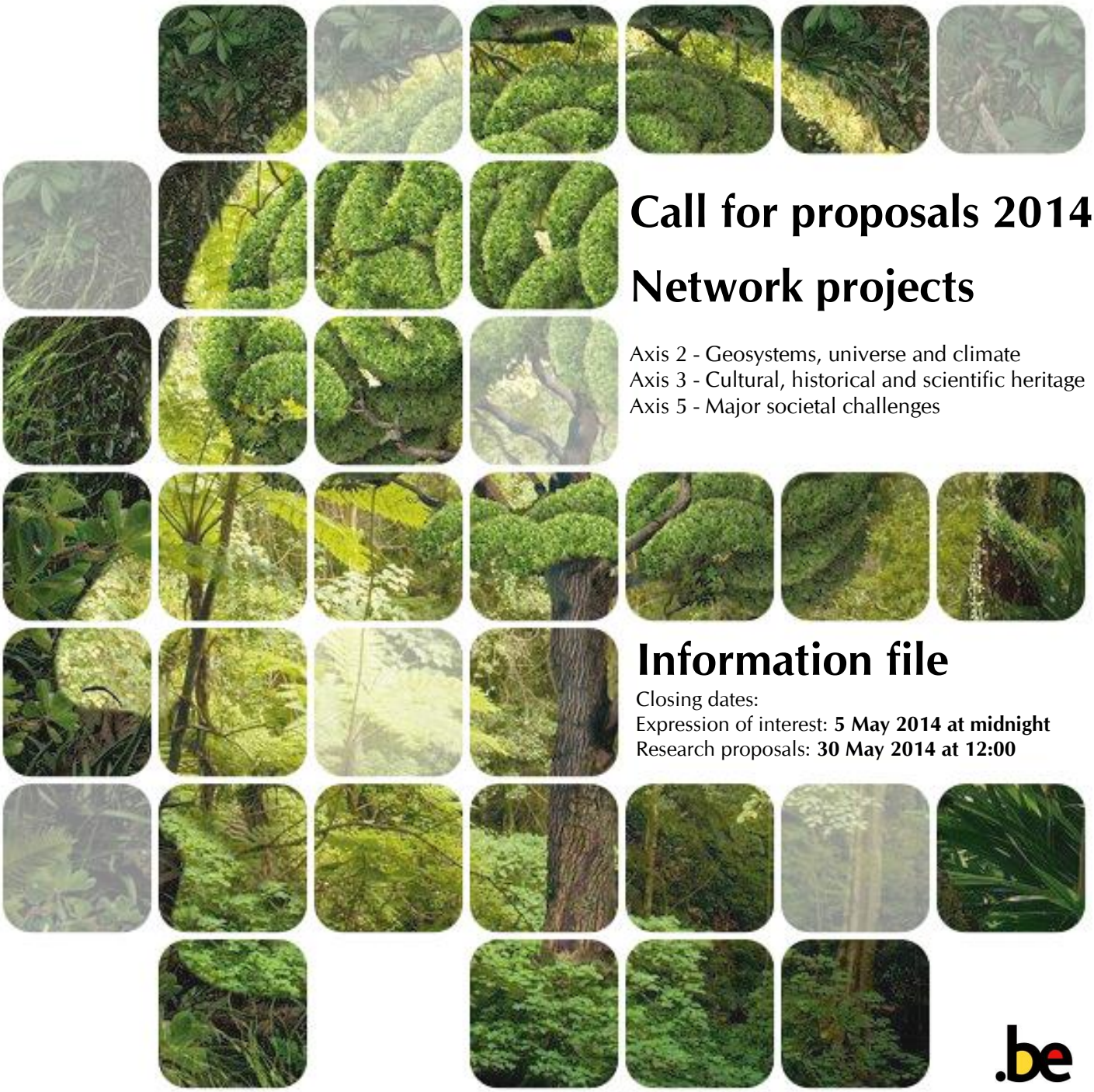
Belgian Science Policy Office

belspo

BRAIN-be

BELGIAN RESEARCH ACTION THROUGH INTERDISCIPLINARY NETWORKS



Call for proposals 2014

Network projects

Axis 2 - Geosystems, universe and climate
Axis 3 - Cultural, historical and scientific heritage
Axis 5 - Major societal challenges

Information file

Closing dates:
Expression of interest: **5 May 2014 at midnight**
Research proposals: **30 May 2014 at 12:00**

.be

TABLE OF CONTENTS

1. MULTI-YEAR FRAMEWORK PROGRAMME FOR RESEARCH - BRAIN-BE

On 5th October 2012, the Council of Ministers approved the launch of the first phase (2012-2017) of the recurrent framework programme for research, BRAIN-be (Belgian Research Action through Interdisciplinary Networks).

Through the funding of research projects based on scientific excellence and European and international anchorage, this framework programme allows the federal departments' scientific knowledge needs to be met as well as supporting the scientific potential of the Federal Scientific Institutions[1] (FSI - see annex 2).

The strategic objectives, which have been set, based on the federal visions and priorities (both political and scientific) underlying the BRAIN-be programme, are as follows:

- to promote a coherent scientific policy within the FSI, and to thereby support and reinforce scientific excellence;
- to facilitate access to the scientific potential, infrastructure and collections available within the FSIs;
- to align the research potential with societal needs;
- to supply the scientific knowledge necessary for the preparation, implementation and evaluation of federal policies/strategies, particularly those related to topics involving multiple departments;
- to provide the scientific support necessary for the development of a Belgian position within various international forums for policy development;
- to develop and reach a critical mass for research on topics deemed priority areas in order to reinforce the impact of the federal research;
- to stimulate cooperation within the Belgian scientific community;
- to align with the European and international research agendas and to encourage Belgian participation in transnational and international research activities;
- to provide scientists with a framework allowing them to take up their role in scientific watch and to anticipate issues related to the priority areas of the programme;
- to promote systemic, multi/interdisciplinary and integrative approaches;
- to create added value by strengthening the complementarity and synergies between the activities of BELSPO (including contributions to the international infrastructure and organisations);
- to meet the obligations in terms of research stemming from international agreements;
- to develop interfaces with potential users of research achievements.

The framework programme is structured around six thematic axes:

1. Ecosystems, biodiversity, evolution
2. Geosystems, universe and climate
3. Cultural, historical and scientific heritage,
4. Federal public strategies
5. Major societal challenges
6. Management of collections

BRAIN-be is open to the whole Belgian scientific community: universities, university colleges, public scientific institutions and non-profit research centres.

[1] The acronym FSI covers the institutions as defined in the Royal Decree of 30 October 1996 and the Centre for Historical Research and Documentation on War and Contemporary Society (Ceges-Soma)

Bearing in mind the priorities of the thematic axes, the framework programme enables participation in transnational programmes, such as the ERA-NETs and the Joint Programming Initiatives (JPI). The current programmes and actions concerned are:

- JPI Climate (http://www.jpi-climate.eu)
- JPI More Years, Better Lives - The Potential and Challenges of Demographic Change (http://www.jp-demographic.eu/)
- JPI Healthy and Productive Seas and Oceans (www.jpi-oceans.eu)
- JPI on Cultural Heritage and Global Change: a new challenge for Europe (http://www.jpi-culturalheritage.eu/)
- ERA-net BiodivERsA (www.biodiversa.org)
- ERA-net SEAS-ERA (www.seas-era.eu)
- ERA-net^{+} Heritage Plus (http://www.jpi-culturalheritage.eu/heritage-plus/)

The framework programme is based on the financing of two types of research project:

- 2 or 4-year network projects
- pioneer projects lasting a maximum of 2 years.

Each year, a call for proposals is launched for these two types of research project. This information file concerns the call related to network projects.

BRAIN-be is implemented under the responsibility of the Belgian Science Policy Office (BELSPO), assisted by an accompanying plenary committee made up of representatives of the federal departments and the FSIs. The plenary committee has appointed six thematic committees open to all of the federal departments and FSIs, whose primary role is to identify the priorities for research to be included in the calls for network projects.

For more information about the programme and the various thematic areas, please see www.belspo.be/BRAIN-be.

CALENDAR OF THE CALLS FOR PROPOSALS

The calendar and the indicative budgets for the calls for proposals as mentioned in the note to the Council of Ministers are as follows:

Available budget in MEUR	end 2012	begin 2013	begin 2014	end 2014	end 2015	end 2016	TOT
Axis 1: Ecosystems, biodiversity, evolution		6.93		7.19		7.36	21.48
Axis 2: Geosystems, universe and climate	6.93		7.19		7.36		21.48
Axis 3: Cultural, historical and scientific heritage	6.93		7.19		7.36		21.48
Axis 4: Federal public strategies		5.65		5.86		5.99	17.50
Axis 5: Major societal challenges	5.65		5.86		5.99		17.50
Axis 6: Management of collections		3.66		3.80		3.89	11.35
Pioneer Projects	0.94	0.94	0.98	0.98	1.00	1.00	5.84

2. SCOPE OF THE CALL

The current call concerns the thematic axis 2, 3 and 5.

