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FEDERAL SCIENCE POLICY

RESEARCH PROGRAMME FOR EARTH OBSERVATION STEREO III

(SUPPORT TO EXPLOITATION AND RESEARCH IN EARTH
OBSERVATION)

CALL FOR PROPOSALS

INFORMATION PACKAGE

OCTOBER 2016

CLOSING DATES:

Expressions of interest (mandatory): 12 December 2016 before 4 p.m.

Research proposals: 3 March 2017 before 4 p.m.

1 CONTENT

1	CONTENT.....	2
	FOREWORD	4
2	PRESENTATION OF THE PROGRAMME	6
2.1	Introduction.....	6
2.2	Programme background.....	6
2.2.1	The national context	6
2.2.2	The STEREO II programme	7
2.2.3	Synergies with ESA activities.....	7
2.2.4	Earth observation within Horizon 2020	9
2.3	The adaptations of the STEREO III programme	10
2.4	Programme Goals	10
2.5	Thematic priorities	11
2.5.1	Global monitoring of vegetation and evolution of major terrestrial ecosystems	11
2.5.2	Management of the local and regional environment	12
2.5.3	Interaction between (change in) land cover and climate change.....	13
2.5.4	Epidemiology and humanitarian aid	13
2.5.5	Security and risk management.....	14
2.6	Geographic priorities	14
2.7	Methodological priorities	14
2.8	Remote sensing data	15
2.9	Programme structure	15
2.9.1	Scientific research	15
2.9.1.1	Research projects	16
2.9.1.2	Development of applications	18
2.9.2	Transversal support.....	19
2.9.3	Valorisation and support.....	19
2.10	Programme planning	20
2.11	Implementation of the projects	21
2.12	Programme committee	22
3	FIRST 2015 CALL.....	23
3.1	Object and budget of this call.....	23
3.2	Timetable.....	23
4	PROFILE OF THE PROPOSALS	24
4.1	Target groups.....	24

4.2	Budget breakdown	24
4.2.1	Staff	24
4.2.2	Operations.....	25
4.2.3	Equipment	25
4.2.4	Subcontracting	25
4.2.5	International collaboration	26
4.2.6	General expenses	26
4.2.7	Earth observation data.....	26
5	PROCEDURES.....	28
5.1	Submission.....	28
5.1.1	Expressions of interest	28
5.1.2	Proposal.....	28
5.2	Assessment and selection	29
5.2.1	Expressions of interest	29
5.2.2	Proposal.....	29

- This document features the information required for teams wishing to take part in the 2017 call for research proposals in the context of the "STEREO III programme". This call only concerns exploration projects.

- **Exploration projects**
 - Small scale remote sensing projects either:
 - 1) exploring innovative research avenues,
 - 2) answering scientific questions that arose in a previous BELSPO project,
 - 3) developing new products and algorithms for PROBA-V or
 - 4) exploiting BELAIR data.
 - The call is addressed to Belgian universities, public scientific institutions and non-profit research institutions. Belgian consultancies with knowledge unique and indispensable for the project might qualify for funding at a maximum rate of 25% of the required STEREO budget but cannot coordinate a project.
 - Cooperation with foreign scientific partners is optional but recommended. A maximum of 20% of the STEREO budget may be earmarked for foreign teams per project. The foreign partners will co-finance their contribution to the project by matching the STEREO III under a parallel funding arrangement. The foreign partner(s) should complement the Belgian teams and make a substantial scientific contribution to the project.

- Applicants are required to observe the rules laid down in this information package, otherwise their proposals cannot be taken into account by the Belgian Federal Science Policy Office.

- Applicants must make sure that there is no overlap with this grant from other regional/national/European programs.

- Expressions of interest and proposals should be presented in English.

- **Expressions of interest (mandatory) must reach the Belgian Federal Science Policy Office no later than 12 December 2016 at 4 PM.**

- **Digital (and electronically signed) copy of the proposals must reach the Belgian Federal Science Policy Office no later than 3 March 2017 at 4 PM.**

For further details about the programme and this call please get in touch with:

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2 PRESENTATION OF THE PROGRAMME

2.1 INTRODUCTION

The go-ahead for the multiannual research programme for earth observation, STEREO III, was officially signed by the State Secretary of Science Policy on 19 September 2013 in execution of decision of the Ministerial Council of 15 November 2012 concerning the elaboration of the Belgian space strategy. The programme covers the period from 2014 to 2020 with a budget of 28,6 MEURO.

