webinars/workshops/awareness raising sessions on Media Outreach and Science Education	■	✓			⇨				
OA 4.1	Facilitate trainings/webinars/workshops/ awareness raising sessions in Open Access & Research Data Sharing Training	■	●	■		⇨				
ETH 5.1	Facilitate trainings/webinars/workshops/ awareness raising sessions on ethics and research integrity	■				⇨				
ETH 5.2	Facilitate trainings/webinars/workshops/ awareness raising sessions on Diversity & Inclusion Awareness	■				⇨				
ETH 5.3	Set up a leadership group to address researcher well-being and career enhancement opportunities	■	✓	■						
GOV 6.1	Determine RRI Baseline Level	■				✓				
GOV 6.2	Identify, ensure key functions and departments represented on the GRRIP WG	■				✓	⇨			
GOV 6.3	Set-up regular progress meeting with the Working Group	■	✓			⇨				
GOV 6.4	GRRIP WG has the responsibility to deliver the Action Plan	■	■			⇨				
GOV 6.5	Get pledges/formal commitment from institutional leadership outlining commitment to implementing all RRI dimensions	■	■	■						
GOV 6.6	Develop, refine and complete action plans for embedding RRI dimensions in the institution	■	✓			⇨				
GOV 6.7	Identify & appoint RRI Champions across institution to support implementation	■	■	■	■	■	⇨			
GOV 6.8	Set-up a reporting structure with senior leadership to share progress, demonstrating usefulness of RRI to management	■	■			⇨				
GOV 6.9	Develop an Institutional RRI Policy/Strategy	■				⇨				
GOV 6.11	Establish systems to collect and analyse information on training completed on RRI dimensions	■	●	●		⇨				
GOV 6.12	Facilitate trainings/webinars/workshops/ awareness raising sessions of doctoral scholars, post docs, and researchers on RRI	■	■	■		⇨				
GOV 6.13	Understand through interviews, etc. barriers/challenges, opportunities for staff (at different levels) to engage with RRI dimensions	■	■	■		⇨				
GOV 6.14	Set-up mechanisms to collect data on public outreach activities of staff	■	✓			⇨				
GOV 6.15	Engage in a series of mutual learning activities with other GRRIP sites	■	✓			⇨				



SWANSEA UNIVERSITY PROGRESS

		22 Milestones and 16 interventions to 31 st January 2022						
Milestone not met: Work in progress ■		Intervention milestone completed ■						
Milestone not met: Work on hold ■		Intervention fully completed ✓						
Milestone not met: Other ●		Further milestones / ongoing activity ⇨						
		1	2	3	4	5	6	7
GE 1.2	Establish Athena SWAN team	✓	✓					
GE 1.3	Run a training support series which includes Diversity & Inclusion Awareness Training	✓	⇨					
PUB 2.1	Identify Public Engagement Champions across the institution to support RRI Implementation	✓	⇨					
PUB 2.3	Initiate citizen/participatory science thinking		⇨					
PUB 2.4	Raise Public Engagement Awareness by professionalising the role of PE officers/researchers		⇨					
PUB 2.5	Training support series, which includes Public Engagement Training	✓	⇨					
PUB 2.6	Join membership of the European Citizen Science Association (ECSA)		✓					
OA 4.1	Better manage information about collaborations on research and innovation with external stakeholders		⇨					
ETH 5.1	Establish a research ethics committee/research integrity office	✓						
ETH 5.2	Run a training support series, which includes Ethics & Research Integrity Training	✓	⇨					
GOV 6.1	Complete GRRIP Self-Assessment Tool to determine RRI Baseline Level		✓					
GOV 6.2	Identify, ensure key functions and departments represented on the GRRIP WG		✓	⇨				
GOV 6.3	Completed GRRIP Action Plan		✓					
GOV 6.4	Identify & appoint RRI Champions across institution to support implementation		✓					
GOV 6.5	Embed RRI training on Participatory Research in educational structures, e.g., in PhD schools or summer schools		⇨					
GOV 6.6	Engage in a series of mutual learning activities with other GRRIP sites	✓	⇨					



