BOOSTER
BOOSTING DROUGHT TOLERANCE IN KEY CEREALS IN THE ERA OF CLIMATE CHANGE

Deliverable 5.2:
Stakeholders' Network Engagement Plan

Project acronym	BOOSTER
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Summary

Deliverable D5.2 presents the Engagement plan (hereinafter “the plan”) of the stakeholders’ network (SN) set up in the framework of the project. The scope of this document is to illustrate the strategy to engage the SN’ members to ultimately increase the dissemination of project results and support their future exploitation. This plan is closely connected with the Plan for Communication and Dissemination of Results (PCDR) and to the Exploitation Plan, both prepared within WP5, a key element envisaged by BOOSTER to disseminate and exploit project results as well as improve public knowledge and understanding about project’s objectives.

This first version of the plan describes the SN rationale and objectives, its members, and the activities to be carried out to foster this engagement. The plan is scheduled for a revision in M24, enabling to better tailor the engagement strategy to the needs of the SN’ members as well as to adapt it to the state of implementation of the project.

As leader of the tasks 5.5 and 5.8 of WP5, CREA will lead the implementation of the strategy envisaged in this plan in close cooperation with IDC, as WP5 leader, and all project partners. On this respect, it is important to highlight that the active participation of all project partners is crucial to ensure the engagement of the SN’ members and the success of the exploitation activities that will be put in place.

Document History

Date	Author	Action	Status
30/09/2023	Mara Lai Simonetta De Leo	First version sent to WP5 members	Draft
09/10/2023	Mara Lai Simonetta De Leo	Second version sent to all partners	Draft
25/10/2023	Mara Lai Simonetta De Leo	Final version sent to project Coordinator	Final

Acronyms and abbreviations

CRE	cis-regulatory element
DTG	Drought Tolerance Genotype
EBIC	European Biostimulants Industry Council
SN	Stakeholders Network
PCDR	Plan for Communication and Dissemination of Results
IPR	Intellectual Property Rights
MA	Multi-Actor
SME	Small Medium Enterprise
WP	Work Package

1. Introduction

Prolonged drought due to climate change has a severe impact on agriculture, requiring measures to secure yield stability under water-shortage conditions. This project aims to be a BOOSTER for developing innovative and sustainable strategies to create climate resilient and drought tolerant cereals. Two strategies have been designed to achieve this goal. Firstly, a new approach will identify genomic variants in regulatory regions functionally associated with drought tolerance. Novel regulatory elements underlying resilience will inform efficient breeding efforts to create new drought tolerant cereal varieties. Secondly, novel seaweed extracts and microbial biostimulants will be developed as an eco-friendly approach for improving drought resilience. The two strategies will be tested in two cereals with different responsiveness to drought: European maize and Ethiopian teff, a cereal, the latter, with high genetic similarity to the desiccation tolerant Eragrostis nindensis. BOOSTER will improve drought tolerance in both maize and teff, while simultaneously exploring the potential for transferring species-specific drought responsive features. By exploiting natural genetic variation to achieve drought tolerant genotypes and by developing biostimulants derived from living organisms, BOOSTER will take advantage of the already available natural resources to steer our agriculture towards novel drought tolerant varieties. Importantly, BOOSTER approaches and results are transferable to other crops. The project will produce increased maize- and teff-derived biomass resources under harsh drought conditions, will lower irrigation requirement, will strengthen competitiveness of European and African agri-food industry, and will provide concrete examples for improving public awareness about a sustainable use of bio-based technologies.

To maximise the dissemination and exploitation of results, BOOSTER envisages the setting up of a Stakeholders' Network, composed a maximum of 12 European and African organisations, selected within the stakeholders' groups considered as the most relevant for the project implementation and exploitation of its results.

The present deliverable describes the SN and the strategy and activities designed to engage its members. This engagement plan will be fine-tuned with time, with an update of it scheduled at M24 of the project.

2. BOOSTER: brief overview and main objectives.

2.1. Project objectives

Climate change has become one of the biggest challenges the world is facing, and drought crises are more and more frequent in different areas, including the European continent. Drought crises are becoming more frequent and climate models predict an increase in severity and duration of these phenomena in most regions, having a negative impact on agriculture and food security. This increases the importance of intervening with innovative and efficient solutions to limit these negative consequences and support yield stability under water-shortage conditions. In this framework BOOSTER provides innovative strategies by utilizing plants and associated soils that are adapted to drought to identify genetic- and biostimulant-based approaches for increasing drought tolerance of crops.

The major objective of BOOSTER is to implement strategies for improving drought tolerance in European maize and African teff as a key step towards the transition to climate-smart agriculture.

To achieve this main goal, the following specific objectives, each corresponding to a dedicated work package, were set up within BOOSTER:

1) Genome-wide identification of maize and teff cis-regulatory elements (CREs) and genes associated with drought tolerance (WP1).

2) Comparative genomics of drought CREs and genes in three different grasses and validation of maize and teff drought CREs genome-wide data (WP2).
3) Development and characterisation of new seaweed extracts (SWEs) and microbial biostimulants for improving maize and teff drought tolerance (WP3).
4) Production of the best performing SWE and microbial biostimulants and evaluation of their performance in improving maize and teff drought tolerance through field trials (WP4).
5) Project dissemination and communication to improve public understanding of biotechnology and bioeconomy in the context of the EU strategies and implementation of the stakeholders' involvement to achieve project outcomes and impacts (WP5).
6) Project management, quality control and the handling of specific ethic requirements (WP6).

