



WP 9 Deliverable 9.6

D9.6: Fourth Year (M54) report on networking, public engagement and communication activities including collation of products and e-MERCES tools

Marine Ecosystem Restoration in Changing European Seas MERCES

Grant agreement n. 689518

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SUBMISSION DATE: 25/11/2020

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PU	Public	
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1. INTRODUCTION

The present document summarizes the work carried out in WP9 of the MERCES project in the period July 2019 - November 2020. It is broken down per Task within WP9 as well as per activity within Tasks, and benchmarks such progress against the "Assessment and monitoring" Table presented in section 6 of the Dissemination Plan - DP, second version (D9.1). For the sake of clarity, the same table is included here as Annex 1, with updates and outcomes from year 4. The present document is released in conjunction with the updated version of the DP and is produced by GAIA with the support of ECOREACH.

2. DESCRIPTION OF PROGRESS

2.1. Task 9.1. Dissemination Plan and Quality Control (M1-M54)

The DP has been delivered as expected on M3, laying down the overall principles of the MERCES dissemination, communication and public engagement strategy. These included: the audience to target, the messages to deliver, the tools and mechanisms to be used, the plan of activities, and the assessment and monitoring approach. The latter (as per section 6 of the DP) is also recalled, in the following sections, to assess performance versus quantitative targets therein defined. The DP also included a database of stakeholders (v.1) and of relevant projects for cross-cutting activities (v.1).

The DP is to be updated annually, and a revised version is delivered by ECOREACH in conjunction with the present document (updated D9.1).

The Quality Control component of this Task refers to the alignment between the MERCES scientific work plan, the DP and its actual implementation. The following sections provide details on such alignment, showing that it is consistent and in line with expectations.

2.2. Task 9.2. E-MERCES (M1-M54)

By e-MERCES, we intend e-based tools and channels employed to support the DP. These include the MERCES website (managed by ECOREACH and UNIVPM) and an array of social media and on-line platforms (managed by GAIA). Communication, promotional and dissemination material (including visual elements to be used in such material) are also covered in Task 9.2, whereby their distribution is mostly (although not exclusively) based on e-channels.

2.2.1 MERCES website

The **MERCES website** (<u>www.merces-project.eu</u>) and the MERCES intranet (Task 9.5) were established by M3, as described in D9.2. Since then, the website has grown in content and has been improved also following advice and requests by partners.

As of November 2020, the website has been visited over 85500 times in 4,5 years. The target set for the MERCES webpage is 8000 visits/year (D9.3), which - with about 19000/year visits, has been met. The majority of visitors to the MERCES website continue to land there via social media links.

2.2.2 MERCES social media and e-based tools/channels

Currently, the **MERCES Facebook page** has published over 150 posts and is followed by about 520 people. The target set in the DP for the MERCES Facebook page was 200 likes/year, which has not been met.

The **MERCES Twitter page** has sent about 880 posts, is followed by over 870 people and has received over 1600 likes to its tweets. The DP set two quantitative targets for the MERCES Twitter page: at least 150 followers/year (which has been exceeded) and at least 10.000 impressions/month (which has not been reached). However, a good part of MERCES' Twitter activity continues to occur through re-twitting of tweets or mentioning by MERCES researchers. While re-twitting is not taken into account by Twitter statistic (including the one generated by external social media management tools), this activity is still MERCES-born and is compensating for the formal gap in impressions. As a consequence, we consider both targets set for Twitter as achieved.

The **MERCES YouTube channel** features 11 videos, which have been viewed over 3400 times. The target set in the DP for the MERCES YouTube activity was at least 100 views/video, which has been well met.

The **MERCES project on ResearchGate** has gained 232 followers and has been read over 1600 times since its creation. The target set in the DP for the MERCES ResearchGate activity was at least 100 followers for the first year, and 50 per year in the subsequent ones. As the actual opening of the current page occurred in February 2017, the target is considered met. The indicator of impact for publications was defined as at least 70% of published papers being cited in year 3, which has been exceeded significantly (see Annex 2).

The **MERCES community on Zenodo** currently consists of 22 scientific publications, all of which with Open Access versions. The other scientific publications have not been uploaded on Zenodo yet, waiting for the pre-print versions from the authors.

2.2.3 MERCES communication, promotional and dissemination material (including visual elements)

Task 9.2 also included a set of printed and e-material, tailored for the different audiences and to be released at different points of the project's lifetime. Such material ranges from visual elements (to be included in different products, for example the MERCES logo) to complete products (to be used as such, for example, MERCES factsheets). Task 9.2 is coordinated by ECOREACH and GAIA, and is implemented by them with inputs from other members of the MERCES consortium. During the fourth year, the following have been created:

