

MacroFuels

Dissemination, Exploitation and Communication Plan



MACROFUELS

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MacroFuels - Dissemination, Exploitation and Communication Plan

1. Purpose of this Document

This document provides the basis for MacroFuels outreach and exploitation activities by (i) outlining the MacroFuels dissemination, exploitation and communication strategy, by (ii) defining the roles and responsibilities and (iii) by summarising the contractual requirements as set out in the Grant Agreement (GA), complemented by the Consortium Agreement (CA).

This DEP, which includes initial timelines and an overview of targeted channels and formats, will be developed into a working document over the next six months (hereafter also referred to as the 'Advanced DEP'), which will apply the strategy and principles outlined here to verified project results and outputs achieved during the term of MacroFuels. This will allow for the systematic implementation of the MacroFuels outreach strategy throughout the project. The Advanced DEP will include detailed timelines, dissemination channels, exploitation roadmaps and selected events and networks at work package, deliverable and milestone level and define partners' responsibilities at task level.

The Advanced DEP will be available for agreement by all partners by the end of June 2016 and continuously assessed and adapted as the project progresses. The DEP will provide the framework of *what* will be disseminated *why*, to *whom*, *how* and *when* and will define the:

- Dissemination aims, target groups and appropriate formats;
- Strategy, content and timeline of the dissemination and publicity measures;
- Responsibilities for the implementation of the dissemination and publicity measures;
- Evaluation concept for dissemination and publicity measures

The DEP will ensure that all project partners have a joint idea and understanding of dissemination and exploitation, and the IP protection measures.

2. Dissemination, exploitation and communication in MacroFuels

2.1. The project's general dissemination, exploitation and communication strategy

MacroFuels will create novel methods, solutions, products and know-how to progress the blue economy and will set future standards which will live on after the project ends. It is essential to ensure that the widest possible group of stakeholders is reached with the results of MacroFuels. Thus the biggest possible scientific, economic and societal impact in Europe is secured. As IPR issues will have to be respected, dissemination activities will be designed and implemented in close cooperation with the Exploitation Officer (Bert Groenendaal, SIOEN). Therefore, no dissemination of Foreground may take place before a decision is made regarding its role in the exploitation plan and the possible protection through IPR. In advance of any dissemination, communication and exploitation activity, the Dissemination Officer/DO (Rita Clancy, EURIDA) and Exploitation Officer/EO have to be contacted for authorisation.

Dissemination, exploitation and communication activities in MacroFuels are based on the principles of Responsible Research and Innovation/RRI. This is one of the key priorities in the



'Innovation Union' Flagship Initiative of the European Commission which aims to maximise projects' impacts by engaging the civil society in Research and Innovation activities and making know-how openly accessible to wide user groups.

A specific objective in MacroFuels is to intensify stakeholder dialogues with the aim of gathering and understanding opinions, expectations and ideas, and considering these in project concepts and activities. A number of the key stakeholders 'Industrial end users' are already members of the MacroFuels consortium and an Advisory Board will be established which guarantees a demand-driven innovation approach throughout all phases of the project.

Engaging with the scientific community, especially with other funded projects in the field of Blue Growth, biofuels and renewable energy will be crucial for knowledge exchange and increase the MacroFuels impact with regard to transferring know-how beyond the project's own community. In return, new perspectives from potential adaptors can be included in MacroFuels concepts and activities and maximises the sustainability.

As MacroFuels touches the consumer-sensitive area of energy and biofuels, engaging with the public will generate trust among future fuel consumers and remove potential barriers to acceptance. This is of particular importance as previous efforts in creating biofuels from terrestrial crops have led to controversial discussions, including concerns about the conflict 'Food vs. Fuel'. New breeding and cultivation methods might raise concerns among fishers and/or local authorities who might fear for local and regional acceptance or see a potential threat to tourism.

In a nutshell, the specific objectives of all dissemination, communication and exploitation tasks within MacroFuels are:

- Manage and protect the intellectual property generated in the project
- Guide the exploitation of research
- Generate market demand for the products or services developed
- Enhance the project visibility at the local, national and international level
- Show how outcomes are relevant to public, e.g. by creating jobs, positive environmental impacts
- Work towards the European knowledge base on energy, blue economy and alternative fuels *via* targeted knowledge and data transfer
- Ensure that the project results are taken up by decision-makers to influence policy-making, by industry to secure market uptake and sustainable growth of the 'blue economy'
- Connect with the scientific community to ensure project follow-up
- Contribute to skills development *via* trainings and seminars
- Maximize support and acceptance and minimize risks towards project outputs *via* stakeholder engagement

Within the first six months of the project, the focus in our strategy will be put on raising awareness about our project within the scientific and industrial community that is relevant for MacroFuels as well as to inform interested citizens and policy makers about our activities, aims and expected results and outcomes. This will be achieved via establishing the project's online presence (e.g. project website and social media presence) and by introducing MacroFuels at conferences (e.g. via MacroFuels sessions, talks, poster



presentations etc.; printed dissemination material will be provided for handing out at events).

Commercial exploitation of MacroFuels results

Although MacroFuels does not target the final process towards large scale production of the next generation biofuels for transportation, we have to draw the contours of a credible business path for the targeted products and processes to the market. The use of seaweed as raw material for biofuels production has many appealing characteristics including negligible Food *versus* Fuels issues, no indirect land use (iLUC) conflicts, revitalization of rural fishing communities and establishment of seaweed based biorefinery operations. However, bringing a new biofuel to the market is a very complex process that is not only based on technical advancement. One also has to deal with legislative and ecological issues, standardisation processes and norms, etc. From a bird-eyes view, there are a number of business risks for this process that can be identified on forehand:

- Product/process cost appears to be too high;
- Lack of legislative support towards next generation biofuels;
- Lack of societal support for more durable and sustainable biofuels;
- Regulatory uncertainty in the permitting process.

During the first six months of the project we will develop a detailed exploitation plan including (i) identification of exploitable results, (ii) determining the freedom of operation and (iii) evaluating their economic viability of the products and processes.

