2019:1

Sida Decentralised Evaluation

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Evaluation of the Sida supported research capacity building programme "International Foundation for Science"

Final Report

Sida

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Abbreviations and Acronyms

AAS	African Academy of Science
BOT	Board of Trustees
CES	Capability Enhancement Support
COSTECH	Commission for science and technology
CSRS	Centre Suisse de Recherches Scientifiques en Côte d'Ivoire
DAC	Development Assistance Committee
DFG	Deutsche Fördergemeinschaft
DFID	Department of International Development
DMS	Database Management System
DOSTE	Department of Science, Technology and Environment
EQ	Evaluation Question
ELSEVIER	Name of an open science platform
ET	Evaluation Team
HCM	Ho Chi Minh
HCMC	Ho Chi Minh City
HRBA	Human Rights Based Approaches
IDRC	International Development Research Centre
IFS	International Foundation for Science
ISP	International Science Programme
KFPE	Commission for Research Partnerships with Developing Countries
LDC	Least Developed Countries
MOSTE	Ministry of Science, Technology and Environment
MOU	Memorandum of Understanding
NAFOSTED	National Foundation for Science and Technology Development
NARS	National Agricultural Research System
NGO	Non-Governmental Organisation
OPCW	Organization for the Prohibition of Chemical Weapons
PASRES	Programme d'appui stratégique à la recherche scientifique
PCR	Project Completion Reports
RBM	Result Based Management
SAC	Scientific Advisory Committee
SDG	Sustainable Development Goals
Sida	Swedish International Development Agency
SNF	Swiss National Research Foundation
SWOC	Strengths, Weaknesses, Opportunities, Constraints
TL	Team Leader
ToC	Theory of Change
ToR	Terms of Reference

TSEK	Thousand SEK
UNEG	United Nations Evaluation Group
VAT	Value Added Tax

Preface

In August 2018, Sida's unit for Research Cooperation contracted NIRAS Sweden AB, to conduct the evaluation of the Sida-supported research capacity programme, implemented by the International Foundation for Science (IFS). The objective of the programme is to strengthen the capacity of young scientists in low- and middle-income countries to conduct relevant and high-quality research on sustainable management of natural resources.

The evaluation took place from August to December 2018. It included country studies with interviews in Benin and Vietnam. It also included stakeholder interviews and an analysis of the many reports provided by IFS.

The evaluation team consisted of the following experts: Dr. Pierre Walther (team leader), Prof. Dr. Nguyen Thi Van Ha (Dean of the Faculty of Environment of the HCM City University of Natural Resources and Environment), and Prof. Dr. Bassirou Bonfoh (former Director General CSRS, Ivory Coast). Katarina Lundblad managed the process at NIRAS Sweden and provided research support to the team. Ted Kliest provided the quality assurance.

The team wants to thank the IFS secretariat in Stockholm for the excellent support received during the whole evaluation process.

All findings and recommendations represent the view of the evaluation team and need, therefore, approval by the concerned parties.

Executive Summary

Introduction

The main purposes of the International Foundation for Science (IFS) is to strengthen the capacity of young scientists in low and lower middle-income countries, and to support relevant and high-quality research on sustainable management of biological, water, and energy resources. The funding by the Swedish International Development Cooperation Agency (Sida) started in 1974.

Following an external evaluation in 2012, an agreement for a new phase was signed in 2014. The present phase will end in December 2018. It was agreed that an external evaluation be carried out in 2018. An extension of the phase up to December 2019 has been discussed between Sida and IFS.

The mandate of the present evaluation is described in the Terms of Reference (ToR). It should provide Sida with input for the upcoming assessment and preparation of a possible new phase, and IFS with input of what worked well and less well, also to adjust its strategy for the period 2020 to 2029.

The evaluation team (ET) consisted of the following experts: Dr. Pierre Walther (team leader), Prof. Dr. Nguyen Thi Van Ha (Dean of the Faculty of Environment of the HCM City University of Natural Resources and Environment), and Prof. Dr. Bassirou Bonfoh (former Director General CSRS, Ivory Coast).

The findings presented in this report are based on evidence gathered through interviews with key stakeholders of the programme; two country studies (Benin, Vietnam); a systematic analysis of representative samples of project completion reports (PCR), research proposals and scientific reviews; and two representative global surveys (applicants 2018; scientific advisors).

General

Sida and IFS have a long history of collaboration. According to its statutes, revised in November 2014, IFS is an independent and globally operating foundation, financed by fund raising. All geographic regions have to be represented in the Board of Trustees (BOT).

The BOT, but also other committees and the IFS Secretariat in Stockholm, consists mainly of scientists. Many of the key persons have a history with IFS. The BOT, the members of scientific advisory committees (SAC) as well as the over 1100 scientific advisors, work pro-bono for IFS. This is a very positive sign of commitment.

Equipped with a comprehensive mandate, the IFS Secretariat is running the organisation and processes quite well. It is under pressure from all sides. Among them are: (a) fluctuations in the financial commitment of the main donor, Sida; (b) preconditions in

the grant agreement that IFS has to broaden its funding base; or (c) expectations of the researchers. To run this global organisation which also creates expectations in the science community needs considerable funding.

With its almost 50 years of existence, IFS is also a resource for Sweden and Sida. It provides access to thousands of scientific advisors and young scientists, many of them working in sectors relevant to the implementation of the Sustainable Development Goals (SDG). Grantees of IFS have a very positive image about Sweden (reputational effect).

The programme funded by Sida in IFS, is conform with the Swedish strategy for research cooperation. Nevertheless, merit further discussion. For example, the individual grants are relatively short-term co-operations, with little monitoring or mentoring of what happens with the grants. IFS can make a difference for individuals, but it does not have a convincing strategic approach to research capacity building. The grants are quite small.