3. BOOSTER Stakeholders' Network

3.1. Stakeholders' Network rationale and main objectives

The main scope of the Stakeholders' Network (SN) of BOOSTER is to enhance the exploitation of the project knowledge and products. The rationale behind the setting up of the SN and the definition of a thorough exploitation strategy lies on the type of results that BOOSTER will achieve, with specific reference to their level of maturity, and on the interest that these results can elicit in the seed industry, both in Europe and Africa.

The involvement of seed companies might largely influence the release of DTGs developed by BOOSTER into the market. However, different scenarios can be observed for maize and teff, the two crops on which the project focuses. In Europe, the seed market is rather concentrated; five companies hold around 75% of the EU maize seeds market shares. These companies are dynamic and with high propensity to innovate; this characteristic combined with the presence of one of them within the project partnership (KWS), will contribute to increase the exploitation of the outcomes, during and after the project. The situation differs radically in relation to teff. In Ethiopia the seed market is much less organised, with a small number of companies involved and with a high number of informal seeds' exchanges between farmers. The presence in the consortium of the University of Bern and the Ethiopian Institute of Agricultural Research, which have recently collaborated to release new varieties of teff into the market, will contribute to exploit the results of the project.

The SN enters this picture as a key tool to mobilize and engage different stakeholders' categories to complement the efforts towards exploitation of results already planned within the project consortium.

The SN has two main objectives:

i) To improve the implementation of BOOSTER.
ii) To contribute to the exploitation of its results, during its implementation and after its end.

The SN will fulfil its objectives by supporting dissemination and communication of the project knowledge, technologies, and products, and by providing advice and feedback, according to the expertise of its members, on the activities of the project, enabling to modulate and adjust the project activities, if needed, to better meet the needs of different types of stakeholders.

The SN will operate according to the provisions of this engagement plan, which will be updated, as already mentioned, after two years of the project implementation.

3.2. Structure of the Stakeholders' Network

The SN is currently composed by 11 organisations representing different groups of European and African actors relevant for the implementation of the project. The organisations selected for the SN represent all steps of the value chains related to BOOSTER. The organisations that have agreed to be part of the SN are listed in table 1.

Farmers are represented by three organisations, two of them located in Africa, that is, the Ethiopians ERER Farmers' cooperative and Amuari Seed, and one European, CEPM – European Confederation of Maize Production, which represents maize producers. They will provide advice about specific needs of farmers and contribute to the release of DTGs and biostimulants. Their knowledge and experience will be valuable to improve transferability to farmers.

The industries involved are represented in Europe by Euroseeds, which contains the main companies working in the seed industry, and it is expected to play a significant role in the future exploitation of the project results. In Africa, it is represented by Amuari Seed in Ethiopia, which also serves the interests of farmers, and Sansor in South Africa, which contains the South African seed companies, cooperates with producers' organisations, provides advice and training to support the transfer of innovations to farmers, and offers expertise on related policy matters.

The network DEMETER, built around a Horizon 2020 project, whose main goal is to empower farmers, is a "multi-actor member" bringing together 60 partners among farmers, scientists, policy makers and representatives of agricultural industries. Its added value within the SN lies in the capacity to reach a large number of actors and in the skills related to support the transfer of innovations into the environment.

The scientific world is represented by three organisations. EPSO, the European Plant Science Organisation, represents more than 200 research institutes and universities, mainly European, and aims to improve the impact of plant science. EPSO will ensure interaction with scientists who can provide advice on BOOSTER activities and on future actions to support product transferability. CIMA Research Foundation - International Centre for Environmental Monitoring will provide information about the drought trends in agriculture. Finally, the Alliance of Bioversity International & the International Centre for Tropical Agriculture (CIAT) an organisation part of CGIAR – the Global Research Partnership for a Food Secure Future - created in 2019, when Bioversity International and CIAT joined forces to respond to global challenges of climate change, biodiversity loss, environment degradation and malnutrition. The Alliance delivers research-based solutions to support the transition to more sustainable food systems. Its added-value is linked to the support the Alliance can provide for the future exploitation of the project technologies and outcomes, both in terms of developing future projects and support the transferability of ready-to-use solutions. Furthermore, the Alliance can provide advice on reducing gender inequalities and advancing social inclusion, these being key topics of its strategy for the next decade.

The civil society and more specifically consumers are represented by Euro Coop, the European Community of Consumers Cooperatives, which will bring the perspective of consumers about BOOSTER innovations, as well as its knowledge about consumers' education and information. The last organisation of the SN is "LadyAgri – Impact Investment hub", which supports agricultural businesses where the role of women is visible. The organisation serves the scope of supporting gender balance and at the same time promote the setting-up of agricultural businesses. The organisation is active in Europe and in several African countries; it provides technical assistance, supports the linkages between private and public partners and facilitates the transfer of innovative solutions at farm level. On this respect, the network of professionals of LadyAgri can provide useful advice, applying to all farmers and not only to women, about how to transfer project results more efficiently.