For continuity's sake, a first call for thematic network projects was launched in 2013 in line with the modalities of the STEREO II programme

Late 2014, the programme was modified taking into consideration the results of the evaluation of the STEREO II programme and the focus of the European programme Horizon 2020.

This document concerns the fourth call for proposals of the STEREO III programme.

2.2 PROGRAMME BACKGROUND

2.2.1 THE NATIONAL CONTEXT

The Belgian long-term strategy in the field of earth observation is based on two pillars:

- The development of technology, via ESA and bilateral collaborations (for example: SPOT, Pléiades, VEGETATION, CTIV, PROBA, APEX);
- and, since 1984, the development of applications, the establishment of an expertise in earth observation and the support of the scientific use of types of earth observation data (focussing on the use of "Belgian" satellites and remote sensing instruments), financed by a succession of federal research programmes. Throughout the years, these programmes progressively put emphasis on:
 1. International visibility of the results of the Belgian research
 2. Transfer of knowledge from the universities to the industry and the administrations
 3. Interaction with users and enlargement of the user community

4. Training and education

2.2.2 THE STEREO II PROGRAMME

The previous phase of the STEREO programme, STEREO II, ended in 2014. Its aim was to develop in Belgium an autonomous expertise in earth observation with an international level as contribution to the knowledge economy.

This translated into following goals:

- Reinforce Belgian earth observation capacities;
- Stimulate scientific innovation;
- Put Belgium on the map as an international centrum of knowledge in different niches and give to the Belgian organizations the necessary capacity to play an important role in international research programmes and European and Worldwide earth observation activities;
- Support the Belgian earth observation infrastructure;
- Foster interactions with users and introduce earth observation as common tool for new users.

In 2013-2014, an external evaluation of the programme was carried out in order to assess the performance of the STEREO II programme and its parts, and to provide recommendations on the elaboration of STEREO III.

The final report of this evaluation can be found on the following website:
<http://eo.belspo.be/About/Stereo3.aspx>.

2.2.3 SYNERGIES WITH ESA ACTIVITIES

There is an obvious synergy between national programmes and ESA activities: programmes like STEREO enable the training of highly qualified researchers and the development of expertise thus allowing an adequate ESA return to Belgium. A continuous financing of the research also makes it possible to have national champions.

ESA aims to collaborate with national programmes as member states with a national research programme are perceived to perform better in ESA programmes.

For more information about relevant ESA activities, please contact:
BELSPO's ESA delegate for Earth Observation: Steven Bogaerts (boga@belspo.be).

2.2.4 EARTH OBSERVATION WITHIN HORIZON 2020

Horizon 2020 is the EU Framework Programme for Research and Innovation for the period 2014 to 2020. Its goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

Space research is supported in Horizon 2020 under the priority "Industrial Leadership", in line with the main objective and challenge to foster a cost-effective competitive and innovative space industry (including SMEs) and research community to develop and exploit space infrastructure to meet future Union policy and societal needs. Horizon 2020 will enable the European space research community to develop innovative space technologies and operational concepts "from idea to demonstration in space", and to use space data for scientific, public, or commercial purposes.

The work programme for Space R&D aims at:

- Prioritising the existing two EU Space flagships of European Global Navigation Satellite System (EGNSS) and Earth Observation reaping the benefits they can generate in the coming years and ensuring their state-of-the-art also in the future;
- Ensuring support for the protection of space infrastructure at European level;
- Ensuring support to EU Space industry, notably to maintain and enhance industry's competitiveness and its value-chain in the global market;
- Ensuring that Europe's investments made in space infrastructure are exploited to the benefit of citizens; as well as supporting European space science; and
- Enhancing Europe's standing as an attractive partner for international partnerships in space science and exploration.

Remote sensing is addressed in the work programme through specific calls. The first calls dealt with:

- New ideas for Earth-relevant space applications.
- Climate Change relevant space-based data reprocessing and calibration
- Observation capacity mapping in the context of Atmospheric and Climate change monitoring
- Bringing EO applications to the market
- Stimulating wider research use of Copernicus Sentinel Data
- Technology developments for competitive imaging from space

For more information, <http://ec.europa.eu/programmes/horizon2020> or contact Danièle Coosemans (coos@belspo.be).