The BOT is the strategic board and should lead the organisation. With only one to two meetings per year, prepared by a small committee, there is a risk that reform related issues remain unaddressed or are left to the quite over-burdened IFS Secretariat to deal with. The IFS strategy 2020-2029 would be an opportunity to address these issues.

Relevance

In many developing countries, the university and research landscape is rapidly changing. Thus, there are definitively vast needs for supporting early-career scientists and to encourage them to contribute to address relevant issues. Though the grants are small, IFS is here an option for individuals seeking support. Thus, the response to calls of IFS is high.

IFS grants are an incubator, but also quite often used as matching funds by young researchers working in projects funded by other sources. In principle, it is the responsibility of the scientific supervisors to organise financing for their research groups. IFS grants are, however, a welcomed additional resource. PhD graduates that are becoming junior advisors, would be an interesting target group for IFS grants. However, the grants would have to be significantly higher.

In the few countries in which IFS has strong presence (e.g. Benin, Kenya), IFS is perceived as a relevant actor for research capacity building by Government. In Benin, the alumni organisation contributed to the status.

In its present design and composition – a large majority of SAC members are from Europe; the IFS Secretariat is in Stockholm - IFS is still a largely western-based organisation. The dialogue with emerging research funding platforms e.g. in Africa, or with the private sector also investing in the South is weak. Exceptions are found in the few countries (e.g. Benin) in which IFS has reached a density of grantees and an active alumni organisation.

Effectiveness

The maximum amount of the IFS grants is still the same as in 1974 (USD 12,000). This is low, particularly in cases in which laboratory work is needed. Moving to a more differentiated and strategic approach, including options for higher grants or institutional overheads, would make sense.

IFS invests mainly upstream (proposal writing phase, review). Results from the interviews suggest that investments into monitoring and mentoring (downstream) would be equally important to achieve scientific capacity. A more strategic approach (e.g. better targeting, higher grants for some categories) could help to keep the balance, also in financial terms.

Regarding outcome 1, the Sida-funded IFS programme achieved good results. It was a door opener for young scientists, many of them with an MSc, but also freshly graduated PhD returning from abroad. They got feedback how to write grant proposals, and they got access to senior researchers for advice.

With respect to outcome 2, effects were lower, and with regard to outcome 3 substantially lower. The main positive results were scientific publications, many of them of good scientific quality and mentioning IFS. As seen in the sample analysed, attribution of the results to IFS is sometimes difficult.

The Sida decision to on short notice resign from its financial promises for the year 2016, had a negative effect on the effectiveness and also the credibility of IFS. IFS had published an open call in late 2015, and IFS had to tell applicants that there was only little capacity for grants in 2016. The IFS Secretariat managed this crisis remarkably well.

The IFS approach is quite personalised, treating each applicant as a person. It has remained the same for many decades. With this approach and trying to reach large numbers of young researchers, the workload is significant. Whether three layers of reviews (pre-screening, scientific reviews, regular SAC meetings) are needed, is questionable.

Impact

With regard to influencing policy or build-up of recognised expertise (outcome 3) in sectors relevant for meeting the SDGs, the IFS grants can, at best, be small, sometimes valuable contributions. Attribution of the results to IFS is difficult as IFS has to rely mainly on the reports of the grantees. A more strategic approach and significantly larger grants would be needed to make a difference.

Efficiency

With operational costs ranging from 44% (2015) to 56% (2017) for running of the organisation (IFS) and the scientific review processes, including the development of new programmes and proposals, the efficiency of the overall system can be questioned. Considering that most of the scientific reviews of the proposals is done pro-bono, the costs for these up-stream investments and management of the grants appear to be high.

IFS mapped the whole application and review process into a database management system (DMS), designed with a private firm. This certainly allowed automatizing many of the processes (parts of the pre-screening, printing of letters, management of the reviews and the grants). The processes can be handled by less staff in the IFS Secretariat than before.

At present, a very large amount of work is done pro-bono (by BOT, scientific advisors, SAC). Thus, efficiency has to be questioned even more. IFS presently succeeds to motivate former IFS grantees to become reviewers what is very positive. In the long run, it could become increasingly difficult to find experienced researchers for pro-bono work.

With the present set-up and processes (global structure, a very individualized approach, review processes, small grants) efficiency cannot be substantially increased. More promotion for IFS, or an increase in the funding available for small grants, would inevitably lead to the need to hire staff at the IFS Secretariat as the staff is already running at its limits.

How to achieve efficiency gains, needs an analysis. Options include to increase the grant level substantially; to simplify the review process; to align the IFS small grant programmes with other programmes; to offer webinars instead of courses; to decentralise the IFS Secretariat to the South. The more drastic options would inevitably imply adapting the statutes.

The BOT has to take the lead in these discussions and to take the decisions. It should also consider that quite a number of staff at the IFS Secretariat is close to retirement age. This means that it is the right time for the BOT address these points, also studying and drawing on the experiences of other, similar organizations.

Sustainability

Reports indicate that the sustainability of the activities initiated or co-funded by the IFS grants is quite good. Transfer of equipment to the research institutions is guaranteed in the grant contracts. However, universities claim they need an institutional overhead (e.g. costs for operation and maintenance, government rules e.g. in Vietnam). This is a relevant issue to be discussed further.

The funding agreement between Sida and IFS (2014, renewed 2017) stated that IFS would have to extend its funding base. However, the opposite happened. The total external funding, apart from Sida, has dropped from 11,543 TSEK (2014) to 8,789 TSEK (2017). The total external funding, including Sida, has dropped from 36,543 TSEK (2014) to 24,930 TSEK (2017).

The dependency on Sida has remained high but at an acceptable level (65%). However, the erosion of the funding basis since 2014, and the shock in 2016 when Sida had less funds available, has put IFS under severe stress. The IFS Secretariat reports that the crisis is now over.