Table 1. Members of the SN

Stakeholders' typology	Organisation	Headquarters (Country)	Contribution to BOOSTER	Website
Farmers	Erer Farmers' Cooperative	Ethiopia	Interaction with Ethiopian farmers. Provision of advice and contribution for the development and release of teff DTGs and use of teff biostimulants.	https://ererunion.com/
Farmers	CEPM - European Confederation of Maize Production	France	Interaction with European maize farmers. Provision of advice and contribution for the development and release of maize DTGs and use of maize biostimulants.	https://www.maizeurop.com/en/structure/cepm/
Farmers/Industrial	Amuari Seed - Ethiopian Seed Association	Ethiopia	Interaction with Ethiopian smallholders and farmers. Provision of advice and contribution for the development and release of teff DTGs and use of teff biostimulants.	https://ethiopianseedassociation.wordpress.com/
Industrial	Euroseeds	Belgium	The organisation groups the main European seed companies, providing a direct link with them. Advise and contribution to the dissemination of BOOSTER results and products, especially for maize DTGs and biostimulants in the EU.	https://euroseeds.eu/
Industrial	Sansor - South African National Seed Organisation	South Africa	Link with South African seed companies. Transferability and exploitation of BOOSTER results and products. Advise on policy matters. Collaboration with producer organizations.	https://www.sansor.org/
Farmers, Policy Makers, Industrial, Scientific	H2020 DEMETER: 18 European countries; coordinated by Walton Institute, Ireland.	18 EU Countries	Dissemination and communication support through a large established network of technologists and policy makers. Support for activities requiring a multi-actor approach (e.g., management of requirements). Connection to large network of Digital Innovation Hubs. Support and advice for exploitation.	https://h2020-demeter.eu/ https://waltoninstitute.ie/

Stakeholders' typology	Organisation	Headquarters (Country)	Contribution to BOOSTER	Website
Scientific	EPSO - European Plant Science Organisation. WG Future proofed crops.	Belgium	Interaction with academies, research institutes and companies for approaches/products transferability. Advice on (i) new technologies from the Future Proofed Crops Working Group and (ii) biostimulants from the Plants and Microbiomes Working Group. Presentation of the results at the Plants Day to increase dissemination.	https://epsoweb.org/
Scientific	CIMA Research Foundation - International Centre for Environmental Monitoring.	Italy	Agricultural drought monitoring at EU scale	https://www.cimafoundation.org/en/
Scientific	Alliance Bioversity & CIAT (part of CGIAR – Global Research Partnership for a Food Secure Future).	Italy	Dissemination of project results through a worldwide network of scientists and professionals.	https://alliancebioversityciat.org/
Civil society	EURO COOP - European Community of consumers cooperatives	Belgium	Advice for integrating consumers' dimension and improve consumers' understanding of innovations that BOOSTER might introduce.	https://www.eurocoop.coop/
Civil society/social inclusion/Advisory	LadyAgri Impact Investment Hub	Belgium	Dissemination of project results among their network of professionals and farmers. Advice on how better support women and agri-businesses run by women to uptake project results.	https://www.lady-agri.org/

3.3. Contribution of the Stakeholders Network to overcome the main barriers to the adoption and diffusion of BOOSTER innovations.

The adoption and diffusion of innovations are traditionally prone to experience several impediments, caused by barriers of various nature. Long et al. (2015) identifies five categories of barriers, which can negatively influence the adoption and diffusion of technical innovation for climate smart agriculture. Those barriers are usually economic, institutional, behavioural, organisational and market/consumers/society related.

A list of potential barriers as potential impediments to the exploitation of BOOSTER results have been already identified. Table 2 illustrates them according to the abovementioned categories. It is important to highlight that issues included in the table and the corresponding contribution of SN members to mitigate them will be subject to discussion within the SN. Furthermore, it is difficult to judge, at this initial stage of implementation of the project, the real effect that some of the specifications included in the list will have. For these reasons, some of the considerations that follow might need to be revised and adjusted when the project has reached a more mature stage of implementation and upon discussion within the SN.

The specifications included in this table can refer to: i) technology providers, that is, the companies that will release into the market maize and teff hybrids, and biostimulants; and ii) farmers, which will be those adopting the innovations. The engagement of diverse categories of stakeholders, as highlighted by the composition of the SN, can contribute to overcome the potential barriers identified to the full exploitation of the project results.

Technical and economic barriers. The most important **technical and economic barriers** identified concern the possibility that farmers face *high upfront investment or high implementation costs* to adopt in the field the results of the projects (new hybrids and biostimulants). At this stage it is difficult to foresee the extent of these costs and if they will become a problem. Nevertheless, the presence in the SN of organisations representing farmers (ERER, Amuari Seed, CEPM, Euroseeds, Sansor, LadyAgri) can help reduce this risk by involving their members from the initial phases in their participation to the SN. This will allow engaging important suggestions to reduce these potential costs. The organisations could also apply specific strategies for the use of the project outcomes in an initial phase, such as involving the most appropriate farmers in terms of farms' structure, assets, farmers' skills, etc.

These economic risks might concern the industry too, where the companies that will have to invest on the project new technologies and outcomes should have clear information about the future returns on investments of the new products developed by the project. Likewise, the presence of organisations representing the industry can reduce this risk.