The total available budget for every axis is between:

- 5.5 and 6.9 million euro for Axis 2 - Geosystems, universe and climate
- 5.1 and 6.5 million euro for Axis 3 - Cultural, historical and scientific heritage
- 4.2 and 5.3 million euro for Axis 5 - Major societal challenges

The exact amount is depending on future decisions of the federal government regarding the budget 2014.

The research priorities for these thematic axes are described in this chapter.

2.1 THEMATIC AXIS 2: GEOSYSTEMS, UNIVERS AND CLIMATE

The frame of this thematic axis is described as follows in the note approved by the Council of Ministers:

> Axis 2 is geared towards the description and understanding of the various elements that make up planet Earth: the atmosphere, hydrosphere, cryosphere, solid earth - and their interactions.
> It is also geared towards the understanding and prediction of its dynamics, and its evolution as well as that of its resources (mineral and hydrogeological) as well as its reactions to the pressures of mankind and climate. This includes the study of natural hazards and those stemming from the use of resources.
>
> It includes the understanding of the climate system and its modelling, geodesy and spatio-temporal reference systems.
>
> It allows the study of various components of the universe and their interactions, including the study of the sun-earth interaction, solar wind, the magnetosphere and atmosphere, as well as space weather effects.
>
> Finally, the research will contribute to the scientific support necessary for national and international policy development related to the topics addressed (particularly international agreements and conventions such as the Climate Convention, the Montréal Protocols, etc.).
> This theme will monitoring or surveillance to be established if this proves necessary to fulfil the needs of the research.

Call contents

This call addresses 4 research themes:

1. Universe
2. Science in support of the Federal Climate Change Adaptation Plan (FAP)
3. Science in support of the European Union's Marine Strategy Framework Directive (MSFD)
4. Antarctica: exploitation of ground based atmospheric observations at the Princess Elisabeth station

This call envisage to fund, according to the theme and sub-themes fundamental 'vertical' 'bottom up' research ' or strategic 'comprehensive', 'horizontal' research.

2.1.1 UNIVERSE

Federal science policy has always been a strong player when it comes to the study of the universe, especially in terms of funding observational infrastructure on the ground and in space, and supporting scientific research based on the information obtained. Extending the scientific exploration of the universe remains an important priority, partly because it provides answers to the most fundamental questions that humans ever ask, and partly because it constantly challenges our research institutes, universities and industry to develop and refine new technologies. The new scientific and technological understandings in turn contribute to the search for answers to all kinds of problems facing people and governments here on Earth.

The general objective of this call is, therefore, to stimulate high-level fundamental scientific research to further develop our understanding of the universe.

The specific objective of the current call is to strengthen research in two areas:

a) **Planetology**: the structure and evolution of the core, surface and neutral atmospheres of the planetary objects in our Solar System; this extends to the planets (except Earth), their moons and small astronomical bodies such as comets, asteroids and meteoroids;
b) **Stellar physics**: the structure and evolution of stars (except the Sun), independently or in relation to their direct environment and their galaxy.

Project proposals must clearly state **how they tie in strategically** and contribute to today's research landscape. The existence of **synergies** or **complementarities** with leading national and international research initiatives are important criteria for selection. Below we give a non-exhaustive list of potential reference points:

- the present long-term strategy of the European Space Agency ESA as regards the Scientific Programme (*Cosmic Vision, Space Science for Europe 2015-2025*, ESA BR-247, 2005, http://www.esa.int/esapub/br/br247/br247.pdf), and specific recent ESA projects and missions;
- the instruments available at the European Southern Observatory ESO, and specific recent ESO projects;
- priority themes of the European Commission's Horizon 2020 Programme, and specific projects funded by the 7th Framework Programme;
- other prominent science projects on the national and international scale, e.g. the Interuniversity Attraction Poles, international databases, etc.

Proposals are expected to signify an important step forward in the relevant area of research and to strengthen our country's position in international research. The opening of **new perspectives** to even more advanced research and/or better instrumentation is seen as an added value. Finally, **cooperation** between different national scientific teams, each with their own expertise, is also seen as an added value.

The indicative budget set aside for this theme is approximately EUR 2,1 million. It is expected to fund to fund 1 to 2 projects in each area, i.e. "Planetology" and "Stellar physics".

2.1.2 SCIENCE IN SUPPORT OF THE FEDERAL CLIMATE CHANGE ADAPTATION PLAN (FAP)

Climate change is a fact and even important emission reductions will not prevent further climate change impacts, making the need for adaptation unavoidable. Adaptation is vital to respond to the impacts of climate changes that are already happening, while at the same time it is necessary to prepare for future impacts so as to minimise adverse impacts de and maximise potential opportunities. A solid knowledge base is essential for promoting innovation and supporting sectorial adaptation measures.

The magnitude of climate change in Belgium varies according to the regions and seasons, and will depend on future trajectories of global greenhouse gas emissions. Governments, the private sector, etc. are often poorly informed on the impacts of climate change for our regions and the need and urgency to adapt to those changes.

To better anticipate future impacts of climate change and assess the risks for different sectors, it is important to have **coherent high resolution climate scenarios** at different spatial and temporal scales tailored to the needs of different sectors. For users it is important that the uncertainties are quantified in view of using the scenarios for impact and vulnerabilities assessments.

In December 2010, the National Climate Commission adopted the National Adaptation Strategy which includes a roadmap to a future National Adaptation Plan (NAP). The federal authority has a range of competence and relevant levers in different sectors to implement adaptation measures. The Federal Adaptation Plan (the federal contribution to the NAP) aims at making use of those levers in order to improve climate resilience.

The specific objectives of this call are:

1. to understand how the climate will change and vary (including associated risks) in the near future and in the longer term in Belgium by means of the **integration and application of 'local' modelling** and highly **detailed coherent climate scenarios for Belgium** at regional/local scale on a long term future time horizon (100 years.), including the assessment of associated (un) certainties and in view of users' needs.

2. to develop **generic standardized policy supporting tools and methods** for assessing potential climate change impacts, vulnerabilities risks (including socio-economic and environmental cost in Belgium) and adaptive capacity, (paying due consideration to indirect, cross-sectorial effects and cascade impacts) in different sectors in particular maritime transport, economy and the interdependent energy sector, health and crisis management also in relation to long-term risk reduction related to extreme weather events. The applicability of the tools or methods will be demonstrated by **case studies**. These tools/methods should also help to identify potential adaptation measures and target groups (e.g. identification of priority economic sectors).

The indicative budget set aside for this theme is EUR 1, 6 million. Projects are comprehensive in nature, clustering the available expertise in Belgium (taking into account relevant on-going initiatives, all other relevant BRAIN-Be projects and demonstrating an active for participation in international initiatives (ERA net on climate Services within H2020, the strategic research agenda and activities of the JPI climate, ISI-MIP, CORDEX,...), support the development of a Belgian federal Climate (Service) Centre in particular the development of climate adaptation services and the implementation of the FAP.

The proposals should address at least one of the two objectives and demonstrate the ability of mobilizing and coordinating key expertise and disciplines in Belgium as well as an active stakeholder involvement and include activities to foster the science-policy interface within Belgium. The selected projects should interact and therefore proposals should foresee a work package for interaction with other BRAIN-be projects, to be developed during contract negotiation.

It is expected to fund for each objective 1 comprehensive multidisciplinary project.

If there would be more than six partners within a the project, the financial rule which states that 'the budget of each Belgian partner is between 15% and 60% of the total budget of the project in order to guarantee a balanced participation among the various partners' does not apply. However, it is expected that the budget distribution among the partners is balanced.

For objective 1, the order of magnitude of the budget is estimated indicatively maximum EUR 0,9 million, for objective 2 it is about EUR 0,7 million. These are indicative figures.

