

**Research programme
"Science for a Sustainable Development"
(SSD)**

**"Natural risks on ecosystems
and the socio-cultural heritage in Belgium and Central Africa"
"Polar terrestrial research"**

Call for proposals 7

July 2011

Closing dates

Expression of interest (obligatory): Monday 19 September 2011

Research proposals: Monday 10 October 2011 at 12:00 a.m.

INFORMATION FILE FOR USE BY PROPOSAL SUBMITTERS



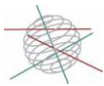
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FOREWORD

- This document contains all information useful to the teams wishing to participate in the call for research proposals in the framework of the **“Science for a Sustainable Development” research programme**.
- The Public Planning Service Science Policy (“BELSPO”) supervises and coordinates the Programme at both the scientific and administrative levels.
- The call is for proposals for **4-year** research projects, prepared by **interdisciplinary networks of 2 teams** belonging to at least two separate Belgian scientific institutions, including at least one university institution.
- The call is intended for **Belgian university institutions, public scientific institutes, non-profit research centres, and specialised consulting offices**. These last-mentioned can be financed up to maximum 25% of the total budget requested by the network.
- The project may require punctual expertise which can be delivered in **subcontracting** form. Such subcontracting may under no circumstances amount to more than 25% of the total budget requested by the concerned partner of the network.
- If it brings in an added value to the project and to the development of Belgian expertise, submitters may propose a cooperation with a **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 funding of non-Belgian partners by BELSPO will under no circumstances amount to more than 20% of the total budget requested by the network. The non-Belgian partner is responsible for the co-funding, from other sources, for at least the same amount as the amount asked from BELSPO.
- The **participation of Federal Research Institutes** and the cooperation between partners from **different Communities or Regions** is encouraged. For equal scientific quality between introduced proposals, the preference will be given to consortiums composed of partners from different communities and/or consortiums with participation of Federal Research Institutes.
- The personnel funded in the project **must be recruited under an employment contract**. Thus, no scholarship student can be taken on in the framework of the project.
- This call offers the possibility of using earth observation data via cooperation with the Space Research and Applications Service and for additional research in the framework of international commitments of the federal government via cooperation with the Service for International, Interfederal, and Interdepartmental Coordination of BELSPO.
- Expressions of interest and proposals must be submitted in **English**. Proposals must be accompanied by a summary in the coordinator’s language. If the submitters deem it useful, a version of the proposal may also be submitted in the coordinator’s language.
- The submitters are obliged **to comply with the modalities** laid out in this document. Otherwise BELSPO will not consider their proposal.



- Interested parties must submit an expression of interest, using exclusively the form available on the BELSPO website (<http://www.belspo.be/>), no later than **Monday 19 September 2011**. **Only those who submit an expression of interest may later submit a complete proposal.** The expressions of interest will be used by BELSPO **only** in order to **seek foreign experts for the evaluation of the research proposals.**
- The proposals must be sent **in two paper copies** to the following address:

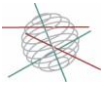
BELGIAN SCIENCE POLICY OFFICE (BELSPO)
RESEARCH PROGRAMME "SCIENCE FOR A SUSTAINABLE DEVELOPMENT"
CALL 7
LOUIZALAAN 231 AVENUE LOUISE
1050 BRUSSELS

The proposals must **also be sent in electronic form (word and pdf format)** to:

SSD_call7@belspo.be

- **Closing dates:**

Expressions of interest (mandatory): Monday 19 September 2011
Research proposals: Monday 10 October 2011 at 12:00.



1. THE PROGRAMME “SCIENCE FOR A SUSTAINABLE DEVELOPMENT”

1.1 Context

The following elements of the international, European, and national contexts may act as important beacons for maintaining economic growth, appropriate social development, and protection of the environment. They offer a frame of reference for the various actions planned within the Programme.

1.1.1 At the international level

- Belgium’s various commitments in the framework of different international Conventions and Agreements, the recommendations formulated by various international organisations, and all the European directives, strategic plans, implementation plans... with which Belgium must comply in the areas involved.
- The efforts been made for some time now with regard to the creation of a European Research Area (6th Framework Programme, 7th Framework Programme), in particular the strengthening of cooperation at the level of research projects and programmes (Networks of Excellence, ERA-NETs).

