



Global partnerships in ERA-NETs

International Cooperation of bioeconomy ERA-NETs and JPIs

**Deliverable 4.4: Recommendations on interactions and
cooperation between ERA-NETs and institutionally
driven (global) research alliances**

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Executive summary

This report explores the opportunities for ERA-NETs in the bioeconomy for cooperation with global research alliances, multilateral organisations and partners in third countries (non-EU or Associated countries) dealing with the same research issues. In this report we will look at several interesting global research alliances, multilateral organisations and potential partners for ERA-NETs in the bioeconomy. If we look at the empirics in this report, we notice there is room for improvement regarding external cooperation of ERA-NETs in the bioeconomy.

Through a questionnaire for ERA-NET coordinators in the bioeconomy, an internet search and a request on LinkedIn, we obtained information about relevant global research alliances (GRAs) and multilateral organizations (MLOs) active in bioeconomy research. We followed the same procedure to gain an insight into the cooperation of ERA-NETs in the bioeconomy with partners in third countries.

Through these channels we found 10 GRAs and MLOs active in the bioeconomy. The collection of data on cooperation of ERA-NETs in the bioeconomy with partners in third countries is supplemented with information from ERA-NET-evaluations. Particularly information on reasons for partners to participate in an ERA-NET is used for this purpose.

Cooperation is an opportunity when working on the same research themes, mostly with a global or a cross-border nature or when there is a risk of potential overlap in research of both networks and organisations. We have another reason for cooperation with third-country funders: *critical mass*. Partnering with third countries can create networks where the best available knowledge is more readily available. This way duplication of efforts can also be avoided.

We consider hard barriers and soft barriers for cooperation with GRAs, MLOs and partners in third countries:

- (1) *Hard barriers* include time constraints to work with partners outside of Europe and procedures of multilateral organisations or partners in third countries for programming or allocating research budgets. It is often difficult to manage these together.
- (2) *Soft barriers* include cultural factors such as building confidence between partners.

The ERA-NET-coordinators mentioned several barriers for ERA-NET-coordinators who consider cooperating with GRAs, MLOs and partners in third countries. For research activities addressing global objectives, it is important to facilitate access to relevant resources: what is going on in different countries, and what are possibilities for research funding, both national and international. This contributes to better planning. Considering funding, it is important to have a considerable joint budget to overcome the transaction costs (a minimum of 5 to 10 million euros).

Barriers that must be overcome are the lack of funding, the time required to broaden the ERA-NET, identifying partners in the relevant networks and the administrative burden. Through our assessment we can make several recommendations to encourage cooperation:

Recommendations resulting from our assessment

(1) For Cooperation between ERA-NETs in the bioeconomy and MLOs or GRAs

- Cooperation of ERA-NETs in the bioeconomy with GRAs and multilateral organisations could be organised around research issues which are not typical European/EU-oriented research issues.
- For the non-typical issues both sides could provide benefits. Research budgets could for example be more substantial, the availability of research infrastructure could be beneficial for both partners and there could be a more critical pool of researchers. This way, the efficiency of research budgets could increase.
- Programme procedures of global research alliances, multilateral organisations or ERA-NETs in the bioeconomy do not always follow the same time line. It might be worthwhile finding out if this can be more synchronised. Set up a study to see what global research alliances and multilateral organisations could contribute by cooperating with ERA-NETs in the bioeconomy. This could be knowledge or research infrastructure.

(2) For Cooperation between ERA-NETs in the bioeconomy and partners from third countries

- More cooperation could be encouraged with the first step being for example looking at ERA-NETs with small, specialised research fields on a European level or ERA-NETs where research is carried out at a global scale. The added value of cooperation at a global scale could be evaluated. A pilot project with low administrative burden and a lot of available time could offer lessons for future EU research policy where cooperation with global research alliances, multilateral organisations and partners in third countries plays a more prominent role.
- Experimenting in joint calls with other partners and evaluating the process.

1. Introduction

It is widely accepted that investing in research has a positive effect on the growth of the economy of the EU Member States¹ and the EU as a whole. It is therefore not surprising that investing in research and development is one of the key elements of *Europe 2020*. Europe 2020 is the EU-strategy for a smart, sustainable and inclusive European economy, delivering high levels of employment, productivity and social cohesion. Europe 2020 sets out a vision of Europe's social market economy for the 21st century.² Investing 3% of European GDP in research and development is one of the main objectives of the Europe 2020 strategy. It was also a main objective in an earlier comparable strategy, the Lisbon-strategy of 2000.³ Transnational cooperation and more competition within the EU research system is one of the ingredients for an effective achievement of this objective. The main idea behind this is that the best research boosts innovation and innovation increases competitiveness.

In a European context the term European Research Area (ERA) is often used. In the words of the Commission it is described as follows: *The European Research Area is composed of all research and development activities, programmes and policies in Europe which involve a transnational perspective. Together, they enable researchers, research institutes and businesses to increasingly circulate, compete and co-operate across borders. The aim is to give them access to a Europe-wide open space for knowledge and technologies in which transnational synergies and complementarities are fully exploited. ERA consists of activities, programmes and policies which are designed and operated at all levels: regional, national and European.*⁴

The ERA includes the *ERA-NET* instrument. The ERA-NET instrument was introduced during the European Commission's 6th Framework Programme (2003-2006). It was further extended in the 7th Framework Programme (2007-2013) with the introduction of ERA-NET plus, under which the Commission provides some project funding, which is not the case in the ERA-NET scheme. The aim of the ERA-NET system is to coordinate national and regional research programmes of Member States and associated countries⁵ and to strengthen the European Research Area as well as certain branches of the European industry. The European Commission pays costs related to coordination incurred by the member organisations while the ERA-NET project runs.

¹ See e.g. http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news_13-5-2014-12-8-8

² EUROPE 2020, A European strategy for smart, sustainable and inclusive growth, <http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf>

³ In March 2000, the European Union set itself the ambitious goal to become, by 2010, "the most competitive and dynamic knowledge-based economy in the world", what has become known as the Lisbon strategy. This involved many reforms, such as the establishment of an effective internal market, an improved education system, and a more productive innovation and research base, just to name a few of the reforms concerned.

⁴ http://ec.europa.eu/research/era/understanding/what/what_is_era_en.htm

⁵ These countries are: Israel, Norway, Iceland, Turkey, the Former Yugoslav Republic of Macedonia (FYROM), Serbia, Albania, Montenegro, Bosnia & Herzegovina, Faroe Islands, and Moldova. The status of Switzerland is currently unclear, in 2014 Swiss institutions will not be able to participate.

ERA-NETs are networks of programme owners and networks (usually ministries and research councils), supported by an EC grant (Coordination and Support Action). The main actions of an ERA-NET are the development of joint calls and cooperation of different project teams from various countries in the projects under the ERA-NET umbrella. The financing of ERA-NET calls are mostly according to the distributed pot model.⁶

More than 30 European Research Area Networks in the bioeconomy sector have been funded under FP6 and FP7. Through coordination and cooperation between national research programmes these networks contribute to meeting the challenges Europe faces on the path towards a sustainable bioeconomy, whether it is in the area of agriculture, forestry or marine, and on topics ranging from biotechnologies, application of ICT and robotics, organic food and farming, forest-based materials, statutory plant health, rural development, infectious diseases of livestock, or plant sciences. The FP7 project *Platform of knowledge-based bioeconomy relevant ERA-NETs* (PLATFORM) offers the ERA-NET actors mutual learning and networking opportunities and has developed into a robust forum for funders and programme managers. PLATFORM aims at increasing coordination and maximising synergies in the area of bioeconomy.

This report is part of PLATFORM work package 4 *Common Vision and Strategy*. In the tasks in this work package, various lines of cooperation are analysed, including those among ERA-NETs, of ERA-NETs and private initiatives between ERA-NETs, and between ERA-NETs and Joint Programming Initiatives.

This report is prepared for the ERA-NET community and focuses on cooperation of ERA-NETs in the bioeconomy with (1) *multilateral organisations (MLOs)*, (2) *global research alliances* and (3) *Associated Countries (AC) or non-European countries*.

There can be many reasons for cooperation, such as having the best scientific knowledge in your network. Although for ERA-NETs in general, the European Commission stresses the global dimension of ERA as well. The external dimension of ERA is important for strengthening Europe's influence in the development of common global principles to facilitate international cooperation in research and innovation, and to create a global level playing field. As such, it may be interesting for ERA-NETs to also work with networks, organisations, and funders outside of Europe.

⁶ There are Common Pot models and Distributed pot models for ERA-NET calls. Parties funding the topic financed by the **Common Pot funding model** all contribute to the common budget without regard to the nationality of the participants to be funded. However, only participants from the countries/regions contributing to the Common Pot are eligible for funding. The project coordinator enters into a contract with the Lead Funding Organisation on behalf of the project consortium. The project is financed centrally through the Lead Funding Organisation. In general the budget condition is full cost with a funding rate of maximum 100% (national/regional rules apply). When a contract is signed by both parties (project coordinator and Lead Funding Organisation) a first installment can be invoiced. Subsequently, the next installments can be invoiced when a midterm report is accepted, when the final report is delivered and when the final report is accepted. In projects funded through the **Distributed Pot funding model**, each partner in a consortium will enter into a contract with and financed by their national/regional funding agency. National/regional rules apply and are listed in the call documents.