Useful information

related to science (policy):

- International Conference on Regional Climate - CORDEX 2013: http://cordex2013.wcrp-climate.org/ (conclusions : http://cordex2013.wcrp-climate.org/web_streaming.shtml)
- IPCC WG II - chapters related to Europe : (available after 29 March when SPM WGII AR5 are approved and underlying document accepted
- JPI strategic research agenda and implementation plan: http://www.jpi-climate.eu/jpi-themes/research-agendaISI-MIP-2: http://www.pik-potsdam.de/research/climate-impacts-and-vulnerabilities/research/rd2-cross-cutting-activities/isi-mip/isi-mip-phase-2/how-to-join/how-to-join-isi-mip2-1
- ERA net CIRCLE database: http://infobase.circle-era.eu/

related to climate policy

- The National Adaptation Strategy : http://www.climat.be/files/6913/8262/2075/NASpublicatiedruk.pdf
- Federal adaptation Plan: http://www.climat.be/index.php/download_file/view/738/1041/
  Study: adaptation http://www.climat.be/files/2013/8253/2115/Federale_bijdrage_adaptatiebeleid_Eindrapport_juli_2013.pdf
- EU adaptation strategy: http://climate-adapt.eea.europa.eu

2.1.3 SCIENCE IN SUPPORT OF THE EUROPEAN UNION'S MARINE STRATEGY FRAMEWORK DIRECTIVE (MSFD)

Oceans and seas form one of the most valuable natural resources of our biosphere and regulate the Earth's climate. The marine environment is also under huge pressure from human activities and climate change. The consequences can be particularly significant in shallow coastal seas adjacent to highly industrialized countries, such as the North Sea, and affect the sustainability of activities depending strongly or solely on the sea such as transportation, exploitation of the resources (water, fossil fuels, minerals), recreation, etc.

To protect the marine environment more effectively, the European Union adopted the Marine Strategy Framework Directive (MSFD) in 2008, aiming to achieve the Good Environmental Status (GES) of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend.

A major challenge in the implementation of the MSFD is to attain the necessary scientific knowledge of the elements that define the state of the marine environment, combined with a substantial need to develop additional scientific understanding to support decision-making.

This call will focus specifically on the 'descriptors' to achieve the GES related to abiotic factors of (the Belgian part of) the North Sea. The specific objectives of this call are to

1. **the development of tools and methods to support the monitoring of MSFD descriptors 6. 'Sea-floor integrity' and 7. 'Hydrographical conditions**', as the physiographic and geographic conditions related to descriptor 1. 'Biological diversity, quality and occurrence of habitats' : sediments dynamics, suspended matter dynamics and physicochemical interactions, impact of human activities (validated models of bottom shear stress); The key is to determine the thresholds of seabed and water column changes and link these to the impact of human activities. Time and cost-effective seabed mapping strategies require the integration of calibrated and standardized acoustic techniques with in situ validation techniques such as sampling and visual observations. An evaluation of the final precision of the acoustic data used for monitoring the seabed is a fundamental part of this call, as well as the assessment of external sources of variance that may affect the measures (influence of the water column condition on the seabed acoustic signature).

2. **the development of tools and methods to support the monitoring of MSFD descriptor 8. 'Contaminants':** methodological and practical developments that aim to overcome the current difficulties in implementing the GES criteria: determination of current harmful levels, measurements and assessments independent of the matrix (e.g. by cumulative passive sampling), harmful concentrations under detection levels, cumulative and synergetic effects of mixed contaminants, effects of emerging contaminants;

For the aforementioned research priorities, it is highly recommended to take into account cross–boundary as well as cumulative and synergetic effects where applicable.

This call will not fund monitoring as such.

The indicative budget set aside for this topic is approximately EUR 1,1 million. It is expected to fund at least 1 project for each sub-topic (MSFD D6&7 and MSFD D8).

Useful information:

- http://cdr.eionet.europa.eu/be/eu/msfd8910/msfd4text/envucy0_w/Bon_etat_ecologique_et_objectifs.pdf/manage_document.

2.1.4 ANTARCTICA: EXPLOITATION OF GROUND BASED ATMOSPHERIC OBSERVATIONS AT THE PRINCESS ELISABETH STATION

BELSPO has established a strong position in terms of scientific research in Antarctica and is therefore an important partner in the negotiations within the Antarctic Treaty. BELSPO has also established an important monitoring and measuring network at its Antarctic research station Princess Elisabeth.

Therefore the purpose of this call is the exploitation and use of these atmospheric observations from the Princess Elisabeth station in support of research priorities as defined by the International Panel on Climate Change (IPCC) and the Scientific Committee on Antarctic Research (SCAR) for example in relation to the radiation budget which is the key aspect of studies of Antarctic climate.

The specific objectives of this call are therefore an analysis of the ground based (including RS) atmospheric observations at the Princess Elisabeth station in view of improving regional climate models for Antarctica for producing reliable projections of the Antarctic surface mass balance on the decadal scale.

The indicative budget set aside for this theme is approximately EUR 0,6 million.

Useful information

- Cordex-Antarctica http://wcrp-cordex.ipsl.jussieu.fr/index.php/community/domain-cordex-antarctica
- The Antarctic Climate Change and the Environment (ACCE) report from SCAR http://www.scar.org
- The Global Energy and Water Exchanges project (GEWEX): http://www.gewex.org/
- and the World Climate Research Programme (WCRP) Climate and Cryosphere project (CliC) , established by the WMO: http://www.wcrp-climate.org/ and http://www.climate-cryosphere.org/

2.2 THEMATIC AXIS 3: CULTURAL, HISTORICAL AND SCIENTIFIC HERITAGE

The general frame of this thematic axis is described as follows in the note approved by the Council of Ministers:

> The Federal State - and particularly the FSIs - acquires, conserves, restores, manages and valorises collections as well as archives that are composed of – or relate to – tangible and intangible cultural and scientific heritage, of an origin and scope that is either national or international. Through its expertise, it also contributes to the valorisation of non-federal heritage.
>
> It is important to make the most of this heritage and the associated expertise through (inter)disciplinary research that involves putting it into context - social, artistic, historic, geographical, environmental, scientific, technical, political, archaeological, linguistic, literary, musical, economic or cultural – from a synchronic or diachronic point of view.
>
> In particular, the research will include scientific inventories, monographic studies, work in the field, the examination of materials and techniques as well as the ongoing analyses involving methods specific to the various disciplines concerned.
>
> It will lead to the production of work acknowledged on a national and international level in the form of publications, conferences, exhibitions, etc., designed to make the knowledge and heritage available in diverse contexts within our societies.

Call contents

As for the call for proposals 2012, the proposals to be submitted in response to this call have to satisfy two complementary objectives:

- be adequate to a *general common approach* which all of the research projects must fulfil,
- meet *thematic priorities* to which this joint approach must be applied.

General common approach

The research projects need to make a scientific contribution in the form of a **cross- and interdisciplinary exploitation/valorisation of relevant federal heritage sub-groupings.**

The objective is to federate the expertise of the scientific community – in the scientific establishments, universities and research centres - around topics which present an issue of scientific knowledge that is important for the promotion of federal heritage.

In order to clearly demonstrate the concordance between the research projects and this joint approach, the proposals will provide the following in an explicit and well-argued manner:

- **identification of the federal heritage (sub)-collections** – cultural, historical and/or scientific – tangible and/or intangible – of national and/or international origin – for which the project will provide a scientific contribution.

  Using collections in the project that aren't part of the federal heritage can be envisaged as far as:
  - federal institutions contribute to their promotion, through their expertise,
  - they are used in the project as additional support for the federal (sub)-collections.

- **the nature of the interdisciplinarity** implemented in the project, especially at the level of:
    - the mobilised scientific disciplines,
    - and / or the integration of methodological approaches
    - and / or the various ways to apprehend the studied topics
    - and/or the merging and/or possible integration of (sub)-collections of a heterogeneous nature
    - ...

- demonstration of the **balance between the project's methodology on the one hand** – including in the tasks to valorise and disseminate the results – **and**, **on the other hand**, the objectives that the project is pursuing in terms of **relative impact and benefits** (scientific, policy support, societal)

This joint approach will be encouraged by the organization of common research in networks, as is the intention throughout the entire programme: this will allow a reinforcement of the collaboration between the different scientific actors, particularly with and between the institutions responsible for the heritage concerned, as these institutions are on the front lines of the exploitation and valorisation of their heritage.

The research projects will take advantage of international research activities in the fields concerned, as necessary, notably within the framework of the "Cultural heritage"JPI.

Thematic priorities

For the 2014 call for proposals, the thematic priorities chosen are as follows:

Cross- and interdisciplinary exploitation/valorisation of federal heritage...

- **...** applied to "Sleeping beauties"
- ... relating to socio-cultural encounters / confrontations
- ... relating to public, environmental and animals health issues
- ... relating to "Belgium 1900. - The cultural, intellectual and economic power of Belgium at the turn of the 19th/20th c. (1880-1914)
- ... relating to Food history - Research in food history

2.2.1 SLEEPING BEAUTIES

Federal scientific institutions and the federal state administration host collections, some of which began several centuries ago. Therefore, these collections no longer meet scientific standards due to the lack of contextual quality data and / or recent analytical data. This greatly limits their relevance in current and multidisciplinary research.