1.1.2 At the national level

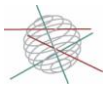
- The priorities defined in the various government coalition agreements, in the various (sectoral and trans-sectoral) policy plans and policy strategies elaborated at the National level , Federal level or at the level of the Regions and the Communities.
- The position of BELSPO within the Belgian research landscape, which offers possibilities for:
 - the analysis of trans-sectoral or horizontal themes corresponding to the competences of different federal departments;
 - the analysis of issues managed at different levels of authority (federal, Regions, Communities).

1.2 Objectives of the Programme and Implementation modalities

1.2.1 Strategic and operational objectives

From a **strategic** perspective, the objectives of the Programme are:

- to preserve and develop the scientific potential in various strategically important areas, with the objective of reducing scientific uncertainties and anticipating future needs for knowledge;
- to offer the authorities of the country the scientific support required for the preparation, implementation, and follow-up of a supranational, federal, regional, or local policy in and between these areas;
- to offer the Belgian research potential in the areas involved the possibility of integrating itself into the various research initiatives at the European and international levels, in particular within the European Research Area.



From an **operational** perspective, the proposed Programme will contribute to developing scientific knowledge and instruments (databases, models, concepts, indicators, etc.) aiming to:

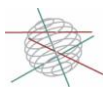
- the analysis of processes: understanding, monitoring, evaluating, and forecasting processes and their mutual interactions which constitute the basis of the functioning of both anthropogenic and natural systems;
- the study of impacts: evaluating the effects of changes in/the evolution of processes and their mutual interactions at the environmental, social, and economic levels;
- the development, follow-up, and evaluation of (existing and/or future) policy measures, on the basis of criteria such as efficiency, feasibility, acceptability... Among other things, the research will study policy measures focused on prevention, adaptation, remediation, management...

1.2.2 Diversified implementation

To fulfil these objectives, the Programme provides a diversified approach which:

- combines **sectoral**, **trans-sectoral**, and **integrated** approaches to the concerned issues;
- encourages **interdisciplinary** research so as to offer support to decision-making on the basis of an integration of different dimensions, perspectives, etc. of the issues concerned and to promote dialogue and information exchange between scientists, decision-makers, and other involved actors;
- offers space for **oriented basic research** and **targeted research actions**:
 - **oriented basic research** will anticipate needs, especially at policy level, by playing a future-oriented and/or alarm-sounding role and by eliminating specific uncertainties, in order to offer a scientific basis for decision-making. Oriented basic research also contributes to (inter)national research efforts.
 - **targeted actions** aim to formulate, within a relatively short time span, answers to specific policy issues at the (inter)national level. This may involve applied research, exercises integrating scientific results, proposals for harmonising, standardising data and information...
- offers possibilities for the **internationalisation of Belgian research**, via:
 - the opening up of this Programme to foreign researchers;
 - initiatives promoting cooperation and synergies between national thematic research programmes, such as ERA-NETs² (European Research Area –Networks). BELSPO is currently involved in a number of ERA-NET projects¹. This opens the way to developing and implementing joint transnational activities such as joint calls, project clustering, etc.;
 - support for the participation of Belgian researchers in international and supranational research programmes and networks, such as those of the European Science Foundation, the European Union, the International Energy Agency, the United Nations, the International Council for Science, etc.

¹ see www.belspo.be/SSD



- promotes **cooperation between research projects** funded within the different research areas of the Programme and/or in the framework of other initiatives of BELSPO when these are mutually complementary or demonstrate common areas of interest (**clustering**). The aim is to ensure greater coherency in research and to give the research added value in specific fields.

1.3 Research priorities

The priority research areas of the present Programme are linked to the national and international context described above. The whole set of priority research areas was chosen because of the need to address the complex, global, interrelated problems underlying a sustainable development policy. This choice is a response to strategic needs, at different levels of authority, for policy-supporting research and to the challenge of maintaining and developing national scientific expertise in complex and strategically important areas.

The **priority research areas** are:

- Energy
- Transport and mobility
- Agri-food
- Health and environment
- Climate (including Antarctica)
- Biodiversity (including Antarctica and the North Sea)
- Atmosphere and terrestrial (including freshwater) and marine ecosystems (including Antarctica and the North Sea)
- Transversal Research: In order to better translate/operationalise the concept of sustainable development, in and between the priority areas, transversal and generic research is necessary.