MLOs, such as the Organisation for Economic Cooperation and Development, are organisations of member states often supported by a secretariat. Only governments can be members of an MLO. Member states pay a membership fee and should agree on the organisation's working programme. MLOs often operate according to diplomatic rules. GRAs are more voluntary networks with various partners from governments, research institutes and private organisations. Contributions to these networks are often voluntary. There is a large body of business literature on the motivation and creation of networks and alliances⁷ comparable with ERA-NETs (see Boonstra, 2007; Gulati, 1998). In business economics, the creation of and participation in networks is an alternative for merging different organisations. Networks are being developed with the aim of creating efficiency gains in conducting research, in exploring international opportunities or in the use of infrastructure.

Following the literature on networking in business economics, we classify global research alliances and multilateral organisations in the bioeconomy along the following lines:

- Research fields; varying from applied to fundamental research.
- The goal of the network; varying from concrete to abstract goals.
- Governance; varying from governance bodies with only government officials to bodies with only representatives from research organisations.
- Programming or organising the work of the global research alliances; varying from researching new themes to coordinating existing work.
- Nature of the network; varying from coordinating initiatives to carrying out research in the context of the network or organisation.
- Budgets; varying from in-kind contributions to a substantial budget.

Non-European countries or partners from AC-countries can participate in ERA-NETs on a level comparable with EU member states. A European Union Association Agreement (for short, Association Agreement or AA) is a treaty between the European Union (EU) and a non-EU country (an associated country, AC) that creates a framework for cooperation between them. Research is one of the subjects of cooperation between the EU and an AC. AC countries even discuss the direction of research of bioeconomy in committees like the Standing Committee on Agricultural Research (SCAR)^{8,9}. However, obtaining funding from the EU is bound by rules. Non-European countries/ Third countries refers to any country/territory that is not an EU country or an overseas country or territory linked to an EU country.

The outline of the rest of the report is: In chapter 2 we elaborate on the cooperation of ERA-NETs in the bioeconomy with MLOs and GRAs. We present gathered data on current cooperation and analysis of the obstacles and incentives. For cooperation with third parties in ERA-NETs we follow the same procedure in chapter 3. We finish this report in chapter 4 with recommendations to the ERA-NET community on cooperation with MLOs, GRAs and partners in third countries.

⁷ In business literature, the words **networks and alliances** are used interchangeably.

⁸ Regulation (EEC) No. 1728/74 of the Council of 27 June 1974.

⁹ The SCAR was established with the purpose to advise the Commission in the field of the coordination of research in agriculture. The SCAR consists of representatives of EU Member States and associated countries. The SCAR was given a renewed mandate by the Council in 2005 to play a major role in the coordination of agricultural research efforts across the European Research Area. The new SCAR is made up of the 27 EU Member States, with representatives from Candidate and Associated Countries as observers.

2. Cooperation of ERA-NETs with multilateral organisations and global research alliances

2.1. Data collection

To identify global research alliances and multilateral organisations relevant to ERA-NETs in the bioeconomy, we followed three courses of action:

First, we did an internet search with key words such as ‘bioeconomy,’ ‘greenhouse gases’ and ‘agriculture.’ We did this search in combination with words such as ‘research’ and ‘innovation.’

Second, in March 2013, PLATFORM approached coordinators of ERA-NETs active in the bioeconomy with the aim of collecting a list of joint projects that were already formed by ERA-NETs with GRAs and MLOs, and those that ERA-NET coordinators had identified as potentially interesting. The questionnaires (Annex II and III) were sent to the coordinators of the ERA-NETs, who are mentioned in the PLATFORM publication *Bioeconomy ERA-NET actions, European Research Area Networks of the 6th and 7th framework programmes*. This publication gives an overview of all ERA-NETs relevant for the bioeconomy. The result was that twenty-four questionnaires were returned, although not all the answers were useful for the analysis of cooperation with GRAs and MLOs, because some only provided information on cooperation with partners from non EU-member states or non-AC members.

The aim of the questionnaires was:

- to harvest the cooperation of ERA-NETs in the bioeconomy with global research alliances, multilateral organisations or third countries;
- to identify the barriers and incentives for such cooperation;
- to provide recommendations for such cooperation.

Third, a request to the LinkedIn Group *FP7 Food, Agriculture and Fisheries, and Biotechnology* with the same aim as approaching the ERA-NET coordinators (see figure 1).

In addition, after learning that the coordinator of ERA-NET CAPS sent a questionnaire on cooperation of ERA-NETs in the bioeconomy with partners in AC-countries or non-European countries, we decided to work together on that topic. We included the results from that questionnaire in this report as well. The analysis on cooperation with third countries can be found in the next chapter. The questionnaire can be found in annex III.

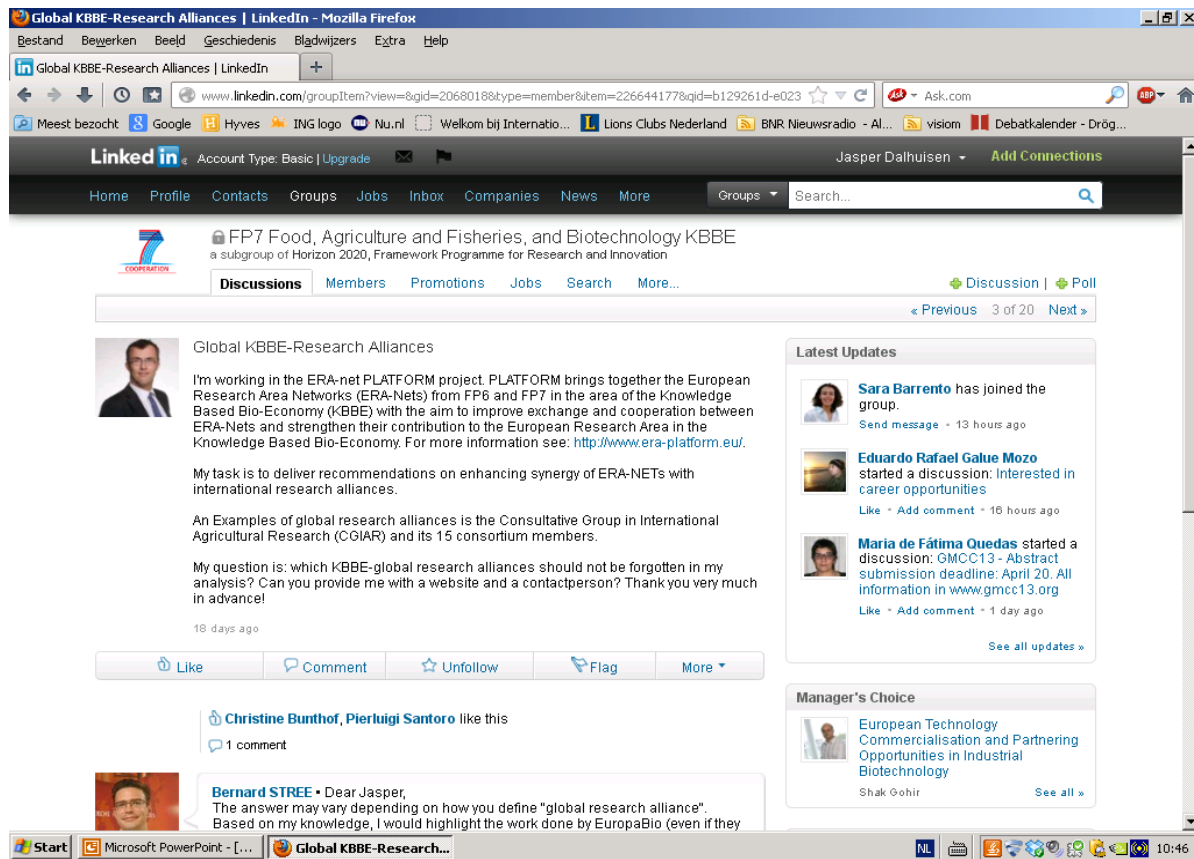


Figure 1: the request on the FP7 Food, Agriculture and Fisheries, and Biotechnology KBBE LinkedIn group.

2.2. Current cooperation of ERA-NETS in the bioeconomy with multilateral organisations or global research alliances

This section begins with the results of the internet search for relevant multilateral organisations followed by a non-exhaustive list of existing cooperation of ERA-NETS in the bioeconomy with global research alliances and multilateral organisations.

Through a search on key words, and by looking at the replies to the LinkedIn request, the answers to the questionnaire and contacts with ERA-NET actors, a long-list of approximately 25 organisations was drawn up. The request on LinkedIn resulted in one extra relevant global research alliance and the confirmation of three extra research alliances and one multilateral organisation which were already found.