The second main category of technical and economic barriers are related to the *lack of competence and skills and the lack of capacity to assess the innovation*. Transferability of innovations does not often happen naturally; the usefulness of the innovation does not guarantee its applicability. Lack of knowledge about how to implement the innovation or about the existence of the innovation itself is the main technical barrier. Introducing a new variety might imply to adapt the agricultural practices to it, thus, to possess the appropriate skills and competence to do it. These two risks might be considered most relevant for farmers. Farmers' organisations can contribute to reduce the lack of competence and skills, as well as increase the capacity to assess if a certain innovation is appropriate for a specific farm. The assistance of advisors might be valuable to overcome these issues, as well as the importance to build trust between farmers and providers of the new technologies and products. The role of scientific partners (EPSO, H2020 Demeter, Alliance Bioversity&CIAT) to reduce these risks is also significant, with specific reference to the provision of clear and understandable information about the new products.

Table 2. Barriers to the adoption and diffusion of BOOSTER innovations

Barrier	Specifications	SN members expected contribution to reduce these risks
Technical and economic	High upfront investments High implementation costs Lack of knowledge to assess innovations. Lack of competence and skills.	**ERER, Sansor, Amuari Seed, CEPM, Euroseed, LadyAgri**. i) Assessment of most appropriate farms to adopt new products (initial phase). ii) Training programme for farmers and advisors. iii)Peer-to-peer exchanges for farmers/advisors. **H2020 Demeter; EPSO.** i) Participate to prepare and run training programmes for farmers/advisors. ii) Wider dissemination of information about project results.
Political/Institutional	1. Unfavourable regulatory framework 2. Low institutional support. 3. Food security concerns 4. Farmers' need and knowledge not adequately considered in R&I. 5. Use of scientific language	**Eurocoop** (3) i) Dissemination and communication of transparent information about the objectives and results of the projects to consumers and the civil society. **H2020 DEMETER** (2,4,5) i) Support to improve multi-actor and participatory approaches when needed, to include farmers' needs and knowledge into R&I. ii) Increase dissemination and communication towards policy makers, to enhance institutional support of the project results. **ERER, Sansor, Amuari Seed, CEPM, Euroseed, LadyAgri.** (4.5) i) Improve the consideration of farmers' needs and knowledge in the development of the project. Note: The consequences of the unfavourable regulatory framework will be mitigated by the activities of partners.
Perception and acceptance (behavioural)	1. Lack of management support. 2. Conflict with traditional methods/Farmers' opinions. 3. Low trust of advisors or consultants. 4. Lack of acceptance (from farmers, consumers, society). 5. Lack of information.	**ERER, Sansor, Amuari Seed, CEPM, Euroseed, LadyAgri.** (all) i) Dissemination of project results among farmers. ii) Training programme for farmers and advisors. iii)Peer-to-peer exchanges for farmers and advisors. **H2020 Demeter; EPSO; Alliance Bioversity&CIAT** (1, 2, 3,5) i) Dissemination and communication about project objectives and results. ii) Participation in the design and delivery of training programmes for farmers and advisors. **EuroCoop** (4, 5)

Barrier	Specifications	SN members expected contribution to reduce these risks
		i) Dissemination and communication of project's objectives and results to consumers and the civil society.
Availability on markets and trade barriers	1. Lack of market attractiveness. 2. Poor diffusion on local markets. 3. Difficult and expenses access to patented varieties. 4. Consumers/farmers motivation. 5. Market uncertainty: labelling, intellectual property rights (IPRs). 6. Social pressures.	**EuroCoop** (4, 6) i) Dissemination and communication of project's objectives and results; raising awareness about the environmental and climate-related topics addressed by the project. **ERER, Sansor, Amuari Seed, CEPM, Euroseed, LadyAgri.** (1, 2, 3, 4, 5) i) Dissemination and communication about project results. ii) Raise awareness about possible economic advantages (if existing) of using the project results (new hybrids, biostimulants). iii) Raise awareness about the environmental and climate-related advantages of the use of project results. iv) Provide suggestions about how to reduce the potential difficulties caused by the labelling/IPRs. **H2020 Demeter; EPSO; Alliance Bioversity&CIAT** (1, 3, 5, 6) i) Provide transparent information about the economic advantages of using the project results (new hybrids, biostimulants). ii) Dissemination and communication of project's objectives and results among the scientific community and policy makers.
Ecological	Environmental conservation Modification of the soil biome.	**H2020 Demeter; EPSO; Alliance Bioversity&CIAT** (1, 2) Disseminate and communication project's objectives and results, including the findings of the environmental LCA.

Institutional and legislative barriers. A second important category of barriers concerns **institutional and legislative aspects**, which include diverse issues that might arise during BOOSTER implementation. Given some of the expected results of BOOSTER, *legislative and regulatory* issues exist. In particular, the present legislation on GMOs applies to gene edited maize plants produced through targeted editing (which will be validated at greenhouse level within the project duration), which will be released by the project. The EU started a process of revision of this legislation, and depending on the outcome of this revision, new opportunities to exploit the project innovative technologies can rise within the EU. These legislative barriers might also affect the new microbial stimulants developed by the project; being new products, it will not be known whether they will be eligible to the conformity assessment envisaged by the Fertilizing Products Regulation (Reg. EU n. 2019/1009). BOOSTER SMEs are members of the European Biostimulants Industry Council (EBIC) and as such they are involved in the actions EBIC is carrying on at EU level to extend the expand the use of biostimulants. The SN organisations will be informed about these issues, even though a more direct contribution to this it is, at this stage, less likely to envisage.