- **Updated collections of pictures, videos and graphics** to be used for MERCES communication, promotional and dissemination material (ECOREACH, GAIA, other partners). Such collections are stored on a separate platform, not directly accessible by MERCES partners in order to ensure proper handling of copyright and usage. Files are available to partners upon request.
- **Factsheets.** Graphics used to enrich the newsletter #7 will be used as factsheets associated to the Teachers' Workbook as "Supplementary material" (to be completed by December 2020 as a deliverable of the SponGES project).
- **Three more newsletters**, two for the non-specialist (#7, #9: GAIA and ECOREACH with other partners as contributors) and one for the specialist/business audience (#8: WP8 DSES, NIVA, UTARTU with GAIA and ECOREACH for the layout and pagination). The target set in the DP for the MERCES newsletters was at least 150 views/year, measured via the MERCES website. The target has been met based on the Business newsletter, while we still don't know the statistics for the remaining two newsletters given their release in November, conjunction with the MERCES final meeting.
- **Press releases and presence in the media.** The consortium has continued to be actively engaged in communication to the non-specialist audience, appearing in printed and digital media. Moreover, MERCES featured in the CORDIS news (https://cordis.europa.eu/article/id/421774-getting-down-to-the-business-of-marine-ecosystem-restoration-in-european-seas-and-beyond?WT.mc_id=Twitter), which has been promoted through EC channels and beyond. Finally, MERCES was included in the first report on Nature-Based Solutions released by DG RTD https://op.europa.eu/en/publication-detail/-/publication/d7e8f4d4-c577-11ea-b3a4-01aa75ed71a1
- **Models visualization.** A modelling-based video and an interactive experience representing different scenarios in the restoration of seagrasses in the North Sea has been released https://dataportal.nioz.nl/visualmodels/BESE/ and https://www.youtube.com/watch?v=ApfY0dWTL6E&feature=youtu.be
- **Documentary.** UNIVPM and ECOREACH realized a documentary in collaboration with GG Production and the documentarist Roberto Rinaldi.

2.3. Task 9.3. Ocean Literacy (M13-M54)

Ocean Literacy has been at the heart of the MERCES WP9 agenda, engaging audiences of all ages and backgrounds. This task has the double aim of involving students and their teachers in dedicated events or activities, focusing on raising knowledge and awareness on ecological restoration actions. To reach these goals:

- UNIVPM and ECOREACH organized a full day experience to explain the MERCES experimental activities to high-school teachers and students at Gabicce (UNIVPM experimental site) and UNIVPM

labs, in collaboration with the Italian PLS project (Italian national plan to promote scientific degrees, funded by the Italian Ministry of Education, University and Research).

- UNIVPM participated in the event Your Future Festival, presenting MERCES to visitors (mainly young students from primary school).
- IMAR organized an open day with high schools from Horta, during which researchers showed their coral collection and explained how scientists explore the deep sea. Students also learnt about the close relationship between researchers and local fishermen crucial to the MERCES' restoration work for deep-sea corals. A movie made during the 2018 campaign "Blue Azores" completed this full-immersion in the deep sea. Also, as mentioned in the paragraph below, IMAR and GAIA organized the third leg of the touring exhibition in summer and late 2019.
- Being involved in the communication, dissemination and public engagement activities of both MERCES and "sister project" SponGES, GAIA has worked to strengthen the collaboration between these initiatives. Two ways in this direction have been identified in MERCES joining both the touring exhibition that was part of SponGES' outreach plan, and the linked modular manual for school teachers. The third leg of the touring exhibition (now involving all three "sister projects" SponGES, MERCES and ATLAS) was organized in the Azores, hosted by IMAR and overall coordinated by GAIA. The exhibition was set up at the Marine Observatory of the Azores in June 2019, lasted until October 2019 and was also presented during the Sea Week event in August 2019 (which exposed MERCES to decision makers and industry representatives as well). The third leg of the exhibition was visited by a few thousand people. In the end of 2019, all structural materials that constitute the core of the touring exhibition were shipped back to Italy because the fourth leg was due to take place during the EUDI Show fair (collaboration between GAIA and UNIVPM). EUDI is one of the major events in the sector of recreational and professional scuba diving in Europe, and is visited by over 30K people every year, including divers, professionals, families, and general visitors. The decision to be present at EUDI was motivated by the desire to bring the touring exhibition and its themes closer to these target audiences, with special focus on engagement in Citizen Science and hands-on Public Engagement activities that would be beneficial to marine restoration (such as environmental monitoring, practical support during restoration actions, post-action monitoring etc). Also, the decision was motivated by the need to establish collaborations with the diving industry, and more specifically with dive operators and major certifying agencies. To such an end, GAIA planned a set of hands-on activities and prepared linked materials that would pair activities at the fair with activities at sea at selected locations. EUDI 2020 was planned in Bologna (Italy, from February 28th to March 1st, but the event was initially put on hold and then moved to 27-29 November 2020 as a consequence of the first, shocking wave of Corona-19 virus that hit Italy. Eventually, however, the event was definitively cancelled in summer 2020. This sequence of events and continuous adaptation of plans, associated with the disruptions brought along by the pandemics at all levels, have delayed the finalization of the teacher's workbook (which will nonetheless be completed by the end of the SponGES

project, in December 2020). Also, the two remaining legs of the touring exhibition (Italy and Norway) had to be cancelled.

- ECOREACH, GAIA and UNIVPM presented MERCES during the activities organized under the Sharper project (linked to the European Researchers' Night) in September 2019.
- UNIVPM was invited to present MERCES during two public events hosted at Santo Stefano al Mare and Diano Marina (IMPERIA, Liguria, Italy). These events were dedicated to showing the beauty of animal forests and the opportunity of restoration where and when these habitats are damaged or no longer present. During each event the Mayor welcomed the participants together with other institutional representatives. More than fifty people were present at each event.
- IMAR has organized several online initiatives: MERCES/ATLAS stories during the Açores EntreMares 2020 initiative http://www.azores.gov.pt/GRA/SRRN-cigam/, Marina Carreiro-Silva Os Açores são um hotspot para os corais de águas frias? Are the Azores a hotspot for cold water corals? https://youtu.be/pGYpLMCNTpU, Telmo Morato A política para o mar usa o conhecimento científico? Does marine policy developments use scientific knowledge? https://www.youtube.com/watch?v=Ki21-DnPUw0&feature=youtu.be

2.4. Task 9.4. Public engagement on pilot restoration actions in coastal habitats via Citizen Science (M1-M54)

As described in D9.4, recreational divers as well as dive professionals (owners of dive centres, diving instructors, dive masters) were trained in the specific techniques for gorgonian transplanting, and took part in the transplantation of nearly 600 gorgonians in summer 2017. Starting from this, GAIA, UNIVPM and CSIC continued with monitoring activities with divers in Italy and Spain, with the promotion of Citizen Science for marine restoration, and with divers training, although activities have been reduced to a minimum in 2020 due to the pandemics (see also the note linked to EUDI 2020, above).