A fundraising expert has recently joined the IFS Secretariat. The strategy is to win more private foundations or firms to fund IFS. The “strategy story” of IFS is very

strong and has potential to be an attractive basis for fundraising. According to the expert, results should become visible in spring 2019.

Gender equality

The IFS Secretariat shows gender sensitivity in its approach. A gender specialist has recently been nominated and proposed appropriate measures. At the field level, success will depend on the country contexts. With the exception of allowing women applying for grants to be older than men applying for grants, no real mechanism is yet in place to encourage women in science. Special programmes, awards or prizes could make a difference.

Looking to the future

IFS is an independent organisation. To be able to provide core instead of project funding, Sida would need a convincing new strategy 2020-2029 and annual planning and reporting at the institutional level. Thus, the decision whether to provide core funding has to be postponed until the new strategy is available.

The IFS reports, including internal surveys, about the collaborative partnership grants are positive. What would be needed is an independent evaluation, comparing the IFS model to other models of research partnerships. This was beyond the scope of the present evaluation (see ToR).

Recommendations

1. IFS should strengthen its governing body (BOT) with specific competences (e.g. fundraising, management, strategy). The BOT should lead the reflections and action on the results of this evaluation.
2. The BOT should take steps to increase the overall efficiency of IFS. Rationalising and differentiating its approach to grants such as more targeting, providing larger grants without dropping the option of small grants for PhD students, a simpler review process, or decentralizing some of its operations could already make a difference.
3. The new IFS strategy 2020-2029 is the ideal vehicle for discussing such reforms, studying options, and presenting the conclusions. However, to formulate and communicate this strategy is likely to use more time than anticipated. Sida should give this time (e.g. extension of the present phase until December 2020).
4. To fuel the process with fresh ideas and to avoid that the strategy process is driven mainly by the IFS Secretariat, the BOT could establish a (temporary) strategic think-tank which discusses and presents options to the BOT, to lead IFS into the new decade.
5. Sida should give IFS the resources (time, financing) to embark on this process. Sometimes in summer 2019, it should take a principle decision regarding the future level of Sida funding to IFS. By then, IFS should be able to present options to increase its efficiency, and first results of fundraising efforts will be visible.

6. If Sida wants to keep IFS as a Stockholm-based and globally operating organisation under the present Statutes, offering access to a large pool of researchers, and clear benefits for the reputation of Sweden, it should make a strong commitment and provide substantially more and regular funding to IFS.

   In this case, core funding would be a good option. The decision should, however, depend on whether IFS is able to present a realistic and attractive strategy 2020-2019 to Sida.

7. If this is not an option, Sida should have a dialogue with IFS on a programme which it is willing to finance in a next phase. This proposal could include: (a) support to researchers from developing countries who made their PhD in a "science hub" (e.g. Europe, USA, South Africa, India) and are committing to become junior advisors in their countries; (b) better align with bilateral grant or university exchange programmes of Sweden or other like-minded countries; and/or (c) a regional programme.

1 Introduction

1.1 BACKGROUND

Established in 1972, the International Foundation for Science (IFS) is currently active through 135 affiliated organisations in 86 countries. Its main purpose is to strengthen the capacity of young scientists in low and lower middle-income countries, to conduct relevant and high quality research on sustainable management of biological, water, and energy resources. Funding by the Swedish International Development Cooperation Agency (Sida) started in 1974, and Sida has remained by far the most important donor to IFS.

Following an evaluation in 2012, and based on a proposal by IFS to Sida, an agreement for a new phase (2014-2018) was signed between Sida and IFS (project funding[1]). This agreement will end in December 2018. An extension up to December 2019 has, in principle, been decided.

The programme document for this programme phase contains specific objectives (result areas) with related outcomes. The result areas are defined along the main process line of IFS: (a) supporting improved research planning, (b) supporting the production of quality research by early-career scientists, and (c) support to increased use of quality research results produced by IFS-supported scientists. The total number of outcome indicators, assigned to these result areas, is 34.

The level of Sida funding in the present programme period varied between 25 million SEK (2014) and 17 million SEK per year. This was partly deliberate, to encourage IFS to become more independent of Sida, but also unforeseen. The Swedish Government reallocated funds for development assistance to cover the costs of providing support for the large influx of refugees in Sweden.

The IFS Programme 2014-2018, financed by Sida, has been aligned with the IFS Strategy 2011-2020 (updated in 2017). Whether the programme is also aligned with Sida's strategy for research cooperation and research in development cooperation 2015-2021, and how this alignment can possibly be improved, should be analysed further by this evaluation.

[1] Core funding was provided in earlier years.

1.2 THE EVALUATION

1.2.1 Subject and scope of the evaluation

The subject and scope of the evaluation are described in the Terms of Reference (ToR) for the evaluation (see Annex 1). They were discussed in the kick-off meeting of the evaluation in Sida in Stockholm on 20 August 2018 and the inception meeting on 31 August 2018. The list of key questions was rationalised and presented in the form of an evaluation matrix in the inception report.

It was agreed that the evaluation should be summative as well as formative. It should provide Sida with input for the upcoming assessment and preparation of a possible new phase of its contribution to IFS. Furthermore, it is expected to provide IFS with input, also for the drafting of its new institutional strategy 2020-2029. Both Sida and IFS consider the evaluation an opportunity to assess options to further increase relevance, efficiency and effectivity of IFS, with a particular focus on the Sida-funded small grant programme.

Geographically, and as specified in the ToR, the evaluation placed special attention to Benin and Vietnam. However, and to understand how the specific context contributed to the results in these two countries, the ET was invited to also conduct some interviews in neighbouring countries[2] in the two regions (West Africa, South-East Asia).