The above mentioned risks will be mitigated as follows: the too high costs will be circumvented by a successful MacroFuels project, see the different WP's for the explicit risk mitigation. Legislative support and regulatory uncertainty will be addressed by involving the identified bodies in an early stage of the project. Societal support will be generated by a proactive, transparent and open communication strategy (*vide supra*). On this basis, we can weigh with the best available data the risk vs. reward of the various seaweed to bio-fuel processes and value chains. The relevant stakeholders in the consortium can then decide on the appropriate commercial implementation vehicle. Furthermore, the integration of biofuels production with AVT's process towards 100% biobased and technical superior polyester PEF strengthens the MacroFuels concept considerably. The current PET market is a multi-Mt market (> 65 Mt) with strong market pull of players such as DANONE, Alpla, Wifag-Polytype and The Coca-Cola Company and a CAGR (Compound Annual Growth Rate) of 8%. Successful implementation of the technology will both ensure maximal economic viability as well as strong market pull to justify rapid scale up and implementation. Total replacement of the PET market with biobased products requires more than 130 Mt of biomass, thus indicating that the additional availability of biomass by seaweed cultivation is necessary.

The successful implementation of advanced textile based cultivation substrates and storage & transportation containers within MacroFuels will have a huge impact on the technical textiles producing and converting industries in Europe. An example: Today diesel is obliged to contain ca. 5.75% of biodiesel. This percentage will increase to 10% by 2020. European legislation is in the progress of drafting new laws and regulations, which will incentivize second (and third) generation biofuels. A very likely scenario is that a minimum threshold of 5% for second (and third) generation biodiesels will be installed in the next coming years (i.e. 95% first generation biodiesel, 5% second (and third) generation biodiesel). Assuming 35% of this 5% will be derived from seaweed, this corresponds to 571 billion litre of seaweed based



biodiesel which corresponds to 1.6 billion tons of dry seaweed and to 1,142,857 km² of seaweed cultivated surface area (assuming a yield of 14kg/m²). Needless to say that this would boost the technical textiles producing and converting industries in Europe.

2.2. Legal requirements regarding dissemination and exploitation (as per Grant Agreement Articles 27, 28 and 29)

Legal obligation to protect, exploit and disseminate results

Each consortium partner is obliged to protect, exploit and disseminate the results obtained during the term of MacroFuels. This includes:

- A. Examining the possibility of protecting its results and must adequately protect them — for an appropriate period and with appropriate territorial coverage — if:
 - (a) the results can reasonably be expected to be commercially or industrially exploited
 - (b) protecting them is possible, reasonable and justified (given the circumstances).When deciding on protection, the beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries (GA, Article 27.1).
- B. Taking measures aiming to ensure ‘exploitation’ of its results (either directly or indirectly, in particular through transfer or licensing; see Article 30 in the GA) by:
 - (a) using them in further research activities (outside the action);
 - (b) developing, creating or marketing a product or process;
 - (c) creating and providing a service, or
 - (d) using them in standardisation activities.
- C. Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

This does not change the obligation to protect results, the confidentiality obligations, the security obligations or the obligations to protect personal data in Article as defined in the GA,
all of which still apply.

A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

Any other beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

Visibility of EU funding

Applications for protection of results (including patent applications) filed by or on behalf of a beneficiary must include the following:



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“The project leading to this application has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 654010”.

If results are incorporated in a standard, the beneficiary concerned must ask the standardisation body to include the following statement in (information related to) the standard:

“Results incorporated in this standard received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 654010”.

Any dissemination of results (in any form, including electronic) must:

(a) display the EU emblem prominently and

(b) include the following text:

“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 654010”.

Open Access to scientific publications

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

(a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

(b) ensure open access to the deposited publication — via the repository — at the latest:

- on publication, if an electronic version is available for free via the publisher, or
- within six months of publication in any other case.

(c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

Further details on the legal requirements towards dissemination and exploitation activities can be found in the GA, Articles 27, 28, 29, pp. 45-48).

2.3. MacroFuel’s approach to knowledge management and IPR protection

The MacroFuels consortium will co-create innovation and foreground. The Intellectual Property Rights (IPR) have been clearly defined for the consortium members. The terms of



IPR management are specified in detail in the Consortium Agreement (CA) which has been signed by all members. The CA includes a list of included background and, where relevant, specific Background that is subject to legal restrictions or limits. A list can be found in Annex I of this document. For all further details on access rights within MacroFuels, please refer to the relevant section in the Consortium Agreement (Section 9, pp. 18-20) and the corresponding article in the Grant Agreement (Article 31, pp. 49-50).

The general principles relating to access of IPR follow common practices and are:

- Access rights shall be granted to any of the other partners upon written request.
- The granting of access rights may be made conditional on the conclusion of specific agreements aimed at ensuring that they are only used for the intended purpose.

Background exclusion is addressed as follows: the participants have to define the “background needed” to set up the project and “where appropriate exclude specific background”. Access rights for execution of the project are the following:

- Partners shall enjoy access rights to the foreground and the background IPR, if that foreground or background IPR is needed to carry out their own work under that project.
- Access rights to foreground shall be granted on a royalty-free basis.

Access rights to background IPR shall be granted on a royalty-free basis, unless an agreement was effective before the signature of the Contract. Subject to its legitimate interests, the termination of the participation of a partner shall in no way affect its obligation to grant access rights to the other partners pursuant to previous paragraph until the end of the project. The consortium intends to closely collaborate with the Commission’s IPR Helpdesk.

Access rights for use of foreground IPR are the following:

Partners shall enjoy access rights to foreground and to background IPR, if that foreground or background IPR is needed in order to use their own know-how. Access rights for use purposes have to be granted either under fair and reasonable conditions or royalty-free (participants may chose). The period during which access right for use may be requested is reduced from two years to one, unless the participants agree differently (i.e. shorter or longer time periods).

When staff working for a partner is entitled to claim rights on the foreground, the partner must ensure that applying those rights will be done in accordance with its obligations under the grant agreement. When work is jointly carried out by several partners, with no possibility to ascertain their share, joint ownership of the foreground will apply. Where no joint ownership agreement has been concluded regarding the allocation and terms of exercising that joint ownership, each of the joint owners shall be entitled to grant non-exclusive licenses to third parties, based on prior notice and reasonable compensation.