2.5. Task 9.5. Internal dissemination (M1-M54)

The **MERCES** intranet was established by M3, as described in D9.2 and above (section 2.2). The intranet section of the MERCES website is called "Partners' Area" and is password-protected. Described in D9.3, this section is constantly updated and is regularly visited by partners. Further to this, internal dissemination is ensured by e-mail exchanges between relevant partners, skype calls, distribution of reports and other written material, participation to the MERCES workshops and annual meetings (where posters and oral communications about progress in the work are presented).

2.6. Task 9.6. Training (M24-M54)

MERCES training has addressed different target groups, from prospective and current university students to teachers and practitioners:

- HCMR participated to an ERASMUS event, attended by about 40 students and teachers from 4 countries. HCMR talked about possible ways to reduce marine litter impact, including using bio-polymers as in MERCES experiments.
- The First Marine Restoration Course was held in Tricase (Italy) on 2-7 September 2019, co-organised by UNIVPM, CONISMA, CSIC, GAIA, ECOREACH. Attended by 10 participants from Italy, Turkey and the UK, the course primarily focused on the restoration of algae, seagrasses and the Mediterranean coralligenous. It encompasses theoretical lessons, labs experiences and field work on the shore as well as underwater (SCUBA diving). The course was positively received, as testified by the responses provided to the evaluation questionnaire administered at the end, and the MERCES WP3 Team intended to replicate the course in 2020 but such initiative had to be put on hold due to the pandemics.
- DSES has organized two MERCES webinars in the last 18 months, on the theme of ecological restoration: "Building a Business Case for Marine Ecosystem Restoration", and "Moving to Industrial-Scale Coral Habitat Restoration". All five webinars of the MERCES business webinar series have been added to the 'Restoration Resource Centre' in the website of the Society of Ecosystem Restoration.

2.7. Task 9.7. Open Access scientific papers (M6-M54)

Papers are listed in the MERCES website (under "Products"), with links to both the Zenodo community and the ResearchGate platform. Most MERCES publications are made Open Access following the Green OA option - bibliographic metadata as well as mandatory statements required by publishers are included in "self-archived" files used for this purpose. About one hundred scientific papers (for a total of over 1600 citations) have been uploaded on web site so far. The indicator of impact for publications was defined as at least 70% of published papers being cited in year 4, which has been significantly exceeded (see Annex 2).

2.8. Task 9.8. Networking activities (M1-M54)

This Task (ECOREACH, GAIA) is carried out in conjunction with Task 10.6 (UNIVPM, ECOREACH), to which it provides support. The fourth year has seen MERCES engaged in establishing further collaborations with other projects funded under relevant H2020 calls, stakeholders and key organizations:

- The UNIVPM management team organized a symposium dedicated to MERCES during the next 8th World Conference on Ecological Restoration (SER), which was held on 24-28th September 2019 in Cape Town, South Africa.

- UNIVPM, CONISMA and HCMR successfully proposed a Symposium on marine ecological restoration to the SERE 2020 (European SER congress, postponed to 2021 due to the Covid-19 pandemic) and to World Conference SER2021(the response for this has not been received yet).
- HCMR sent over 300 mails, contacted over 400 people, reaching >1000 people, engaging actively over 300 people by filling the social acceptance survey.
- NIVA presented posters and oral presentations at meetings: the Blue Carbon Initiative workshop in Copenhagen on 10th September 2019, about the Norwegian pilot study on kelp restoration; at an «Expert seminar» on developing the dock area of Grønlia on 7th November 2019; at Oslo School of Environmental Humanities (OSEH), on 2th October 2019 (https://www.hf.uio.no/english/research/strategic-research-areas/oseh/news-and-events/events/lunchtime-discussions/Safeguarding).
- Moreover, NIVA arranged a transdisciplinary workshop called "Brainstorming to develop solutions to restore or establish marine biological diversity in urban sea areas", 14th October 2019, CIENS, Oslo, Norway, with researchers and city planners as participants and has participated at the EU-MERCES webinar Building a Business Case for Marine Ecosystem Restoration (18th November 2019). In addition, NIVA has published a relevant report: Wenting Chen, Barton DN, Magnussen K, Navrud S, Grimsrud K, Garnåsjordet PA, Engelien E, Syverhuset AO, Bekkby T, Rinde E (2019). Values in the Oslofjord. Economical values related to ecosystem services from the fjord and the seashore. NIVA rapport nr 7420-2019. 139 p. (In Norwegian).
- DSES participated in 3 conferences/meeting: July 2019 The 'Restoring Estuarine and Coastal Habitats in the North-East Atlantic (REACH North-East Atlantic) Conference at the Natural History Museum, London. 9-12 September 2019 the Blue Carbon Initiative Science Steering Group Meeting in Copenhagen, Denmark. 20 to 22 November 2019 the World Ocean Council conference for Sustainable Ocean Summit on 'Investing in Ocean Futures: Finance and Innovation for the Blue Economy' and made a presentation on 'Environmental Impact Assessments for deep-sea mining in Areas Beyond Natural Jurisdiction' in a special session on 'Ocean EIA: Solutions, Best Practices and Collaboration for Assessing Threat, Risk and Impacts to High Seas Biodiversity'.
- NUIG participated in the following workshops/conferences: 25th Annual Conference of the European Association Environmental and Resource Economists [virtual event], June 23 Friday, July 3 2020; and the 10th Annual Marine Economics and Policy Research Symposium, Galway, Ireland, 28th 29th November 2019.
- IMAR and GAIA organized the third leg of the touring exhibition in the Azores, which was also presented during the Sea Week event in August 2019. This translated into networking with local decision makers and industry representatives.

