



eco-friendly ceramic
MEMBRANE
BIOREACTOR **MBR**
based
on RECYCLED
agricultural and industrial
wastes for waste water reuse

D1.5 DATA MANAGEMENT
PLAN

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1. EXECUTIVE SUMMARY

The data management plan (DMP) is a written document that describes the data expected to acquire or generate during the course of REMEB project by the consortium, under *Article 29* of the Grant Agreement Number 641998. According to this Grant Agreement, It is mandatory the use of open access to scientific publications (*Article 29.2*), with the exemption shown in *Article 29.3* [1].

The DMP is a live document, which will vary during the course of the project, this document will define how the data will be managed, described, treated and stored, during and after the end of the project. In addition, the mechanisms to use the results at the end of the project, will be described to share and preserve the data.

A description of the existing data relevant to the project and a discussion about the data's integration will be provided, together with the description of the metadata to be provided, related to the subject of the project.

The document will provide a description of how the results will be shared, including access procedures, embargo periods, technical mechanisms for dissemination. Besides, it will foresee whether access will be opened according to the two main routes of open access to publications: self-archiving and open access publishing.

Finally, the document will show the procedures for archiving and preservation of the data, including the procedures expected once the project has finished.

The application of this document will be a responsibility of all REMEB project partners. This document will be updated through the lifecycle of REMEB project extending the information given now, or including new issues or changes in the project procedures. DMP will be updated when significant changes are aroused (new data sets, changes in consortium policies or external factors) as a deliverable [1]. As a minimum, the DMP will be updated and sent as a part of the mid-term report and final report. Every time that the document is updated, the draft version will be sent to all project partners to be reviewed. Once approved, the definitive version will be sent to the consortium.

2. DATA SET REFERENCE, NAME AND DESCRIPTION

This section shows a description of the information to be gathered, the nature and the scale of the data generated or collected during the project. These data are listed below:

- Membrane composition: during the execution of the project, different membrane compositions will be tested in order to find the one with the best permeability.
- Manufacturing process of the membrane: membranes will be manufactured by extrusion at pilot and industrial scale.
- Membrane module configuration: the design parameters of the module where the membranes will be placed.
- MBR operating parameters such as sludge retention time, F/M ratio, solid concentration, etc.

It is foreseen to protect some of these results through a patent. These issues will be addressed in the following updated versions of this document.

3. STANDARDS AND METADATA

Open Access will be implemented in peer-review publications (scientific research articles published in academic journals), conference proceedings and workshop presentations carried out during and after the end of the project. In addition, non-confidential PhD or Master Thesis and presentations will be disseminated in OA.

The publications issued during the project will include the Grant Number, acronym and a reference to the H2020 Programme funding, including the following sentence:

“REMEB project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 641998”.

In addition, all the documents generated during the project should indicate in the Metadata the reference of the project: REMEB H2020 641998.

Each paper must include the terms Horizon 2020, European Union (EU), the name of the action, acronym and the grant number, the publication date, the duration of embargo period (if applicable) and a persistent identifier (e.g. DOI).