PLOCAN PROGRESS

45 Milestones and
30 interventions to
31st January 2022

Milestone not met: Work in progress ■		Intervention milestone completed ■		1	2	3	4	5	6	7
Milestone not met: Work on hold ■		Intervention fully completed ✓								
Milestone not met: Other ●		Further milestones / ongoing activity ⇨								
GE 1.1.1	Ensure the RRI Working Group is balanced and have access and authority to deliver the Action Plan							✓		
GE 1.2.1	Develop a written policy for gender equality							✓		
GE 1.2.2	Develop a Gender Equality Plan									
GE 1.2.3	Introduce structures and policies to embed gender balance in institutional R&I decision making									⇨
GE 1.3.1	Run a training support series incl Gender Equality Awareness							✓		⇨
GE 1.3.2	Collect, track and analyse information on training completed on Gender Equality Awareness						✓			⇨
PUB 2.3.1	Run a training support series incl Public Engagement Training									⇨
PUB 2.3.2	Analyse information on Public Engagement training completed									⇨
PUB 2.3.3	Develop tools/focus group sessions to understand challenges staff face in engaging with RRI dimensions									
PUB 2.3.4	Participate in communications campaign raising awareness about project + RRI	✓								⇨
PUB 2.4.1	Provide GRRIP stakeholders with relevant information/tools on the project, baseline maturity levels and RRI goals						✓			⇨
PUB 2.4.2	Leverage existing collaborations and extend strategic stakeholder networks with different societal actors		✓							
SCI 3.3.1	Run a training support series, incl Science Education Training									⇨
SCI 3.3.2	Analyse information on Science Education training completed									⇨
OA 4.2.1	Develop written Open Access Policies and/or protocols	✓								
OA 4.2.2	Set-up a tracking mechanism to establish number of publications in hybrid journals or fully Open Access journals	✓								
OA 4.3.1	Run a training support series incl Open Access Training									⇨
OA 4.3.2	Analyse information on training completed on Open Access									⇨
ETH 5.3.1	Run a training support series incl Ethics & Integrity Training									⇨
ETH 5.3.2	Analyse information on Ethics and Integrity completed									⇨
GOV6.1.1	Complete GRRIP Self-Assessment Tool to determine RRI Baseline						✓			
GOV6.1.2	Identify, ensure key functions and departments represented on the GRRIP WG							✓		
GOV6.1.3	Set-up regular progress meeting with WG (on development and implementation of the interventions and monitor AP)								✓	⇨
GOV6.1.4	Get pledges/formal commitment from institutional leadership outlining commitment to implementing all RRI dimensions	✓								
GOV6.1.5	Complete Action Plan					✓				
GOV6.1.6	Identify & appoint RRI Champions across institution to support implementation									
GOV6.1.7	Set-up a reporting structure with senior leadership to share progress, demonstrating usefulness of RRI to management				✓					⇨
GOV6.1.8	Set-up a RRI unit with a staff member(s) explicitly responsible to embed GEN, PUB, OA and SCI									
GOV6.4.1	Track the number of research and innovation collaborations that demonstrate stakeholder inclusion				✓					
GOV6.4.2	Create Intellectual property rights/agreements to protect researchers/stakeholder collaboration									