- The First Marine Restoration Course held in Tricase (Italy) on 2-7 September 2019 and co-organised by UNIVPM, CONISMA, CSIC, GAIA, ECOREACH allowed for networking with territorial administrators and operators of the local fishing and coastal-based tourism industries.
- The MERCES final meeting took place using ZOOM platform on 10th and 11st November 2020. Overall, 120 participants including members of the Consortium, the project Advisory Board, EU representatives, the MERCES Business Club and other interested people (i.e., researchers) attended the meeting. The Project Adviser Dr Victoria Beaz-Hidalgo and members of the DG R&I, Dr Nerea Aizpurua and Ivan Conesa Alcolea, of the EASME, Dr Rocio Suarez-Jimenez and Dr Juan-Pablo Pertierra also attended the two-days meeting. The meeting was structured in such a way that WPs co-leaders made an overview of the results achieved during the 4 years of the project within each WP, and then additional specific talks were presented by partners in some WP.

3. CONCLUSIONS

With MERCES coming to a closure in November 2020, the goals for its WP9 are 1) to support the exploitation of key results, and 2) to keep reaching out to the different layers of society about the theme of marine restoration. The communication, dissemination and exploitation strategy designed by MERCES takes into account the need for activities able to remain as a legacy in spite of the lack of funding after November 2020. This barrier will be overcome in several ways, including and not limited to: 1) maintaining and curating the e-channels of MERCES for the next 3 years; 2) continuing the promotion of MERCES and marine-restoration related news through such channels as well as through the personal and institutional channels of MERCES participants; 3) including the newly generated knowledge and the most appropriate results in forthcoming training, teaching and capacity building activities that MERCES partners will be engaged in the short- and medium-term; 4) continuing with the release of publications, technical reports, policy documents and with the participation in events such as round tables, meetings, webinars etc; 5) endeavoring in new initiatives, both focusing on research and on the application of

4. ANNEXES

Annex 1 - D9.6 Annex 1_WP9 Assessment and monitoring table, updated (.pdf)

Annex 2 – D9.6 Annex 2_Publications (.pdf)

D9.6 Annex 1_WP9 Assessment and monitoring table, updated

Tool / mechanism	Task	Time line	Description	Targets	Indicators of impact	Outcome	
Website and project management site	Т9.2	Online at M3 and revised at least twice per month with news	Project website linked to social media and with sections dedicated to different stakeholders	At least 8K visits/year.	Impact measured as views/ downloads of online material (e.g. newsletters, fact sheets, see below)	The website has been visited about 19000 times/y since it was launched.	
Social media	Т9.2		Social media accounts on Facebook, Twitter, Youtube and ResearchGate		FB/TT/YT: audience drawn into visiting e-MERCES resources via links posted in social media RG: % of published papers cited over the years: y1 = 25%, Y2 = 40%, Y3 = 60%, Y4 = 70%	Total scores after launching the channels: FB: ca. 480 likes; TT: ca. 870 followers, ca. 5.9K impressions/month plus MERCES researchers (see text); YT: > 3400 for all videos; RG: >230, > 90% of the published papers have been cited at least once	
Newsletter	Т9.2	One newsletter every 6 months	4 dedicated to specialists and 4 dedicated to non-specialists, promoted via social media	At least 150 views/ newsletter	Evaluation questionnaire administered to subscribers once per year: min 50% filled in, min 75% useful/ very useful	Views > 200 for Newsletter # 8 pooling together website and social media statistics. Data not available for Newsletters #7 and #9, released in November. Evaluation questionnaires dropped due to extremely limited response rate	
Short videos	T9.2	First short video online at M3	2-3 dedicated to kids, 2-3 for non- specialist audience, posted on YT, accessible via website and promoted via social media	At least 100 views/video	Amount of website landing generated via this platform	Eleven videos and 3400 visualisations at the end of the project	
Fact sheets	T9.2	First by M6	N=3, first programmatic, second and third incorporating results, accessible via website, promoted via social media and printed for selected events	At least 200 views/factsheet (online version), printed version distributed at minimum 5 key events	At least one relevant contact emerging from key events.	Fact sheets for y4 will be included in the teachers' manual, to be released in its completed form in December 2020 (under the SponGES project)	
Printed promotional material	Т9.2	Available from M6	Part of the communication toolbox consisting of template presentation, business cards, poster, flyers	Used by 100% of partners by the end of Y1. Used in at least 10 scientific or stakeholders-relevant events/y and 5 pieces of news/y	Evaluation questionnaire administered to partners at the end of y2: min 80% filled in, min 75% good/ very good	All partners have used some form of printed material in events participated by MERCES. They have submitted pieces of news for e-MERCES throughout the year. Evaluation questionnaires have been dropped due to extremely limited response rate	