The goal of the research actions is to support specific decision-making in relation to both sector-related and trans-sectoral problems. The Programme thus promotes interactions between the priority research areas. The present call answers this request.

For more information, see www.belspo.be/SSD

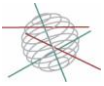
1.4 Continuity with SPSD I, SPSD II programmes

The research programme "Science for a Sustainable Development" is the continuation of the first and second Scientific Support Plan for a Sustainable Development Policy (SPSD I (1996-2001) and SPSD II (2000-2005)).

Compared to SPSD I and II, the Programme integrates new themes, namely "Health and Environment" and "Standardisation". These themes build upon the previous programmes "Workers' healthcare" and "Standardisation and Technical Regulation", which both formed part of the "Scientific Support Plan for integrating the concepts of quality and safety of production environments, processes, and goods into a context of sustainable development" (1998-2003).

On the one hand, all submitters of research proposals **must take account of the research activities conducted in the previous programmes** (see www.belspo.be/fedra).

On the other hand, a **research proposal that is a continuation of a project** funded in the framework of the aforementioned programmes must **clearly describe the relationship of the new proposal to the previous project and its added value** with respect to it. BELSPO will provide the experts in charge of the scientific



evaluation of the proposals (see point 4.2) with the relevant English-language material (final and/or interim scientific reports, findings of evaluations, etc.).

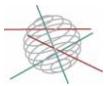
These elements will be taken into consideration when evaluating the research proposals.

1.5 Complementarities with other research actions

The research will be performed taking into account:

- the other (previous and/or current) research actions of BELSPO:
 - the research programmes Information Society, Belgian Coordinated Collections of Micro-organisms (BCCM), Social Cohesion, Agora, Earth Observation Research Programme (STEREO I and II), Interuniversity Attraction Poles (IUAP), Technological Attraction Poles (TAP), Action in Support of the Federal Authority's Strategic Priorities, Society and future, the Belgian Princess Elisabeth Station - Antarctica (BELISA) etc.;
 - research within the federal scientific institutions.
- other research actions carried out at the federal, regional or community levels.

According to the priority research areas of the Programme, the calls for proposals will establish more direct links with some of these research actions.



2. CONTENT OF THE PRESENT CALL

2.1. Natural risks on ecosystems and the socio-cultural heritage in Belgium and Central Africa

Context of the call

Natural disasters as well as technological accidents, pollution, terrorism, armed conflicts, food and energy security, and increasingly scarce resources, are supposed to do serious damage to at-risk populations, their heritage and their environment. These are some of the 'major risks' to human beings and society.²

In Europe, thanks to a relatively high level of anticipation and precautions and moderate threats of natural origin, losses to human beings have remained limited during the past 15 years. Still, economic losses linked to natural risks have increased considerably in Europe, just as elsewhere in the world. The total damage could triple between now and 2100.³

In Belgium, storms, floods, fires in forests, heathlands or bush related to persistent droughts, landslide, and the repercussions of volcanic eruptions in nearby countries, have demonstrated the need for a systemic, interdisciplinary and cross-sectoral approach to these risks,⁴ to ensure a more coherent response from society in the context of globalisation.

The management of natural risks therefore forms an integral part of sustainable development policies. This covers a series of measures relating simultaneously to awareness-raising, prevention and reduction of risk, the management of crises and restoring damaged systems.

This requires a thorough knowledge of the risk itself, the vulnerability of at-risk systems, and of the various factors and contexts that need to be taken into account when assessing and managing risk. The support required to take effective and coherent decisions in this area necessitates the development of approaches, analyses, methods and innovative instruments, which integrate the (psycho-)social, cultural, economic and environmental dimensions.

The topic of the call

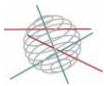
This call is meant to contribute to scientific support for a policy for managing major natural risks for Belgian and Central African society and its material cultural heritage.

² EOS, 2009. White Paper. A Global European Approach for Energy Infrastructure Protection and Resilience, European Organisation for Security (EOS), 2009.