Equally, and to get the full picture, the ET was asked to interview not only persons who had received IFS research grants but also young researchers whose applications were not considered for IFS funding.

1.2.2 Evaluation Team (ET) and implementation

The evaluation team (ET) consisted of the following experts: Dr. Pierre Walther (team leader, TL), Prof. Dr. Nguyen Thi Van Ha (Dean of the Faculty of Environment of the HCM City University of Natural Resources and Environment), and Prof. Dr. Bassirou Bonfoh (former Director General CSRS, Ivory Coast).

The evaluation had to be carried out in a short time period, much less than anticipated earlier[3]. Therefore, a clear division of tasks in the ET was needed. While the TL focused mainly on the institutional and organisational issues (interviews in Stockholm) and defined the approach and methodology of the evaluation, the two national consultants conducted country studies in Benin and Vietnam, to gather evidence in the field. Findings and recommendations were drafted together, as a team. The TL visited Stockholm three times.

[2] South-East Asia: Cambodia, Myanmar; West Africa: Ivory Coast, Kenya.

[3] See programme of the evaluation in Annex 2.

The list of persons met, and the list of documents reviewed are presented in Annexes 3 and 4. A summary of data, provided by IFS about the Sida-funded programme for the period 2014-2017, as well as Google Analytics documenting how the IFS websites are used, are presented in Annexes 5 and 6.

The LogFrame of the Sida programme document lists 34 outcome indicators, and this is quite a large number. Therefore, it was agreed with Sida, that the ET would cover not all of them. The long list of outcome indicators can provide a general orientation for this evaluation, but priorities had to be defined. The ET decided to concentrate particularly on those outcome indicators where monitoring data was available from IFS.

As part of the process, the ET also invited IFS to assess where it sees its strengths and weaknesses (SWOC). The ET used the results of this self-assessment as evidence in its analysis.

1.3 THE EVALUATION SUBJECT

The main focus was on the Sida-funded activities for the period 2014-2018, described in the programme document which IFS had submitted to Sida in 2014, and which became the Annex to the grant agreement (2014). The programme covered three outcome objectives. However, to adequately assess relevance, effectiveness and sustainability, the evaluation had to take into consideration IFS's broader engagement in research capacity building, its approaches, its funding structure and its organisation.

Noted positively, IFS is a strong and stable partner of Sida. From the legal point of view, it is a foundation under Swedish law which obtains its income from fundraising[4]. It has a global scope since the members of the Board of Trustees (BOT) have to represent the four geographical regions. The mission is described as follows: "IFS shall contribute towards strengthening the capacity of young men and women scientists in developing countries, not only to conduct relevant and high-quality research, but to enhance opportunities to put it into use in their home environments".

The BOT[5] has the final responsibility for the organisation. It defines the strategy and ensures fund-raising. An Executive Committee of five BOT members supports it. The scientific advisors review proposals, and the members of the Scientific Advisory Committees (SAC) are the decision boards for the research grants. The IFS Director gives the final, administrative approval.

The IFS Secretariat is based in Stockholm and consists of 12 collaborators, many of them working for many years in IFS. Considering the composition of the SAC committees, 65% are from Europe and only 16% from Africa where most of the research proposals come from. Commitment and identification of collaborators and scientists with IFS is very high, also as many are affiliated already for a long time with

[4] IFS is also registered in the United States.

[5] Seven of the 16 members of the BOT are from Europe, and 3 from each Latin or North America, Asia and Africa.

IFS. Apart from the staff of the IFS Secretariat, all of them work pro-bono what is an exceptional commitment.

1.3.1 The Sida-funded programme 2014-2017

65% of the funding comes from Sida. Thus, Sida is by far the most important donor to IFS. The programme document 2014-2018 lists the following three outcome objectives:

1. Improved planning of research by early-career scientists in low- and lower middle-income countries that is relevant to those countries;
2. Increase production of quality research by early-career scientists in low and lower middle-income countries that is of relevance to those countries;
3. Increased use of quality research results produced by IFS-supported scientists in low-and lower middle-income countries that is of relevance to those countries.

According to this programme, IFS "strives … to nurture and support the early career of scientists from low- and lower middle-income countries." The focus is mainly on the small grants for early-career scientists. Instruments such as collaborative grants which IFS considers important to achieve results in the outcome areas 2 or 3 (see above) are not covered by this programme.

In the implementation of this programme benefits from the resources which IFS offers. This includes: (a) the support of the global network of pro-bono scientific advisors[6] for sharpening research proposals of early-career scientists; (b) know-how and a well-defined process for the provision of small research grants (see Annex 5); (c) experience in offering proposal writing courses; and (d) alumni organizations of forther IFS grantees.

1.3.2 Phase of austerity

In the original grant agreement (2014), Sida and IFS had agreed that the annual contributions of Sida would be stepwise reduced from 25 million SEK (2014) to 17 million SEK per year (2018). It was also stated that the final disbursement in 2018 would only be made if IFS shows a clear progress in broadening its funding base[7].

Clearly against this agreement, Sida had to cut 30% of its funding to IFS for 2016 what brought IFS into serious problems. After IFS had published its annual open call for research proposals in autumn 2015, Sida announced a budget cut in early 2016, leaving IFS in a delicate situation. IFS had to communicate that only a few grants would be available.

The overall development of the financial situation of IFS is presented in Table 1 below. Besides Sida, IFS counts on a number of committed other donors such as

[6] 1100 scientists, working pro-bono.

[7] Article 3.1 of the grant agreement.

Deutsche Fördergemeinschaft (DFG), the Swiss National Research Foundation (SNF), the Carolina MacGillavry Fund, and the Organisation for the Prohibition of Chemical Weapons (OPCW).