D9.6 Annex 1 WP9 Assessment and monitoring table, updated

Dy.o Annex 1_wPy Assessment and monitoring table, updated							
Ocean Literacy (OL) material for schools	Т9.3	First set available by M24	Uploaded on Scientix and presented/tested during workshops/events, promoted via social media and local channels	At least one activity per WP2, WP3 and WP4, at least 100 classes reached	Evaluation questionnaire administered to teachers at the end of each activity: min 70% filled in, min 75% good/very good	The third leg of the touring exhibition was visited by a few thousand people and met with widespread approval at its different venues. No evaluation questionnaire could be set up for logistic reasons, but local schools appreciated the activity to such an extent that they asked to keep the exhibition through February 2020. This was not possible given the need to set it up in Italy in the same period (which did not happen, because of the pandemic).	
Citizen Science (CS) activities	T9.4	Selection of CS activities by M12	Identification and tuning of at least one CS continuous activity for WP2, WP3 and WP4	At least 25 volunteers engaged per activity by the end of Y2	Evaluation questionnaire administered to volunteers at the end of their participation: min 50% filled in, min 75% good/ very good	Very little activities carried out because of the pandemic. Participants engaged and proactive, but no survey completed (Response rate = 0%). As a consequence, evaluation surveys have been dropped	
Training for specialists/institutional audience	Т9.6	From second year	Min. two, for transfer of knowledge and feedback, promoted locally and internationally via partners' networks and social media.	At least 15 participants/ event	Evaluation questionnaire administered to participants at the end of each event: min 70% filled in, min 75% good/very good	The only evaluation questionnaire was administered to the participants of the Training course in Tricase (September 2019). The feedback was very positive (100% response rate, >75% good/very good) and constructive.	
Educational events for non-specialist public	Т9.6	From second year	Min. three, in the wider context of science festivals or similar	At least 40 participants/ event	Evaluation questionnaire administered to participants at the end of each event: min 50% filled in, min 75% good/very good	Participants engaged and proactive, but no survey completed (Response rate = 0%). As a consequence, evaluation surveys have been dropped	
Peer-reviewed publications	T9.7	From M12	Publications in ISI journals, partitipation to national/international congresses	About 5-10 papers/partner, min one review or position paper per WP (WP2-7)	% of published papers cited over the years: y1 = 25%, Y2 = 40%, Y3 = 60%, Y4 = 70%	Papers and communications delivered. >90% papers already cited at least once	
Networking activities	Т9.8	From M0	Coordination of participation to meetings, conferences, fairs, joint workshops, etc (with WP10), coordination of networking with policy-decision makers (with WP6, WP8)	Participation in at least 10 scientific or stakeholders-relevant events/y	At least one relevant contact emerging from key events.	About 15 networking/stakeholders- relevant events and conferences joined or organised in y4, resulting in a valuable base of new contacts and collaborations	