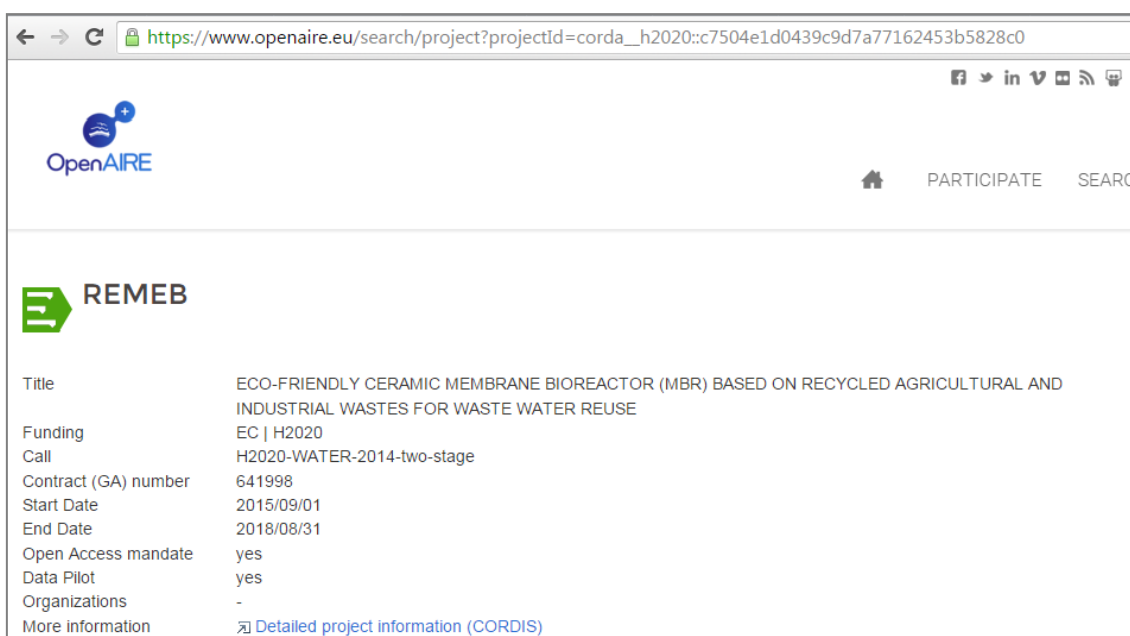
The purpose of the requirement on metadata is to maximise the discoverability of publications and to ensure the acknowledgment of EU funding. Bibliographic data

mining is more efficient than mining of full text versions. The inclusion of information relating to EU funding as part of the bibliographic metadata is necessary for adequate monitoring, production of statistics, and assessment of the impact of Horizon 2020 [2].

4. DATA SHARING

All the publications of a Horizon 2020 project are automatically aggregated to the OpenAIRE portal (provided they reside in a compliant repository). Each project has its own page on OpenAIRE (*Figure 1*) featuring project information, related project publications and datasets and a statistics section.

Consortium will ensure that all publications issued from REMEB project are available as soon as possible, taking into account embargo period (in case they exist).



The screenshot shows the OpenAIRE project page for REMEB. The URL in the browser is https://www.openaire.eu/search/project?projectId=corda__h2020::c7504e1d0439c9d7a77162453b5828c0. The page features the OpenAIRE logo and navigation links for 'PARTICIPATE' and 'SEARCH'. The project information is displayed as follows:


	REMEB
Title	ECO-FRIENDLY CERAMIC MEMBRANE BIOREACTOR (MBR) BASED ON RECYCLED AGRICULTURAL AND INDUSTRIAL WASTES FOR WASTE WATER REUSE
Funding	EC H2020
Call	H2020-WATER-2014-two-stage
Contract (GA) number	641998
Start Date	2015/09/01
End Date	2018/08/31
Open Access mandate	yes
Data Pilot	yes
Organizations	-
More information	Detailed project information (CORDIS)

Figure 1: REMEB information in OpenAIRE web (www.openaire.eu)

It is important that the partners involved check periodically if the list of publications is completed. In case there are articles not listed it is necessary to notify to the portal.

The steps to follow to publish an article and the subsequent OA process are:

- A partner prepares a publication and sends it to the project coordinator and other partners involved.
- Once approved, the partner submits the article to the selected journal.
- The final peer-reviewed manuscript is added to an OA repository.

- The reference and the link to the publication should be included in the publication list of the progress Report.

When the publication is ready, the author has to send it to the coordinator, who will report to the EC through the publication list included in the progress reports. Once the EC has been notified by the coordinator about the new publication, the EC will automatically aggregate it at the OpenAIRE portal.

5. ARCHIVING AND PRESERVATION

In order to achieve an efficient access to research data and publications in REMEB project, Open Access (OA) model will be applied. Open access can be defined as the practice of providing on-line access to scientific information that is free of charge to the end-user. As it has been stated, OA will be implemented in peer-review publications (scientific research articles published in academic journals), conference proceedings and workshop presentations carried out during and after the end of the project. In addition, non-confidential PhD or Master Thesis and presentations will be disseminated in OA.

Open access is not a requirement to publish, as researchers will be free to publish their results or not. This model will not interfere with the decision to exploit research results commercially e.g. through patenting [3].