The application of analytical methods which were not available when the collections began, will allow a qualitative enrichment and valorisation of these scientific, artistic and / or documentary collections. Their potential as an object of study or as a reference collection within contemporary scientific issues will thereby be improved.

Research projects will focus on the update and the contextualization of collections through available low-invasive analytical methods which do not require specific technical developments:

- of a particular collection using a multidisciplinary approach allowing answering a specific scientific question,
- of several collections of different nature in a synchronic or diachronic perspective,
- of collections in order to give them a (new) reference value.

2.2.2 SOCIO-CULTURAL ENCOUNTERS / CONFRONTATIONS

The federal heritage collections are a useful source to deal with the various historical, artistic and societal phenomena associated with the encounter / confrontation between different cultures, with no restriction in terms of area or chronological period.

The term "culture" must in this context be understood in the broad sense as favoured by current research: it concerns both material as well as ideological phenomena, and thus encompasses aspects as diverse as art, literature, language, religion, philosophy, politics, architecture, urban planning, gastronomy, institutional structures, etc.

The research particularly focuses on:

- the cultural and societal impact of wars, invasions, migration and colonisation,
- cultural exchanges due to peaceful contacts, whether commercial, diplomatic or artistic.

The objective will be to open new perspectives, based on innovative scientific research allowing the delicate and present-day problems of cultural identities to be understood.

2.2.3 PUBLIC, ENVIRONMENTAL AND ANIMAL HEALTH ISSUES

Scientific collections such as observations of the climate, the biosphere and the quality of the environment, databases with medical data as well as epidemiological, demographic and sociological inventories constitute a valuable material and immaterial scientific heritage to study human or animal health determinants by means of an interdisciplinary approach and by crossing aggregated data. The use of advanced techniques for the cross-analysis of data will further increase the valorisation of this heritage.

The research projects will focus in particular on the following federal competences and priorities:

- the relation between environmental factors in the broad sense and health risks, in particular concerning outdoor and indoor air quality, emerging chemical and biological substances, ionising and non-ionising radiation, novel materials such as nano, noise and the effect of climate change,
- the effects of socio-economic factors on these relationships as well as the impact of policies hereon.

The projects will implement and refine:

- the analytical approaches that allow the screening and the extraction of information or the comparison of the content of collections or databases,
- statistical and epidemiological methods that put into value, or allow the exploitation of databases in order to put into evidence possible associations or causal relations between environmental factors and health and well-being.

The results of these investigations will allow clarifying the usage and the pertinence of the federal heritage in the setting up of a policy for scientific research, public, animal and environmental health, based on scientific evidence.

2.2.4 "BELGIUM 1900. - THE CULTURAL, INTELLECTUAL AND ECONOMIC POWER OF BELGIUM AT THE TURN OF THE 19TH/20TH C. (1880-1914)

At the turn of the 19th/20th century, the period stretching from the 50th anniversary of the country's independence to the First World War is often considered as the climax of the "Belle Epoque". At the time, Belgium, a small country with a population of 5.5 million people, is the second industrial power of the world, just behind the United Kingdom. Belgians (be they diplomates, artistes, businessmen, intellectuals...) stand in the forefront of various international networks.

The research projects will bear on the following:

- the economic and industrial development of the country: Belgium as an economic world power, the development of its industry and trade, about capitalism and the financial sector, its innovation capacity, the first years of the colonial times;
- the intellectual and scientific life in the country: the place of Belgium in the field of scientific research and innovation, but also regarding ideas (pacifism and internationalism, for instance);
- the cultural and artistic renown of the country: Brussels is at the cultural crossroad of Europe, and one of the main centres of an international tendency of renewal. Projects will emphasise on the interaction between fields of creation (litterature, painting, opera, music, architecture, photography, poetry...). They will encompass among others issues pertaining to the influence that new techniques, means of diffusion, political and institutional support have on the creative process, the internationalism (cosmopolitism) of Brussels in contrast to the role of the "artistic hinterland", and the productive heritage of the time.

2.2.5 FOOD HISTORY - RESEARCH IN FOOD HISTORY

The food history, a dynamic and recent field, is based on inter-disciplinarity (history, archeology, bio-archeology, geography, anthropology, sociology, economy, linguistics...). It is particularly well suited for long-term research. The food history concerns issues of access to food (production, distribution, circulation, exchange(s), etc.), and of the cultural dimension (culinary culture, tastes and culinary identities, social functions, etc.).

The research projects will focus on the following:

- the use of document sources in the elaboration of event-based data bases;
- the impact of wars and/or climatic events and the environment on the alimentation of the human population;
- the intervention of political and administrative institutions, and the evaluation of market regulations;
- the introduction of new food and their influence on the economic development and on the sanitary conditions;
- the pluridisciplinary approach of food, mirror of the status and identity in a society;
- the interaction between alimentation and human migrations.

2.3 THEMATIC AREA 5: MAJOR SOCIETAL CHALLENGES

The frame of this thematic axis is described as follows in the note approved by the Council of Ministers:

> Established to support the competences of the Federal Authorities, this thematic axis is based on major societal challenges and relates to an array of important concerns for individuals and society such as demographic changes, democracy, migration, safety, poverty, sustainable development, health and environment, globalisation, and multiculturalism.
>
> In an increasingly globalised society, the analysis of these challenges must take the international context into account. These challenges not only concern the problems that arise and for which a response is needed, but also the opportunities that can be seized to ensure the well-being of individuals and of society in general.
>
> The research financed within the context of axis 5, is based upon these societal challenges and takes the individual and/or society as the primary unit of analysis.

Call contents

This call for proposals offers the chance to carry out research on two societal challenges with which Belgium is faced:

- the Digital Turn
- the transition towards a low-carbon and resource-efficient society:

The budget available is divided equally between the two challenges.

2.3.1 DIGITAL TURN

Research projects aimed at acquiring systemic knowledge will last 2 or 4 years while more targeted projects will last only 2 years.

Information and communication technologies deeply modify the way we live, think, produce, distribute, consume, share, work, travel, etc. We now move in a highly technically and digitally interconnected world, where we constantly interact with devices or intelligent interfaces that deliver a continuous flow of information. This has been termed the 'digital turn'.

The federal authority already deploys a great deal of effort to *understand* these evolutions (for instance, through "the survey on the use of ITC by households", conducted by FPS Economy or the Barometer of the Information Society by the same FPS), to *support* them (especially within the framework of the Belgian coordination of the European *Digital Agenda 2020* strategy aimed at creating a unique European digital market), to *accelerate* distribution (for instance, digital applications such as Tax-on-web, e-id, e-gov, Intelligent Transport Systems, etc.), to *fight* the inegalitarian consequences (National action plan against the digital gap 2005/2010 and Plan e-inclusion 2011/2015 currently being finalised) or criminal use (through the federal police's Computer Crime Unit, the future Centre for the Fight against Cyber Crime, the fight against cyber hate, etc.). These are just a few examples of the importance of federal public action in this societal shift towards the digital society.

Within the framework of this call, it is necessary to assess the profound transformations of the digital transition, its potentialities, the new divides it brings, the challenges it raises or moderates with regard to harmonious relations between society, the economy and the environment.

In particular, this call aims at developing systemic or more targeted knowledge that is complementary to the knowledge currently implemented by the public services[2], allowing a better understanding of the uses of private and public digital content by the population, to understand its expectations, its fears, its needs within the digital society, mainly within the context of the use of ICT to ensure the relationship between institutions/organisations/business (private and public) and individuals. Such knowledge will ultimately allow the federal authority to draw the necessary lessons in order to better calibrate its action in an effort to optimise the way society functions. Within this spirit, researchers will effectively integrate into their study of the digital experience a certain number of the problem's facets considered to be relevant:

- Digital inclusion (e-inclusion): the stake of e-inclusion is to develop the required digital skills and infrastructures, i.e. to allow everyone to benefit from the framework and opportunities linked to the access to and use of ICT. E-inclusion addresses population groups that don't only include those on a low income or the socially isolated. Digital inclusion is one of the forms of social inclusion in the sense that, within the current context, it is a tool that allows the individual to exercise its role as an active and autonomous citizen. Access to digital technologies and services and the ability to use them is now considered a basic right.