	D9.6 - Annex 2 - Publications impact			
Date publication	Title	Journal link	June 2019 Citations	November 2020 Citations
January 2021	Hynes et al. Valuing the Ecosystem Service Benefits from Kelp Forest Restoration: A Choice Experiment from Norway	https://www.sciencedirect.com/science/ article/pii/S0921800919319573 https://www.nature.com/articles/		
17 November 2020 6 July 2020	Bianchelli & Danovaro. Impairment of microbial and meiofaunal ecosystem functions linked to algal forest loss O'Connor et al. Investigating societal attitudes towards marine ecosystem restoration	s41598-020-76817-5 https://onlinelibrary.wiley.com/doi/abs/ 10.1111/rec.13239		
February 2020	Chen et al. Ecosystem accounting's potential to support coastal and marine governance	https://www.sciencedirect.com/science/ article/pii/S0308597X19302933?		3
June 2020	Ganon et al. Facilitating foundation species: The potential for plant–bivalve interactions to improve habitat restoration success	via%3Dihub https://besjournals.onlinelibrary.wiley.com/ doi/full/10.1111/1365-2664.13605		4
May 2020	Medrano et al. From marine deserts to algal beds: <i>Treptacantha elegans</i> revegetation to reverse stable degraded ecosystems inside and outside a No-Take marine reserve	https://onlinelibrary.wiley.com/doi/abs/ 10.1111/rec.13123		1
22 July 2020 1 September 2020	Temmink et al. Mimicry of emergent traits amplifies coastal restoration success Ledoux et al. The Genome Sequence of the Octocoral <i>Paramuricea clavata</i> – A Key Resource To Study the Impact	https://www.nature.com/articles/ s41467-020-17438-4 https://www.g3journal.org/content/		1
23 September 2020	of Climate Change in the Mediterranean van Tatenhove et al. The Governance of Marine Restoration: Insights from three cases in two European Seas	https://onlinelibrary.wiley.com/doi/full/ 10.1111/rec.13288		5
June 2020	Ledoux et al. Assessing the impact of population decline on mating system in the overexploited Mediterranean red coral	https://onlinelibrary.wiley.com/doi/abs/ 10.1002/aqc.3327		
3 February 2020	Danovaro et al. Ecological variables for developing a global deep-ocean monitoring and conservation strategy O'Connor et al. Estimating the non-market benefit value of deep-sea ecosystem restoration: Evidence from a	https://www.nature.com/articles/ s41559-019-1091-z https://www.sciencedirect.com/science/		10
December 2020	contingent valuation study of the Dohrn Canyon in the Bay of Naples Guarnieri et al. Large-Scale Sea Urchin Culling Drives the Reduction of Subtidal Barren Grounds in the	article/pii/S0301479720311051? via%3Dihub https://www.frontiersin.org/articles/		1
4 August 2020 January 2020	Mediterranean Sea Medrano et al. Long-term monitoring of temperate macroalgal assemblages inside and outside a No take marine reserve	10.3389/fmars.2020.00519/full https://www.sciencedirect.com/science/article/abs/pii/S0141113619304751		3
May 2020	Montseny et al. A new large-scale and cost-effective restoration method for cold-water coral gardens	https://onlinelibrary.wiley.com/doi/abs/ 10.1002/aqc.3303		2
2020	Ounanian K et al. Midnight at the oasis: does restoration change the rigs-to-reefs debate in the North Sea?	https://www.tandfonline.com/doi/full/ 10.1080/1523908X.2019.1697657 https://www.frontiersin.org/articles/		1
7 April 2020 13 August 2020	Bekkby et al. Habitat Features and Their Influence on the Restoration Potential of Marine Habitats in Europe Meysick et al. Context-dependency of eelgrass-clam interactions: implications for coastal restoration	10.3389/fmars.2020.00184/full https://www.int-res.com/abstracts/meps/		3
March 2020	Vilas et al. Kelp-carbon uptake by Arctic deep-sea food webs plays a noticeable role in maintaining ecosystem structural and functional traits	v647/p93-108/ https://www.sciencedirect.com/science/ article/abs/pii/S0924796319304051		3
March 2019	Medrano et al. No-take marine reserves control the recovery of sea urchin populations after mass mortality events	https://www.sciencedirect.com/science/ article/abs/pii/S0141113618307918		12
12 March 2019 3 June 2019	Gómez-Gras et al. Response diversity in Mediterranean coralligenous assemblages facing climate change: Insights from a multispecific thermotolerance experiment Montseny et al. First attempts towards the restoration of gorgonian populations on the Mediterranean continental	https://onlinelibrary.wiley.com/doi/full/ 10.1002/ece3.5045 https://onlinelibrary.wiley.com/doi/abs/		2
22 November 2019	Shelf Garrabou et al. Collaborative Database to Track Mass Mortality Events in the Mediterranean	10.1002/aqc.3118 https://www.frontiersin.org/articles/ 10.3389/fmars.2019.00707/full		10
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13 September 2019	Bensoussan et al. Using CMEMS and the Mediterranean Marine Protected Areas sentinel network to track ocean warming effects in coastal areas	https://www.tandfonline.com/doi/full/ 10.1080/1755876X.2019.1633075 https://www.sciencedirect.com/science/		1
May 2019 23 September 2019	Jones et al. Existing environmental management approaches relevant to deep-sea mining Aurelle et al. Advances on the phylogenetic placement of the enigmatic octocoral Dendrobrachia Brook 1889	article/pii/S0308597X18303956 https://www.biotaxa.org/Zootaxa/article/		14
25 October 2019	Tamburello et al. Are we ready for scaling up restoration actions? An insight from Mediterranean macroalgal canopies	view/zootaxa.4674.1.6 https://journals.plos.org/plosone/article? id=10.1371/journal.pone.0224477		4
8 May 2019	Billet et al. Improving environmental management practices in deep-sea mining	https://link.springer.com/chapter/ 10.1007/978-3-030-12696-4_15		3
January 2019 November 2019	Bianchelli & Danovaro. Meiofaunal biodiversity in submarine canyons of the Mediterranean Sea: A meta-analysis Long R. Restoring Marine Environmental Damage: Can the Costa Rica v Nicaragua compensation case influence	https://www.sciencedirect.com/science/ article/abs/pii/S0079661118300806 https://onlinelibrary.wiley.com/doi/full/		7
November 2019 February 2019	the BBNJ negotiations? Corinaldesi C et al. High diversity of benthic bacterial and archaeal assemblages in deep-Mediterranean canyons and adjacent slopes	https://www.sciencedirect.com/science/ article/abs/pii/S0079661118301174		7
February 2019	Covazzi Harriague et al. Macrofaunal assemblages in canyon and adjacent slope of the NW and Central Mediterranean systems	https://www.sciencedirect.com/science/ article/abs/pii/S0079661118301010		4