OCDE 2003. Emerging Systemic Risks in the 21st Century. An Agenda for Action

³ EWCII, ONU, ISDR, 2003. Europe, Regional consultation in preparation for the second International conference on early warning (EWCII), E. J. Plate, ISDR - International strategy for disaster reduction, UN, 2003.
World Bank/UN report, 2010. Natural Hazards, UnNatural Disasters. The Economics of Effective Prevention. Joint World Bank and UN report, 2010.

⁴ CEPS, 2011. OCDE 2003.



The major natural risks involved in this call are:

- *Risks associated with extreme weather phenomena:* such as storms, forest fires, floods, prolonged droughts and lightning.
- *Major risks associated with physical and geological environmental features* such as earthquakes, landslides, subsidence, volcanic eruptions and natural sources of emissions.
- *Risks of biological origin* such as biological infestations. This call only concerns risks to material cultural heritage and major risks to terrestrial and marine ecosystems.

The areas at risk involved in this call are:

- Belgian and Central African *society, including* the population, structure and organisation of society, and the physical assets of human beings and their environment.
- *Material cultural heritage:* immovable heritage (monuments, sites, architectural units and archaeological sites) and movable heritage (paintings, sculptures, musical instruments and other art objects, manuscripts and archives (Belgian and Central African))

The call is aimed at gaining a thorough knowledge of the chain of risks consisting of:

1. Hazards. This particularly concerns studying the probability that natural phenomena will occur (variability) at a certain intensity, time and given place; and highlighting precursory signs, conditions that will induce events, as well as the potential aggravation of risks caused by a combination of other hazards and site effects. It will in particular be necessary to try to reduce and quantify uncertainties as regards to hazards.
2. Vulnerability. The research will identify and evaluate the impacts on and potential damage to, as well as potential resilience of, at-risk areas. The research will in particular take into account the multiple socio-economic and environmental factors which determine or influence such vulnerability.
3. Scientific support for managing risk. This involves i) evaluating risk based on the integration of scientific knowledge of the risk and the vulnerability in question; ii) analysing measurements of risk management while looking for a balance between measures to ensure early detection, prevention, impact limitation and restoration to support reduction or adaptation of the risk; and iii) analysing perception of the risk, concerns and values of society in order to suggest how to manage risk in a way that is acceptable to society and how to communicate this in a suitable manner.

Considering the European and international significance of certain natural risks, it would be appropriate if the case arises to undertake suitable research in support of coordinated solutions.

Research will be multidisciplinary and systemic. It will deal with more than one of the three elements in the cited risk chain.



2.2. Polar terrestrial research

The dramatic changes that are currently affecting the poles and their impact on the total planetary system make the study of Polar Regions more important than ever:

- the polar regions are changing more quickly than any other area on Earth, with regional and global consequences at ecological, economic and social levels,
- any change at the poles is critical because of the numerous feedback processes, which involve the oceans, the cryosphere and the biosphere, any of which could accelerate global changes,
- because they act as heat sinks for the climate system, the poles induce and react to changes elsewhere on Earth.

BELSPO has a long tradition of research in the Antarctic. The first phase of the Antarctic research programme was launched in 1985. For a few years, this research was part of the sustainable development programmes (PADD I and II and the current SSD programme). Support for Antarctic research now extends to Arctic research – which reflects international tendencies – with the purpose of gaining a better knowledge of the poles and polar systems, their interactions and their impact at the global level.

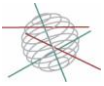
While the call in 2010 concerned polar oceanographic research, this call is for **terrestrial polar research**, dealing with the **following research topics and priorities**:

The Poles and the polar climate system

- Better understanding of the dynamics of polar climate systems to predict future changes
- Improved modelling and observations of geophysical and climatic processes relevant for the ice sheet mass balance and ice sheet dynamics
- Understanding processes and mechanisms to improve model projections of polar contributions to future sea level change
- Polar atmospheric chemistry studies into the fundamental physical and chemical mechanisms of the atmosphere-snowpack exchange processes