	2014	2015	2016	2017
Core Contributions	5,936	6,787	6,587	6,020
Sida (restricted contribution)	25,000	20,000	12,000	16,141
Restricted contributions other donors	5,607	8,162	6,033	2,769
Other income	4,913	2,766	1,854	1,217
TOTAL INCOME	**41,456**	**37,715**	**26,474**	**26,147**
Small research grants (Sida)	11,868	8,984	4,576	7,057
Capacity Enhancement support (Sida)	209	128	189	523
Other research grants, including CES	8,586	12,458	9,090	2,774
Total support to activities[8]	**20,663**	**21,570**	**13,855**	**10,355**
Operational costs	**18,300**	**16,850**	**14,427**	**13,342**
TOTAL EXPENSES	**38,963**	**38,420**	**28,282**	**23,696**

Table 1: Financial data on IFS (in TSEK)[9]

1.4 EVALUATION APPROACH AND METHODOLOGY

1.4.1 Evaluation Approach

To respond to the Evaluation Questions and to achieve a balanced understanding of the programme and its results, the ET examined the whole system and collected evidence from the following levels: context, programme design and planning, implementation, and results of the programme.

Regarding context, the ET was able to build on the vast know-how of the two national experts. It also had to obtain key figures about the performance of similar other programmes and to understand challenges in research capacity building in developing countries.

To provide information about the results of the programme at the outcome level, the evaluation applied contribution analysis, taking as a point of departure the draft of

[8] Operational costs are shared between Sida and the other donors; Sida normally pays more.

[9] Consolidated data for 2018 is not yet available

a reasoned Theory of Chance (ToC) that infers causalities. This draft is presently discussed in the BOT and was provided to the evaluation team by the IFS Secretariat.

1.4.2 Methods applied

Various data collection methods were applied, and results from different sources were triangulated to achieve a balanced and plausible understanding of IFS and the Sida-funded programme. The methods were:

A. Document reviews

The list of documents reviewed is presented in Annex 4. The evaluation team also analysed the results of meta-evaluations and examples of good practices of similar grant programmes.

B. Analysis of IFS monitoring and financial data, Google analytics

IFS provided monitoring data on some of the indicators listed in the LogFrame of the Sida funded programme (Annex 5). Financial data were discussed in the meetings in Stockholm in October 2018 in the IFS secretariat. The Google analytics (Annex 6) on the use of the IFS websites helped to understand the IFS network.

C. Interviews with key informants

The ET held interviews with a number of key informants (Annex 3) directly involved in the programme (semi-structured interviews along the EQ, face to face or by Skype). They comprised informants from the Sida research division, staff of the IFS Secretariat, members of the IFS Board of Trustees (BOT), and scientific advisors and reviewers.

D. Rapid self-evaluation on main strengths and weaknesses

At the kick-off meeting with the team of the IFS Secretariat, the team members (12 persons) were asked to list on paper the three main strengths and the three main areas to further improve. The result was discussed with the team.

E. Interviews with other informants

Interview with other informants comprised a few resource persons whom the ET found relevant. This included other donors to IFS, such as the Swiss Research Foundation (SNF); representatives of similar programmes, e.g. the International Science Programme (ISP), programmes in Benin, Ivory Coast and Vietnam.

F. Quick global survey with IFS scientific advisors

A short online survey (survey monkey) was sent to the 457 scientific advisors registered in the IFS network who had been invited by IFS to review research proposals in 2018. The survey was designed by the ET, in close collaboration with the IFS Secretariat. It was representative, and the results are presented in Annex 7.

A. Quick global survey on 2018 applicants

The purpose of the global survey was to get information on the perception of the applicants of the quality of step 1 in the IFS process (planning of research; outcome objective 1). The focus on applicants on 2018 (>1000) made sense as the response rate was high, even for the group of applicants whose application had been rejected. The survey was representative, and the results are presented in Annex 8.

B. Country studies in Benin and Vietnam

The two national consultants conducted country studies in Benin and Vietnam. During these studies, they focused not only on the country but also on the regional contexts (West Africa, South-East Asia).

The country case studies included interviews with a representative sample of young researchers who had applied for IFS grants, a systematic analysis of the research proposals of these applicants and the scientific reviews, as well as an analysis of representative samples of project completion reports (PCR). The results are presented in the country reports (Annexes 11 and 12).

The evaluation team carried out semi-structured interviews with key informants (e.g. IFS alumni, supervisors), to obtain more information about the programme, and how the IFS Secretariat collaborates with the partners in the field. It also interviewed informants from other countries (e.g. Kenya, Ivory Coast).

The IFS Secretariat forwarded to the ET all project completion reports (PCR) for the two countries: 61 in Benin, 30 in Vietnam. A representative sample (around 20 in each country, randomly selected) was assessed and rated by the two consultants at the basis of a checklist. A sample of the ratings (20%) was cross-checked by the TL. Results of the analysis are presented in Annex 9.

For the interviews, the ET selected representative samples of applicants in Benin and Vietnam. The total number of applicants in the two samples was 45. The national consultants carried out semi-structured interviews and carried out a content analysis of the documents forwarded by the IFS secretariat (research proposals, reviews). The latter included ratings. 20% of these ratings were cross-checked by the TL.

Other applicants replaced the few applicants who could not be located. In South-East Asia, some addition interviews were carried out with applicants from other countries (Nepal, Myanmar). The results of these interviews were not included in the results presented in Annex 10.

1.5 COMMENTS TO THE IMPLEMENTATION

1.5.1 Availability of data

Despite the severe time constraints of the work plan for this evaluation, and the fact that IFS was in a process of moving its secretariat to another location during the evaluation, the IFS Secretariat responded very professionally and timely to each data requests of the ET. This was highly appreciated by the ET.

In some cases, the country experts had difficulties to contact applicants which were included in the sample of persons to be interviewed. In these cases, other persons were included in the sample, also by a random selection process.