The knowledge generated in MacroFuels will be managed by using an interactive project website and through internal WP and Steering Committee meetings. The responsibility for an efficient management of knowledge internal in the project will be divided on different levels:

- The management team will have the responsibility for evaluating that each WP leader’s management of knowledge is satisfactory.



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- The management team will have the responsibility to control that the knowledge is properly addressed on the project website.
- Each WP leader will inform the participants in his/her WP about on-going activity and new results by using e-mails, web-based conference calls, face-to-face meetings and the project website to attain improved knowledge within the tasks.

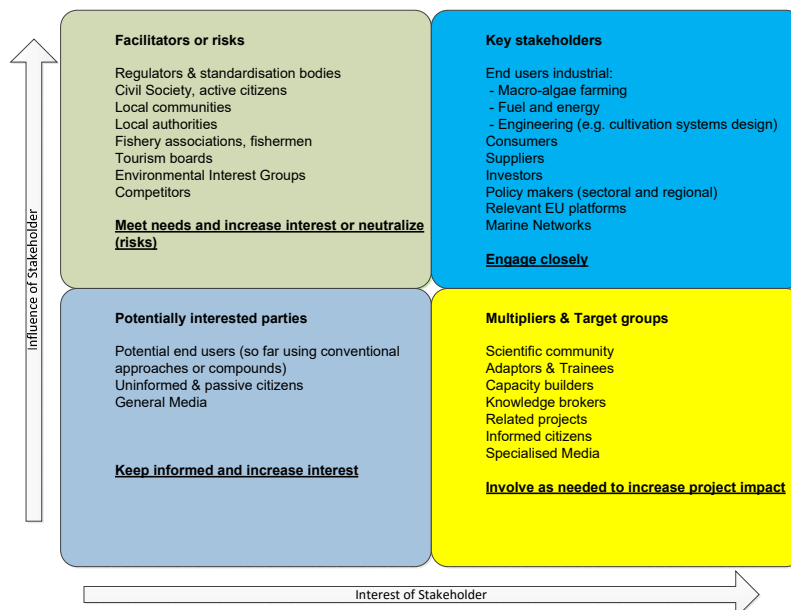
3. MacroFuels Stakeholders

MacroFuels aims to maximise its impact by knowing the project’s target groups and potential users, and understanding their needs. MacroFuels has a wide variety of stakeholder groups: industrial end users, investors, consumers, policy makers, regulators, interest groups, citizens and suppliers. MacroFuels fosters stakeholder relationships at both consortium and local levels to understand their different interests and concerns through regular and systematic forms of dialogue: i.e. meetings, conferences, workshops, and a citizen survey. By listening to stakeholders’ concerns, engaging in serious discussions, and striving for transparency in all activities, we aim to build sustainable and social innovation. A thorough stakeholder analysis provides the basis for all activities aimed to maximise MacroFuels’ impact and serves as the foundation for this Dissemination and Exploitation Plan.

Communication and dissemination activities are targeted at all identified groups with appropriate well defined goals. Activities and means are chosen based on these goals and are divided in ‘dissemination and exploitation’ and ‘communication’ activities.

Figure 1 shows the most important stakeholders sub-divided by their levels of influence on and interest in MacroFuels:

- Key Stakeholders (high influence/high interest);
- Facilitators or Risks (high influence/low interest);
- Multipliers & Target Groups (low influence/high interest);
- Potentially Interested Parties (low influence/low interest).





4. Dissemination, communication and exploitation by stakeholder groups

4.1. Future commercial end-users, adaptors and investors

Dissemination:

MacroFuels puts a strong focus on disseminating project results and newly created know-how to commercial end-users, adaptors and potential investors for future market uptake. The table below outlines the planned MacroFuels dissemination activities targeted at commercial stakeholders at defined project stages and clearly links the project deliverables to dissemination activities and formats.

Timeline	Activities
M1-M23	<ul style="list-style-type: none"> • Raise awareness about MacroFuels project, consortium and goals via website, social media, e-Bulletins and at external conferences, symposiums and fair trades • Establish connections with industrial key stakeholders
M24-M48	<ul style="list-style-type: none"> • Present first results to industrial key stakeholders in targeted sessions during external conferences and trade fairs and MacroFuels Conferences (M24, M48) • Send out press releases on macroalgae resources for bio fuels to general media, trade journals and public technical magazines
M42-M48	<ul style="list-style-type: none"> • Present results from the <i>MacroFuels life-cycle analysis assessment</i> (LCA) in external conferences, symposiums and fair trades (see list under C.)

Exploitation of MacroFuels results

Activities will include the monitoring of results and knowledge for protection and possible market exploitation. The potential for different exploitation pathways will be assessed and promising lines pursued. A detailed exploitation plan will be designed for the Advanced DEP.

Communication

Communication and knowledge exchange with industrial stakeholders and future end users will be implemented via an Advisory Board, which will include selected representatives from relevant industries. That way, needs and requirements can be taken into account at an early stage of MacroFuels, which will assure the market relevance and feasibility of MacroFuels' products and results.

4.2. The scientific community

Dissemination

Publications. MacroFuels partners are expected to publish their work in peer-reviewed scientific journals or disseminate them as patent applications. All scientific articles will be published *via* Open Access using 'Gold' or 'Green' access (for further details, please refer to Annex II). That way scientific content and underlying data will be accessible and usable free of charge straight after publication. In addition, open access publications will be considered *via* ResearchGate or *via* the project website as download (e.g. Ph.D. theses). Protected knowledge and data will be excluded from publications. Relevant journals, available *via* Open Access, in the fields relevant for MacroFuels are for instance:



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- Applied Biochemistry and Biotechnology
- Bioresource Technology
- Biotechnology and Bioengineering
- Industrial Crops and Products
- Environmental Science and Technology
- Biomass & Bioenergy
- Journal of Biotechnology
- Journal of Cleaner Production
- Marine Biology

Conferences & Fair Trades. To increase the project visibility and to extend the project network beyond the consortium, MacroFuels results will be presented at relevant conferences and fair trades. Dedicated sessions on MacroFuels topics will be held during selected events (see table in *B. Dissemination to industrial end-users*). Conferences that have been pre-selected for participation are listed below. Further conferences will be selected and added in the elaborated DEP at the start of the project.