Improved understanding of the paleoclimate

- Improved understanding of deep ice behaviour in the ice sheet and its connection with the subglacial environment: validity of paleoclimatic interpretation of deep ice archives
- Integration of paleoclimate and paleoglaciological records in coupled ice sheet-climate models
- Improved modelling and observations of paleo ice sheet and climate dynamics
- Paleoclimatic and paleo-glaciological reconstructions and modelling based on Late Quaternary high-resolution ice, marine, and lacustrine records



Biodiversity, Biogeography and Evolution

- Biodiversity, Biogeography and Evolution of organisms in relation to climate and environmental changes: impact, resilience and adaptation strategies
- Linking biodiversity patterns with evolutionary, ecological and physiological processes in the perspective of global change
- Development of advanced integrative and spatially explicit models to predict the future climate change effects on biodiversity and ecosystems functioning and their feedbacks
- Biological components as early warning indicators of change in the climate system

Human

- Orienting psychological, psychosociological, physiological and psychophysiological studies of adaptation and behaviour of persons and groups during a (winter) stay at research stations

Management of data and collections

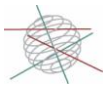
One part of the call, based on the results and advices of the IPY Joint Committee, will be reserved for projects aimed at the management of data and collections relating to polar research projects financed within the framework of the SSD (Science for Sustainable Development) and BELISA (Belgian Princess Elisabeth Station Antarctica) programmes.

These research priorities will need to match research results and priorities deriving from international working groups and the following reports:

- *4th Assessment Report of Working Group 1 of the Intergovernmental Panel on Climate Change (IPCC)*
- *Arctic Climate Assessment Impact (ACIA) report*
- *SCAR Antarctic Climate Change and the Environment (ACCE) report*
- IPY Joint Committee Understanding Earth's Polar Challenges report: IPY 2007-2008.

Existing international collaboration needs to be reinforced via mechanisms for co-financing international partners within the projects.

The data and observations that are obtained need to be integrated to the maximum extent into models that can predict changes and the responses to these changes.



3. PROFILE OF THE PROPOSALS

3.1. Duration and budget

The present call offers room **for 4-year research projects..**

Taking into account the resources made available, the projects selected within the framework of the present call will start at the end of 2011.

The overall available budget for this call is **8,2 million Euro**, 6.1 million for the research axis “Natural risks on ecosystems and the socio-cultural patrimony in Belgium and Central Africa”, 2,1 million for the axis “Polar terrestrial research”. The total project budget is limited to 1 million Euro.

In addition to the 8,2 million, 2,2 million is reserved for the participation of Belgium in the following ERA-NET calls: ERA-ENVHEALTH (Environment and health research), SEAS-ERA (Marine Research), BiodivERsa (Biodiversity Research) and PolarLIFE (European Partnership in Polar Life Science).

The Belgian Science Policy will take care of the real expenses of the Belgian partners for taking part in campaigns to foreign countries (in particular Polar Regions and Africa), in addition to the financing of the project.

Expenses which are reimbursed by the State within the context of the campaigns cover: (i) travelling costs and stay of Belgian researchers who are joining in scientific expeditions; (ii) transportation and insurance of their scientific equipment; (iii) medical aptitude tests for staying in a Polar environment; and exceptionally (iv) repairing, adaptation of scientific equipment which is essential and directly linked to a particular campaign. The cost of the equipment for the campaigns has to be integrated in the total budget of the project.

3.2. Networks and coordination

3.2.1 Networks

Each proposal is submitted by an **interdisciplinary network**, belonging to at least two separate Belgian scientific institutions, of which at least one is a university institution.

The network partners must conduct complementary activities related to a common issue and its integration.

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, public scientific institutes, non-profit research centres, and specialised consulting offices**. These last-mentioned can be financed up to maximum 25% of the total budget requested by the concerned partner.

The project may require punctual expertise, which can be delivered in the form of **subcontracting**. Such subcontracting may under no circumstances amount to more than 25% of the total budget requested by the concerned partner of the network.



The participation of Federal Research Institutes and the cooperation between partners from **different Communities or Regions** is encouraged. For equal scientific quality between introduced proposals, the preference will be given to consortiums composed of partners from different communities and/or consortiums with participation of Federal Research Institutes

If it brings in 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 funding of non-Belgian partners by BELSPO will under no circumstances amount to more than 20% of the total budget requested by the network. The non-Belgian partner is responsible for the co-funding, from other sources, for at least the same amount as the amount asked from BELSPO.