The SN organisations, however, can provide a more decisive contribution in relation to other issues linked to the institutional environment that might arise during the project implementation. Among those identified, considered more relevant for BOOSTER, there are *low institutional support* and *concerns about food security*. The presence within the SN of Eurocoop, which groups cooperatives of consumers, will support the communication towards this category of stakeholders, contributing to clarify the environmental and climate related relevance of the issues addressed by the projects and its results. The H2020 Demeter network can provide advice on how to better use multi-actor and participatory approaches when involving farmers and it can support communications to policy makers, engaging them in relation to the project' objectives and results. This will help disseminate information about the project, reducing concerns about food security and increasing institutional support.

Behavioural barriers: perception and acceptance of the project's innovations. These barriers can concern farmers, industry, and civil society. The actions implemented within the communication plan aims to influence the perception of the innovations introduced by BOOSTER and the SN members will play a complementary role to them. Farmers' organisations and industry representatives within the SN can improve the acceptance by introducing detailed information about BOOSTER new technologies and products in training and peer-to-peer exchange programmes for farmers/advisors and by disseminating information within their network. The scientific organisations within the SN will support overcoming these barriers by providing help in the design of training programmes for farmers, by raising awareness about the importance of BOOSTER results for the advance of the bio-based sector and the relevance in terms of environmental and climate-smart achievements. Organisations representing consumers will help develop the knowledge of individuals and their capacity for informed choices about new breeding technologies, the use of biostimulants and other bio-based techniques.

Market barriers. Lack of market attractiveness, low level of diffusion on local markets, market uncertainty linked to labelling and Intellectual Property Rights (IPR) are some of the elements that can hamper the impact of BOOSTER innovations. Social pressures deriving from the concern that these innovations may become a threat to human health as well as low motivation of consumers towards these innovations. All SN organisations can contribute to overcoming these barriers by disseminating the project's results among their networks. Specifically, farmer and industry associated organisations can raise awareness about the environmental and climate-related advantages linked to the project outcomes.

4. Stakeholders' Network engagement: strategic approach and activities.

The setting up of a SN is one of the four main strategies illustrated by the BOOSTER Plan for Communication and Dissemination of Results (PCDR). The SN will collaborate with partners throughout the entire duration of the project, with the aim to engage a wider network of actors from all stakeholders' categories considered relevant to enhance the future uptake of BOOSTER results.

The strategic approach identified to engage the SN is based on sharing at an early stage the knowledge produced during the project and its results, in compliance with what is described in chapter 5 of the PCDR about IPR management, and upon the signature of a Non-Disclosure Agreement (NDA) and Consent form (Annex 1). SN members will have the ability to provide suggestions about the implementation of the project, with the aim to make the results more suitable for future exploitation (e.g., adoption and diffusion of validated maize and teff SWE and PGPR biostimulants; improvement of product transferability protocols; list of the best CRE genetic variants and key drought-responsive genes for developing maize and teff DTGs). Furthermore, SN members can provide opportunities for future development of the projects products in terms of investments by the private sector and funding to develop new research projects.

4.1. Stakeholders' Network engagement activities

The organisation of face-to-face and online meetings is the key activity to leverage the engagement of SN members. During the project implementation phase the following meetings will be organised:

i. **Three face-to-face meetings** to be held in combination with the annual project meetings. The combination of these events will enable project partners to interact with the SN members. During these meetings project partners will illustrate the state of play of the project and engage in discussions with SN members about the potential strategies to improve the implementation phase in the view of better exploitation of the project results.
ii. **Seven online meetings** to discuss ad hoc topics considered of relevance for the exploitation of the project results.

The following table shows the provisional time schedule for the face-to-face and online meetings. Changes, in terms of timing and number of meetings, could occur depending on the emerging needs or specific requests from the SN members and project partners. SN members will be invited to the final conference.

Table 3. Time schedule of face-to-face and online meetings of the SN.

Item/Month	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Face-to-face meeting																																											
Online meetings																																											

Meetings held in year 1 and year 2 of the project will allow sharing of initial results (according to the project work plan). Furthermore, they will give the opportunity to i) become familiar with the project's partners, its objectives and implementation schedule; ii) discuss the validity of the exploitation strategy, to update it and to suggest possible additional exploitation tools to make it more efficient and iii) provide suggestions to improve the project implementation. Meetings

scheduled for year 3 and particularly for year 4 will allow sharing details about the results and, at that stage, the specific definition of the exploitation strategy will become possible.

Despite the few concrete results that will be possible to share, at least during the first two years of implementation, it will be important to engage the SN and keep their interest and attention in the project. SN members will receive the project newsletter and any other information published about the project and they will be invited to follow BOOSTER in the social networks. A Microsoft Teams folder dedicated to the SN will be created, as a repository of all relevant documents the SN members will think important to share about the project and about the project main themes.