2.3 THE ADAPTATIONS OF THE STEREO III PROGRAMME

The adaptations of the programme aim at conserving its main strength, which is enabling of high quality research. This is aided by a rigorous selection procedure, the inclusion of international partners and the project supervision by a Steering Committee. This research is carried out by a tightly knit community which is supported by BEODays.

Following changes were made to meet recommendations of STEREO II evaluation:

- Facilitate development of applications
- Increase flexibility in research financing
- Encourage data-sharing
- Increase interaction with all programme stakeholders
- Enhance visibility of research results through more intensive dissemination activities

2.4 PROGRAMME GOALS

STEREO III's **goals** are in line with the previous programme and aim at supporting the Belgian space strategy. These are:

- To support innovative high quality research in the field of remote sensing.
- To keep/put Belgium on the map as international centre of expertise in a number of remote sensing fields.
- To stimulate international collaborations and to secure integration of Belgian teams in international partnerships.
- To support Belgium's remote sensing instruments and platforms.
- To stimulate the development of new remote sensing applications.
- To introduce the use of remote sensing in new disciplines and to new users.
- To promote remote sensing, and especially results of Belgian and STEREO research.

2.5 THEMATIC PRIORITIES

The thematic research priorities are as follows:

1. Global monitoring of vegetation and evolution of terrestrial ecosystems
2. Management of the environment on a local and regional scale (water, soil, forest, nature reserves and biodiversity, agriculture, coastal areas, urban and peri-urban areas)
3. Interaction between (change in) land cover and climate change
4. Epidemiology and humanitarian aid
5. Security and risk management

Certain topics are covered by several programme themes, or even by all of these themes. A variety of disciplines sometimes has to be brought into play to study these issues from several thematic viewpoints. In this case, cooperation between one or more scientific teams with no remote sensing expertise is strongly recommended.

Note: The research themes atmospheric chemistry and climatology are covered by ESA's PRODEX programme. For more information on this programme, please go to: https://www.belspo.be/belspo/space/euPolicy_prodex_en.stm.

2.5.1 GLOBAL MONITORING OF VEGETATION AND EVOLUTION OF MAJOR TERRESTRIAL ECOSYSTEMS

Vegetation and the major terrestrial ecosystems are regarded as the lungs of the planet, sources of raw materials, life supports and environments. They provide the general framework for the development of our societies and activities. The human footprint is making an ever-increasing impact on the status of terrestrial ecosystems, which in turn increasingly drive the process for determining the quality of life for current and future generations.

Helping to answer myriad strategic and social questions, one of the key scientific challenges is to make a contribution to the effort to gain a better understanding of the status of the global environment on the basis of a continuing and independent system of monitoring (for example, an inventory of CO₂ sequestration or emission zones, the ability of ecosystems to withstand human activities on a sustainable basis, availability of and access to natural resources).

The use of PROBA V and Vegetation data is encouraged.

2.5.2 MANAGEMENT OF THE LOCAL AND REGIONAL ENVIRONMENT

Human perceptions of the environment are obviously mediated at local and regional levels, where the environment plays a comprehensive role in economic activities, thereby underpinning the economic sector. The environment also provides a framework for recreational activities and well-being. Moreover, it makes a contribution to the cultural identity of local and regional communities and strengthening the feeling of social allegiance. Consequently, one of the challenges that has to be met involves investigating the spatial and temporal management of the local and regional environment in the light of its three economic, ecological and socio-cultural functions and the various environments and ecosystems they cover.

The environment is constantly changing as a result of myriad biological, physico-chemical, metrological, climatic and man-induced factors. The environment in turn makes an impact on human beings and their activities. This intricate dynamic process must be understood and monitored so as to guarantee the environment is managed in a responsible way. Modelling can help anticipate developments driven by local or regional management and planning policies. Remote sensing is a key source of data towards this end. Central to the research activities is the development of exploitation-specific methods and tools.

As environmental challenges do not stop at national borders, research may look into cross-borders environmental issues or a comparison may be made of how the impact of environmental policies differs from one country to another.