The personnel funded in the project **must be recruited under an employment contract**. As a consequence, no scholarship student can be taken on in the framework of the project.

3.2.2 Coordination

A **coordinator** (belonging to a Belgian research institute in accordance with point 3.2.1, § 4) 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 so as to promote applications and support to 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 production of the reports on 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 proper implementation of the project;
- to coordinate the synthesis and translation of research results, with a view to applications and support to decision-making;
- to coordinate the publication and dissemination of research results.

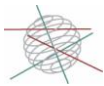
3.3. Follow-up Committee, Valorisation, and Data

3.3.1 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 promote **valorisation of the research**. It will carry out this role via the exchange and provision of data and information and by giving advice, suggesting valorisation avenues... This committee is convened once or twice a year (or more, if necessary).

The Follow-up Committee is composed of **potential users of the results**, such as representatives of public authorities at the national, regional, European, or international level, social actors, scientists, industrial actors... The members of the Follow-up Committee are non-funded partners.

In the research proposal, the submitters must describe the profile of the members of the Follow-up Committee (institutions and a list of possible members). The actual composition will be established in



consultation with BELSPO. The committee will consist of **at least 5 people**.

3.3.2 Valorisation

Each research proposal must include **concrete proposals for valorising** the research. 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 the 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.

3.3.3 Use and management of data

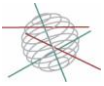
Concerning the use of existing data or the collection of new data, proposal submitters should take the following guidelines into account:

- 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. Should it appear after the start of the research 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 highlighting its added value as compared to existing databases. In addition the partners must provide the budget required for this data collection.
- As the data collected in 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.

3.3.4 Intellectual Property

Foreground shall be the property of the Institution carrying out the work generating that foreground, as mentioned in article 13.2 of the general conditions of the contract (annexe 2).

For the research areas North Sea, Biodiversity and Antarctic, the researchers must bear in mind that the analysis and measurement data must nevertheless be transferred to specific data banks like IDOD/BMDC (<http://www.mumm.ac.be/datacentre>), AMD (Antarctic Master Directory (<http://gcmd.gsfc.nasa.gov/KeywordSearch/Home.do?Portal=amd&MetadataType=0>), data bank BIOBEL from the Biodiversity platform (<http://www.biodiversity.be>).



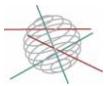
3.4. Interactions with Space Research and Applications Service

Like other sources of information, remote sensing from space can contribute to better understanding and monitoring the evolution of the ecosystem Earth. Scientific expertise in this area is being progressively developed in Belgium, particularly through the various phases of the programmes TELSAT, STEREO I and II, and VG. Research within these programmes ranges from thematic basic research to pre-operational applications.

In order to make possible the conversion of earth observation data to useful "information", a multidisciplinary approach is necessary which requires close cooperation between the above-mentioned programmes and the programme "Science for a Sustainable Development".

This cooperation is translated into the following specific modalities:

- provision of earth observation data to the research teams on the basis of a justified request;
- reinforcement of the capacity to support the user community in general, via maintenance of an "Belgian Earth Observation Platform"-type information and help service: <http://eo.belspo.be>



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 How to answer 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.

Only those who submit an expression of interest before the stipulated deadline may later submit a complete proposal.

4.1.1 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.**

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

Interested parties are asked to use *exclusively* the form available at the BELSPO website:

<http://www.belspo.be/>

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

SSD_call7@belspo.be

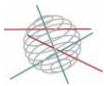
The expression of interest must reach BELSPO no later than:

Monday 19 September 2011

A receipt will be sent by email.

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

Only those who submit an expression of interest in time may later submit a complete proposal.



4.1.2 Proposal submission

General guidelines

The submitter is asked to use **exclusively** the forms that are downloadable from the internet site of BELSPO (<http://www.belspo.be>). Only the research proposals that fulfil all the eligibility criteria will be considered (<http://www.belspo.be>).

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

Each proposal must be submitted in **English** in **2 copies**.