Ten organisations (see *table 1*) were selected for further desk study. This selection was made based on which organisations were known by the author to be relevant (mainly through knowledge about ERA-ARD and ERA-NET Bioenergy), combined with the answers to the questionnaire. Moreover, four criteria were used: (1) research fields, (2) the public character of the MLO or the GRA, (3) the development of research programmes in the bioeconomy and (4) the level of budgets for research. In Annex I these GRAs and MLOs are described in more detail, along the six lines to classify network organisations as explained above.

Table 1: Ten relevant MLOs and GRAs

Name	Research Field
The Global Research Alliance on Agricultural Greenhouse Gases (GRA)	The GRA on Agricultural Greenhouse Gases focuses on more food (and more climate-resilient food systems) without increasing greenhouse gas emissions. The GRA offers a global network of researchers and policy makers dedicated to the goals of the GRA.
Consultative Group on International Agricultural Research (GRA)	CGIAR research is dedicated to reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources.
The Global Forum on Agricultural Research (GRA)	The Global Forum on Agricultural Research focuses on agricultural innovation – especially for poor farmers.
Global Foot and Mouth Disease Research Alliance (GRA)	The GRFA is focused on a broad spectrum of aspects of foot and mouth disease (FMD), such as understanding host-pathogen interactions; understanding the epidemiology of FMD and discovering vaccines specifically designed for the control and eradication of the FMD virus
International Energy Agency, Bioenergy (MLO)	IEA Bioenergy focuses on sustainable bioenergy questions
The Global Bioenergy Partnership (GRA)	The Partnership focuses its activities on three strategic areas: <ul style="list-style-type: none"> • Sustainable development • Climate change • Food and energy security
The United Nations Food and Agriculture Organisation (MLO)	The FAO deals with issues on food, agriculture and natural resources.
The Organisation for Economic Cooperation and Development (OECD, established in 1961), specifically through its research programme on biological resources in agriculture (CRP) (MLO)	The OECD CRP promotes such international cooperation through funding conferences/workshops and research fellowships related to the themes of: <ul style="list-style-type: none"> • The Natural Resources Challenge • Sustainability in Practice • The Food Chain
The International Council for the Exploration of the Sea (GRA)	ICES has a number of high priority work areas: <ul style="list-style-type: none"> • Arctic research • Integrated ecosystem assessments • Marine Strategy Framework Directive (MSFD) • Sustainable aquaculture •
OSPAR ¹⁰ (MLO)	OSPAR works on marine and fisheries issues.

¹⁰ OSPAR is so named because of the original Oslo and Paris Conventions ("OS" for Oslo and "PAR" for Paris).

Figure 2 shows that the cooperation with global research alliances and multilateral organisations is not common practice. Seventeen out of twenty-three responding networks have no such cooperation. Only five actively collaborate with GRAs and MLOs and only one has concrete plans to establish such cooperation. The figure does not show the nature of the cooperation and the partners ERA-NETs cooperate with.

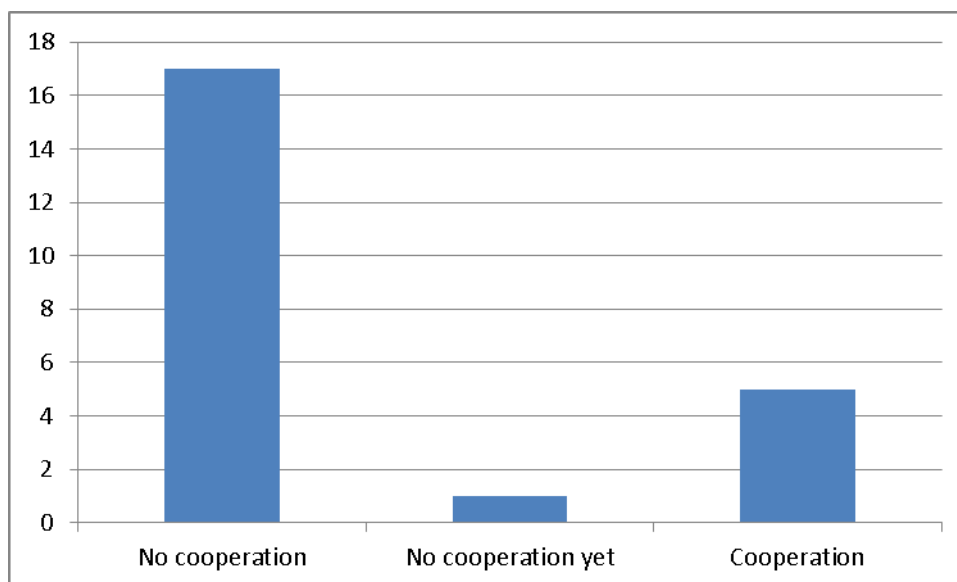


Figure 2: the state of play: the observed cooperation of ERA-NETs in the bioeconomy with global research alliances (GRAs) and multilateral organisations (MLOs)

Table 2 describes the already existing cooperation of bioeconomy ERA-NETs and JPIs with MLOs and GRAs. To give a complete picture, this table also provides information on cooperation with private parties (such as the Bill and Melinda Gates Foundation). The cooperation with these parties will be omitted from the rest of the report.

Table 2: Observed cooperation and nature of cooperation of ERA-NETs in the bioeconomy

ERA-NET	Cooperates with	Role of the GRA or MLO
ERA-ARD	<ul style="list-style-type: none"> • Forum for Agricultural Research in Africa (FARA) • Association of Agricultural Research institutes in the Near East and North Africa (Aarinena) • Forum for the Americas on Agricultural Research and Technology Development (FORAGRO); • Asia-Pacific Association of Agricultural Research institutes (APAARI) • Central Asia and the Caucasus Association of Agricultural Research institutes (CACAARI) 	Organisations have an advisory role in planning joint calls and cooperation in the organisation of regional workshops

ERA-NET Bioenergy	<ul style="list-style-type: none"> • IEA Bioenergy 	The cooperation with IEA Bioenergy has a nature of funding and management of IEA Bioenergy activities by the ERA-NET Bioenergy
	<ul style="list-style-type: none"> • Global BioEnergy Partnership and • Bioenergy and Food Security (BEFS) Approach of the FAO 	Participation of ERA-NET Bioenergy Partners
EMIDA ERA-NET, in the context of the STAR-IDAZ network	<ul style="list-style-type: none"> • FAO 	FAO are on the circulation list receiving all project notices etc., and participated in the Asia and Australasia regional network meeting
	<ul style="list-style-type: none"> • OIE 	OIE is an Associated Partner in STAR-IDAZ, participating in consortium meetings and involved in the Foresight and Programming Unit. OIE were on the EMIDA Advisory Board, participated in the development of the Strategic Research Agenda and participate in meetings of the Collaborative Working Group on Animal Health and Welfare research
	<ul style="list-style-type: none"> • OFFLU 	OFFLU (a joint initiative between OIE and FAO on influenza). STAR-IDAZ is working with OFFLU in developing mechanisms for addressing research gaps.
	<ul style="list-style-type: none"> • AU-IBAR 	AU-IBAR was an Associated Partner and is now becoming a full project partner. AU-IBAR participated in the Consortium meetings, are involved in the Foresight and Programming unit (which is developing a long-term strategic research Agenda) and are now going to lead a regional network for Africa and the Middle East.
	<ul style="list-style-type: none"> • Bill and Melinda Gates Foundation 	Associated partners
	<ul style="list-style-type: none"> • The Global Research Alliance on agricultural greenhouse gases • 	A working group on Animal Health and Greenhouse Gas Emissions under the Livestock Research Group of the GRA has been established by STAR-IDAZ.
FACCE-JPI	<ul style="list-style-type: none"> • Belmont Forum • Global Research Alliance on Agricultural Greenhouse gases 	Joint calls
	<ul style="list-style-type: none"> • CGIAR CCAFS programme • Wheat Initiative • FAO Committee on World Food Security (HLPE on Food Security and Nutrition) • Global Research Alliance on Agricultural Greenhouse gases 	Exchange through annual workshops
	<ul style="list-style-type: none"> • Embrapa and IntensAfrica 	Observers at the annual workshop (2013)
ERA COFASP	<ul style="list-style-type: none"> • ICES 	Partner in the ERA-NET

2.3. Results from the questionnaire

Added value of cooperation

ERA-NET COFASP sees cooperation as an opportunity for strategic priorities in the fisheries, aquaculture and seafood processing sectors that not only serve national interests. The aim of the cooperation is balancing national input with international crosscutting issues, as seen from the science community.

ERA-NET EMIDA (within the framework of STAR-IDAZ) cooperates with the aim of coordinating research on mutual priorities to avoid duplication of efforts and improve focus and thus expedite the development of control tools – this includes sharing of information on current and planned activities and the coordination of future activities, while it may also involve the joint funding of collaborative projects. It is about bringing together the major players working on mutual priorities at both programme owner and researcher level.