1.5.2 Representativeness of the country studies

The ToR for the evaluation asked the ET to cover Benin and Vietnam. The selection of these countries was not done to get a representative sample of country case studies. Rather, they should illustrate processes and findings.

In Benin, the number of IFS grantees is significantly higher than in other countries. The alumni organisation is also very active, and IFS has organised a number of training courses. In the eyes, the particular experience of Benin is not representative as it cannot be replicated in other countries with the given financial resources of IFS.

1.5.3 Limitations

The evaluation was implemented according to plan and the ET did not experience unsurmountable challenges.

The quantitative figures provided in this evaluation report are mainly based on ratings, either by experts or by the interviewed persons. The quality of the ratings has been checked. However, the percentages can give some indication but should not be interpreted too literally.

2 Findings

2.1 GENERAL

2.1.1 To what extent are the programme and the IFS strategy with Sida´s 2015-2021 strategy for research cooperation and research in development cooperation?

The Swedish 2015-2021 strategy for research cooperation and research in development cooperation distinguishes between: (a) funds administered by Sida; and (b) funds administered by the Swedish Research Council. The goal to be achieved in the Sida component is "Strengthened research of high quality and of relevance to poverty reduction and sustainable development".

The goal is described with a list of criteria in three result areas. Here, the Sida programme in IFS is undoubtedly consistent with the Swedish strategy. Observations of the ET are:

1. The programme contributes to all three result areas, with a particular focus on result areas 1 and 2. This is discussed further in section 2.3.2
2. Result area 1 places a lot of emphasis on linking South researchers to international dialogues, North-South collaboration, or capacity development for scientific communication. As discussed in section 2.3.2, IFS has achieved results in this area.
3. IFS shows gender sensitivity in its approach (see section 2.6)
4. Scientific quality is a decisive criterion. Here, IFS is strong and entirely conform with the strategy of Sweden. This is discussed in section 2.3.3.

With regard to the different approaches and activities mentioned in Sweden's strategy document, the ET observes the following where improvements in the IFS programme may be discussed:

1. Sweden sees research capacity building as a long-term process. Thus, research co-operations should be long-term, with a systemic approach. The IFS approach is, however, more individualized and short-term (focus on proposal writing)[10]. Once a grant is provided, IFS provides little monitoring, mentoring or follow-up[11]. Alumni organisations are operational in a few countries only.

[10] Renewal is possible.

[11] Exception: The IFS Secretariat asks for reports. Project Completion Reports (PCR) are a good example. The quality is checked.

2. IFS has a particular focus on enabling and training young researchers. This is an important area for the Swedish Government, and it finances many activities. At present, the Sida-funded programme in IFS is somehow isolated and not related to other ongoing training programmes (e.g., university exchange programmes).
3. Sida's initiatives are to be implemented in countries and regions in which Sweden pursues strategy-based cooperation. The geographic scope of IFS is broader.
4. Sweden is in favour of a systemic approach. "Strengthened research capacity is to be seen as the overall effect of development in different parts and at different levels of a research system". IFS covers a small, but important element in this (e.g. proposal writing, encouragement). Its main contribution is strengthening individuals[12].

Sida's programme on research and cooperation comprises significant investments in developing countries like Bolivia, Cambodia, Ethiopia, Mozambique, Tanzania, Uganda and Palestine. The countries should be enabled to independently identify research problems of relevance for development, prioritise areas for research, carry out research and secure the necessary financial resources and human capacities[13]. There are also a number of joint activities of Sida and the Swedish Research Council.

Until now, Sida has not encouraged IFS to align its programme to these other Sida programmes and projects. There are undoubtedly options for synergies. IFS could also be an interesting partner for programmes and projects, managed by the Swedish Research Council[14]. Also here, the room for synergies has not always been explored systematically.

As its present strategy phase (2010-2019) is coming to an end, IFS is currently formulating a new institutional strategy 2020-2029. This is a perfect moment for Sida to take up the dialogue with IFS on these issues.

Some BOT members see IFS as knowledge organisation, establishing thematic discussion groups and formulating political statements[15]. This would be outside of what Sida can finance under Sweden's present strategy for research cooperation 2015-2021. In October 2018, the BOT has decided that this is unlikely to be a significant aspect of the organisation's remit.

2.1.2 What was the overall performance of the Sida-funded programme in terms of achieving its targets, also in terms of outputs?

The LogFrame of the Sida-funded programme was elaborated, to meet requirements of Sida for Result Based Management (RBM). It contains 34 indicators, grouped in

[12] Alumni organisations play a role only in a few countries.

[13] See Sida website

[14] The ET did not have the capacity to look further into this.

[15] E.g. model of Volkswagen Foundation.

three outcome objectives. It is far too detailed, lacks logic, and is only partially coordinated with the indicators which are listed in the IFS strategy.

As soon as it became clear that reporting on these indicators would be difficult, Sida and IFS agreed on a smaller set of indicators on which IFS now provides regularly quantitative data to Sida. Based on these data, the ET can conclude that the overall performance, in quantitative terms of targets and achievements, is good, despite of the funding problems encountered in 2016.

IFS is strong in handling large numbers. Together with the large network of scientific reviewers and the Scientific Advisory Committees (SAC), the IFS Secretariat handled a remarkable amount of applications. This involved pre-screening (5000), scientific reviews (1774), and the grants (698). 39% of the applications were accepted for scientific reviews, and 14% were funded. IFS also succeeded to establish a new database management system (DMS).

Delays in the implementation of the programme in terms of targets and achievements can be related to the funding problem in 2016. Later in 2016, and after Sida finally was in a position to fulfil its financial commitments, some grants were awarded (e.g. prolongation of existing grants). In 2016, performance in terms of targets and achievements was lower than in other years.