The proposal must be sent to the following address:

**BELGIAN SCIENCE POLICY OFFICE (BELSPO)
RESEARCH PROGRAMME "SCIENCE FOR A SUSTAINABLE DEVELOPMENT"
CALL 7
LOUIZALAAN 231 AVENUE LOUISE
1050 BRUSSELS**

The proposal must also be sent in electronic form (word and pdf format) to the following address:

SSD_call7@belspo.be

The proposal (**paper and electronic versions**) must reach BELSPO no later than:

Monday 10 October 2011 at 12:00.

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

A receipt will be sent by email at the latest on Tuesday 11 October 2011.

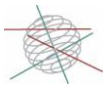
Forms

Each proposal form includes three separate sections.

Section 1 - Administrative data

Section 2 - Description of the proposal

Section 3 - Qualification and experience of the participants



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

<http://www.belspo.be/>

4.2 Evaluation and selection

4.2.1 Bases for the evaluation

Proposals submitted in the framework of this call will be evaluated externally by foreign scientific experts qualified in the research field involved.

Only **complete submission files** (the English-language version) that fulfil all the eligibility criteria will be presented for evaluation. **No annex** to the submission file will be taken into consideration during the evaluation and selection procedures.

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

4.2.2 Evaluation criteria

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

Compliance with the aims, content, and characteristics of the Programme in general (see point 1) and of the present call in particular (see point 2).

Scientific quality

- Clarity of the objectives and tasks, relevance of the method, positioning with respect to the state of the art in the proposed area
- Scientific originality of the proposed research, the innovative character of the expected results, strengthening of existing expertise, contribution of the proposed research to ongoing research in the area involved.

Scientific support to decision-making

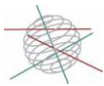
- The link between the project's potential scientific results and the scientific support required in order to prepare and implement a supranational, federal, regional, or local sustainable development policy.

Quality of the research team(s)/network

- Experience and international contacts of the submitters
- Added value of the network
- Complementarity of the partners' skills
- Clarity of the division of tasks between partners
- A balanced distribution of funds among the partners
- Realism of the requested resources (duration, budget, personnel)
- Added value of foreign partner's contribution

Quality of the management and coordination

- The coordinator's scientific quality and management, synthesising, and communication skills.



Interdisciplinarity

- An interdisciplinary approach in order to meet the requirements of the sustainable development concept

Valorisation

- Pertinence of proposals for disseminating and making available the information, especially in a perspective of support to policy decision-making;
- The member profile and role of the Follow-up Committee.

Added value with regard to projects funded under previous programmes (SPSD I, SPSD II) (see point 1.4)

4.2.3 Selection

The research project selection procedure will take place in two phases: a scientific evaluation, followed by a strategic choice. The scientific evaluation is performed by foreign scientific experts qualified in the research areas of the submitted proposals. The strategic choice is made between the scientifically best-ranked and best-grounded projects.

4.3 Contractual Obligations

4.3.1 Contracts

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

For this, 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 choice of the coordinator, the proposals for valorising the research, etc.

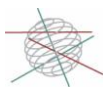
BELSPO grant the selected projects the **funds required** for their implementation. BELSPO shall reimburse at most, and up to the amount specified in the granted budget, the real costs substantiated by the people responsible for the contract provided those costs are directly related to the implementation of the project.

4.3.2 External evaluation

All research projects are subject to one or more external evaluations, whose modalities are specified in the research contract. 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. The evaluation will result in recommendations for the continuance (or discontinuance) of the project.

4.3.3 Reports

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) is to be covered by the project budget.



4.3.4 Data, Results, and Ownership

Foreground shall be the property of the Institution carrying out the work generating that foreground, as mentioned in article 13.2 of the general conditions of the contract (annexe 2).

For the research areas North Sea, Biodiversity and Antarctic, the researchers must bear in mind that the analysis and measurement data will nevertheless be transferred to specific data banks like IDOD/BMDC (<http://www.mumm.ac.be/datacentre>), AMD (Antarctic Master Directory (<http://gcmd.gsfc.nasa.gov/KeywordSearch/Home.do?Portal=amd&MetadataType=0>), data bank BIOBEL from the Biodiversity platform (<http://www.biodiversity.be>).

5. CONTACT INFORMATION

All additional information can be obtained at the following telephone number and e-mail address:

Secretariat
+ 32 (0)2 238 37 61
secretariat_SSD@belspo.be