JPI-FACCE In treating the questions related to agriculture, food security and climate change, it is necessary to take a global view even if the JPI concerns European research. For **FACCE** there is high added value at the EU level in working with international initiatives in that as an EU initiative the JPI is already working at bringing critical mass and is thus better able to exert its influence in a cooperation with an international initiative. Individual countries could have a more difficult time attracting the interest of an international initiative. Working with international initiatives also brings more visibility to EU research.

Obstacles for cooperation

JPI-FACCE cooperates with several other networks and organisations active in bioeconomy research, but the organisation of joint activities is long and complex in that the rules of each initiative have to be taken into account, the timing needs to be synchronised, etc.

For **ERA-ARD**, the main facilitator for cooperation is an evident need for a southern voice when focusing on challenges of food security and climate change in developing and emerging economies.

2.4. Analysis

There are more relevant MLOs and GRAs performing research in the bioeconomy, but they are not cooperating with ERA-NETs in the bioeconomy. However, there may be overlaps and complementarities in research fields. The general picture is that cooperation beyond Europe and cooperation beyond Member State funding organisations is not common practice.

Those ERA-NETs in the bioeconomy which cooperate with MLOs and GRAs have two commonalities:

(1) Research issues are global or cross-border. The networks which cooperate with GRAs and MLOs have global and cross-border research themes. **ERA-ARD and FACCE-JPI** established extended cooperation because of their research on food security. **STAR-IDAZ** and the **EMIDA ERA-NET** act on a global scale because of the nature of the research subjects. Animal diseases are a global challenge. **ERA-NET Bioenergy** cooperates with IEA bioenergy because of the development of a global framework for sustainable energy.

(2) There is substantial overlap in research issues of the ERA-NET and the MLO or GRA. **COFASP** cooperates with ICES. ICES is a multilateral organisation that carries out research in fisheries. There is an overlap with the research fields of ERA-NET COFASP.

3. Participation of third country funders in ERA-NETs

3.1. Data collection

This chapter describes the cooperation of ERA-NETs in the bioeconomy with partners from third countries. Information was obtained through a questionnaire. Although sent to coordinators of 27 ERA-NETs, only four responses were received. Because of this low response, we studied other reports from research (e.g. evaluations of ERA-NETs) to search for the reasons for participating in ERA-NET. Most of the literature, however, concerns the motivation of EU- or AC-partners for participation in ERA-NETs. There is no certainty concerning the results.

3.2. Existing cooperation of ERA-NETs in the bioeconomy with partners from AC-countries or non-European countries

AC countries are defined in the first chapter. This section shows the existing cooperation of ERA-NETs in the bioeconomy with third countries, an AC-country or a non-EU country.

ERA-NET CAPS has a number of partners and observers from outside of the EU within the network. Each of these organisations has research programme(s), most are ministries or funding agencies.

Partners are:

- the Ministry of Business, Innovation and Employment (MBIE), New Zealand and
- the National Research Council, Canada (due to restructuring, to date they have had limited involvement in the ERA-NET)

Observers are:

- the Department of Biotechnology (India),
- the Japan Science and Technology Agency,
- the American National Science Foundation (NSF). NSF held a parallel call of their Plant Genome Research Program with the first joint call of ERA-NET CAPS. This has enabled US researchers to form consortia with those funded through ERA-CAPS.

EMIDA ERA-NET, in the context of the STAR-IDAZ network, is in its own right part of an international network cooperating with research funders/programme owners and international organisations worldwide, with regional networks covering a) the Americas, b) Asia and Australasia¹¹ and c) Europe, while one is currently being established for Africa and the Middle East.

¹¹ Australasia, a region of Oceania, comprises Australia, New Zealand, the island of New Guinea, and neighbouring islands in the Pacific Ocean.

ERA-NET SAFEFOODERA developed a hub strategy. A lot of the food in the EU is imported from outside. The food safety level is best secured from the very beginning and therefore SAFEFOODERA planned to install hubs and looked for partners in each continent who could participate in SAFEFOODERA but should also bring in their knowledge and experience from their regional networks. The focus was on:

- Brazil; Plant Inspection Service Ministry of Agriculture, Livestock & Food Supply
- South Africa
- Thailand; The National Bureau of Agricultural Commodity and Food Standards
- United Arab Emirates; The Food Control Division in Abu Dhabi
- USA; The Food and Drug Administration (FDA) and the US Agricultural Research Service (US-ARS)

Other ERA-NETs cooperate to a lesser extent with research funders outside of the EU or an AC. Examples of cooperation with Associated countries are: (1) **ERA-NET CORE Organic** has the Turkish Ministry of Food, Agriculture and Livestock as a partner involved in the programme. **ERASysAPP** works with SystemsX.ch which is a partner from Switzerland. **ERA-IB-2** has two partners from outside of the EU: the Foundation for Assistance to Small Innovative Enterprises from Russia and The Scientific (FASIE) and Technological Research Council of Turkey (TUBITAK). The ERA-NET in Synthetic Biology (**ERASynBio**) works with the Kommission für Technologie und Innovation from Switzerland.

3.3. Some extra information from literature on motives for participating in ERA-NETs

ERA-NETs are formed because they offer mutual benefits for their participants. There are different evaluations of ERA-NETs¹² that have revealed motives for partners to participate in ERA-NETs. These evaluation reports also provide information about barriers for partners in third countries.

The reasons for participating which are often mentioned in ERA-NET evaluations are:

- *Developing common standards*; these help participants facilitating more effective competition with the US, Japan and other economic areas.
- *Accumulating expertise* in areas where the member state does not already have this expertise at national level. This was mentioned by a participant in the ERA-NET related to hydrogen fuel cells.
- *Avoiding duplication of efforts*; this way participants can spend their research budgets more efficiently. However, in countries where a specific topic was well-funded nationally, there was little incentive to engage in transnational cooperation.
- *Mobilisation* of the national research community towards transnational cooperation is a motive to participate in an ERA-NET.

¹² For example: ftp://ftp.cordis.europa.eu/pub/fp7/docs/fp6-ERA-NET-evaluation-final-report-volume-1-q1-q5-d1-to-d14_en.pdf

The following two barriers to cooperate in ERA-NETs were regularly mentioned in ERA-NET evaluations:

- *Efforts required*; empirical findings from a number of ERA-NET evaluations show that huge efforts of all involved partners are required.
- *No clear benefits*; the evaluation shows that financial benefits¹³ of participation in a transnational network such as ERA-NETs are not always clear. There is not always a common pot and parts of the national budget in the ERA-NET participation are intended for the own research institute. This could be a reason for not participating in ERA-NET.

3.4. Results from the questionnaire

Added value of cooperation

For ERA-NET CAPS the main active cooperation involves the NSF (USA) and MBIE (NZ). Through ERA-CAPS calls, researchers within the EU have the opportunity to cooperate with researchers in these two countries. As mentioned above, the added value for the EU comes from leveraging research funding from these countries (and vice versa).

SAFEFOODERA sees the importance of the global market for developing a large number of countries. The SAFEFOODERA-consortium considers it a high priority to establish strategic cooperation on extending the scientific methods and research results to all countries importing food into the EU, thus including EU and non-EU Member States.

Barriers

Many funding bodies often grant funds for international cooperation at national level. Various ERA-NETs in the bioeconomy noticed that most national funders cannot or will not contribute to a real common pot for calls. Thus, the calls are bound by the rules that apply to the applicants from the individual countries.

¹³ A survey of participants illustrates the use of common pots in energy research. A Finnish participant pointed out that real common pots had been widely used in transnational cooperation with other Nordic countries outside ERA-NETs. In contrast to ERA-NETs, these Nordic programmes were financed by the ministries. However, Tekes, the Finnish funding agency which participated in ERA-NETs is not allowed to fund foreign researchers.

3.5. Analysis

There are two main reasons for ERA-NETs in the bioeconomy to cooperate with partners in third countries.

The first reason lies in the nature of the research themes and is similar to the rationale for collaboration with MLOs and GPAs described in the previous chapter. Cooperation is expedited when dealing with research theme on a global scale, such as animal diseases, or when the research is being carried out in several countries.

The second reason concerns the research community; formation of a critical mass. A partner from a third country can increase the efficiency of an ERA-NET through jointly supporting networks where the best available knowledge is put together or where duplication of efforts is avoided. Although not extensively analysed, this seems to be the case for areas with small specialised research communities.

Obstacles are: the efforts which have to be made in order to cooperate; as the administrative procedures between funding agencies differ, and the financial benefits for the partner from the third country are not clear.

4. Conclusions and recommendations

This chapter provides conclusions on cooperation of ERA-NETs in the bioeconomy with GRAs, MLOs and partners from third countries. We start by describing the benefits, and continue with the obstacles. Subsequently we describe the recommendations for cooperation given by ERA-NET-coordinators and we finish with recommendations based on the previous chapters.

4.1. Drivers for cooperation

We see that cooperation of ERA-NETs depends on the goals and motivation of the partners as well as the nature of the research subjects.