- Oblivion, grey areas and privacy: the digital turn has brought with it a considerable increase in the ability to gather, store and process information. Whether we want to or not, we leave countless digital traces behind us that are likely to be used in many ways. Hence, our private lives can be exposed, as well as our consumption preferences, our professional performance, our industrial secrets, etc., without us necessarily being able to control their use. New terms therefore apply to the debate on the protection of privacy (vs. the public and private interest of gathering ever-increasing and precise information), the right to oblivion (vs. the duty to remember or the social usefulness of archiving and analysing data), the right to preserve a grey area regarding our family and friends, our employer, trading companies and public services.

  This aspect of the digital experience sheds new light on the above-mentioned e-inclusion and invites researchers to take into account the complexity of a necessary inclusion in a virtual world not exempt from inconveniences that go against the sought-after object, i.e. the empowerment of the individual in the digital society;

- Access to information, culture and knowledge: the state guarantees every citizen the right to cultural development, i.e. the right to be initiated in, contribute to and participate in cultural activities. The evolution of new technologies and digital services creates new needs and expectations among the citizens and institutions concerned while also offering new opportunities. The digital turn must allow the development of the necessary digital skills and infrastructures to ensure access to information, cultural property (tangible or intangible) and the associated know-how;

[2] Besides the federal policies, some of which are mentioned below, we should take into account the research financed by Belspo on this theme:
- Compulsive computer use in Belgium (CLICK: http://www.belspo.be/belspo/fedra/proj.asp?l=fr&COD=DR/64)
- ICT, political participation and digital divide (INTERMOB: http://www.belspo.be/belspo/fedra/proj.asp?l=fr&COD=TA/00/09)
- Teenagers and ICT: risks and challenges (TIRO: http://www.belspo.be/belspo/fedra/proj.asp?l=fr&COD=TA/00/08)
- Second degree digital divide (DD²: http://www.belspo.be/belspo/fedra/proj.asp?l=fr&COD=TA/00/25)
- Analyses of the costs and impacts of cyber crime in Belgium (BCC: project beginning mid-2014)

- Trust and reliability: our daily digital lives are often filled with information that is dated, not up-to-date, badly conveyed, unchecked, biased, or quite simply wrong. The question that this raises is the trust we can have in this flow of information, an aspect that relates to the authenticity and reliability of private and public digital resources. This specific aspect will undoubtedly have a considerable influence on the relationship between citizens and ICT;

- Dehumanisation: we increasingly interact with intelligent machines and applications, thus disrupting our relationships with others. How have users experienced this? How does this influence their expectations regarding services that rely on ICT? To what extent do private and public institutions see their image modified from their users' point of view?

- ICT and the new relationship with time and space: ICT redefines the way in which we manage space-time, whether it is private, within the family, socially or professionally. It can also encourage on the one hand autonomy, productivity, comfort and emancipation (e.g. through new forms of work – remote working, satellite offices, co-working spaces, etc. - a subject where the social, economic and environmental impacts are not well known – time-saving, a reduction in mobility costs, the fluidification of social relations, etc.) as well as, on the other hand, control or overload (intrusion of professional life in our private lives, over-rationalisation of work, stress and new problems at work linked to infobesity, lability of social relations, etc.).

2.3.2 TRANSITION TOWARDS A LOW-CARBON AND RESOURCE-EFFICIENT SOCIETY

The transition towards a low-carbon and resource-efficient society is one of the current major challenges as the European political initiatives (Roadmap for moving to a competitive low-carbon economy in 2050, Resource Efficient Europe flagship initiative, 2030 framework for climate and energy policies, etc.) and priorities in terms of research show (Horizon 2020, Joint Programming Initiative 'Connecting Climate Change Knowledge for Europe').

In Belgium, the government speaks in favour of the country "justly achieving its transition towards a low-carbon and resource-efficient society by 2050" (Long-term Federal Strategic Vision on Sustainable Development approved by the government in May 2013, Royal Decree of 18/07/2013). Above all, this strategic vision provides for the following:

- Belgian greenhouse gas emissions will be reduced on a domestic level by at least 80 % to 95% by 2050 compared with their level in 1990;
- Production and consumption activities will be based on an efficient use of natural resources that respect our planet's limits, and they will contribute to social and economic development.

Research plays a vital role in establishing the core knowledge required to achieve this movement towards a low-carbon and energy efficient society. This theme was already the subject of a call for proposals in 2012. Within the framework of the 2014 call, researchers are invited to respond – following an interdisciplinary or transdisciplinary approach – to the following specific topics:

1. The financing of the low-carbon transition;
2. The gradual implementation of a circular economy: a central element of the transition towards a society that uses resources efficiently and sustainably;
3. The inequalities and redistributive stakes of the transition towards a low-carbon and resource-efficient society.

2.3.2.1 Financing the low-carbon transition

This topic is only open to two-year network projects.

The low-carbon transition requires considerable additional investments in a series of sectors: transport (vehicles, infrastructure, etc.), buildings (renovation, heating systems, etc.), industry, agriculture, electricity production and distribution, etc. According to the analyses available, the extra costs associated with these investments would be compensated partly or fully by the reduction in fuel costs, with potentially significant differences depending on the sectors.
The researchers are invited to examine **possible ways to facilitate the mobilisation of these extra investments in Belgium and the levers the state has** to achieve this, taking into account:

- The potential role of private bankers: how can we identify low-carbon investments compared with other types of investments? What can prevent the funding of such long-term (even very long-term) investments? What are the links with the financial products that exist or to be developed? Can public-private partnerships play a role? Does the insurance sector have a role within this context? How can investment funds contribute to facilitating such investments? Etc.;
- The potential role of central banks and banking regulations;

- The potential role of new public instruments such as insurance or public guarantee for the granting of loans linked to low-carbon investments in order to reduce the cost of the loan and/or to facilitate it being granted;
- All the public instruments available at all levels of power, including the tax instrument;
- …

Many disciplines or fields can shed light on these issues: economy, finance, law, taxation, sociology, energy, etc.

2.3.2.2 Resource-efficient society: circular economy

Our economy's current linear system (extract, manufacture, consume, discard) has reached its limits: if we continue to use the natural resources at the current pace, we will need more than two planets to satisfy our needs, not to mention the considerable amount of waste we produce.
The circular economy offers a new economic and industrial system focusing on 1) the reduction in the use of natural resources and energy, 2) the re-use of materials and products, and 3) the recycling of waste and used products.

The circular economy endeavours to keep biotic and abiotic factors and manufactured products in circulation as long as possible within the system, while being careful to guarantee the quality of their use. In other words, it is a question of intensifying the use of products, their components and materials. For this purpose, the circular economy intends to integrate and promote several principles: ecodesign, industrial and territorial ecology, product-service system, re-use, maintenance and repair, recycling, etc.

The circular economy is at the crossroads of the environmental, economic and social stakes: these potential effects affect biodiversity, pollution, climate change and the security of supply, competitiveness, employment, logistic flows, lifestyle habits, etc.
The transition towards a circular economy requires innovations in the domains of technology and production, but not only. Innovations in terms of economic and social processes are also necessary in order to change the usual manner in which companies and consumers operate.

On the one hand, researchers will focus on the **macro-economic development potential of a circular economy[3] and on its social, economic and environmental impacts** in the mid (2030) and long term (2050). What are the limits? Within this context, the research will endeavour to provide quantitative and qualitative answers to the following questions:

- Considering its geographic situation and its economic fundamentals (raw materials, industries, skills, etc.), in how far is Belgium a country favourable to the development of a circular economy?
- On the basis of the characteristics of the Belgian economy, what are the economic potentialities and the conditions (economic, sociocultural, etc.) for the development of a circular economy in the mid and long term?
- What are the limits of the development of a circular economy in Belgium? How can its development be combined with alternative raw material supply methods? On the basis of scenarios taking into account the economic (profitability, competitiveness, etc.), social (employment, North/South relations, etc.) and environmental (natural resources, biodiversity (on a global level), etc.) limits and impacts in the mid and long term, what could be the

[3] The emphasis will be on the substitution of virgin raw material supplies with secondary raw materials and the extended use of products, components and materials. The issue of supply with biosourced materials will only be broached in the identification of the limits of the system and the elaboration of future scenarios.

potential ways to allocate the supply of raw materials (virgin raw materials (biotic and abiotic) and/or secondary)? "

On the other hand, researchers are asked to suggest and examine **innovative "business cases"** whose development would have **a potentially significant lever effect** on the implementation of a circular economy in Belgium. The researchers will focus on **changing sectors or activities** following the development of a circular economy (logistic, product-service system, etc.).