Specific observations of the ET are:

1. There is no effective monitoring on what happens on the ground, once the grants are provided[16]. Monitoring is, thus, based mainly on what is reported by the grantees.
2. Outcome area 1 (planning): The geographic distribution of the grants was not balanced. 70% of the grants went to Sub-Saharan Africa, and 24% to Asia and the Pacific. Only 3% of the grants went to Latin America[17].
3. With respect to outcome 2, effects were lower, and with regard to outcome 3 substantially lower than in outcome 1 (see analysis below).

2.1.3 Are the programme logic and in particular the Logframe and the outcome indicators sufficiently clear and appropriate for managing the programme, and for indication progress in implementation?

The LogFrame in the Sida programme document (2014) is not a good basis for the management of the programme. The objectives are too aligned with the operational processes, it does not include a component for the international development of IFS, and focuses too much on numbers instead on the quality of the effects in terms of research capacity building. As mentioned, the number of outcome indicators is far too large.

[16] Some follow-up is provided by programme coordinators and administrators in the IFS Secretariat, each of them covering several hundreds of grants. Monitoring consists mainly of asking for and checking the completeness of the reports.

[17] Also related to the fact that only a few countries remain eligible.

The IFS Strategy 2010-2019 suffers from quite similar deficiencies. It is a 30-page document, containing a logical model with output and outcome indicators, and linking IFS to the main global challenges (e.g. SDG). However, it is too detailed to be a functional institutional strategy. The logical model comprises 13 result areas (outcome and output indicators). In this form, the document is less a strategy than a planning document.

The ET also notes inconsistencies between the IFS Strategy 2010-2019 and the logic of the Sida-funded programme, as stated in the programme document (2014).[18] For example:

1. According to the IFS Strategy document, the IFS approach to empowering early-career scientist's works with (a) individual grants, (b) collaborative research, and (c) contributing to innovation. Each level is attributed to one of the outcome objectives. As Sida finances only approach (a), the Sida programme is linked, in the logic of this IFS strategy, only to specific objective 1.
2. In the results framework of the Sida-funded programme, however, lists all three outcome objectives. The programme logic mirrors how IFS handles the small grants (research planning, implementation of research, effects of small grants). The same logic is applied in the description of the IFS approach to empowering early-career scientists on page 16 of the IFS strategy.

For the future, it is advisable to put a more consistent system with the following documents in place: (a) a smart institutional strategy 2020-2019; (b) a simplified system based on fewer but relevant and measurable indicators for annual planning and reporting; and (c) a Sida programme document which integrates fully in the institutional strategy 2020-2029.

2.2 RELEVANCE

2.2.1 General findings

Donors find it increasingly attractive to finance larger programmes that provide visibility and can be managed more efficiently. IFS's supports early-career scientists who often have difficulties to access research grants, with small grants. Given the large number of young scientists in developing countries, this meets a demand.

Based on the interviews carried out, the ET describes the type of support which young researchers need, as follows:

1. For many it is difficult to find the financing for the quite significant step from BSc to MSc. In some countries and universities, enrolment fees are high.

[18] This can probably be assigned to the fact that the IFS strategy 2010-2019 was revised after the Sida programme document had been adopted.

2. Financing of the PhD is easier as there are more opportunities to collaborate in research groups, and once graduated as PhD, there are more funding opportunities.
3. Until the PhD level, it is the role of the supervisors to organise the funding for the young researchers. IFS grants are here a welcomed option, also for matching funds for student projects.

IFS grants are particularly relevant for young researchers, having access to research groups, also as matching funds. This is also supported with evidence. 88% of the IFS grantees reported that other students and scientists benefitted from the IFS research grants, and in 60% of the cases the IFS grantees succeeded to leverage additional funding. The median age of IFS applicants and grantees of between 32 to 35 years suggests that IFS reaches scientists who have already some experience.

Whether this form of a general relevance is a sufficient rationale for maintaining a global organisation for small grants, based in Stockholm, is another question. Certainly, IFS can offer the following positive assets: (a) IFS can count on a global network of over 1100 scientific advisors[19]; and (b) IFS stays outside the sometimes complex institutional context in which researchers work in developing countries[20]. These are arguments for the relevance of IFS.

2.2.2 How is the context capacity building developing, and what are the needs (particular focus on Benin and Vietnam)?

As seen in West Africa and South-East Asia, the university and research landscape is rapidly changing in the South. More developed countries like India or South Africa become science hubs from which the neighbouring less developed countries can profit. Research capacity building and research collaboration programmes start to build on such regional networks[21].

Vietnam has about 235 universities and institutes[22], of which 37 institutes have been assigned to provide doctorate programmes[23]. In total, Vietnam has around 24,000 doctors of which still 12,261 were active in research in 2017. From 2015 to 2017, the number of doctoral students has increased by 25% to 13,587[24].

[19] Exchange among the scientists in the network is quite limited, with the exception of the Scientific Advisory Committees (SAC) which meet at least once per year.

[20] In many countries, government interventions complicate access to research funding.

[21] The Swissnex programme is connecting Switzerland and the world in education, research and innovation. It supports the outreach and active engagement of partners in the international exchange of knowledge, ideas and talent. To achieve this, Switzerland collaborates with a number of science hubs. Each of these hubs is connected to universities in neighboring developing countries.

[22] Data from 2017

[23] https://vnexpress.net/tin-tuc/giao-duc/viet-nam-co-tren-12-000-tien-si-tham-gia-nghien-cuu-3396989.html

[24] https://baomoi.com/buc-tranh-toan-canh-ve-nen-giao-duc-dai-hoc-o-viet-nam-nhung-nam-

Conditions enabling North-South and South-South research collaboration have improved substantially with Information Technology (IT) and globalisation. Examples include internet, social networks, mobility of the society, distance learning courses, and webinars. Universities in more developed countries in the South are connected to universities in the North and become science hubs for neighbouring less developed countries[25].