Organisational issues: There are various benefits for partners to participate in an ERA-NET. This may for most partners (also the multilateral or the research alliance) be:

(1) avoiding duplication of research, (2) having access to the best available knowledge in the world, or (3) access to the best research circumstances when these are outside the EU. In highly specialised fields this could be a benefit for European partners as well as for non-European countries. Drivers for cooperation mentioned by ERA-NET coordinators are (1) avoiding duplication, (2) ensuring the best expertise in the ERA-NET, (3) increasing the critical mass by having more experts in a field. In addition, cooperation results in cost-effective research budgets.

Same research themes – not a typical European research theme - or cross-border research themes (the international food chain).

4.2. Barriers for cooperation

Although it could be interesting for ERA-NETs in the bioeconomy to cooperate with other global actors active in the bioeconomy, there is not so much cooperation going on among ERA-NETs in the bio-economy and GRAs, MLOs, or non-European national funding organisations.

We observe hard barriers and soft barriers for cooperation of ERA-NETs in the bioeconomy with GRAs, MLOs and partners in third countries:

- (1) *Hard barriers* are for example time constraints to work with partners outside of Europe. Another hard barrier is the procedures of the multilateral organisations or partners in third countries for programming or the appointment of a budget for research. It is often difficult to manage these together.
- (2) *Soft barriers* could be explained as cultural aspects like building confidence between partners.

4.3. Recommendations

The coordinators of the ERA-NETs were asked in the questionnaires to come up with recommendations to improve the cooperation with global research alliances, multilateral organisations and third countries.

For research activities addressing global objectives, it is important to facilitate access to relevant resources: what is going on in the various countries, what are possibilities for research funding, national and international. This contributes to better planning. Considering funding, it is important to have a considerable budget to overcome the transaction costs (5-10 million minimum). An alternative could be voluntary and complementary cooperation between two or three consortium partners together with the southern partners.

In this report we identified several interesting global research alliances, multilateral organisations as potential partners for ERA-NETs in the bioeconomy. As far as we can conclude this from the empirics in this report, the cooperation level of ERA-NETs in the bio-economy is not very high.

From our analysis we recommend several approaches to stimulate cooperation:

For cooperation between ERA-NETs in the bioeconomy and MLOs or GRAs

- Cooperation of ERA-NETs in the bioeconomy with GRAs and multilateral organisations could be organised around research issues which are not typical European/EU-oriented research issues.
- For the non-typical issues there might be a benefit from both sides. Research budgets could be for example more substantial, the availability of research infrastructure could be a benefit for both partners and there might be more critical mass of researchers. This way the efficiency of research budgets could increase.
- Programming procedures of global research alliances and multilateral organisations, but also of ERA-NETs in the bioeconomy do not always follow the same time line. It might be worthwhile to find out whether this can be better synchronised so we can benefit from both the European side and from the side of the partner.
- Set up a study into the global research alliances' and multilateral organisations' possible contribution in cooperating with ERA-NETs in the bioeconomy. This could be knowledge or research infrastructure.

For cooperation between ERA-NETs in the bioeconomy and partners from third countries

- More cooperation could be encouraged with some first steps by for example looking at ERA-NETs with small, specialised research fields on a European level or ERA-NETs where research is performed with a clear global nature. The added value of cooperation on a global scale could be evaluated. A pilot action with low administrative burden and high time availability could offer lessons for future EU research policy where cooperation with global research alliances, multilateral organisations and partners in third countries plays a more prominent role.
- Experiment with joint calls with other partners and evaluate the process.

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Websites

- Website of ERA-net PLATFORM <http://www.era-platform.eu/>
- The Global Research Alliance on Greenhouse Gasses: <http://www.globalresearchalliance.org/>
- The Consultative Group on International Agricultural Research: <http://www.cgiar.org/>
- The Global Forum on Agricultural Research: <http://www.egfar.org/>
- Global Footh and Mouth Disease Research: <http://www.ars.usda.gov/gfra>
- IEA Bioenergy: <http://www.ieabioenergy.com/>
- The Global Bioenergy Partnership: <http://www.globalbioenergy.org/>
- The UN Food and Agriculture Organisation: <http://www.fao.org>
- The Organisation for Economic Cooperation and Development: <http://www.oecd.org>
- The International Council for the Exploration of the Sea: <http://www.ices.dk>
- Ospar: <http://www.ospar.org/>

Annex I - GRAs and MLOs in the Bioeconomy with high Relevance for ERA-NETs active in the bioeconomy

Global Research Alliance: The Global Research Alliance on Agricultural Greenhouse Gases (GRA AGG, established 2009)

<i>Research fields</i>	The GRA on Agricultural Greenhouse Gases focuses on growing more food (and more climate-resilient food systems) without increasing greenhouse gas emissions. The GRA offers a global network of researchers and policy makers dedicated to the goals of the GRA.
<i>Goal</i>	The world needs an increase of agricultural production, in the high level production systems as well as in the low level production systems. The whole range of farmers, from industrial farmers to smallholders, needs to increase their production in a sustainable and climate-smart way. The GRA is focusing on research, development and extension of technologies and practices that will help deliver ways to grow more food (and more climate-resilient food systems) without increasing greenhouse gas emissions. Members of the GRA aim to deepen and broaden mitigation research efforts across the agricultural sub-sectors of paddy rice, cropping and livestock, and the cross-cutting themes of soil carbon and nitrogen cycling, and inventories and measurement issues. The GRA working groups elaborate on synergy between mitigation and adaptation.
<i>Governance</i>	The GRA on Agricultural Greenhouse Gases has more than 40 member countries from all regions of the world ¹⁴ . The GRA is a unique link between national policy makers and national knowledge institutes and it is partnering with several platforms from private companies and multilateral organisations. The Alliance is founded on the voluntary, collaborative efforts of countries. Its membership and governance arrangements are underpinned by a Charter signed by all participating countries. This Charter establishes the GRA Council, which is the representative body of all member countries. From June 2014, the Netherlands holds the role of GRA Chair for a 12 month period. Currently, New Zealand holds the role of Vice-Chair on an interim base. There is a secretariat hosted by New Zealand.
<i>Programming</i>	The GRA combines several instruments and resources of the member countries and partners to bring about action. Together, the five GRA working groups cover the main food products and the main issues through which agriculture influences climate.
<i>Nature of the network</i>	The GRA is a voluntary cooperation between countries to link the research networks and develop more integral approaches governed from a shared policy agenda. Government representatives and researchers are therefore active in the network.
<i>Budgets</i>	The GRA has no budget as such: member countries don't pay a fee. Participation from researchers or other country representatives are considered to be covered by the country itself. In some situations, developed countries support participation by developing countries, but only through supplying partial funds. In some cases the GRA partners up with other organisations, for instance the CCAC. This partner then provides a budget for projects to which the GRA can contribute.

¹⁴ Member countries of the GRA on Agricultural Greenhouse Gases: Argentina, Australia, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Denmark, Ecuador, Finland, France, Germany, Ghana, Honduras, Indonesia, Italy, Ireland, Japan, Malaysia, Mexico, Nicaragua, the Netherlands, New Zealand, Norway, Panama, Paraguay, Peru, the Philippines, Republic of Korea, Spain, Sri Lanka, Sweden, Switzerland, Thailand, the United Kingdom, United States, Uruguay, Vietnam.

Global Research Alliance: Consultative Group on International Agricultural Research (CGIAR, established in 1971)

Research field	CGIAR research focuses on reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources.
Goal	CGIAR is a global partnership that unites organisations engaged in research for a food-secure future.
Governance	The Fund Council is the decision-making body of the CGIAR Fund and composed of representatives of the Fund donors and other stakeholders (19 countries, 3 multilateral organisations, 3 foundations) ¹⁵ Management is supported by a consortium office which is based in Montpellier. The Fund council also appoints the Independent Science and Partnership Council, a panel of leading scientific experts who provide independent advice and expertise to all Fund donors. This advice is used by the Council to approve CGIAR Research Programs and allocate resources to them.
Programming	Research is carried out by 15 Centres ¹⁶ . The centers are specialized in certain sectors or cash crops, such as rice, maize, potato, livestock, natural resources (water, forests, biodiversity) or disciplines (food policy)The centers form the CGIAR Consortium, and collaborate with hundreds of partner organisations, including national and regional research institutes, civil society organisations, academia, and the private sector. The Consortium Board stimulates joint, interdisciplinary research programmes and strategic partnerships with non-CGIAR research stations and the private sector through the establishment of so-called CRPs (Consortium Research Programmes), next to bilateral funding of individual centers. CGIAR research aims at generating and disseminating agricultural knowledge, technologies, and advice for the benefit of the poor.
Nature of the network	The CGIAR centers are opening up to other partners: national agricultural research stations in developing countries, advanced research institutes in other parts of the world, NGOs, private companies. The alliances aim at higher development outcomes.
Budgets	The CGIAR Fund is a multi-donor trust fund that finances CGIAR research guided by the Strategy and Results Framework. The CGIAR Fund is administered by the World Bank, as Trustee, and governed by the Fund Council. Since the launch of the reform in 2008, funding increased by 13% annually up to a total expenditure in 2013 of \$984 million, CRP expenditures amounted to 82% of the total, Expenditures in sub-Saharan Africa increased up to 50%, whereas investments in Asia and North Africa decreased to 31%. Investments in Latin America are 19%.