2.3.2.3 Inequalities and redistributive issues of transition

The transition towards a low-carbon and resource-efficient society will be accompanied by major technological, behavioural, social and economic changes. These changes are likely to have a different impact on the economic players according to their level of wealth or their ability to adapt. Researchers are invited to focus on the **potentially inegalitarian consequences of the transition in terms of distribution and well-being in Belgium and the means to solve this,** taking into account the following aspects in their proposals:

- The economic and financial impacts of the transition on the distribution of income (impact per household income deciles, for instance), by collecting available data and case analyses in various countries, among other things;
- Differentiated impacts due to various habits in consumption, travel, housing, heating, etc., according to circumstances (standard of living, living environment (urban, rural, etc.), family composition, state of health, age, etc.);
- Aspects linked to the geographic distribution of the centres of activity (home, job, shops, leisure, etc.);
- The public instruments that can help correct the distributive impacts of the transition: taxation (payment methods for government taxes resulting from a "green" reform, associated with the progressiveness of the tax system, with possible relief on labour taxation, etc.), energy prices, social transfers and other compensation mechanisms, public services, etc.;
- The effects of the transition on employment, especially the net effects (the balance between jobs created in "green" sectors and jobs lost), the effect on the structure of employment, impact on labour (qualified versus under-qualified) and the employment market's ability to adapt to the evolution in needs.

3. GUIDELINES FOR COMPLETING THE PROPOSAL FORM

The proposers can choose for a **research projects of 2 or 4 years**, except for certain sub-themes for which the project duration is limited to 2 years (see chapter 2 - content of the call).

The projects selected within the context of the current call will begin in 2014.

Please read these instructions carefully before completing the proposal form.

3.1 COMPLIANCE OF THE PROPOSAL WITH THE SCOPE OF THE CALL

Explain/justify how the proposal:

1) answers and makes a scientific contribution to the research priorities of the call;
2) makes use of interdisciplinarity at the level of:
    - mobilised scientific disciplines,
    - and / or the integration of methodological approaches
    - and / or the various ways to apprehend the studied topics
    - ...

3.2 SUBJECT OF THE PROPOSAL

3.2.1 OBJECTIVES

Define the objectives of the proposal and its complementarity and added value with respect to national activities and initiatives (existing or in preparation).

3.2.2 METHODS

Describe and motivate the used methods.

3.2.3 DATA

Describe the kind, the scope, the availability and cost of the data-sets needed for the project.
In case of gathering new data, describe and justify its necessity, added value and methodology.

Concerning the use of existing data or the collection of new data, proposal submitters should take the following guidelines into account:

- Whenever possible, the partners should make use of existing (administrative or non-administrative) databases to meet the needs of their research. For this, they must check beforehand whether the data are accessible, at what cost, and how much time it will take to acquire the data. If, after the start of the research, it appears that due to partner negligence or insufficient knowledge of the field, the data files will not be available in time, this may constitute a reason for BELSPO to cancel the contract.
- If the proposal requires collecting new data (e.g. via a survey), the team must justify with clear and convincing arguments its choice of methodology, referring to the objectives of the study and specifying why this particular form of data collection is required and preferable to other approaches. This means the proposers must provide sound and detailed argumentation in support of the chosen methodology (sampling, etc.) and highlight its added value in comparison to existing databases. In addition, the partners must provide the budget required for this data collection.

- As the data collected within the framework of the proposed research must be available to other users for other purposes, the proposal must clearly indicate when and in what format the data are made accessible, specifying which categories of users are likely to benefit from access to the data.
- If the project needs earth observation data, BELSPO's the space research and applications service can provide them on the basis of a justified request (see http://eo.belspo.be)

3.2.4 WORK PLAN AND DETAILED DESCRIPTION OF THE TASKS

Describe and justify the work plan and the proposed approaches in relation to the state of the art, including:

- the tasks in detail, incl. numbering, name and responsible for the tasks in accordance with the timetable. The description of tasks covered by the international partner (also the tasks covered by the co-financing by a third party), the non-financed partners, the possible subcontractors should also be included.
- the means, tools, procedures ... for the integration of the partners' contributions, for the overall organisation, timing, coordination, ... of the project.
- the valorisation and dissemination activities. These must include **concrete proposals for valorisation and dissemination** of the research and the research results, and the required budgets must be foreseen. This might involve, for example, the organisation of thematic debates and meetings, proposals for disseminating and popularising the results, proposals to integrate data into computerised databases on national and international levels, the elaboration of targeted messages intended for experts, policy-makers or managers regarding the content of specific results, including its limitations, the related uncertainties, the hypotheses and methods used, etc. The target groups of these valorisation proposals must be explicitly described.

3.2.5 TIMETABLE

Elaborate and fill in in accordance with the work plan and the detailed description of the tasks. Include all tasks (incl. the meetings with the follow-up committee and valorisation and dissemination activities).
Include all involved research partners as well as the non-financed partners, the international partner and the possible subcontractors.

3.3 EXPECTED RESEARCH RESULTS AND THEIR IMPACT FOR SCIENCE, SOCIETY AND DECISION MAKING

3.3.1 EXPECTED RESEARCH RESULTS

Describe the expected research results.

3.3.2 EXPECTED IMPACTS OF THE RESEACH AND COMPLIANCE OF THE RESEARCH WITH THE EXPECTED IMPACTS

Specify and justify the expected impacts of the research at the level of::

- scientific / research community
- policy support / policy makers
- societal / society in general

Estimate the relative importance accorded by the proposal to the three types of impact (in percentage for a total of 100%).

Demonstrate the compliance of the proposal - methodology incl. the valorisation and dissemination tasks - with the addressed expected impacts.

3.3.3 FOLLOW-UP COMMITTEE

Each selected project is accompanied by a follow-up committee. The objective of this committee is to provide **active follow-up** of the project and to **valorisation of the research**. It will carry out this role through the exchange and provision of data and information, giving advice, suggesting possibilities to valorise the research, etc. The follow-up committee is composed of **potential users of the results**, such as representatives of public authorities at national, regional, European, or international level, social actors, scientists, industrial actors, etc. The members of the follow-up committee are non-funded.

It is up to the candidates to specify in their proposal the functioning and specific goals of the committee (number of meetings, method of information exchange, etc.), and the role and profiles of its members.

To the extent possible, members will be identified by name and, if applicable, will express their interest and possible contribution to the project. If relevant for the proposal, the applicants may contact the Federal departments via the contact list in annex 3.

The final composition of the follow-up committee will be defined in collaboration with the Belgian Science Policy Office.

3.3.4 GENDER

Describe and specify how the gender dimension, if relevant, is taken into account in the research topics.

3.3.5 ETHICS

Describe how the project and its research takes into account or includes ethical issues such as sustainability, animal welfare, environmental respect, informed consent of the studied population ...

If for methodological, budgetary or other reasons those aspects are not taken into consideration a justification is required.

3.4 NETWORK

Each proposal is submitted by an **interdisciplinary network**, belonging to at least two separate Belgian scientific institutions.

The network partners must conduct complementary activities related to a common issue and the integration of achieved results.

All funded teams will jointly share all obligations and responsibilities during the implementation of the project. The contributions of the different network partners may differ according to the content. Accordingly, different partners may receive different shares of the total budget and devote different numbers of man-months to the research, provided they all bear in mind the principles of a network project.

The call is intended for Belgian university institutions, university colleges, public scientific institutions, non-profit research centres.
The project may require specific expertise, which can be delivered in the form of **subcontracting**.

The participation of **Federal Scientific Institutions** and the cooperation between partners from **different Communities** is encouraged. In case of equal scientific quality between the proposals submitted, preference will be given to consortiums in which one or more FSIs are involved.

If it offers an added value to the project and to the development of Belgian expertise, submitters may propose a cooperation with **non-Belgian universities or public research institutes** (except for international institutions such as the Joint Research Centre). This participation will take place on a **co-funding** basis. The non-Belgian partner is responsible for the co-funding, from other sources, for at least the same amount as that requested from BELSPO.

A **coordinator** (belonging to a Belgian research institute) must be designated in each proposal. In addition to his/her scientific and management qualifications, the project coordinator must be able to synthesise and integrate the research results in order to promote applications and support for decision-making. The specific role of the coordinator is:

- to coordinate all activities to be carried out in the framework of the project;
- to coordinate the internal meetings between the network members;
- to coordinate the meetings with the Follow-up Committee and write the reports of these meetings;
- to coordinate the production of the interim and final project reports intended for BELSPO;
- to inform BELSPO of any problems that might interfere with the correct implementation of the project;
- to coordinate the synthesis and translation of the research results, with a view to applications and support for decision-making;
- to coordinate the publication and dissemination of the research results;
- meetings related to the project's progress between the network and BELSPO.