In addition to meetings and sharing relevant information, the SN members will be invited to participate to events organised by partners linked to the project or where the project topics are discussed. Likewise, partners, according to their knowledge and competences, will participa, as much as possible, in events organised by the SN members on themes relevant to the project. Managers of the SN, in collaboration with project partners and SN members, will prepare a list of potential events of interest.

Annex 1. Stakeholder Network: Non-Disclosure Agreement and Consent Form

Title	Boosting drought tolerance in key cereals in the Era of Climate Change
Acronym	BOOSTER
Organisation mobilising the Stakeholder Network Member (hereinafter 'the Organisation')	Name of legal entity Complete address Email Tel. Name and Surname of the Legal Representative Role within the Organisation
Name and Surname of the Appointed Expert (hereinafter 'the Expert')	Name and Surname of the Expert Email Tel
BOOSTER Contact person	Mara LAI Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria Research Center for Agricultural Policies and Bioeconomy Via Ardeatina 546, 00178 Roma (Italy) Email: mara.lai@crea.gov.it Office Tel. +39 06 47856310

1. Introduction

The Organisation has identified, in the person of its employee Mr/Mrs Name and Surname, the Expert to involve in the BOOSTER Stakeholder Network, in consideration of the Experts' outstanding competences and expertise, crucial for the Project success.
In this context, this Non-Disclosure Agreement and Consent Form is meant to provide the Expert and its Organisation with a complete set of information regarding the role and tasks to be performed within the BOOSTER Stakeholder Network.
The information contained in this document must be read carefully. Any questions related to anything which is not clear, should be addressed to the BOOSTER Contact person: Mara Lai (see above and Section 7 for complete contact details).

By signing this consent form the Expert is confirming that he/she shall:
• know what it is going to be required in order to take part in BOOSTER;
• agree to take part in BOOSTER and actively support the Project;
• consent to the storage and use of his/her personal data for the administrative purposes of the BOOSTER Project (e.g., for the reporting activities);
• have the opportunity to grant, reserve or withdraw consent for the use of images and video for communication and dissemination of Project activities and outcomes.
• agree to adhere to the provisions outlined in this Agreement;
• have the authorisation to take part in the Stakeholders' Network, as it is testified by the signature of the Legal Representative of the Organisation.

By signing this consent form the Organisation is confirming that the Expert is authorised to take part in the BOOSTER Stakeholders' Network, and that the Organisation fully endorses the provisions of this Agreement.

The Expert and the Organisation will be given a copy of this Non-Disclosure Agreement and Consent Form for their records.

Funded by the European Union. This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101081770. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or of the Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

2. The purpose of BOOSTER Project

Aim of the Project

Prolonged drought due to climate change has a severe impact on agriculture, requiring measures to secure yield stability under water-shortage conditions. This project aims to be a BOOSTER for developing innovative and sustainable strategies to create climate resilient and drought tolerant cereals. Two synergistic strategies will be implemented to achieve this goal. Firstly, a new approach will identify genomic variants in regulatory regions functionally associated with drought tolerance. Novel regulatory elements underlying resilience will inform efficient breeding efforts to create new drought tolerant cereal varieties. Secondly, novel seaweed extracts and microbial biostimulants will be developed as an eco-friendly approach for improving drought resilience. The two strategies will be tested in two cereals with different responsiveness to drought: European maize and Ethiopian teff, a cereal with high genetic similarity to the desiccation tolerant *Eragrostis nindensis*. BOOSTER will improve drought tolerance in both maize and teff, while simultaneously exploring the potential for transferring species-specific drought responsive features. By exploiting natural genetic variation to achieve drought tolerant genotypes and by developing biostimulants derived from living organisms, BOOSTER will take advantage of the already available natural resources to steer our agriculture towards novel drought tolerant varieties. Importantly, BOOSTER approaches and results are transferable to other crops. A tailored communication/dissemination strategy and a stakeholders' engagement plan will ensure the expected outcomes and impacts. The project will produce increased maize- and teff-derived biomass resources under harsh drought conditions, will lower irrigation requirement, will strengthen competitiveness of European and African agri-food industry, and will provide concrete examples for improving public awareness about a sustainable use of bio-based technologies.

Source of funding

BOOSTER has been funded by the European Union within the Horizon Europe Programme (Grant Agreement n. 101081770) in the framework of the Call: HORIZON-CL6-2022-CIRCBIO-02-02-TWO-STAGE — "Exploring extreme environments: novel adaptation strategies at molecular level for bio-based innovation".

Composition of the Consortium

The Project is being implemented by:
1) Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA) – Project Coordinator;
2) Heinrich-Heine-Universitaet Düsseldorf (UDUS);
3) Vlaams Instituut voor Biotechnologie (VIB);
4) Ethiopian Institute of Agricultural Research (EIAR);
5) University of Cape Town (UCT);
6) Tsentar Po Rastitelna Sistemna Biologiya i Biotehnogiya (CPSBB);
7) BioAtlantis (BIOAT);
8) Aphea.Bio (Aphea.Bio)
9) EU CORE Consulting srl (EUC);
10) ID Consortium (IDC);
11) Universitaet Bern (UBERN);
12) Michigan State University (MSU);
13) KWS SAAT SE & Co KGaA (KWS);
14) Quantis Sàrl (QUANTIS).

3. What does the participation in BOOSTER involve?

Activities to be carried out by the Appointed Expert appointed.