- Annual European Biomass Conference & Exhibition
- Nordic Seaweed Conference (annual conference, Denmark)
- International Seaweed Symposium (in 2016 in Copenhagen, every three years)
- Seagrass, annual, Netherlands

Inter-project Communication

Currently there is a significant number of (inter) seaweed related projects ongoing: MAB3 in Denmark, SEAFARM in Sweden, and AT~SEA, TASTE, MacroBioTech. For the EU funded projects, there is no cluster or platform that brings these projects and their newly generated know-how together. Within MacroFuels we want to develop an international inter-project 'meeting point' for seaweed-related projects and establish communication with projects focused on biofuels and renewable energy. Within this platform European project consortia from Blue Growth projects are envisioned to gather once a year to discuss the status in the field, identify mutual needs, develop recommendations (e.g. for policy makers) on seaweed related issues, and discuss how in a concerted effort, this industry can be brought further. A first meeting should take place during month 6 on the occasion of the project meeting.

4.3. Policy Makers

Dissemination

Activities will be targeted at policymakers at various levels of government. This includes, depending on the level of knowledge to be provided, policy makers at international, national, regional and local level. Where possible MacroFuels will also consider targeting intermediaries with policy-related information, such as international organisations, NGOs, and stakeholder platforms that involve policy makers (e.g. the EU stakeholder platforms listed above). MacroFuels will also target mass media, RTO's, individuals with good contact



to individual policy makers. Policy Briefs will be utilized as a proven means of knowledge provision for policy makers.

Communication

A focus group will be established involving national and EU policy makers and experts and relevant authorities to elaborate jointly the long-term impact of MacroFuels activities. The focus group will be theme-driven and moderated by the relevant chair(s) or WP leader(s) in the project. Results will be reflected upon within the MacroFuels consortium and where necessary incorporated in project plans. This will help the emergence of a consensus about potentially controversial issues in MacroFuels and directly feed into the risk contingency plan. Input shall be given by MacroFuels to future policies, such as the EU Single Energy Market and the Renewable Energy Directive, which are currently under preparation, as well as other relevant policies.

Exploitation

MacroFuels aims to contribute to the challenge of a skills gap in the blue economy by providing training for scientists in 'Blue Economy Entrepreneurship'. The skills gap comprises topics from the entire envisioned production chain (WP1-4 and 6). Major skills gaps include large scale seaweed cultivation (WP1), environmental impact thereof (WP1&6), and fuel production. Recommendations for policy makers in skills development will be prepared.

4.4. EU stakeholder groups and platforms

Dissemination / Exploitation - Knowledge exchange and data transfer towards relevant stakeholder platforms (e.g. 'Marine Knowledge 2020')

MacroFuels will work towards 'Marine Knowledge 2020' by making relevant collected data available to EMODnet (unless protected for IPR and/or patenting reasons per the grant agreement). EMODnet experts will be consulted at the start of MacroFuels to obtain the required data formats. Furthermore, knowledge exchange will be implemented *via* relevant European platforms and PPPs with varying objectives. The following have been identified as being relevant:

- European Biofuels Technology Platform – Biofuels
- EU Joint Programming Initiative (JPI) 'Healthy and Productive Seas and Oceans'
- MarineKIC Initiative
- European Aquaculture Technology and Innovation Platform (EATIP)
- Blue Economy Business and Science Forum
- KIC InnoEnergy
- JPI on Agriculture, Food Security and Climate Change

Knowledge exchange with international groups will be implemented, e.g. *via* the *Canada-EU-US Atlantic Ocean Research Alliance*. Other networks will be explored during the project term.



4.5. Citizens

Dissemination

There will be a specific section in the MacroFuels website designed for non-scientists and interested citizens. Furthermore, existing events (such as science fairs, science exhibitions, science cafes etc.) that address citizens specifically, will be assessed for opportunities to participate. Mass Media will be used for spreading targeted information that is relevant for citizens.

Communication

The planned Citizen Panel aims to be a representative consultative body of local residents to identify local priorities. MacroFuels envisions that the most affected local residents will be those that live in coastal areas in near which seaweed will be cultivated, as well as potential industrial sites for the production of biofuels. By engaging local residents from these areas, we will be able to identify concerns and priorities of local communities, residents and active citizens on various aspects of MacroFuels at an early stage and minimize risks, while at the same time enhancing citizen's support. Therefore the citizen panel will be a crucial part of the MacroFuels risk contingency plan. It also forms the basis of the social impact assessment (s-LCA) which will be performed in WP6.

Potential members will be reached through local authorities, project partners, interest groups, local media and other local information platforms. To facilitate the participation of Citizen Panel members we will offer various ways of communication (online survey, face-to-face at an event near their home location).

5. Dissemination channels and materials

Web site, blog and social media

To ensure an immediate visibility of the project, a basic informative project website will be set up in M1 of the project. It will continuously be extended. To cater to the different needs of the MacroFuels interested communities, the website will have specific sections targeted to different groups (e.g. 'Scientific Community', 'Industries', 'Policy Makers' etc.). A blog will be created to inspire and facilitate continuous interest in the MacroFuels project. Contributors will be members of the consortium and guest bloggers within the field. Social media such as LinkedIn, Twitter and Pinterest will complement the online presence of MacroFuels.

Newsletter/e-Bulletin

For the interested public there will be a newsletter, delivered on a semi-annual basis starting in month 1 (if appropriate the frequency will be increased to quarterly). The newsletter will, among other relevant issues, contain information on achievements in the project, reports from conferences and announcements of upcoming events and trainings. The newsletter will also be published on the web site.