The programme wants to promote equality between men and women in research, therefore, the projects should take this into account in the choice of the researchers.

3.4.1 PARTNERS' EXPERTISE

Each financed project partner must provide the following, in a clear and precise manner:

- His/her background
- His/her top 5 best publications that concern the subjects covered in the proposal (indicate clearly the publications accepted by international peer reviewed journals).
- A list of the research projects carried out over the past five years in the field under consideration or related areas (specify the duration of the work and funding source).
- A list of their (inter)national contacts and the (inter)national networks to which he/she belongs within the context of the proposal.
- Describe also the management skills of the coordinator.

If possible, include weblinks.

3.4.2 NETWORK'S COMPOSITION

Justify the composition of the network (complementarity, interdisciplinarity) and if applicable the added value of the collaboration with the international partner for the project and for the development of Belgian expertise taking into account the existing knowledge/expertise in Belgium.

3.4.3 GENDER

Describe how the gender issue is taken up in the network (network composition,...) or justify why it could not been taken into account (budget, needed expertise, ...).

3.5 INTERNATIONAL DIMENSION OF THE PROJECT

Describe the complementarity and added value of the proposal with respect to international activities and initiatives (existing or in preparation) and opportunities for new international collaboration.

3.6 RESOURCES

Within a project, **the budget of each Belgian partner is between 15% and 60% of the total budget** of the project in order to guarantee a balanced participation among the various partners. This rule does not apply to partners not requesting any budget.

The project budget is reserved exclusively for the project activities.

The different categories of expenditure financed by BELSPO are:

Staff: Pre-tax wages associated with increases in the cost of living, employers' social security and statutory insurance contributions, as well as any other compensation or allowance due by law and secondary to the salary itself and tax-free scholarships. Tax-free scholarships refer to a grant subject to a tax exemption under the tax laws. BELSPO prefers staff to be hired under a labour contract.

The staff costs are limited to a maximum amount of:

- 60.000 €/year for a scientist with a Master's degree (regardless of years of experience)
- 90.000 €/year for a scientist with a PhD (regardless of years of experience)
- 50.000 €/year for a technician (regardless of years of experience)

Those amounts are not applicable to persons that are identified by name in the proposal.

At least 60% of the total proposal's budget has to be devoted to staff.

General operating costs: this includes all current expenditures related to the project's implementation such as usual supplies and products for the laboratory, workshop and office, documentation, travel and accommodation, use of IT facilities, software, organisation of meetings, workshops and events, etc. The total amount of these operational costs is set at a flat rate of 15% maximum of the staff budget for the coordinator and 10% maximum of the staff budget for the other partners.

Specific operating costs (invoices will be required): this includes specific operating costs not covered by the general operating costs such as costs for analysis, maintenance and repair of specific equipment purchased by the project, surveys, ...

Equipment (***only for the Belgian partners***): Purchase and installation of scientific and technical apparatus and instruments, including computer hardware. Equipment needs to be purchased in the first half of the project.

Overheads (***only for the Belgian partners***): Institutions' general overheads that cover, in one lump sum, administration, telephone, postal, maintenance, heating, lighting, electricity, rent, machine

depreciation, and insurance costs. The total amount of this item may not exceed 5% of the total staff and operating costs.

Subcontracting (***only for the Belgian partners***): Expenses incurred by a third party to carry out tasks or provide services that require special scientific or technical competences outside the institution's normal area of activity. The amount may not exceed 25% of the total budget allocated to the Belgian partner concerned.

The total requested budget for **international partners** may **not exceed 20% of the total proposal's budget** and only covers staff and operating costs.

3.7 ANTARCTICA CAMPAIGN BUDGET (IF APPLICABLE)

In addition to the financing of the project, BELSPO will take care of the real expenses of the **researchers of Belgian Institutions employed by the project** for taking part in field work campaigns in Antarctica.

These campaigns costs must not be budgeted in the overall budget tables of the proposal.

Expenses which are reimbursed by the State within the context of these campaigns cover: (i) travelling costs and stay and (ii) transportation and insurance of their scientific equipment. All other costs should be included in the overall project budget.

The campaigns should be explained in the detailed description of the tasks and timetable.

3.7 EXPERTS

The network may propose, via a specific form, a maximum of 5 scientific experts capable of evaluating the proposal.

The experts must meet the following criteria:

- be outstanding and internationally well recognized in their research field
- be able to evaluate as much as possible all the aspects covered by the proposal
- be foreign (European) experts not working or living in Belgium
- not belong to the same institution as the foreign partner
- have no direct link with the network
- have no co-publications with any of the partners within the last 5 years

It is up to BELSPO's consideration to appeal to any of the proposed experts.

4. PROCEDURES

This paragraph describes the procedures for submitting a proposal, the project selection procedures, and the principal contractual obligations applying to selected projects.

4.1 INFORMATION MEETING

The information and networking sessions will be organized at BELSPO, Avenue Louise 231, 1050 Brussels on **Thursday 3 and Friday 4 April 2014.**

To participate, please register beforehand on the website: www.belspo.be .

4.2 HOW TO ANSWER TO THIS CALL FOR PROPOSALS?

The submission takes place in two steps, first by filing an expression of interest and then by filing a research proposal.

4.2.1 EXPRESSIONS OF INTEREST

Interested parties must submit an expression of interest, using the form intended for this purpose. These expressions of interest will be used by BELSPO **only** in order to seek **foreign experts for the evaluation of the research proposals**. The network has at this stage already the possibility of proposing 5 international experts. The experts need to be confirmed in the proposal.

Expressions of interest are submitted in **English**.

Interested parties are asked to **only** use the form available on the BELSPO website:

http://www.belspo.be/

The expression of interest must be sent **in electronic form** to the following address:

BRAIN_call2014@belspo.be

To facilitate the treatment of the the expressions of interest it is asked to include in the "subject" of the email **"Axis [X] _ [Acronym proposal]"** and to rename the file of the expression of interest in the format: **"[acronym proposal] _ [name of coordinator] _ [institution coordinator]. docx"**.

The expression of interest must reach BELSPO no later than:

5 May 2014 at midnight

A receipt will be sent by e-mail.

BELSPO will disregard expressions of interest submitted after the closing date.

4.2.2 PROPOSAL SUBMISSION

Only proposals for which an expression of interest has been submitted on time will be taken into account.

The submitter is asked to **only** use the form that is downloadable from the BELSPO's website (http://www.belspo.be/). Only the research proposals that fulfil all the eligibility criteria will be considered (see annex 1).

No annexes to the submission file will be taken into consideration during the evaluation and selection procedure.

The proposal must be sent in English and only electronically (**Word and signed copy in pdf format**) to the following address:

BRAIN_call2014@belspo.be

The original signed documents must be kept and can be requested during the procedure.

To facilitate the treatment of the research proposals it is asked to include in the "subject" of the email **"Axis [X] _ [Acronym proposal]"** and to rename the file of proposal in the format: **"[acronym proposal] _ [name of coordinator] _ [institution coordinator]. docx"**.

The proposal must reach BELSPO no later than:

30 May 2014 at 12:00

BELSPO will disregard proposals submitted after the above-mentioned closing date and time.

A receipt will be sent by email by 6 June 2014 at the latest.

The forms can be obtained from the BELSPO website at the following address:

http://www.belspo.be

4.3 EVALUATION AND SELECTION

4.3.1 SELECTION PROCEDURE

The selection process of the research proposals is done in two steps: a scientific evaluation, followed by a strategic choice. The scientific evaluation is conducted by foreign experts who are specialized in the fields of the call for research proposals. The selection decision is made by the Minister of Science Policy among the highest ranked proposals on the basis of the strategic advice of the programme's plenary committee.

4.3.2 BASES FOR THE EVALUATION

The eligible proposals (see point 4.2.2) will be evaluated externally by foreign scientific experts qualified in the research field involved.

The text of the call for proposals serves as the basis for evaluating and selecting the proposals.

4.3.3 EVALUATION CRITERIA

The general evaluation criteria to be taken into consideration by the experts are the following:

Compliance with the aims of the programme and content of the present call

Scientific quality

- clarity of the objectives and tasks; relevance of the methodology; coherence of the objectives, the tasks and the methodologies; alignment of the proposal with the state of the art in the proposed field;
- scientific originality of the proposed research, taking into account the innovative character of the potential results, value of the research in light of other research underway in the field in question.

Potential impact of the project on science, society in general and on decision-making in particular

- positioning/relevance of the research with regard to the orientations of the call;
- potential use or integration of the project results by the scientific community, society and decision-makers;
- relevance of the proposals for distributing the results and making them available;
- profile of the members, role and functioning of the follow-up committee;
- integration of relevant societal themes such as sustainability, the gender aspect, etc.