February 2019	Corinaldesi C et al. High rates of viral lysis stimulate prokaryotic turnover and C recycling in bathypelagic waters of a Ligurian canyon (Mediterranean Sea)	https://www.sciencedirect.com/science/ article/abs/pii/S0079661118301009 https://www.sciencedirect.com/science/		
February 2019 August 2019	Gambi et al. Biodiversity and distribution of meiofauna in the Gioia, Petrace and Dohrn Canyons (Tyrrhenian Sea) Gerovasileiou et al. Habitat mapping in the European Seas-is it fit for purpose in the marine restoration agenda?	article/abs/pii/S0079661118300880 https://www.sciencedirect.com/science/		9
May 2019	Capdevila et al. Warming impacts on early life stages increase the vulnerability and delay the population recovery of a long-lived habitat-forming macroalga	article/abs/pii/S0308597X18307061#! https://besjournals.onlinelibrary.wiley.com/ doi/abs/10.1111/1365-2745.13090		10
May 2019	Montero-Serra et al. Marine protected areas enhance structural complexity but do not buffer the consequences of ocean warming for an overexploited precious coral	https://besjournals.onlinelibrary.wiley.com/doi/abs/10.1111/1365-2664.13321		5
11 July 2019	Orejas et al. Cold-water corals in aquaria: advances and challenges. Past, present and future: Mediterranean Cold-water corals	https://www.springer.com/gp/book/ 9783319916071 https://www.sciencedirect.com/science/		5
October 2019 25 June 2019	Da Ros et al. The deep sea: the new frontier for ecological restoration Lotze et al. Global ensemble projections reveal trophic amplification of ocean biomass declines with climate change	article/abs/pii/S0308597X18309199 https://www.pnas.org/content/ 116/26/12907		77
3 September 2019	Meysick et al. The influence of hydrodynamics and ecosystem engineers on eelgrass seed trapping	https://journals.plos.org/plosone/article? id=10.1371/journal.pone.0222020		4
7 November 2019	Cerrano et al. Temperate mesophotic ecosystems: gaps and perspectives of an emerging conservation challenge for the Mediterranean Sea Pagès-Escolà et al. Assessing the effectiveness of restoration actions for Bryozoans: The case of the	https://www.tandfonline.com/doi/full/ 10.1080/24750263.2019.1677790 https://onlinelibrary.wiley.com/doi/abs/		8
22 November 2019 3 August 2019	Mediterranean <i>Pentapora fascialis</i> Fowler et al. The ecology of infrastructure decommissioning in the North Sea: what we need to know and how to	10.1002/aqc.3236 https://academic.oup.com/icesjms/article/		2
March 2019	achieve it Siero et al. Grazing away the resilience of patterned ecosystems	77/3/1109/5543459 https://www.journals.uchicago.edu/doi/full/ 10.1086/701669		11
25 October 2019	Tamburello et al. Are we ready for scaling up restoration actions? An insight from Mediterranean macroalgal canopies	https://journals.plos.org/plosone/article? id=10.1371/journal.pone.0224477		4
November 2019	Valisano et al. Characterization of North–Western Mediterranean coralligenous assemblages by video surveys and evaluation of their structural complexity Montero-Serra et al. Strong linkages between depth, longevity and demographic stability across marine sessile	https://www.sciencedirect.com/science/ article/abs/pii/S0025326X19305430 https://royalsocietypublishing.org/doi/		3 ————————————————————————————————————
28 February 2018 November 2018	species Murray et al. Data challenges and opportunities for environmental management of North Sea oil and gas decommissioning in an era of blue growth	10.1098/rspb.2017.2688 https://www.sciencedirect.com/science/article/pii/S0308597X18302355		12
1 March 2018	Niner et al. Deep-Sea Mining With No Net Loss of Biodiversity—An Impossible Aim	https://www.frontiersin.org/articles/ 10.3389/fmars.2018.00053/full		51
29 November 2018	Pagès-Escolà et al. Divergent responses to warming of two common co-occurring Mediterranean bryozoans	https://www.nature.com/articles/ s41598-018-36094-9 https://www.pnas.org/content/		9
15 October 2018 24 May 2018	Bastiaansen et al. Multistability of model and real dryland ecosystems through spatial self-organization Cefalì et al. The optimal sampling design for littoral habitats modelling: a case study in the north-western	115/44/11256 https://journals.plos.org/plosone/article?		23
10 December 2018	Mediterranean Verdura et al. Restoration of a Canopy-Forming Alga Based on Recruitment Enhancement: Methods and Long- Term Success Assessment	id=10.1371/journal.pone.0197234 https://www.frontiersin.org/articles/ 10.3389/fpls.2018.01832/full		27
December 2018	Falace et al. Effects of a glyphosate-based herbicide on <i>Fucus virsoides</i> (Fucales, Ochrophyta) photosynthetic efficiency.	https://www.sciencedirect.com/science/ article/abs/pii/S0269749118316221 https://www.frontiersin.org/articles/		11
10 December 2018 12 January 2018	Cuvelier et al. Potential mitigation and restoration actions in ecosystems impacted by seabed mining Capdevila et al. Effective dispersal and density-dependence in mesophotic macroalgal forests: Insights from the	10.3389/fmars.2018.00467/full https://journals.plos.org/plosone/article?		14
December 2018	Mediterranean species <i>Cystoseira zosteroides</i> Dailianis et al. Human activities and resultant pressures on key European marine habitats: An analysis of mapped resources	id=10.1371/journal.pone.0191346 https://www.sciencedirect.com/science/ article/abs/pii/S0308597X18302884		15
5 November 2018	Pica et al. Distribution and phenotypic variability of the Mediterranean gorgonian <i>Paramuricea macrospina</i> (Cnidaria: Octocorallia)	https://www.tandfonline.com/doi/full/ 10.1080/24750263.2018.1529202		4
12 July 2018	Ponti et al. The understorey of gorgonian forests in mesophotic temperate reefs Bianchelli S et al. Nematode biodiversity and benthic trophic state are simple tools for the assessment of the	https://onlinelibrary.wiley.com/doi/abs/ 10.1002/aqc.2928 https://www.sciencedirect.com/science/	0	16
December 2018 November 2018	environmental quality in coastal marine ecosystems Barone G et al. Benthic deep-sea fungi in submarine canyons of the Mediterranean Sea	article/pii/S1470160X18305533 https://www.sciencedirect.com/science/article/pii/S0079661118301587	2	10