In Stereo III the focus is given to the following components of the environment:

- Water (both sea and inland)
- Agriculture and soil
- Urban and peri-urban areas (the cities of the future)
- Natural vegetation and biodiversity
- Forest

2.5.3 INTERACTION BETWEEN (CHANGE IN) LAND COVER AND CLIMATE CHANGE

This topic covers interactions and feedbacks between global change drivers and biogeochemical and water cycles as well as biodiversity, structure and productivity of natural and managed ecosystems. The focus must be given to the terrestrial component of these interactions (atmospheric chemistry and climatology being covered by ESA's PRODEX programme).

2.5.4 EPIDEMIOLOGY AND HUMANITARIAN AID

The way the environment affects human and animal health is not easy to show, primarily because it affects isolated subjects. The environment is first and foremost a framework for the development of or concentrations of pollution, pathogenic agents or their vectors. Consequently, the aim is to investigate the connection between the development of these agents' ecological niches and the trends highlighted by epidemiological studies, formulate systems for following up and mapping risks and forge decision-making tools in the event of a potential epidemic.

The communities faced by crises or emergency situations are often living in remote areas and are particularly vulnerable. Remote sensing research boosts the facilities for making a fast assessment of devastated areas and gaining access. The research seeks to tap into the widest possible of images that may be available. Remote sensing will also be used to become involved in the sustainable development of economically developing nations.

Against the background of rapidly changing economic, political and environmental situations in the world, the ever-increasing number of areas suffering from dire living conditions is forcing people to migrate. In order to help these people, relevant areas have to be identified and an assessment made of the scale of the problem.

2.5.5 SECURITY AND RISK MANAGEMENT

Irrespective of whether they are the result of natural or man-induced causes, the risks may be managed to some extent via Earth observation systems, monitoring hot spots on a daily basis and developing reliable and effective early warning and communication systems, relating to security and civil protection.

2.6 GEOGRAPHIC PRIORITIES

- There is a preference for study areas where previous (STEREO) research took place or for BELAIR sites (for more information go to <http://belair.vgt.vito.be>) - but additional sites are possible if well motivated.
- It is advisable to upscale to a larger scale and/or to compare the results of the study area with other sites. Results must be replicable in other study areas and be part of an unfolding process as much as possible.

2.7 METHODOLOGICAL PRIORITIES

Following methodological research merit particular attention. They either dovetail with Belgian expertise or respond to the recommendations of the STEREO II evaluation:

- Exploitation of time series
- Fusion of different types of RS imagery
- Processing of large datasets
- Automation of data processing
- Standardisation
- Use of crowd sourcing
-

In addition, improved estimation of uncertainty of the results is of utmost importance. The results and products derived from the research will be backed up with comparative tests, quality and reliability tests. The methods, models and services developed will have been calibrated and validated with representative field data and subjected to sensitivity analyses and error propagation.

2.8 REMOTE SENSING DATA

The *image requirements* (including the need to organise airborne campaigns) have to be clearly determined and motivated.

The programme provides incentives for the deployment of a wide range of satellites and instruments, with special emphasis of the use of hyperspectral imagery combined with other remote sensing and/or in situ data. The use of very high resolution PLEIADES images and Vegetation and PROBA V data will also be encouraged depending on the topic and the study site.

In addition, the use of "new" techniques and platforms such as LIDAR or UAV is supported. *Whenever possible data previously acquired by BELSPO should be used.*

2.9 PROGRAMME STRUCTURE

The three-part programme comprises:

- Scientific research
- Transversal support (of scientific STEREO research)
- Valorisation and support (of the remote sensing community)

2.9.1 SCIENTIFIC RESEARCH

The scientific research covers two types of projects: *research projects* and *development of applications*.

2.9.1.1 RESEARCH PROJECTS

Within the research projects, 4 types of projects can be distinguished:

- Thematic network projects
- Exploration projects
- Shared cost projects
- Dissemination and support projects

Thematic network projects and exploration projects are selected only as part of call for proposals and after evaluation by international peers.

Shared cost and dissemination and support projects can be submitted outside a call and are selected by the STEREO Programme Committee depending on the fit with the programme, the duration and the available budget.

The publication of peer reviewed research papers is key for all types of research projects.