¹⁵ http://www.cgiarfund.org/fund_council_membership

¹⁶ <http://www.cgiar.org/cgiar-consortium/research-centers/>

Global Research Alliance: The Global Forum on Agricultural Research (GFAR, established in 1996)

Research fields	The Global Forum on Agricultural Research focuses on agricultural innovation for – especially the poor farmers.
Goal	Participants in GFAR seek to integrate research into the societies it aims to serve and put meeting the needs of farmers (in particular resource-poor farmers) and the poor at the very core of agricultural research and innovation systems. The ambition of the network is: “We need a revolution in agricultural research for development, to mobilize, reorient, strengthen and bring coherence to systems generating and sharing new knowledge around the world, to overcome systematic failings and efficiently lead to development outcomes for the poor”.
Governance	GFAR is managed by a Steering Committee that works in close cooperation with a Donor Support Group and a management team ¹⁷ . All are assisted by the Forum Secretariat, which is hosted in the Headquarters of the Food and Agriculture Organisation of the United Nations (FAO) in Rome.
Programming	Jointly agreed actions are delivered directly through the organisations, networks and agencies involved in systems of agricultural innovation around the world.
Nature of the network	Members will work with farmers and farmer organisations, the private sector, international and regional research institutes, foundations and non-governmental organisations to improve the sharing of research results, technologies and good practices and get these out on the ground. Those involved in GFAR cover the continuum from farmers and consumers to researchers. The Forum promotes an active exchange of data, people and research to help improve the ways agricultural greenhouse gas research is conducted and to enhance participating countries’ scientific capability.
Budgets	The basic financial principle of the Global Forum is cost sharing, with each partner contributing to the GFAR programmes according to their resources. The Forum’s Secretariat is in no way a donor or an executing agency for donors. Only seed money is available - to assist the stakeholders in developing and formulating ideas and joint programmes, or to help to boost interregional cooperation.

¹⁷ The Forum’s Steering Committee involves all relevant categories of stakeholders. These are represented through: Regional Fora bringing together National AR4D systems of each region (AARINENA, APAARI, CACAARI, EFARD, FARA and FORAGRO), International Agricultural Research Centres (IARCs), NGOs(INHERE), Farmers’ Organizations (AFA), Private Sector (PANAAC), Donor Support Group (EC), Facilitating Agencies (FAO, IFAD).

The GFAR Donor Support Group (GFAR-DSG) works to mobilize the international donor community in support of the Global Forum on Agricultural Research initiative. It is currently being led by the European Commission. See for a full list of supporters (<http://www.egfar.org/about-us/governance-and-organization/gfar-donor-support-group>).

The Global Forum’s Management Team consists of the Chair and Vice-Chair of GFAR, the two members of the GFAR facilitating agencies (FAO and IFAD) who are members of the GFAR Steering Committee, the Chair of the Forum’s Donor Support Group, and the Executive Secretary of the Global Forum who acts as the Member Secretary of the Team and the Chair of the Programme Committee.

Global Research Alliance: Global Foot and Mouth Disease Research Alliance (GRFA, established in 2003)

Research fields	The GRFA is focused on a broad spectrum of aspects of foot and mouth diseases (FMD), such as understanding host-pathogen interactions; understanding the epidemiology of FMD and discovering vaccines specifically designed for the control and eradication of the FMD virus.
Goal	<p>The aim of the GRFA is to build a global alliance of partners to generate and share knowledge - in a virtual FMD laboratory - to develop tools that can better combat the threat of the disease.</p> <p>The GFRA has five goals:</p> <ul style="list-style-type: none"> • facilitating research cooperation and serve as a communication gateway for the global FMD research community; • conducting strategic research to better understand Foot and Mouth Disease • developing the next generation of control measures and strategies for their application; • determining the social and economic impact of a new generation of improved FMD control; • providing evidence to inform development of policies for safe trade of animals and animal products in FMD-endemic areas.
Governance	GFRA is a worldwide association of animal research organisations that are involved in combating FMD. The GFRA has an Executive Committee comprising GFRA members who facilitate activities that advance the GFRA mission. Division of roles; Membership: partners are research organizations and official member (signed a MoU) (in the Netherlands WUR), collaborators are research organizations that collaborate in research projects; stakeholders are organizations supporting GFRA (as SCAR Cwg AHW and STAR-IDAZ).
Programming	The alliance develops action plans with different aims. One aim is to identify partnership opportunities and promote funding of collaborative research projects. Another aim is to ring together experts to analyse gaps and set research priorities. The network currently has several research programs active in Europe, North America, South America and South-East Asia. GFRA programs will continue to expand the alliance in these areas and will actively reach out to new areas of the world that have a stake in the progressive control and eradication of FMD.'
Nature of the network	Global network of animal health research organizations
Budget	GFRA members currently manage a research budget of over US\$10 million dedicated to the global control and eradication of FMD

Multilateral Organisation: An International Energy Agency, Bioenergy, established in 1974)

Research fields	IEA Bioenergy focuses on sustainable bioenergy questions
Goal	IEA Bioenergy's vision is to achieve a substantial bioenergy contribution to future global energy demands by accelerating the production and use of environmentally sound, socially accepted and cost-competitive bioenergy on a sustainable basis, thus providing increased security of supply whilst reducing greenhouse gas emissions from energy use.
Governance	In IEA Bioenergy 23 countries collaborate ¹⁸ . The IEA has established Implementing Agreements to provide a framework for international cooperation in energy technology R&D, demonstration and information exchange. They specify the commitments of the Contracting Parties, and a management structure. Activities are set up under Implementing Agreements that provide the legal mechanisms for establishing the commitments of the Contracting Parties and the management structure to guide the activity. The Contracting Parties to an Implementing Agreement nominate an Executive Committee that acts as the 'board of directors' of the Implementing Agreement. The Executive Committee appoints Operating Agents to manage the day-to-day activities of each of the Tasks of the Agreement. The Executive Committee is made up of one representative from each participating country, and most substantive decisions must be made through consensus.
Programming	IEA Bioenergy operates within the IEA energy technology and R&D cooperation programme. This programme facilitates cooperation among IEA Member and non-Member countries to develop new and improved energy technologies and introduce them to the market.
Nature of the network	Contracting Parties can be government organisations or private entities designated by their governments. Non-IEA Member countries, or their designated entities, can become Contracting Parties.
Budgets	No information available

¹⁸ Bioenergy Australia (Forum) Ltd, The Republic of Austria, The Government of Belgium, The National Department of Energy Development of the Ministry of Mines and Energy (Brazil), Natural Resources Canada, The Energy Institute "Hrvoje Pozar" (Croatia), The Ministry of Transport and Energy, Danish Energy Authority, Commission of the European Union, Tekes, Finnish Funding Agency for Technology and Innovation, L'Agence de l'Environnement et de la Maîtrise de l'Énergie (ADEME) (France), Federal Ministry of Food, Agriculture and Consumer Protection (Germany), The Sustainable Energy Authority of Ireland (SEAI), Gestore dei Servizi Energetici – GSE (Italy), The New Energy and Industrial Technology Development Organization (NEDO) (Japan), Ministry of Knowledge Economy, the Republic of Korea, NL Enterprise Agency (The Netherlands), The New Zealand Forest Research Institute Limited, The Research Council of Norway, South African National Energy Research Institute (SADERI), Swedish Energy Agency, The Swiss Federal Office of Energy, Department of Energy and Climate Change (United Kingdom), The United States Department of Energy.