By taking part in BOOSTER, the Expert shall be requested to provide support to BOOSTER providing opinions and support, especially in relation to the following aspects:
a) the provision of suggestions to improve the work packages (WPs) implementation during the project time course, for facilitating the future exploitation of the BOOSTER results;
b) the provision of suggestions to improve the Exploitation plan to be prepared and updated within BOOSTER WP5;

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c) the contribution to the exploitation and transferability of the project results, during and for up to two years after the project end-date;
d) the dissemination and communication of the project results among the members of the organisations and its network.

Additional costs and reimbursement

For his/her participation in the Project, the Expert shall not be entitled to receive any kind of salary, attendance fee or other forms of compensation paid on the budget of BOOSTER. In any case, subject to the previous authorisation of the beneficiary EUC (contact person, Dr. Irene Liverani, email: liverani@eucore.eu), the Expert can be reimbursed for travel and subsistence costs incurred by taking part in Project meetings requiring physical presence.
In case the authorisation is granted, EUC may decide on a case-by-case basis either to directly upfront the mission costs of the Expert or to reimburse the Experts' expenses if duly documented and incurred in accordance with the financial rules of the Horizon Europe Programme and the internal rules of EUC regarding the reimbursement of travel and subsistence costs (to be shared with the Expert).

4. Voluntary participation in Project activities

The participation in the BOOSTER Stakeholders' Network and in its activities is voluntary. Should the Expert decide to take part in them, he/she needs to sign this Non-Disclosure Agreement and Consent Form, to be countersigned by the Legal Representative of the Organisation he/she belongs to.
Subject to the prior written request of one month to the BOOSTER Coordinator and to the appropriate hierarchical level within his/her organisation, the Expert may decide to withdraw from the Project.
In the case of withdrawal, the data and the other documents submitted or elaborated for the Project by the Expert can still be used for the benefit of the Project and its activities.

5. Commitments

Confidentiality

By being involved in the BOOSTER Project the Expert shall agree to treat as confidential all information shared as part of the Project activities, in compliance with the provisions of the BOOSTER Consortium Agreement (Art. 10) as follows:

- All information in whatever form or mode of communication, which is disclosed by any Beneficiary or Associated Partner taking part in BOOSTER (the "Disclosing Party") to you (the "Recipient") in connection with the Project during its implementation (whether in oral, written, electronic or other form), which, due to its nature, should reasonably be considered confidential, is considered as "Confidential Information". In addition, any information which has been explicitly marked as "confidential" at the time of disclosure, or when disclosed orally has been identified as confidential at the time of disclosure and has been confirmed and designated in writing within 15 calendar days from oral disclosure at the latest as confidential information by the Disclosing Party, is also "Confidential Information".
- The Recipient hereby undertakes in addition and without prejudice to any commitment on non-disclosure under the Grant Agreement, for a period of 5 years after the final payment of the Granting Authority:
  - not to use Confidential Information otherwise than for the purpose for which it was disclosed;
  - not to disclose Confidential Information without the prior written consent by the Disclosing Party to any third party;
  - to ensure that internal distribution of Confidential Information by a Recipient shall take place on a strict need-to-know basis; and
  - to return to the Disclosing Party, or destroy, on request all Confidential Information and materials that have been supplied, acquired or disclosed to the Recipient including all copies thereof and to delete all information stored in a machine-readable form to the extent practically possible. The Recipient may keep a copy to the extent it is required to keep, archive or store such Confidential Information because of compliance with applicable laws and regulations or for the proof of on-going obligations provided that the Recipient complies with the confidentiality obligations herein contained with respect to such copy.
- The above shall not apply for disclosure or use of Confidential Information, if and in so far as the Recipient can show that:

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- the Confidential Information has become or becomes publicly available by means other than a breach of the Recipient's confidentiality obligations;
- the Disclosing Party subsequently informs the Recipient that the Confidential Information is no longer confidential;
- the Confidential Information is communicated to the Recipient without any obligation of confidentiality by a third party who is to the best knowledge of the Recipient in lawful possession thereof and under no obligation of confidentiality to the Disclosing Party;
- the disclosure or communication of the Confidential Information is foreseen by provisions of the Grant Agreement;
- the Confidential Information, at any time, was developed by the Recipient completely independently of any such disclosure by the Disclosing Party;
- the Confidential Information was already known to the Recipient prior to disclosure, or
- the Recipient is required to disclose the Confidential Information in order to comply with applicable laws or regulations or with a court or administrative order.

– The Recipient shall apply the same degree of care with regard to the Confidential Information disclosed within the scope of the Project as with its own confidential and/or proprietary information, but in no case less than reasonable care
– Each Recipient shall promptly inform the relevant Disclosing Party by written notice of any unauthorised disclosure, theft, misappropriation, or misuse of Confidential Information after it becomes aware of such unauthorised disclosure, theft, misappropriation or misuse.
– If any Recipient becomes aware that it will be required, or is likely to be required, to disclose Confidential Information in order to comply with applicable laws or regulations or with a court or administrative order, it shall, to the extent it is lawfully able to do so, prior to any such disclosure:
  - notify the Disclosing Party, and
  - comply with the Disclosing Party's reasonable instructions to protect the confidentiality of the information.