Leaflet, poster & brochures

Leaflets, brochures and posters with details on the project and contact information will be produced (as indicated in the Gantt Chart in section 3.1). The material will also be placed on the website for download.

6. Roles and responsibilities within the project

The **Exploitation Officer**, Dr. Bert Groenendaal (SIOEN), is responsible for managing MacroFuels generated IPR and Exploitation issues in collaboration with the Executive board (also see Management structure and procedures, Section 3.2).

The **Dissemination Officer**, Rita Clancy (EURIDA), is leader of the 'Dissemination, communication and exploitation' work package, and responsible for all dissemination and communication activities in collaboration with the Exploitation Officer and the Executive Board.

All partners have the responsibility to proactively contribute to dissemination and exploitation of project results via scientific publications, the protection and exploitation of relevant results and the contribution of content to the project website, dissemination material, MacroFuel's social media groups and other project formats

7. Initial implementation plan for dissemination, communication and exploitation

7.1. Tasks to be performed and partner responsibilities

Task 1: Set up dissemination channels and material – M1-3

Eurida will design an initial project website which mainly aims to inform about the project, its aims, intended outcomes and outputs and the consortium. The website will be extended throughout the course of the project to cater different needs of defined stakeholders (e.g. 'Scientific Community', 'Industries', 'Policy Makers' etc.). A MacroFuels LinkedIn group will be established which will be used to inform interested parties about project progress and events, but also to engage in dialogues about relevant topics. Researchers from other projects will be invited to join the group. Selected project news will be posted via Twitter, building a presence on Pinterest will be assessed. Based on available material (IPR checked) from WP leaders, Eurida will compile the project newsletter which will be available on sign-up (via the project website). Eurida will design project brochures and flyers (to be authorised by all partners), mainly for handouts during conferences and other events

Responsible for delivery: EURIDA

Deliverable(s) / milestone: Project online presence – Month 1

Task 2: Develop the DEP into an advanced dissemination, communication and exploitation working document – M2-6

This describes a plan for dissemination activities, protection of intellectual property and exploitation of project results within the MacroFuels project. The plan will guide the consortium to manage and protect the intellectual property generated in the project, to



explore business opportunities and to disseminate the project in the most efficient way. Eurida will, supported by ECN and AVT, design an advanced DEP, based on this document. The advanced DEP will be continuously assessed and adapted to the realities of the project. This will be performed under consideration of IPR and in close cooperation with SIOEN as partner responsible for IPR supervision.

Responsible for delivery: SIOEN, EURIDA; input: ECN and AVT

Deliverable(s) / milestone: Advanced DEP is set up and approved by all partners – Month 6

Task 3: Manage content for ‘Open Access’ publications (IPR measures and GA compliance) – continuous; relevant from M12 onwards

Content for open access publications will be checked for potential IP protection and patenting; SIOEN will advise all MacroFuels researchers in IPR and patent filing and will support the identification of knowledge and data for protection throughout the project term.

Responsible for delivery: ECN, SIOEN (IPR monitoring); input from all partners/WPs

Deliverable(s) / milestone: -

Task 4: Network (conferences, fair trades, meetings) – from M1 onwards

ECN will organise two MacroFuels conferences. One conference will be scheduled for M30 when first relevant results will be available. A second conference will be organised at the end of the project. Eurida will support ECN during the conference organisation in all operational and organisational tasks. The participation of MacroFuels in external conferences and the application for special sessions will be evaluated and organised by all partners and supervised by ECN and DTI

Responsible for delivery: ECN, DTI; input from all partners

Deliverable(s) / milestone: -

Task 5: Knowledge/data transfer & inter-project knowledge exchange – from M6

ECN, SIOEN and AVT, supported by Eurida will evaluate newly generated knowledge within MacroFuels for its potential to be shared with the relevant EU knowledge and stakeholder platforms. Well-chosen knowledge will be provided to the Energy Research Knowledge Centre (ERKC), Intelligent Energy Europe (IEE) and relevant EU platforms such as European Biofuels Technology Platform-Biofuels, European Aquaculture Technology and Innovation Platform (EATIP). The potential role of MacroFuels and its partners as supporters to the MarineKIC Initiative will be assessed and brought to action accordingly.

ECN and DTI will organise annual meetings and online formats for knowledge exchange with related EU funded and international projects (Inter-project knowledge exchange). MacroFuels will contribute, upon invitation by the INEA, to common information and dissemination activities to increase synergies between, and the visibility of H2020 supported actions. Guest blogs from projects related to MacroFuels topics will be invited and provided on the project website. Eurida will support the organisation of inter-project meetings and blog set-ups.

Responsible for delivery: AVT (input from ECN and SIOEN); contribution of knowledge by all partners



Deliverable(s) / milestone: Knowledge and data repository (e.g. for ERKC, IEE and other stakeholder platforms - Month 47

Task 6: Organise seminars for skill development/policy making – M36-48

Training for scientists in ‘Blue Economy Entrepreneurship’ and a seminar for policy makers/administrators on the development of a future skilled workforce in the field of marine biofuels will be developed, which comprises such topics as seaweed cultivation, environmental impact thereof, and fuel production. SIOEN/AVT will develop the training content, while Eurida will carry out the organisational and operational tasks.

Responsible for delivery: SIOEN, AVT, EURIDA

Deliverable(s) / milestone: -

Task 7: Provide a knowledge base for policy makers (policy briefs) – M28-42

Eurida will evaluate the knowledge and data generated by MacroFuels for its policy-relevance. Relevant knowledge will be provided to policy makers via policy briefs and strategy papers set up by Eurida in support with all MacroFuels partners. Eurida will follow-up on submitted material and liaise with policy makers (together with researchers from all MacroFuels partners) to support the integration of knowledge in policies and public strategies.