Global Research Alliance: The Global Bioenergy Partnership (GBEP, established in 2006)

Research fields	The Partnership focuses its activities on three strategic areas: <ul style="list-style-type: none"> • Sustainable development • Climate change • Food and energy security
Goal	GBEP promotes bioenergy for sustainable development.
Governance	<p>GBEP brings together public, private and civil society stakeholders. GBEP Partners now comprise 23 countries and 14 international organisations and institutions and a further 26 countries and 11 international organisations¹⁹ and institutions are participating as observers²⁰. GBEP has a steering committee and a technical working group which are supported by a secretariat. The Steering Committee governs the overall framework, policies, procedures and activities of the Partnership. In addition, it provides direction and instructions for actions to the Secretariat. Decisions on accepting new partners are taken by the Steering Committee. The Committee usually meets twice a year, at times and places to be determined by its appointed representatives.</p> <p>The Technical Working Group, co-chaired by Italy and Brazil, is a technical body of the Partnership whose main activity is to discuss and develop the GBEP programme of work in order to make suggestions to the Steering Committee about further activities of the Partnership. The Group usually meets twice a year, at times and places to be determined by its appointed representatives.</p> <p>The GBEP Secretariat, located at the FAO Headquarters in Rome, is the principal coordinator of the Partnership's communications and activities. The Secretariat is mainly supported by Italy and receives additional support, past and present, from Brazil, Germany, the Netherlands, the United Kingdom, the United States, and UN FAO.</p> <p>The GBEP Task Force on Sustainability, established in June 2008 under the leadership of the United Kingdom, and currently led by Sweden, has developed the report The Global Bioenergy Partnership Sustainability Indicators for Bioenergy.</p> <p>The GBEP Task Force on GHG Methodologies was established in October 2007 under the joint leadership of the United States and the UN Foundation, to develop a common methodological framework for the use of policy makers and stakeholders when assessing GHG emissions associated with bioenergy and to make GHG lifecycle analyses more transparent.</p> <p>The GBEP Working Group on Capacity Building for Sustainable Bioenergy (Working Group), established in May 2011 and co-chaired by the Netherlands and the United States until May 2013 and currently by Argentina and ECOWAS, is promoting the dissemination, use, and implementation of the outcomes of the GBEP Task Forces on GHG Methodologies and on Sustainability through activities and projects.</p>
Programming	The Steering Committee provides strategic guidance to the Partnership and periodically reviews the programme of collaborative activities undertaken by the Partnership.
Nature of the network	Public, private and civil society stakeholder
Budget	No information available

¹⁹ : Argentina, Brazil, Canada, China, Colombia, Fiji, France, Germany, Ghana,

Italy, Japan, Mauritania, Mexico, the Netherlands, Paraguay, Russian Federation, Spain, Sudan, Sweden, Switzerland, Tanzania, United Kingdom, United States of America, Economic Community of West African States (ECOWAS), European Commission, FAO, IDB, IEA, International Renewable Energy Agency (IRENA), UNCTAD, UN/DESA, UNDP, UNEP, UNIDO, UN Foundation, World Council for Renewable Energy (WCRE) and European Biomass Industry Association (EUBIA).

²⁰ Angola, Australia, Austria, Cambodia, Chile, Denmark, Egypt, El Salvador, Ethiopia, Gambia, India, Indonesia, Kenya, Lao PDR, Madagascar, Malaysia, Morocco, Mozambique, Norway, Peru, Rwanda, South Africa, Thailand, Tunisia, Vietnam, Zimbabwe, African Development Bank (AfDB), Asian Development Bank (ADB), Economic Commission for Latin America and the Caribbean (ECLAC), European Environment Agency (EEA), Global Environment Facility (GEF), International Fund for Agricultural Development (IFAD), Organization of American States (OAS), Union Economique et Monétaire Ouest Africaine (UEMOA), World Agroforestry Centre (ICRAF), World Bank and the World Business Council on Sustainable Development (WBCSD).

Multilateral Organisation: The United Nations Food and Agriculture Organisation (FAO, established in 1945)

Research fields	The FAO deals with issues on food, agriculture and natural resources.
Goal	The three main objectives of the FAO are: the eradication of hunger, food insecurity and malnutrition; the elimination of poverty and driving forward economic and social progress for all; and the sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources for the benefit of present and future generations.
Governance	The Conference elects Council Members to serve three-year rotating terms to carry out executive oversight of programme and budgetary activities. The Conference also elects a Director-General to a four-year term of office, renewable once.
Programming	Representatives of members meet at the biennial FAO Conference to review global governance policy issues and international frameworks, and to evaluate work carried out and to approve the budget for the next biennium.
Nature of the network	FAO is an intergovernmental organisation with staff. FAO comprises six departments: Agriculture and Consumer Protection; Economic and Social Development; Fisheries and Aquaculture; Forestry; Corporate Services, Human Resources and Finance; Technical Cooperation.
Budget	FAO's overall programme of work is funded by assessed and voluntary contributions. Member countries' assessed contributions comprise the regular budget, set at the biennial FAO Conference. The FAO regular budget for the 2014-15 biennium is USD 1,005.6 million. The voluntary contributions provided by Members and other partners support technical and emergency (including rehabilitation) assistance to governments for clearly defined purposes linked to the results framework, as well as direct support to FAO's core work. The voluntary contributions are expected to reach approximately USD 1.4 billion in 2014-15 (about 1.03 billion euros).

Multilateral Organisation: The Organisation for Economic Cooperation and Development (OECD, established in 1961), specifically through its research programme on biological resources in agriculture (CRP)

Research fields	<p>The OECD CRP promotes such international cooperation through funding conferences/workshops and research fellowships related to the themes of:</p> <ul style="list-style-type: none"> • The Natural Resources Challenge • Sustainability in Practice • The Food Chain
Goals	<p>The mission of the OECD is to promote policies that will improve the economic and social wellbeing of people across the world. The Trade and Agriculture Committee established a Co-operative Research Programme (CRP) on Biological Resource Management for Sustainable Agricultural Systems. This programme focuses on strengthening scientific knowledge and providing relevant scientific information to feed into future policy decisions related to the sustainable use of natural resources, in the areas of food, agriculture, forests and fisheries.</p>
Governance	<p>Annual Call for Applications to interested scientists and institutions within their country.</p>
Programming	<p>Every year there is a call to sponsor fellows doing research fitting one of the themes.</p>
Nature of the network	<p>Intergovernmental organisation supported by staff organised in a directorate.</p>
Budget	<p>Less than 1 million euros annually.</p>

Global Research Alliance: The International Council for the Exploration of the Sea (ICES, established in 1902)

<i>Research fields</i>	ICES has a number of high priority work areas: <ul style="list-style-type: none"> • Arctic research • Integrated ecosystem assessments • Marine Strategy Framework Directive (MSFD) • Sustainable aquaculture
<i>Goals</i>	ICES is a global organisation which aims to be a leading scientific organisation on marine ecosystems and to provide the knowledge to secure the sustainable use of the seas.
<i>Governance</i>	The principal decision and policy-making body of ICES is the Council. The Council comprises the ICES President and two Delegates appointed by each of the 20 member countries. ²¹ The work of the Council is carried out through the Advisory Committee, Science Committee, and Data and Information Group.
<i>Programming</i>	The advisory committee advises clients on fisheries and marine ecosystem issues. The council decides on the work programme of ICES.
<i>Nature of the network</i>	ICES is a network of more than 4000 scientists from almost 300 institutes, with 1600 scientists participating in activities annually.
<i>Budget</i>	The ICES budget comes from the European Commission and the participating Member States.

²¹ ICES has 20 member countries: Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Latvia, Lithuania, the Netherlands, Norway, Poland, Portugal, Russian Federation, Spain, Sweden, United Kingdom, and the United States of America.

Multilateral Organisation: OSPAR²² (established in 1972)

Research fields	OSPAR works on marine and fisheries issues.
Goals	Fifteen Governments ²³ of the western coasts and catchments of Europe, together with the European Union, cooperate in the OSPAR network to protect the marine environment of the North-East Atlantic.
Governance	<p>OSPAR works primarily through the resources of the Contracting Parties, to examine the background to new issues, to develop proposals for the actions and measures to be taken by OSPAR and to prepare assessments on the effectiveness of its work.</p> <p>The OSPAR Secretariat administers the work under the Convention, coordinates the work of the Contracting Parties and runs the formal meeting schedule of OSPAR. The OSPAR Secretariat also manages reporting of Contracting Parties on the implementation of OSPAR measures and the reporting of data under OSPAR monitoring programmes. For some issues practical data management is handled by a lead Contracting Party or contracted to specialist data centres.</p> <p>Meetings of the OSPAR Commission and its subsidiary bodies are chaired by elected representatives of the Contracting Parties. OSPAR Committees and Working Groups may be delegated to handle the practical implementation of the strategies and to prepare material for examination by the Commission. Observer organisations also take active part in the work of Committees and working groups.</p>
Programming	For each main Committee a work programme is designed and implemented annually. The work programmes are composed of products to be delivered to the next meetings of the committee. For each product a task manager from a lead country or the Secretariat is identified. Where issues require substantial work between meetings, informal groups may be established, such as intersessional correspondence groups. These are usually convened by a lead country. Where necessary, OSPAR workshops may be convened by a Contracting Party to examine a particular issue following agreement of the OSPAR Commission.
Nature of the network	Mostly governmental representatives, contracted parties are countries or organisations (e.g. the European Commission). One or two contracting parties have the lead in certain tasks, e.g. scientific research. Research can be carried out by various knowledge institutes. The Ospam Committee is responsible for the final result.
Budget	No information available.

²² OSPAR is so named because of the original Oslo and Paris Conventions ("OS" for Oslo and "PAR" for Paris).

²³ The fifteen Governments are Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Finland is not on the western coasts of Europe, but some of its rivers flow to the Barents Sea, and historically it was involved in the efforts to control the dumping of hazardous waste in the Atlantic and the North Sea. Luxembourg and Switzerland are Contracting Parties due to their location within the catchments of the River Rhine.