THEMATIC NETWORK PROJECTS

This refers to major projects lasting **4 to 5 years**. They can cover **fundamental and/or application oriented research**, but must have societal relevance. The research should be **innovative**. The research is conducted via **partnerships involving** 2-5 research teams (from Belgium) inevitably rounded out by (an) international team(s). Including Belgian teams not previously involved in STEREO is an asset. The international team must be an indispensable part of the partnership and should bring along expertise not available in Belgium. The team coordinating the project should have some prior experiences with remote sensing.

The proposals will deal with scientific or methodological issues focused on the themes referred to in point 2.5.

These research activities will not be confined to learning about or monitoring a process. They will also seek to *model* it and *forecast* its developments. They will be based in particular on biophysical indicators and parameters originating from data provided by Earth observation via satellites and/or aircraft instruments.

The research activities will be developed as much as possible according to a general multi-instrument, multi-data, multi-theme approach or alternatively independent of the space dimension. Against this background, steps will be taken to guarantee the interoperability of the acquisition and processing systems and the standardisation of the methods, techniques and algorithms.

EXPLORATION PROJECTS

This involves small-scale projects associated or not with past BELSPO thematic projects, lasting **1 to 3 years** for **1 to 3 teams** whether or not rounded out by an international team.

The projects are directed at:

1. investigating new concepts, technologies and sensors (INNOVATION PROJECT); OR
2. Exploring a new research track resulting from previous BELSPO remote sensing projects (SPIN-OFF PROJECT); OR
3. Developing and validating new PROBA-V products (PROBA-V PROJECT); OR
4. Investigating a site specific and well-defined topic using BELAIR data, e.g. the validation of a vegetation index in a fragmented landscape (BELAIR PROJECT).

SCIENTIFIC PROJECTS OUTSIDE CALL

SHARED-COST PROJECTS

In these types of projects there is the possibility for a Belgian partner who was selected for international, bilateral, regional or national projects (in the BRAINS.be programme for example) to be co-financed. There is also the possibility of co-funding for a Belgian participation in transnational programmes such as ERA-nets.

DISSEMINATION AND SUPPORT PROJECTS

These are small short term projects with a maximum duration of 6 months and a budget not exceeding 30.000 €. They concern:

- Writing up of papers of STEREO III research output not initially foreseen or not yet mature by the end of the project;
- Rendering software written for a specific project accessible for the remote sensing community, e.g. in the framework of the STEREO toolbox (see § 2.9.2)

- Dedicated research needed for BELSPO or to support a specific remote sensing field;
- ...

2.9.1.2 DEVELOPMENT OF APPLICATIONS

These applications can be *products, services, software codes or procedures*. The goal of these projects is a transfer of technology and knowledge from scientific institutions to companies or administrations or NGO's or any combination of those. The proposal must result from a critical need of the institution or its customers and end users.

In terms of content, the proposals must have a bearing on the five priority research themes decided upon for scientific research. A maximum of three scientific teams, solely from Belgium, are responsible for the implementation of the project for a period of 1 to 3 years.

The programme pays solely for the scientific partner(s) and the partner from *administrations or NGOs* (non-research partners). These non-research partners can get a maximum of 25 % of the STEREO III subsidy to the project and must contribute at least as much to the project via staff, information and equipment. The proposal must be submitted by the non-research partner who should also coordinate the project. Focus is on non-commercial re-use.

Private companies cannot obtain funding by the STEREO III programme within this type of project. They have to contribute the equivalent of min. 25% of the STEREO III project budget via staff, information and equipment and should also submit and coordinate the project. Potential end users also have to be involved with the project for defining and testing the finished product. Projects may be designed as 'pre-operational', thereby implying further fine-tuning paid for in full in a subsequent phase by the company itself, in the light of the assumed market outlook.

The proposals can be submitted on a permanent basis and will be evaluated min. once a year by international experts.

Financing of a pre-study is possible for a total of 10 k€ for all partners (including the private company). This should allow to investigate the feasibility of the application, to settle the intellectual property rights and to prepare the proposal. Concept creator, data provider and user should be involved in this pre-study.

2.9.2 TRANSVERSAL SUPPORT

This concerns activities which are beneficial to the entire Belgian remote sensing community either by encouraging collaboration or by making data and software accessible.