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5 October 2018	Ramírez F et al. Spatial congruence between multiple stressors in the Mediterranean Sea may reduce its resilience to climate impacts Corinaldesi C et al. Impact of inorganic UV filters contained in sunscreen products on tropical stony corals	https://www.nature.com/articles/ s41598-018-33237-w https://www.sciencedirect.com/science/	4	19
1 October 2018 24 September 2018	(Acropora spp.) Corrales X. et al. Future scenarios of marine resources and ecosystem conditions in the Eastern Mediterranean	article/pii/S0048969718317431 https://www.nature.com/articles/	9 5	38 31
5 September 2018	under the impacts of fishing, alien species and sea warming Carugati L et al. Impact of mangrove forests degradation on biodiversity and ecosystem functioning	s41598-018-32666-x https://www.nature.com/articles/ s41598-018-31683-0	3	39
September 2018	Danovaro R. Climate change impacts on the biota and on vulnerable habitats of the deep Mediterranean Sea Carugati L et al. Impact of breakwater relocation on benthic biodiversity associated with seagrass meadows of	https://link.springer.com/article/10.1007/ s12210-018-0725-4	1	9
September 2018 20 August 2018	Carugati L et al. Impact of breakwater relocation on benthic biodiversity associated with seagrass meadows of northern Adriatic Sea. Ounanian K et al. Governing marine ecosystem restoration: the role of discourses and uncertainties	https://link.springer.com/article/10.1007/ s12210-018-0720-9 https://www.sciencedirect.com/science/	0 2	2
20 August 2018 29 January 2018	Ounanian K et al. Governing marine ecosystem restoration: the role of discourses and uncertainties Bevilacqua S et al. A regional assessment of cumulative impact mapping on Mediterranean coralligenous outcrops	article/pii/S0308597X18302033 https://www.nature.com/articles/ s41598-018-20297-1	8	18
21 August 2017	Robert et al. New approaches to high-resolution mapping of marine vertical structures	https://www.nature.com/articles/ s41598-017-09382-z		31
15 December 2017	Pennesi & Danovaro. Assessing marine environmental status through microphytobenthos assemblages colonizing the Autonomous Reef Monitoring Structures (ARMS) and their potential in coastal marine restoration	https://www.sciencedirect.com/science/ article/abs/pii/S0025326X17306719? via%3Dihub		6
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11 September 2017 August 2017	Levin N et al. Adding the third dimension to marine conservation Guarnieri G et al. A hazardous place to live: spatial and temporal patterns of species introduction in a hot spot of	10.1111/conl.12408 https://link.springer.com/article/10.1007/	5	8 11
26 July 2017	biological invasions Pieretti N et al. Marine soundscape as an additional biodiversity monitoring tool: A case study from the Adriatic Sea (Mediterranean Sea)	s10530-017-1441-1 https://www.sciencedirect.com/science/ article/pii/S1470160X17304247	12	30
3 July 2017	Gambi C et al. Functional response to food limitation can reduce the impact of global change in the deep-sea benthos	https://onlinelibrary.wiley.com/doi/abs/ 10.1111/geb.12608	7	14
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19 May 2017	Mestre NC et al. Environmental hazard assessment of a marine mine tailings deposit site and potential implications for deep-sea mining	https://www.sciencedirect.com/science/ article/pii/S026974911632574X? via%3Dihub	13	20
24 April 2017	Danovaro R et al. A submarine volcanic eruption leads to a novel microbial habitat	https://www.nature.com/articles/ s41559-017-0144	15	24
13 April 2017	Gollner S et al. Resilience of benthic deep-sea fauna to mining activities Corinaldesi C et al. Marine microbial-derived molecules and their potential use in cosmeceutical and cosmetic	https://www.sciencedirect.com/science/ article/pii/S0141113617302441	67	127
12 April 2017 14 March 2017	products Piroddi C et al. Historical changes of the Mediterranean Sea ecosystem: modelling the role and impact of primary	http://www.mdpi.com/1660-3397/15/4/118 https://www.nature.com/articles/srep44491	33	68
23 February 2017	productivity and fisheries changes over time Sweetman A et al. Major impacts of climate change on deep-sea benthic ecosystems	https://www.nature.com/articles/srep44491 https://www.elementascience.org/articles/ 10.1525/elementa.203/	51	116
3 February 2017	Danovaro R et al. An ecosystem-based deep-ocean strategy	http://science.sciencemag.org/content/ 355/6324/452.full?ijkey=i.F9jvPVI	42	95
3 February 2017	Stabili L et al. Spatial distribution of the culturable bacterial community associated with the invasive alga <i>Caulerpa</i> cylindracea in the Mediterranean Sea Montero-Serra et al. Accounting for life-history strategies and timescales in marine restoration	https://www.sciencedirect.com/science/ article/pii/S0141113616302367 https://onlinelibrary.wiley.com/doi/full/	3	7
18 January 2017 23 December 2017	Montero-Serra et al. Accounting for life-history strategies and timescales in marine restoration Di Camillo et al. Building a baseline for habitat-forming corals by a multi-source approach, including Web	10.1111/conl.12341 https://link.springer.com/article/10.1007/	13	28
17 October 2017	Ecological Knowledge Long. Evolutionary Character of International and European Law: Linking sustainability with environmental responsibility and marine ecosystem restoration under the European union's Ocean Governance Agenda. Legal	<u>s10531-017-1492-8</u> <u>https://brill.com/view/book/edcoll/</u> 9789004352544/B9789004352544_005.xml		
15 November 2016	Order in the World's Oceans: UN Convention on the Law of the Sea Stabili L et al. The potential exploitation of the Mediterranean invasive alga <i>Caulerpa cylindracea</i> : Can the invasion be transformed into a gain?	9789004352544/B9789004352544 005.xml http://www.mdpi.com/ 1660-3397/14/11/210	4	9
26 October 2016	Cormier R et al. Moving from ecosystem-based policy objectives to operational implementation of ecosystem-based management measures	https://academic.oup.com/icesjms/article/ 74/1/406/2444580	34	52
22 September 2016	Rastelli E et al. Quantification of viral and prokaryotic production rates in benthic ecosystems: A methods comparison Cordes EE et al. Environmental impacts of the deep-water oil and gas industry: a review to guide management	https://www.frontiersin.org/articles/ 10.3389/fmicb.2016.01501/full https://www.frontiersin.org/articles/	8	13
16 September 2016	strategies	10.3389/fenvs.2016.00058/full	63	133
TOTAL	N = 96		497	1667