Responsible for delivery: EURIDA

Deliverable(s) / milestone: Policy briefs and strategy papers with recommendations for policy making #1 – Month 30

Policy briefs and strategy papers with recommendations for policy making #2 – Month 42

Task 8: Organise stakeholder engagement – M20-48

ECN and Eurida will jointly initiate and organise proven stakeholder formats that will be tailored to MacroFuels’ needs. Eurida will organise the setup of a Citizen Panel and maintain dialogues for knowledge exchange beyond the scientific community. The Citizen Panel will also provide a basis for the social impact assessment in WP6. A focus group, established and chaired by ECN, involving national and EU experts and authorities will elaborate jointly the longterm impact and potential of MacroFuels activities. Eurida will support ECN in the selection of board, panel and group members, the preparation of documents, the organisation of events and the evaluation and compilation of feedback and results.

Responsible for delivery: EURIDA, ECN

Deliverable(s) / milestone: Stakeholder engagement events and results’ evaluation report #1 – Scientific community, Citizen Panel – Month 24

Stakeholder engagement events and results’ evaluation report #2 – Policy makers, scientific community, citizens – Month 48

7.2. Timeline

Table 1: Tasks and indicative timelines – Month 1-6

Task	Partner	Delivery
Initial MacroFuels website design	EURIDA	20 th January 2016
Initial DEP (extracted from proposal/GA)	EURIDA, SIOEN	22 nd January 2016
MacroFuels social media groups set up	EURIDA	25 th January 2016
Input for website, backlinks	All partners	27 th January 2016
Agreement on initial DEP (→ D2)	All partners	29 th January 2016
MacroFuels website online (D2)	EURIDA	31 st January 2016
MacroFuels brochure and flyer template	EURIDA	15 th February 2016
Advanced MacroFuels website: Design	EURIDA	29 th February 2016
Input, material for brochures, flyers	All partners	29 th February 2016
Advanced DEP: First draft	EURIDA, SIOEN	11 th March 2016
Feedback and input advanced website	All partners	11 th March 2016
Advanced website online	EURIDA	31 st March 2016
Brochures, flyers distributed to all partners	EURIDA	31 st March 2016
Input Advanced DEP: Exploitation	AVT	11 th April 2016
Input Advanced DEP: General	ECN	11 th April 2016
Advanced DEP: Second draft	EURIDA, SIOEN	22 nd April 2016
Input Advanced DEP, 2 nd draft	All partners	20 th May 2016
Advanced DEP - Final	SIOEN	31 st May 2016
Agreement on Advanced DEP	All partners	17 th June 2016
Updates and revisions Advanced DEP	Input: all partners Updates: EURIDA, SIOEN, ECN	Continuous

Table 2: List of deliverables and milestones as defined for dissemination, communication and exploitation

Deliverables	Responsible	Delivery
Project online presence	EURIDA	M1
First MacroFuels dissemination, exploitation and communication plan (DEP)	SIOEN	M1
Stakeholder engagement events and results' evaluation report #1 – Scientific community, Citizen Panel	ECN	M24
Knowledge and data repository (e.g. for ERKC, IEE and other stakeholder platforms)	AVT	M47
Policy briefs and strategy papers with recommendations for policy making #1	EURIDA	M30
Stakeholder engagement events and results' evaluation report #2 – Policy makers, scientific community, citizens	ECN	M48
Policy briefs and strategy papers with recommendations for policy making #2	EURIDA	M42
Milestones		
Advanced DEP is set up and approved by all partners	EURIDA	M6



Annex I – Included Background¹

According to the Grant Agreement (Article 24) Background is defined as “data, know-how or information (...) that is needed to implement the action or exploit the results”. Because of this need, Access Rights have to be granted in principle, but parties must identify and agree amongst them on the Background for the project. This is listed in this Annex².

1. Teknologisk Institut/DTI

No background of DTI shall be needed by another Party for implementation of the Project. DTI specifically excludes all Background which has been developed by personnel that are not involved directly in the MacroFuels project or which is outside the scope of its tasks under the Macrofuels project. All Background which has been received or developed under Non-Disclosure Agreements with third parties or under development contracts granted by third parties is also excluded.

2. ECN

No data, know-how or information of ECN shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or exploitation of that other Party's Results (Article 25.3 Grant Agreement).

3. DLO

No data, know-how or information of DLO shall be Needed by another Party for implementation of the Project or exploitation of other Party's Results (Article 25.3 Grant Agreement).

However, in the event it becomes clear during the course of the Project that DLO's Background is Needed for the purposes of article 25.3 of the Grant Agreement, DLO

- Excludes all Background which has been developed by personnel that are not involved directly in the MacroFuels project.
- Excludes all Background of DLO which is outside the scope of its tasks allocated under the Macrofuels project.
- Excludes all Background which has been received or developed under Non-Disclosure Agreements with third parties or under development contracts granted by third parties or which is part of a current patent application.

4. AVT

No data, know-how or information of AVT shall be Needed by another Party for implementation of the Project or exploitation of other Party's Results (Article 25.3 Grant Agreement).

¹ Background means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that:

- is held by the Parties before they acceded to the Grant Agreement, and
- is needed to implement the action or exploit the results.

(Article 25.1 H2020 Model Grant Agreements: H2020 General MGA — Multi: v2.1 – 1 October 2015)

² This represents the status at the time of signature of the Consortium Agreement.



AVT specifically excludes all Background which has been developed by personnel that are not involved directly in the MacroFuels project or which is outside the scope of its tasks under the Macrofuels project. All Background which has been received or developed under Non-Disclosure Agreements with third parties or under development contracts granted by third parties is also excluded.

5. SAMS

The following background is identified and agreed upon for the Project with these specific limitations and/or conditions:

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
SAMS grants Access Rights to Background generated by the SAMS research team directly involved in the MacroFuels Project	Access Right to Background is granted only to the extent that it is Needed to implement the action	Access Right to Background is granted only to the extent that Background is not subject to terms and conditions in other agreements that may prohibit the desired Access Right

6. SIOEN

No data, know-how or information of Sioen Industries shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or exploitation of that other Party's Results (Article 25.3 Grant Agreement). This represents the status at the time of signature of this Consortium Agreement.

7. ERM

Excludes all Background developed by personnel that are not involved directly in the MacroFuels project or which is outside the scope of its tasks under the MacroFuels project, including but not limited to ERM's life cycle model for conversion of macro-algae.