The publications made during REMEB project will be deposited in an open access repository (including the ones that are not intended to be published in a peer-review scientific journal). The repositories used by project partners will be:

- ZENODO will be used by the partners that do not have a repository.
- The University Jaume I uploads all its publications to its own repository (web link: <http://repositori.uji.es/xmlui/>). ITC, as a member of the university, follows the same policy.

As stated in the Grant Agreement (Article 29.3): *“As an exception, the beneficiaries do not have to ensure open access to specific parts of their research data if the achievement of the action’s main objective, as described in Annex I, would be jeopardized by making those specific parts of the research data openly accessible. In this case, the data management plan must contain the reasons for not giving access”*.

This rule will be followed only in some specific cases, in those that will be necessary to preserve the main objective of the project.

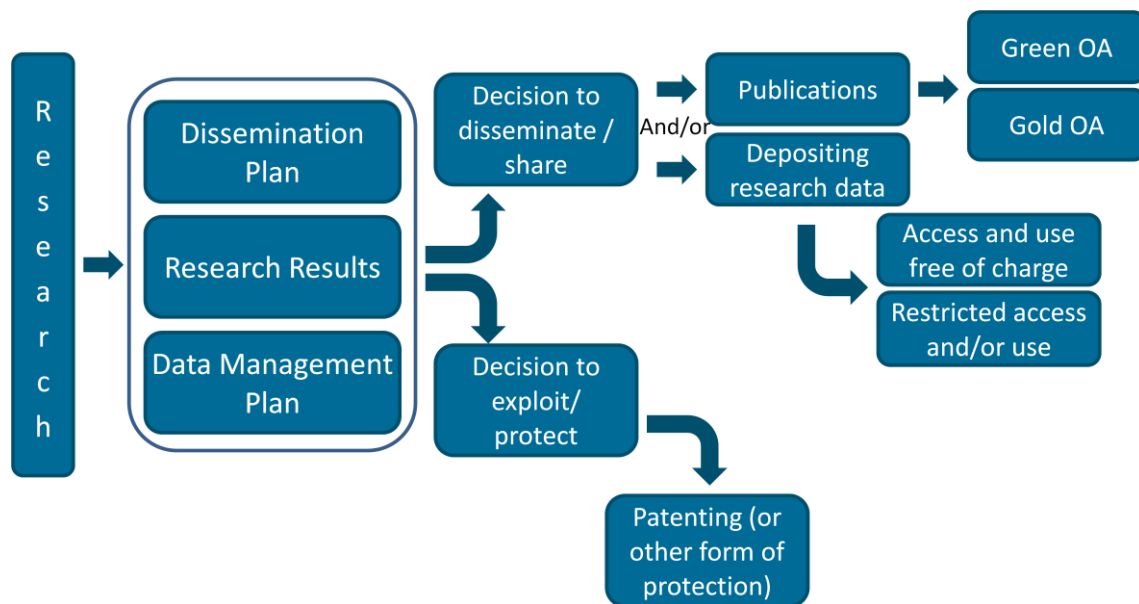


Figure 2: Scheme of decision on IP protection

According to the “Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020” [2], there are two main routes of open access to publications:

- **Self-archiving (also referred to as “green open access”):** in this type of publication, the published article or the final peer-reviewed manuscript is archived (deposited) by the author - or a representative - in an online repository before, alongside or after its publication. Some publishers request that open access be granted only after an embargo period has elapsed.
- **Open access publishing (also referred to as “gold open access”):** in this case, the article is immediately provided in open access mode as published. In this model, the payment of publication costs is shifted away from readers paying via subscriptions. The business model most often encountered is based on one-off payments by authors. These costs (often referred to as Article Processing Charges, APCs) can usually be borne by the university or research institute to which the researcher is affiliated, or to the funding agency supporting the research.

As a conclusion, the process involves two steps, firstly the consortium will deposit the publications in the repositories and then they will provide open access to them. Depending on the open access route selected self-archiving (Green OA) or open access publishing (Gold OA), these two steps will take place at the same time or not. In case of self-archiving model, embargo period will have to be taken into account (if any).

5.1. Green Open Access (self-archiving)

This model implies that researchers deposit the peer-reviewed manuscript in a repository of their choice (e.g. ZENODO).

Depending on the journal selected, the publisher may require an embargo period between 6 and 12 months.