Protection of personal data and respect of ethical principles and rules

All Project participants who work with personal data of the staff of the BOOSTER Beneficiaries and Associated Partners or of Third Parties or other persons shall comply with the principles and rules provided by the General Data Protection Regulation (Regulation (EU) 2016/679, 'GDPR').
In addition, the Expert will perform your activities in accordance with the ethical principles, protecting the fundamental rights and interests, as provided by the Article 18 of the Regulation (EU) 2021/695 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination.
In particular, the Expert shall comply with the ethical principles laid down by the international legislation and by the European Union Law, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols.
Specifically, the Expert shall comply with the following principles: proportionality and precautionary, the right to protection of personal data, the dignity, and the right to the physical and mental integrity of every person, the right to non-discrimination and the protection of vulnerable persons.
In addition, you shall observe the instructions issued and communicated by the Coordinator, for instance in the form of handbooks, guidelines, policies or similar, especially for what concerns the ethical commitments of the Project.

Intellectual Property Rights

The intellectual property of the tangible and intangible results of all activities, including, without limitation, any prototypes, data, information and knowledge, patents, copyrights, design rights, materials, technologies, and know-how are the exclusive property of the BOOSTER Beneficiaries or Associated Partners, at all times, in accordance with the provisions of the Consortium Agreement.

6. Handling of the Expert's personal data

The Expert's personal data (namely name, surname, contact details, as well as video, photos, audio gathered during the implementation of the Project) shall be processed exclusively for administrative purposes and especially in relation to project management activities (e.g., for the reporting activities) and to communication and dissemination endeavours.

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The personal data may be communicated to the European Commission or to other EU bodies only for the requirements provided by the legal base of the Programme Horizon Europe.
Subject to the previous subparagraph, all the Expert's personal data shall be processed in compliance with the GDPR in particular in accordance with the principles of fairness, lawfulness, transparency, and the protection of confidentiality, minimization, security referred to in Article 5 GDPR and the rights of the Expert, according to the Article 13 of the GDPR.

Pursuant to the Article 13 GDPR, the Coordinator informs you that:
• the data protection officer for CREA is Dr. Valentina Longo, e-mail Valentina.Longo@crea.gov.it tel. +39 342 8563068;
• the Expert's personal data are stored for a period not exceeding the time necessary for the pursuit of the purposes for which they are processed and in accordance with current legislation on the conservation of administrative documentation.
Should the data not be completely correct, you are entitled to update, rectify, integrate your data; you have also the right, under the conditions provided for by Article 17 of the GDPR, to request the cancellation of your data, if there are no longer legitimate reasons for their processing.

If the Expert decides to leave the project, the BOOSTER team will not collect additional personal information from the Expert, although the personal information already collected will be retained to ensure that the results of the Project can be measured properly and to comply with law.

7. Final Provisions

Each of the Consortium Parties shall have a right to enforce the terms of this Agreement.

The invalidity or unenforceability of any part of this Agreement, for any reason, shall not affect the validity or enforceability of the remainder of this Agreement.

The communication between the Parties of this Agreement will be made in English by e-mail.

This Agreement is governed by and construed in accordance with Belgian law and the parties submit to the exclusive jurisdiction of the Belgian courts.

The *inter partes* relationship between the BOOSTER Consortium Parties remains regulated by the Consortium Agreement and Grant Agreement and is therefore unaffected by this Agreement.

8. Further information and who to contact

Contact person

Name	Mara Lai
Institution Legal Name	Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria
Institution address	Research Center for Agricultural Policies and Bioeconomy Via Ardeatina 546, 00178 Roma (Italy)
Email	mara.lai@crea.gov.it
Telephone	Office Tel. +39 06 47856310

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Funded by the European Union

Stakeholders' Network – Consent Form

Title	Boosting drought tolerance in key cereals in the Era of Climate Change
Acronym	BOOSTER
Expert	Name and Surname of the Expert Name of Organisation Complete address Email Tel.
BOOSTER Contact person	Mara LAI Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria Research Center for Agricultural Policies and Bioeconomy Via Ardeatina 546, 00178 Roma (Italy) Email: mara.lai@crea.gov.it Office Tel. +39 06 47856310

Declaration by the Expert

I have read the present document (Non-Disclosure Agreement and Consent form) in a language that I understand.

I understand the purposes, procedures, activities and obligations arising from the Project, including the obligations in relating to confidentiality and Intellectual Property Rights.

I declare that, to my knowledge, I have no conflict of interests that would impact my role and participation as Stakeholder Network member.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in the BOOSTER Project as described and I understand that I am free to withdraw at any time during the Project.

I understand that I will be given a signed copy of this document to keep for my own records.

By signing below, I agree to adhere to the provisions outlined in this Agreement.

Name of Expert _____

Signature _____ **Date** _____

Declaration of consent to use photographic images and videos.

Please mark with a cross to provide or deny your consent

I agree with the use of **photos** taken during any of the BOOSTER events for reporting or dissemination purposes
□ YES □ NO

I agree with the use of **videos** recording during any of the BOOSTER events for reporting or dissemination purposes
□ YES □ NO

By signing below, the Legal representative of the Organisation authorises the Expert to take part in the BOOSTER Stakeholders' Network, fully endorsing to the provisions outlined in this Agreement.

Name of Legal Representative _____

Signature _____ **Date** _____

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