- **The further development of the Belgian BELAIR test sites** where EO data (Hyperspectral, VHR,...) and in situ data (field campaigns, flux towers,...) are collected and integrated. This is done in view of the development of reliable products based on Earth Observation data which necessitates a rigorous calibration and validation. To do this the integration of satellites images and in situ data in a controlled manner is necessary and is really useful in the frame of the GMES programme for example. The use of BELAIR data for master and PhD will be encouraged.
- In parallel with the BELAIR activities and web portal, a **STEREO toolbox is envisaged**. Its objective is to offer students and scientists, also those not well versed in remote sensing, user-friendly access to software previously developed within the Belgian remote sensing community.
- **Support to “Belgian” RS instruments and infrastructure**, e.g. through the organisation of dedicated APEX campaigns, support to Copernicus Collaborative Ground Segments, ...

All these actions have to be discussed first with the programme managers and approved by the STEREO Programme Committee.

2.9.3 VALORISATION AND SUPPORT

This is the core business of STEREO’s EODesk (Helpdesk for Earth Observation) which has several tools at its disposal to that end:

- The eo.belspo.be and eodedu.belspo.be websites for the dissemination of information about earth observation and earth observation activities (with a focus on Belgium) to and from professionals and to public at large;
- Acquisition and archiving of remote sensing imagery for BELSPO projects and Pléiades imagery for non-commercial Belgian users;
- Digital newsletters and social media with items and messages focussing on Belgian and BELSPO research;

- Organisation of the annual BEODay (Belgian Earth Observation Day) and (co-)organisation and support of other events;
- Development of educational products or contribution to third party educational products;

2.10 PROGRAMME PLANNING

Table 1 offers a schedule of the various STEREO programme calls planned.

Table 1: Planning for the STEREO calls

PROJECT TYPE:	2013	2014	2015	2016	2017	2018	2019	2020	2021
PERIODIC CALL									
Thematic projects	X			X					
Exploration projects			X		X		X		
Application development*	X								
BUDGET (KEURO):	9.400		1.600	3.600					
PERMANENT CALL:									
Application development*	X	X	X	X	X	X			
OUTSIDE CALL:									
Shared cost projects									
Dissemination and support projects									
Transversal support									
TOTAL BUDGET:									25.100

*: financing via permanent call from 2015 onwards

2.11 IMPLEMENTATION OF THE PROJECTS

- The selected project proposals are covered by a **contract** between the Belgian Federal Science Policy Office, the relevant scientific institutions and, where appropriate, the private or public partner or NGO.
- The practical requirements for the project implementation process are described in the **technical annex** of the contract. The contract describes in particular the part played by all the parties, the funding, the project follow-up procedures, the ownership rights concerning the project the data and project results, the input of all the parties and the legal provisions in the event of disputes.
- The results developed in the context of the project shall be the property of the partner responsible for these results. The State shall nonetheless reserve the right to use these results for its own needs without any charge and on a non-exclusive and irrevocable basis.
- Each project selected must be supervised by a **Steering Committee**.

The Committee should include at least:

- 2 international scientific experts
- Representatives of the Belgian Federal Science Policy Office and the Programme Committee
- Potential users can be involved (mandatory for application oriented projects)

It is tasked with:

- Assessing the progress of the project
- Adjusting the objectives and activities of the project via a binding opinion in the light of the scientific, technical and methodological demands of the project and the intermediate achievements
- Assessing the impact of the partnership/project and the synergy between the various tasks and partners
- Assessing and guiding exploitation activities and disseminating the results nationally and internationally
- Drawing attention to problems within the partnership/project resulting in the termination of the agreement

The Committee meets at least once a year. The **costs** for organising the meeting and paying the costs for foreign experts are **disbursed via the project** and reimbursed via the

programme (outside the budget of the project) up to a maximum sum of €4,000 per Committee session organized in Belgium (if the committee is organized in a foreign country, this amount can be adapted).

2.12 PROGRAMME COMMITTEE

A **cooperation agreement** has been concluded with the Regions and Communities about the implementation of the programme.

The Belgian Federal Science Policy Office is responsible for managing the programme.