The process to follow for REMEB project is:

1. The partner prepares a publication for a peer-review journal.
2. After the publication has been accepted for publishing, the partner will send the publication to the project coordinator.
3. The coordinator will notify the publication details to the EC, through the publication list of the progress report. Then, the publication details will be updated in OpenAIRE.
4. The publication may be stored in a repository (with restricted access) for a period between 6 and 12 months (embargo period) as a requirement of the publisher.
5. Once the embargo period has expired, the journal gives Open Access to the publication and the partner can give Open Access in the repository.

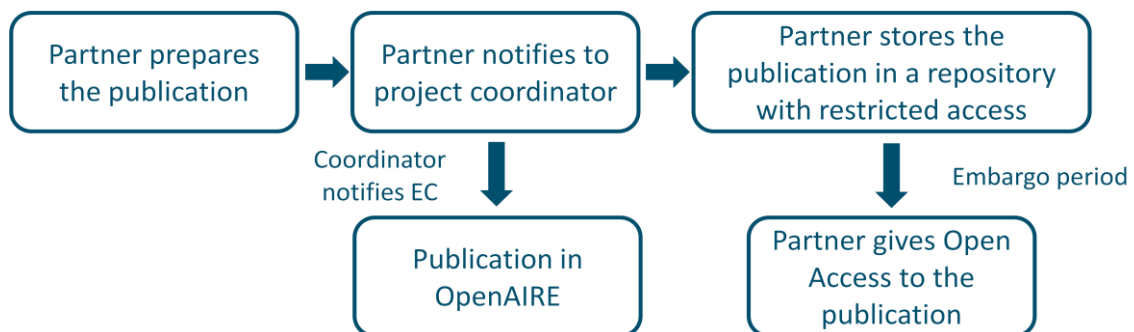


Figure 3: Steps to follow in Green open access publishing within REMEB project

5.2. Gold Open Access (open access publishing)

When using this model, the costs of publishing are not assumed by readers and are paid by the authors, this means that these costs will be borne by the university or research institute to which the researcher is affiliated, or to the funding agency

supporting the research. These costs can be considered eligible during the execution of the project.

The process foreseen in REMEB project is:

1. The partner prepares a publication for a peer-reviewed journal.
2. When the publication has been accepted for publishing, the partner sends the publication to the project coordinator.
3. The coordinator will notify the publication details to the EC, through the publication list of the progress report. Then, the publication details will be updated in OpenAIRE.
4. The partner pays the correspondent fee to the journal and gives Open Access to the publication. This publication will be stored in an Open Access repository.

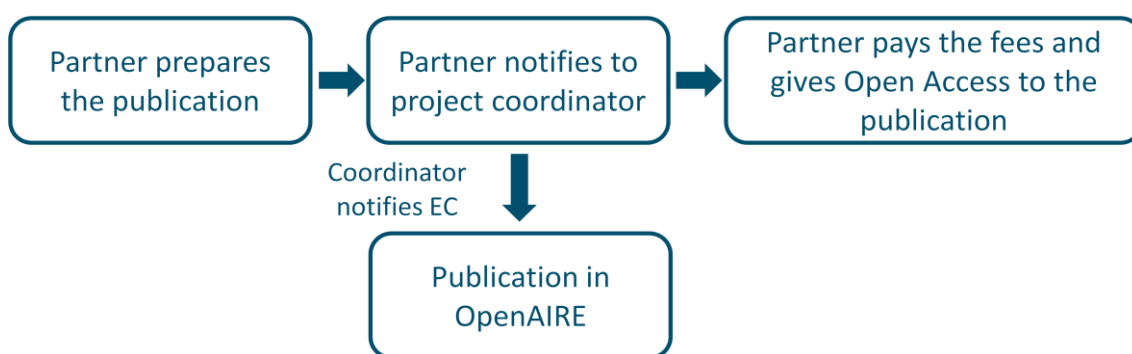


Figure 4: Steps to follow in Gold open access publishing within REMEB project

6. BIBLIOGRAPHY

- [1] E. Commission, "Guidelines on Data Management in Horizon 2020. Version 2.1," 15 February 2016.
- [2] E. COMMISSION, "Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020. Version 2.0," 30 October 2015.
- [3] E. Commission, Fact sheet: Open Access in Horizon 2020, 9 December 2013.