Excludes proprietary software and data licensed by ERM and used in performing its tasks under the MacroFuels project.

8. Aarhus University

The following background is hereby identified and agreed upon for the Project. Specific limitations and/or conditions, shall be:

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Aarhus University (AU) hereby grants Access Rights to Background generated by the AU research team directly involved in the MacroFuels Project	Access Right to Background is only granted to the extent that it is Needed for implementation of the action	Access Right to Background is only granted to the extent that said Background is not subject to terms and conditions in other agreements that may prohibit the desired Access Right



9. EURIDA

No data, know-how or information of EURIDA shall be Needed by another Party for the implementation of the Project (Article 25.2. Grant Agreement) or exploitation of that other Party’s Results (Article 25.3 Grant Agreement).

10. Matis ohf.

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Matis ohf. hereby grants Access Rights to Background generated by the Matis research team directly involved in the MacroFuels Project	Access Right to Background is only granted to the extent that it is Needed for implementation of the action	Access Right to Background is only granted to the extent that said Background is not subject to terms and conditions in other agreements that may prohibit the desired Access Right

11. Fermentationexperts

No background of Fermentationexperts shall be Needed by another Party for implementation of the Project.

Fermentationexperts specifically excludes all Background which has been developed by personnel that are not involved directly in the MacroFuels project or which is outside the scope of its tasks under the Macrofuels project. All Background which has been received or developed under Non-Disclosure Agreements with third parties or under development contracts granted by third parties is also excluded.

Annex II – Open Access³

1. What is open access (OA)?

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 and that is re-usable. 'Scientific' refers to all academic disciplines; in the context of research and innovation, 'scientific information' can refer to (i) peer-reviewed scientific research articles (published in scholarly journals) or (ii) research data (data underlying publications, curated data and/or raw data).

Open access to scientific publications refers to free of charge online access for any user. Legally binding definitions of 'open access' and 'access' in this context do not exist, but authoritative definitions of open access can be found in key political declarations on this subject, for instance the Budapest Declaration of 2002 (<http://www.budapestopenaccessinitiative.org/read>) or the Berlin Declaration of 2003 (http://openaccess.mpg.de/67605/berlin_declaration_engl.pdf)

These definitions describe 'access' in the context of open access as including not only basic elements such as the right to read, download and print, but also the right to copy, distribute, search, link, crawl, and mine.

There are two main routes towards open access to publications:

- A. **Self-archiving / 'green' open access** means that 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.
- B. **Open access publishing / 'gold' open access** means that an 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. In other cases, the costs of open access publishing are covered by subsidies or other funding models.

Misconceptions about open access to scientific publications

In the context of research funding, open access requirements in no way imply an obligation to publish results. The decision on whether or not to publish lies entirely with the grantees. Open access becomes an issue only *if* publication is elected as a means of dissemination.

³ Excerpts from the Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020, 30th October 2015



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Moreover, OA does not interfere with the decision to exploit research results commercially, e.g. through patenting. Indeed, the decision on whether to publish open access must come after the more general decision on whether to publish directly or to first seek protection.

More information on this issue is available in the European IPR Helpdesk fact sheet “Publishing vs. patenting”

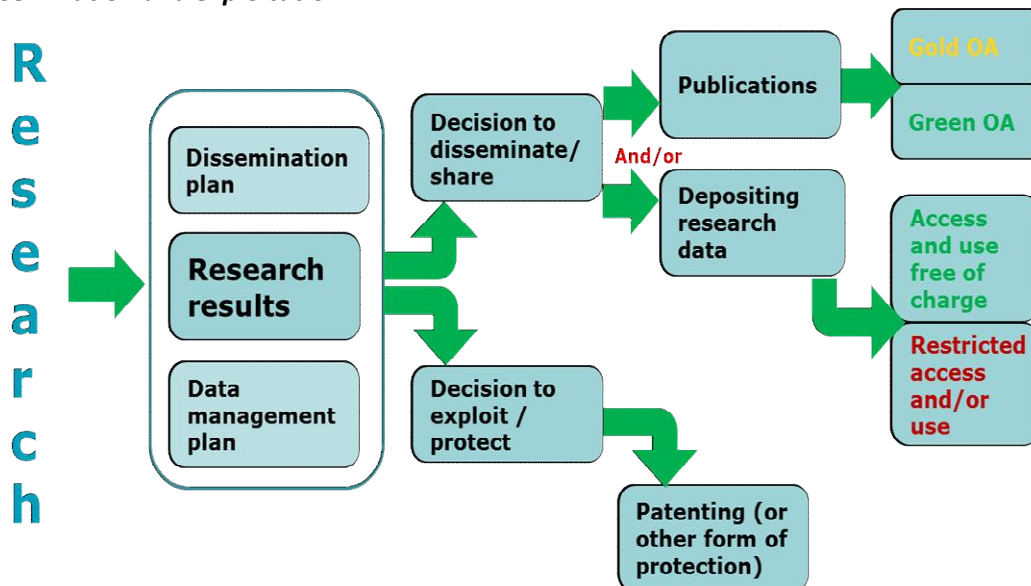
This is illustrated in the graph showing open access to scientific publication and research data in the wider context of dissemination and exploitation at the end of this section.

Open access to research data refers to the right to access and re-use digital research data under the terms and conditions set out in the Grant Agreement.

'Research data' refers to information, in particular facts or numbers, collected to be examined and considered and as a basis for reasoning, discussion, or calculation. In a research context, examples of data include statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings and images. The focus is on research data that is available in digital form.

Openly accessible research data can typically be accessed, mined, exploited, reproduced and disseminated free of charge for the user.

Graph: Open access to scientific publication and research data in the wider context of dissemination and exploitation



2. Mandate on open access to publications

The detailed legal requirements on open access to publications are contained in article 29.2 of the Model Grant Agreement.

Under Horizon 2020, each beneficiary must ensure open access to all peer-reviewed scientific publications relating to its results.