The Belgian Federal Science Policy Office is assisted in this task by a **Programme Committee** comprising representatives of the relevant public administrations of the federal, regional and municipal authorities

The Programme Committee is responsible for:

- overseeing the consistency of all the activities being carried out
- delivering advisory opinions about the activities undertaken
- overseeing the effective transfer of the research results

3 2017 CALL

3.1 OBJECT AND BUDGET OF THIS CALL

This call applies to **exploration projects** only (see § 2.9.1.1.). These are small scale projects lasting 1-3 years and carried out by 1 to 3 Belgian teams. An international partner is recommended but not obligatory.

The **budget** for this call is **tentatively** set at about **1.600.000 EURO** but may be subject to adjustments!

3.2 TIMETABLE

- | | |
|--|------------------------|
| ▪ Submission of expressions of interest | 12 December 2016 |
| ▪ Feedback on expressions of interest | 22 December 2016 |
| ▪ Submission of proposals | 3 March 2017 |
| ▪ Oral defence of proposals | mid May 2017 |
| ▪ Selection of proposals by Steering Committee of STEREO programme | Beginning of June 2017 |
| ▪ Start of contracts | November 2017 |

4 PROFILE OF THE PROPOSALS

4.1 TARGET GROUPS

- The following Belgian partners may qualify for funding under the programme:
 - Universities
 - Public research institutions
 - Non-profit research institutions
 - Governmental administrations and NGOs with an interest in the use of remote sensing
 - Consulting firms with a unique knowledge which is indispensable to the project

International partners can participate according to the modalities explained in § 4.2.5.

4.2 BUDGET BREAKDOWN

4.2.1 STAFF

- The staff costs cover: index-linked gross salaries, employer's social security contributions and statutory insurance charges, plus any other legally due compensation or payments as amounts added to the salary.
- Scholarship students and post-doctorate scholarship students who enjoy exemption from tax liability and are covered by the social security system in accordance with the Royal Decrees of 5 July 1996 and 26 March 2003 concerning employees social security may be appointed only exceptionally subsequent to permission being granted by the President of the Belgian Science Policy Office.
- Preferably, at least 60% of the total proposal's budget should be devoted to staff and the budgets of the different partners should be in balance.

4.2.2 OPERATIONS

The operations costs are divided in two sections depending on the type of expense:

- **OPERATIONS:** This includes all current expenditure linked to the project like ordinary laboratory, workshop and office supplies and products, documentation, travel and trips in Belgium or abroad, use of computing equipment, software, , and more generally, consumables, ... The overall total of these operations expenses is fixed as a flat rate, on the basis of a percentage of the personnel cost. The percentage is limited to 15% for the coordinator and 10% for the other partners.
- **SPECIFIC OPERATIONS:** This includes all specific operations costs linked to the execution of the project like costs for analysis, organisation of workshops, maintenance and repair of equipment acquired by the project, surveys, etc. ...

4.2.3 EQUIPMENT

- It is recommended to buy equipment to be used jointly by network partners.
- Budget available for purchasing and installing scientific and technical appliances and instruments, including computer and office automation equipment.
- The equipment must be bought during the first half of the project

4.2.4 SUBCONTRACTING

- Subcontracting operations for each partner may not exceed 25% of the partner's STEREO budget.

4.2.5 INTERNATIONAL COLLABORATION

- The following is considered as international cooperation: cooperation between a Belgian scientific institution and a scientific institution from a foreign State, and this with a view to reinforcing international scientific cooperation and Belgian expertise.
- A Belgian Institution is the financial intermediary between the international partner and BELSPO. Scientifically speaking the international partner is a partner of the project with some specific tasks defined in the technical annex of the contract. The international partner must contribute to the reports and his work is also evaluated during the steering committees.
- Collaboration with the international partner is realised on the basis of co-financing. A maximum of 50% of the budget envisaged for these tasks is borne by the programme and this total may not exceed 20% of the overall budget for the project. The remaining balance is borne by the international partners. The share borne by the programme covers exclusively the personnel and functioning costs of the international partner. Neither overheads, or equipment or subcontracting are considered as expenses.

4.2.6 GENERAL EXPENSES

- General expenses ("overheads") account for a maximum 5% of the total staff and operating costs for each year and for the total budget of the project.

4.2.7 EARTH OBSERVATION DATA

Earth observation data is not chargeable to the project but to the programme after approval by the programme managers. The data requested should be fully justified and indispensable to the project.