Annex II - Questionnaire about international cooperation of KBBE ERA-NETs and JPIs

PLATFORM Task 4.4: ERA-NETs and international research alliances

A. Aim of the questionnaire

The aim of this questionnaire is to collect information and recommendations with regard to international cooperation of bioeconomy relevant ERA-NETs and JPIs.

B. Background

Task 4.4 aims to increase the effectiveness of ERA-NETs by delivering recommendations on enhancing synergy of ERA-NETs with international research alliances. This task is led by the EL&I and builds on experiences and activities of the ERA ARD (Agriculture and Rural Development) consortium. Examples of global research alliances include, but are not limited to:

- The Consultative Group in International Agricultural Research (CGIAR) and its 15 consortium members;
- The Global Forum on Agricultural Research (GFAR) and its six independently managed Regional Foras²⁴;
- The UN Food and Agriculture Organisation (FAO);
- The Global Research Alliance on agricultural greenhouse gasses; and
- The Organisation for Economic Cooperation and Development (OECD), specifically through its research programme on biological resources in agriculture.

Within this task, information is gathered on existing international cooperation of the KBBE ERA-NETs with and within these research alliances. The goal and approach behind such cooperation will be discussed and a priority list drawn up for cooperation between ERA-NETs and international research alliances. This priority list will reflect the global dimensions and will be accompanied by advice on how to put in place mutually beneficial interaction between ERA-NETs and the research or developmental-driven alliances mentioned above. This could imply a shared vision on future cooperation (mutually beneficial interaction) in setting research priorities in the KBBE area leading towards increased effectiveness and efficiency of research planning, funding and implementation. (PLATFORM Grant Agreement, 10-06-2011, DoW page 17)

This questionnaire focuses on cooperation with international initiatives. Cooperation with (other) ERA-NETs, JPIs, or technology platforms are not addressed by this questionnaire.

²⁴ The regional fora focus on the following specific regions:

[AARINENA](#) - Association of Agricultural Research Institutions in the Near East and North Africa

[APAARI](#) - Asia Pacific Association of Agricultural Research Institutions

[CACAARI](#) - Central Asia and the Caucasus Association of Agricultural Research Institutions

[EFARD](#) - European Forum on Agricultural Research and Development

[FARA](#) - Forum for Agricultural Research in Africa

[FORAGRO](#) - Forum for the Americas on Agricultural Research and Technology Development

Although the task description in the DoW is limited to the ERA-NETs we kindly request the JPIs to complete the questionnaire as well, so that this information can be included in the further analysis. The first step is taken by carrying out an inventory of the existing cooperation, drivers for cooperation and added value. This is done by sending out a short questionnaire to all KBBE ERA-NET coordinators and the coordinators of JPIs in the KBBE domain. The result of this questionnaire will be presented and discussed during the PLATFORM Workshop on 18-19 April in Paris.

C. Questions

Network and contact details

- a. For which ERA-NET or JPI are you answering this questionnaire?

- b. What is your name, role in the network (coordinator/manager/..) and which are your contact details?

1. INVENTORY OF INTERNATIONAL COOPERATION

- a. With which international (=outside the EU) networks / research alliances / research programmes does your network cooperate?

... please name ...

What is the nature of the cooperation for each of these (participation as a member, cooperation through joint activities, advisory/ consultation role, information exchange (or more than one) ... please name ...

- a. In the case of cooperation in joint activities, please specify. Do you participate through Planning, Funding or Implementation (or more than 1 activity)

... please indicate activity ...

2. AIMS – DRIVERS FOR INTERNATIONAL COOPERATION

- a. Which are the main objectives and drivers for this cooperation?

This could include: *ethical considerations* such as poverty alleviation or the environment; *scientific knowledge considerations* aimed at improving research inside the EU; *food security & safety considerations* focusing on international flows of agricultural products to the EU (fisheries, animal & plant diseases); *trade & investment considerations* aimed at strengthening the competitive position of the EU; or *geo-political considerations* aimed at promoting economic growth and stability.

... please name ...

- b. If you do not cooperate, do you experience obstacles to cooperation?

This could include the lack of information about other networks, the lack of European added value, limited relevance for the ERA-NET because the subject is only relevant on a European scale.

... please name ...

3. ADDED VALUE OF INTERNATIONAL COOPERATION

- b. What is the main added value of this cooperation at EU level, *rather than national or regional level*, given the main objectives and drivers that you mentioned under point 2?

... please indicate for each network / alliance / programme which objective – driver is most relevant and whether the added value is very high, high, neutral or low ...

- c. What is the specific or added value of coordination through a public-public partnership (a network of programme owners: ministries and councils) rather than through an institutional level?

... please indicate specific added value of P2P (ERA-NET or JPI) network ...

- d. In your opinion, which activity generates the highest added value: Planning, Funding or Implementation?

... please indicate for each network / alliance / programme which activity has the highest added value ...

4. RECOMMENDATIONS FOR INTERNATIONAL COOPERATION

- a. **Which criteria** would you suggest an ERA-NET to use when developing their plans for international cooperation and selecting the networks / organisations / programmes to establish cooperation with?

... please indicate the criteria ...

- b. With which international networks / alliances / programmes would you recommend **your ERA-NET/JPI** to increase, continue or decrease cooperation?

... please indicate the objective (see Question 2) and added value (see Question 3) ...

- c. Do you have any **recommendations for any other ERA-NET or JPI** with regard to international cooperation? For which Research Activities (= Planning, Funding and Implementation), do you recommend to increase, continue or decrease cooperation?

... please indicate the objective (see Question 2) and added value (see Question 3) and if possible, please indicate in which network / alliance / programme the theme would best be included ...

- d. Do you have recommendations that you feel should be included by PLATFORM with regard to international cooperation?

... please indicate the objective (see Question 2) and added value (see Question 3) and if possible, please indicate in which network / alliance / programme the theme would best be included ...

Annex III - Questionnaire about cooperation of ERA-NETs with partners in third countries

EXISTING TRANSNATIONAL ACTIVITIES – Coordinators' Survey

Questionnaire addressing ERA-CAPS Task 1.3 (and feeding into PLATFORM Task 4.4)

Objective: To survey the coordinators of ERA-NETs and ERA-NETs+ related to the KBBE, learn about their experiences whilst involved in these programmes and whether/how the programmes have become self-sustainable, so that this knowledge can be applied to ERA-CAPS.

To maximise the impact of the information gathered in this survey, it will be shared with PLATFORM to assist in their Task 4.4 (*ERA-NETs and International Research Alliances*).

Please submit your completed responses to Sarah Blackburn (Sarah.Blackburn@bbsrc.ac.uk) by Friday 22nd March.

Answer Sheet:

1. Name of programme coordinator (funding organisation)

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2. Name of transnational research programme that your organisation is coordinating.

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3. Name of the other partners involved in the programme and their nationality.

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4. Describe the funding mechanism used in this transnational programme e.g. Real common pot, virtual common pot, mixed modes - for definitions of these terms please visit: <http://netwatch.jrc.ec.europa.eu/web/lp/learning-platform/toolbox/call-implementation/call-planning/call-process-and-administration/funding-mode>

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5. Indicate the value of funding that was contributed by your funding organisation to calls within this transnational programme and the total value of the calls (i.e. leverage).

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6. What type of programme is it? e.g. bottom-up (research community-driven), or top-down (funding organisation/government-driven).

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7. What topics were covered within the programme?

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8. How did the transnational programme come about? (How did the partners get involved?)

--

9. What were the main drivers and barriers to setting up the transnational

--

programme?

10. Have standard procedures/templates for agreement been developed between the partners?

11. If yes, how were agreements reached? What barriers had to be overcome and what benefits were gained?

12. What were the main lessons learnt from participating in this transnational programme?

13. Has the programme become self-sustaining? If so, how has this been achieved?

14. If not, is the programme planning on becoming self-sustaining? What plans have been discussed?

15. General Comments: Feel free to use the space below to provide us with any other comments you feel are relevant to this survey.

Annex IV – The list of ERA-NETs in the bioeconomy with their questionnaire returned

1. ERA ARD:
2. CORE Organic
3. ERA-NET Bioenergy
 - ERA-NET Plus ERASysBio+ (October 2008 – June 2013)
 - ERA-NET ERASysBio (February 2006 – February 2011)
4. RURAGRI
5. Susfood Project
6. STAR-IDAZ (and the EMIDA ERA-NET)
7. ERA-IB-2
8. ICT-AGRI
9. ERA-CAPS
10. COFASP
11. ERASysAPP – ERA-NET for Systems Biology Applications
12. SAFEFOODERA
13. ERA-NET EuroTransBio
14. ARIMNet
15. WOODWISDOM-NET
16. BiodiversA
17. EUPHRESCO
18. ETB-PRO
19. SEAS-ERA
20. FORESTERRA
21. SUMFOREST
22. C-IPM
23. ERA-MBT
24. GMO ERA-NET preparatory action
25. FACCE-ERA-NET + (FACCE - JPI)
26. BESTF 2