In order to comply with this requirement, beneficiaries must, at the very least, ensure that their publications, if any, can be read online, downloaded and printed. However, as any additional rights such as the right to copy, distribute, search, link, crawl, and mine increase the utility of the accessible publication, beneficiaries should make every effort to provide for as many of them as possible.

'Peer-reviewed' publications refer to publications that have been evaluated by peers, i.e. other scholars. Peer review is typically, yet not exclusively, organised by the journal or publisher to which an article or manuscript is submitted. New approaches to the organisation of peer review are expected to become more prevalent in the coming years.

The dominant type of peer-reviewed scientific publication is the journal article. In addition, however, beneficiaries are strongly encouraged to provide open access to other types of scientific publications, some of which may, in some cases, not be peer-reviewed, including monographs, books, conference proceedings and grey literature (informally published written material not controlled by scientific publishers, e.g. reports).

The open access mandate is composed of two steps: 1. depositing publications into repositories, and 2. providing open access to them. These two steps may or may not occur at the same time, depending on whether open access publishing ('gold' open access) or self-archiving ('green' open access) is used, and, in the case of self-archiving, depending on the embargo period (if any).

Step 1: beneficiaries must deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications. This must be done as soon as possible and at the latest upon publication. This step must be followed even where open access publishing ('gold' open access) is chosen in order to ensure long-term preservation of the article.

The term 'machine-readable electronic copy' means that the publications must be in a format that can be used and understood by a computer. They must be stored using text file formats which are either standardised or otherwise publicly known so that anyone can develop new tools for working with these documents.

In some cases, the deposit of the final version of an article is possible before publication, for example upon acceptance of the publication by the journal. The latest acceptable time to deposit a publication is the date of publication. Where possible, the published version (in terms of layout, pagination, etc.) should be deposited.

A repository for scientific publications is an online archive. Institutional, subject-based and centralised repositories are all acceptable choices. Beneficiaries should not choose a repository which claims rights over deposited publications and precludes access. The Open Access Infrastructure for Research in Europe (OpenAIRE) is the recommended entry point for researchers to determine what repository to choose (<http://www.openaire.eu>). OpenAIRE also offers support services for researchers, such as the National Open Access Desks. Other useful listings of repositories are the Registry of Open Access Repositories (ROAR, <http://roar.eprints.org/>) and the Directory of Open Access Repositories



(OpenDOAR, <http://www.opendoar.org/>).

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications, ideally into a data repository.

This requirement is based on the fact that the concept of 'publication' has rapidly evolved over the past years and in the context of the digital era. Therefore, the notion of 'publication' increasingly includes the data underpinning the publication and results presented, also referred to as 'underlying' data. This data is needed to validate the results presented in the deposited scientific publication and is therefore seen as a crucial part of the publication and an important ingredient enabling scientific best practice. Beneficiaries are also invited to grant open access to this data, but there is no obligation to do so.

Step 2: after depositing publications and, where possible, underlying data, beneficiaries must ensure open access to the deposited publication via the chosen repository.

Beneficiaries can choose one of two main ways to comply with this requirement:

1) **Self-archiving / 'green' OA:** beneficiaries can deposit the final peer-reviewed manuscript in a repository of their choice (see explanation of 'repository' above). In this case, they must ensure open access to the publication within a maximum of six months (twelve months for publications in the social sciences and humanities).

2) **Open access publishing / 'gold' OA:** researchers can also publish in open access journals, or in journals that sell subscriptions and also offer the possibility of making individual articles openly accessible (hybrid journals). Monographs can also be published either via a 'pure' open access or via a hybrid business model. The author processing charges (APCs) for gold open access incurred by beneficiaries are eligible for reimbursement during the duration of the project (see article 6.2.D.3 of the Model Grant Agreement). In all cases, open access via the chosen repository must be ensured upon publication.

The costs of 'gold' open access publications incurred after the end of projects are not eligible for reimbursement via the budget of the specific action. However, a mechanism is being piloted for also dealing with open access publication charges incurred after the end of grant agreements with the Commission. This pilot is supported via the OpenAIRE2020 project: further information is available at <https://www.openaire.eu/postgrantoapilot>.

Beneficiaries must also ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication. The bibliographic metadata must be in a standard format and must include the following:

- the terms [*"European Union (EU)" and "Horizon 2020"*][*"Euratom" and Euratom research and training programme 2014-2018"*];
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and a persistent identifier.



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. For adequate identification of the action concerned, the grant number, name and/or acronym of the action is needed (preferably all three). The publication date and embargo period enable the monitoring of the embargo periods. The persistent identifier (for example a Digital Object Identifier, DOI) identifies the publication. It allows linking to an authoritative version of the publication. For example, OpenAIRE (<http://www.openaire.eu>) will provide means to check the metadata compliance of the chosen repository.

In all cases, the Commission encourages authors to retain their copyright and grant adequate licences to publishers. Creative Commons offers useful licensing solutions in this regard (e.g. CC-BY or CC-0 licences, see <http://creativecommons.org/licenses/>). This type of licence is a good legal tool to enable open access in its broadest sense.

Where possible, it is also recommended that contributors be uniquely identifiable, and data uniquely attributable, through identifiers which are persistent, non-proprietary, open and interoperable (e.g. through leveraging existing sustainable initiatives such as ORCID for contributor identifiers and DataCite for data identifiers).

3. Further information and help

Horizon 2020: <http://ec.europa.eu/programmes/horizon2020>

Participant Portal: <http://ec.europa.eu/research/participants/portal/>

Open access (Science in Society site):

<http://ec.europa.eu/research/swafs/index.cfm?pg=policy&lib=science>

Open access (Digital Agenda site): <http://ec.europa.eu/digital-agenda/en/open-access-scientific-knowledge-0>

OpenAIRE: <http://www.openaire.eu>

IP/12/790 on open access in Horizon 2020:

http://europa.eu/rapid/press-release_IP-12-790_en.htm?locale=en

Questions on open access: RTD-open-access@ec.europa.eu

Publishers:

Elsevier: <https://www.elsevier.com/about/open-science/open-access>

Springer: <http://www.springer.com/gp/open-access>

Directory of Open Access Journals: <https://doaj.org/>