- The EODesk can provide researchers with satellite images from its image archive, in accordance with the agreements with the data providers and distributors. New imagery may be bought if this appears necessary for the implementation of the project and if the planned photographic budget so permits

- All data acquired can be used for a project but remain property of BELSPO.
- As regards airborne data, in as much as possible data acquired during the APEX or BELAIR campaigns should be re-used.
- If requesting airborne data, teams should preferably team up with another project.
- The budget requested should be proportionate to the project budget.

5 PROCEDURES

5.1 SUBMISSION

Submission is a two-stage process: first the submission of an expression of interest and then the submission of a research proposal.

Solely those who submit an expression of interest are entitled to submit a proposal later on.

5.1.1 EXPRESSIONS OF INTEREST

- Expressions of interest should be submitted solely via the form intended for this purpose, which is available online, on the BELSPO and EODesk websites:

http://www.belspo.be/belspo/organisation/Call/SRIII2017_en.stm

<http://eo.belspo.be/About/Programmes/Stereo3-Call.aspx>

- The expression of interest has to reach the Belgian Federal Science Policy Office no later than:

12 December 2016 at 4 PM

- The Belgian Federal Science Policy Office will disregard any expressions of interest that are submitted after the closing date.
- Solely those who submit an expression of interest are entitled to submit a comprehensive proposal later on.

5.1.2 PROPOSAL

- Proposals should be submitted solely via the form intended for this purpose, which is available online, on the BELSPO and EODesk websites:

http://www.belspo.be/belspo/organisation/Call/SRIII2017_en.stm

<http://eo.belspo.be/About/Programmes/Stereo3-Call.aspx>

- Applicants are required to meet the conditions set forth in this document.
- Enclosures with the submission file will be disregarded during the assessment and selection procedure.
- Proposals should be submitted in English.
- **Only a digital (and electronically signed) version** of the proposal should be submitted to the Belgian Federal Science Policy Office in **both pdf and word formats** to SRIII@belspo.be no later than:

3 March 2017 2015 at 4 PM

- The Belgian Federal Science Policy Office may disregard any proposals that are submitted after the closing date.

5.2 ASSESSMENT AND SELECTION

5.2.1 EXPRESSIONS OF INTEREST

After reception of the expressions of interest, the programme managers will give a **non binding feedback (recommendations and/or remarks)** about the compliance of the expression of interest with the guidelines of this call.

5.2.2 PROPOSAL

Note that proposals will not be considered for evaluation if they don't meet the criteria of the evaluation.

The evaluation of the proposals is divided into two steps. The first step is a written evaluation by 3 or 4 international experts. The criteria used for this first part of the evaluation are:

- Compliance with the guidelines of this call and the programme aims
- Scientific quality of the project proposal:
 - scientific originality of the proposed research
 - the innovative character of the anticipated outcomes
 - clarity of the aims and the tasks
 - relevance of the methodological approach
 - positioning of the proposed research vis à vis on-going research in the field in question
 - strengthening existing expertise
- Calibre of the applicant(s)
 - relevant expertise of the laboratory
 - international contacts of applicants
 - peer reviewed publications: number and impact
 - for teams active within STEREO II: number and impact of papers as well as multiteam papers resulting from STEREO II projects
- The quality of the proposed partnership and the added value of cooperation in networking:
 - complementary relationship of the partners
 - interdisciplinary of the collective expertise, incorporation of “new” teams
 - distribution of tasks
 - balanced distribution of the resources among the partners
 - cooperation methods (joint activities, exchanges of researchers, joint publications, ...)
 - international cooperation
 - added value of the international partner
 - organisation and management of the network and the management capability of the coordinator
 - the potential role of the network and the various partners at European and international level
- Feasibility of the proposal
 - realistic preparation of the work plan (including SWOT analysis)
 - realistic assessment of the resources required (duration, budget, staff)

- Exploitation
 - plan for disseminating project results, visibility given to the project
 - training courses for scientists

The second step of the evaluation consists in an oral defence in front of a panel of experts. This second step is only accessible for the proposals that successfully passed the first part of the evaluation.

The criteria used for this second part of the evaluation are:

- Presentation
- Knowledge of domain
- Innovative character of proposal
- Motivation
- Clarity and relevance of answers