IUML PROGRESS

		49 Milestones and 16 interventions to 31 st January 2022						
Milestone not met: Work in progress ■		Intervention milestone completed ■						
Milestone not met: Work on hold ■		Intervention fully completed ✓						
Milestone not met: Other ●		Further milestones / ongoing activity ⇨						
		1	2	3	4	5	6	7
GE 11	Develop written policies on gender equality	⇨						
PUB 10	Develop written policies for public engagement	✓	⇨					
PUB 20	Embed Public Engagement activities in the funding structure for research funding calls			✓				
SCI 13	Develop policies/strategy to promote science education				✓			
GOV 1	Complete GRRIP Self-Assessment Tool to determine RRI Baseline				✓			
GOV 2	Identify, ensure key functions and departments represented on the GRRIP WG					✓		
GOV 3	Set-up regular progress meeting with WG (on development and implementation of the interventions and monitor AP)			✓		⇨		
GOV 4	Ensure the RRI Working Group is balanced and have access and authority to deliver the Action Plan		✓					
GOV 5	Get pledges/formal commitment from institutional leadership outlining commitment to implementing all RRI dimensions				✓			
GOV 6	Design flexible and tailored actions plans with short, medium and long-term (post-project) objectives/initiatives.			✓				
GOV 7	Identify & appoint RRI Champions across institution to support implementation			✓				
GOV 8	Ensuring nature and culture of institution and national STI context is supports tailored RRI plans in turn to inspire national policy	⇨						
GOV 14	Include “societal impact” as a criterion of research programme					✓		
GOV 16	Examine RRI Dimensions in current M&M funding programs			⇨				
GOV 17	Identify gaps in funding grant policies where RRI is absent and could be embedded funding grants		⇨					
GOV 18	Engage in a benchmarking and engagement process, learning from funders who have incorporated RRI into the research funding calls							

WavEC PROGRESS

72 Milestones and 23 interventions to 31st January 2022

		Milestone not met: Work in progress ■	Milestone not met: Work on hold ■	Milestone not met: Other ●	Intervention milestone completed ■	Intervention fully completed ✓	Further milestones / ongoing activity ⇨	1	2	3	4	5	6	7
GE 1.1	Ensure the RRI Working Group is balanced and have access and authority to deliver the Action Plan											✓		⇨
GE 1.2	Develop a Gender Equality Plan												●	●
GE 1.3	Run a training support series, which includes Gender Equality Awareness													⇨
GE 1.4	Run a training support series which includes Diversity & Inclusion Awareness Training								●	●				⇨
PUB 2.1	Run a training support series incl Public Engagement Training							●			✓			⇨
PUB 2.2	Participate in communications campaign raising awareness about project + RRI								✓					⇨
PUB 2.3	Join membership of the European Citizen Science Association (ECSA)							●						
SCI 3.1	Develop policies/strategy to promote science education													⇨
SCI 3.2	Run a training support series, incl Science Education Training							●	●		✓			⇨
OA 4.1	Run a training support series incl Open Access Training							●	●	●				⇨
ETH 5.1	Run a training support series incl Ethics & Integrity Training							●	●	●				⇨
GOV 6.1	Complete GRRIP Self-Assessment Tool to determine RRI Baseline										✓			
GOV 6.2	Identify, ensure key functions and departments represented on the GRRIP WG										✓			
GOV 6.3	Set-up regular progress meeting with the Working Group													✓ ⇨
GOV 6.4	Get pledges/formal commitment from institutional leadership outlining commitment to implementing all RRI dimensions													
GOV 6.5	Design flexible and tailored actions plans with short, medium and long-term (post-project) objectives/initiatives										✓			
GOV 6.6	Identify & appoint RRI Champions across institution to support implementation											✓		
GOV 6.7	Assess the local culture of the institution and national STI context													
GOV 6.8	Set-up a reporting structure with senior leadership to share progress, demonstrating usefulness of RRI to management													⇨
GOV 6.9	Develop an Institutional RRI Policy/Strategy (including unit) to help embed RRI in the institution and communicating the vision													⇨
GOV 6.10	Set-up a RRI unit with a staff member(s) explicitly responsible to embed GEN, PUB, OA and SCI								✓					
GOV 6.11	Track the number of research and innovation collaborations that demonstrate stakeholder inclusion							●	●	●				
GOV 6.12	Include pre-defined stakeholder engagement cycles in Action Plan							●		●				