Quality of the network

- level of scientific excellence or expertise of the candidates;
- complementarity of the competences among the partners;
- interdisciplinary nature of the network;
- distribution of tasks between partners;
- added value of the foreign partner's contribution;
- scientific quality, management, synthesis and communication skills of the coordinator.

Compliance of project/resources

- balance of the distribution of resources between partners;
- realism of the means deployed (duration, budget, personnel);
- gathering, use and accessibility of the data necessary for the project;

International anchoring

- positioning of the project in relation to international activities (existing or in preparation)

4.4 CONTRACTUAL OBLIGATIONS

4.4.1 CONTRACTS

For the proposals selected, a contract is drawn up between BELSPO and the network of funded teams.

For this purpose, the submitters of the proposal will be asked at the end of the evaluation and selection procedure to concisely formulate the specifications on the basis of which the contract is to be drawn up. This **technical annex** to the contract will be drawn up in consultation with BELSPO and will take into account the recommendations formulated by the foreign experts and the Programme Committee. Adaptations to the original proposal may relate to the content of the research, the composition of the network or Follow-up Committee, the budget, the choice of the coordinator, the proposals for valorising the research, etc.

BELSPO grants the selected projects the **funds** required for their implementation. BELSPO shall reimburse at most, and up to the amount specified in the granted budget, the actual costs proven by the partners providing these costs are directly related to the implementation of the project.

4.4.2 EXTERNAL EVALUATION

All research projects are subject to one or more external evaluations. These evaluations, conducted by foreign experts, concern the project's scientific quality (methodology and interim results) and strategic impact, in the light of its initial objectives.

4.4.3 REPORTS AND PROGRESS MEETINGS

The contract will define the various reports to be submitted to BELSPO. These reports are to be included in the project work plan and the cost of preparing them (including translations) must be covered by the project budget.
As well as the reports, meetings on the project's progress will be organised between the network and BELSPO.

4.4.4 DATA, RESULTS, INTELLECTUAL OWNERSHIP AND OPEN ACCESS

Foreground shall be the property of the institution carrying out the work generating this foreground, as mentioned in article 11 of the general conditions of the contract (annex 2). As regards existing information and data, ownership remains the same.

Each institution shall ensure that the foreground of which it has ownership, is disseminated as fast as possible.

Furthermore, each institution undertakes to make the foreground available in a freely accessible institutional deposit (institutional open access repository), immediately and free of charge, in order to be able to read, download, copy, print, or distribute it or to carry out a search within it.

For research areas concerning the marine environment, biodiversity and the Antarctic, researchers must bear in mind that a copy of the analysis and measurement data and/or metadata will nevertheless be transferred to specific databases such as:

- IDOD/BMDC (http://www.mumm.ac.be/datacentre),
- AMD (Antarctic Master Directory) (http://gcmd.gsfc.nasa.gov/KeywordSearch/Home.do?Portal=amd&MetadataType=0),
- GBIF (Global Biodiversity Information Facility) (http://www.gbif.org/) with possibly the help of the biodiversity platform (http://www.biodiversity.be)

The promoters of projects that include tasks in which biological materials are used, must ensure the preservation of this biological material by depositing it in a culture collection (Biological Resource Centre), and preferably one in Belgium. This does not apply to material that promoters can prove has already been deposited in a culture collection or for which existing agreements (Material Transfer Agreement) do not allow it to be deposited. Biological material includes cultivable organisms such as

microorganisms, viruses, plant, animal and human cells as well as the replicable parts of these organisms, such as non-modified and recombinant plasmids (including those with DNAc inserts).

4.4.5 RESEARCH ETHICS

The first code of ethics for scientific research in Belgium was drawn up in 2009 (see http://www.belspo.be/belspo/organisation/publ/pub_ostc/Eth_code/ethcode_en.pdf).

The "Code of Ethics for Scientific Research in Belgium" is a joint initiative of the Académie Royale des Sciences, des Lettres and des Beaux-Arts de Belgique, the Académie Royale de Médecine de Belgique, the Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten and the Koninklijke Academie voor Geneeskunde van België, with the support of the Belgian Science Policy Office.

All projects must take this code of ethics into account in their research.

5. COMPLAINTS

BELSPO places great importance on the quality of its service and on improving the way it operates. A special form to handle complaints has been created.

The complaint form is available at the following address:
http://www.belspo.be/belspo/organisation/complaints_en.stm

Complaints submitted anonymously or which are offensive or not related to our organisation will not be processed.

A complaint is handled as follows:

- once your complaint has been filed, a notification of receipt will be sent.
- the complaint will be forwarded to the relevant departments and individuals and will be processed within one month.
- an answer will be sent by e-mail or letter;
- the complaint will be treated with strict confidentiality.

If you are dissatisfied by the initial response to a complaint, you can always contact the Médiateur Fédéral/Federal Ombudsman, rue Ducale 43, 1000 Brussels. (email contact@mediateurfederal.be).

6. CONTACTS

Further information can be obtained by contacting the **secretariat**:

BRAIN-BE@belspo.be

02/238 34 80 (FR)
02/238 36 12 (NL)

"BRAIN-be" Programme
Call 2014 - Network Projects
Eligibility of Proposals

The Belgian Science Policy Office (BELSPO) ensures that proposals meet all the eligibility criteria listed below. Proposals that do not meet one or more eligibility criteria will not be evaluated. Coordinators of ineligible proposals will be informed by BELSPO. The eligibility of each proposal is verified on the basis of information provided by the submitters in the submission file.

List of criteria

For all proposals submitted, the following criteria are examined. Only those that meet ALL these criteria are used for evaluation.

➢ The submission was preceded by an expression of interest for the same research topic	☐
➢ The submission file is complete (all required forms have been completed)	☐
➢ The submission file was submitted in electronic format (in Word and pdf)	☐
➢ The submission file was submitted no later than 30 May 2014, 12:00	☐
➢ The proposal duration is in accordance with the call	☐
➢ The proposal concerns a network of at least two different Belgian institutions	☐
➢ The proposal coordinator is employed by a Belgian research institution	☐
➢ The network consists of participants from universities and/or public scientific institutions, and/or non-profit research centers	☐
➢ Budgetary aspects:	
• the budget of each Belgian partner is between 15% and 60% of the project budget (excl. non-funded partners) (with the exception of theme 2.1.2)	☐
• at least 60% of the project budget is spent on personnel	☐
• the budget for subcontracting does not exceed 25% of the total budget allocated to the concerned partner	☐
• the budget of the foreign partners does not exceed 20% of the total budget requested by the network	☐

ANNEX 2: LIST OF FEDERAL SCIENTIFIC INSTITUTIONS (FSI)

1. National Archives and State Archives in the Provinces (ARA-AGR)
2. Royal Library of Belgium (KBR)
3. Belgian Institute for Space Aeronomy ((BIRA-IASB)
4. Royal Belgian Institute of Natural Sciences (RBINS)
5. Royal Institute for Cultural Heritage (KIK-IRPA)
6. Royal Meteorological Institute of Belgium (RMI)
7. Royal Museum for Central Africa (RMCA)
8. Royal Museums of Art and History (RMAH)
9. Royal Museums of Fine Arts of Belgium (RMFAB)
10. Royal Observatory of Belgium (ROB)
11. Scientific Institute of Public Health (IPH)
12. Veterinary and Agrochemical Research Centre (VAR)
13. National Institute of Criminalistics and Criminology (NCIC)
14. Royal Museum of the Armed Forces and Military History (MRA)
15. The Centre for Historical Research and Documentation on War and Contemporary Society (Ceges-Soma)

ANNEX 3: LIST OF FEDERAL DEPARTMENT CONTACTS

The Federal departments can be directly contacted by the proposers for specific issues concerning their interest, competences and for possible participation in the Follow up committee.

Institution	Name	E-mail
FPS Economy, SMEs, Self-Employed and Energy	Mr. Etienne Mignolet	etienne.mignolet@economie.fgov.be
FPS Employment, Labour and Social Dialogue	Mr. Alain Piette	alain.piette@emploi.belgique.be
FPS Justice	Mr. Bart Nys	bart.nys@just.fgov.be
FPS Mobility and Transport	Mrs. Anne-Lise Depasse	annelise.depasse@mobilit.fgov.be
FPS Personnel and Organisation	Mr. Ben Smeets	ben.smeets@p-o.belgium.be
FPS Health, Food chain safety and Environment	Mrs. Marielle Smeets	marielle.smeets@environnement.belgique.be
PPS Social integration	Mr. Jo Locquet	jo.locquet@mi-is.be