Research partnerships between more developed and less developed countries are on the rise. They promote mutual learning by building on the potential to create a learning culture[26], or enhance capacities, also at the institutional level[27]. In September 2018, the EU announced that it will substantially increase the number of research grants to Africa. African countries establish their own research funding platforms[28]. They are still weak but likely to be relevant in the future.

A significant number of young researchers from the South have the opportunity to learn about new methods by engaging in doctorates in the North. This paves the way for research partnerships. This is also true for Sweden. The Swedish Institute, a government agency, offers scholarships each year for international students and researchers coming to Sweden. Lund University has a network of 600 universities all over the world[29].

In this emerging context, it is increasingly difficult to find good and young scientists to work pro-bono as scientific reviewers. IFS has to take this into account. Researchers have to report on how they spend their time. Traveling abroad just for a SAC meeting becomes difficult to justify[30].

2.2.3 What is the overall relevance and potential of this programme with reference to this changing context and the needs?

The IFS grants are small[31]. Nevertheless, they are for many young researchers often a door opener to science. However, and probably quite often, they are matching funds to other grants. But they can provide the young researchers with some independence and status in the scientific community (see country studies Benin and Vietnam, Annexes 11 and 12).

The high demand for research grants is also confirmed by the high number of researchers loading down the application forms from the IFS website[32]. Systematic assessments of the needs of these young researcher are, however, not yet made. In the

qua/c/22999246.epi

[25] Research capacity building programmes start to build on these mechanisms.

[26] KFPE principle 5, published on www.kfpe.ch

[27] See principles of research partnerships of the www.kfpe.ch

[28] PASREP in the Ivory Coast is a good example.

[29] Students registered in these universities do not have to pay registration fees in Lund.

[30] This puts the IFS process under stress. Many of the reviewers can no longer attend SAC meetings.

[31] IFS is providing 12,000 USD, renewable to 24,000 USD. The third grant has to be collaborative.

[32] See Google Analytics in Annex 6. Interest in IFS is significantly higher in Africa and Asia than in Latin America.

eyes of the ET, relevance could be particularly high for target groups such as the many students from the South who undertook their PhD in Sweden or other science hubs and now need incentives to return to their home countries, to continue with their research career as junior research advisors. Other groups are researchers looking for matching funds for their projects.

In financial terms, the level of IFS grants has remained the same as 45 years ago (USD 12,000). With inflation, prices have changed substantially. Particularly, chemicals are often expensive, sometimes costing the equivalent of half the grant amount. Projects with a laboratory component would need substantially higher amounts. This is a clear limitation to the relevance.

IFS is a global programme. Hereby, it has to adapt to the changing context, and this is a challenge. Two examples:

1. It is increasingly difficult to find good and young scientists to work pro-bono as scientific reviewers. This is also a limitation for IFS. Researchers have to report on how they spend their time. Traveling abroad just for a SAC meeting becomes difficult to justify[33].
2. The fact that the research funding landscape in the South is developing, is an invitation for organisations like IFS to decentralise their operations. Until now, and with the exception of a pilot hub in Uganda, IFS has not made experiences with decentralisation of its operations to the South. The evaluation of the experience in Uganda revealed that the costs of a decentralised model were relatively high. Whether this finding can be generalised, needs to be discussed further.

Other organisations are considering to phase-out their small grant programmes, as the management is costly and time-consuming. The International Development Research Centre (IDRC), for example, expressed interest to mandate IFS with the management of their small grant programmes as IFS has here particular expertise. Here, IFS could develop into a centre of competence for the management of small grant programmes in the area of sustainable development.

2.2.4 To what extent has IFS ensured that the research topics of selected projects/beneficiaries are relevant to local development challenges?

In the IFS proposal application form there is, at the moment, only one question[34] with a reference to the relevance of the project to address local development challenges. Despite this limitation, the process is working reasonably well, at least with regard to outcome 1 (research planning). In Vietnam, the national expert rated 60% of the projects as relevant for the development of the country or the region.

IFS's approach to monitoring, counselling and mentoring the grantees pursuing such purposes beyond science is the weakest element in the system, also for ensuring

[33] This puts the IFS process under stress. Many of the reviewers can no longer attend SAC meetings.

[34] The question is:"State the expected outcomes of the project. How will your research results be relevant to society? Might your research results be put into use, and if so: how?"

that IFS grants are relevant to local development challenges. Here, more investments (downstream) would be needed.

In both Benin and Vietnam, the project completion reports (PCR) analysed by the ET gave little plausible evidence on how the grantees applied the results of their research. Interviewed grantees were often not aware that this aspect is important. Training, and a lot more inter- and transdisciplinary research would be required to facilitate the transfer of research results to policy or practical applications. Such claims stay, to some extent, in conflict with IFS's goal to support scientific excellency.

Regarding the criteria of relevance for local development challenges, IFS could profit from experiences of other organizations[35]. The latter suggests that research has to start already with an inter- and transdisciplinary setting in the project formulation phase, to facilitate the transfer of scientific knowledge to practice. IDRC has defined criteria accordingly[36]. The ET has not found evidence that IFS is already connecting to such international discussions. The pressure of handling the large amount of research proposals is high.

2.3 EFFECTIVENESS

2.3.1 General findings

Despite pressures from different sides[37], the IFS Secretariat is managing the Sida-funded programme quite well. One of the pressures are fluctuations in the financial commitment of the main donor, Sida. Others are the dissatisfaction of researchers in some countries[38] that IFS cannot satisfy all needs with the present financial resources.

Considering that financial resources for early-career scientists are scarce in developing countries, the response to the open calls is high. IFS receives a large amount of research proposals. The reports about the effectiveness of IFS are overwhelmingly positive, from scientific advisors as well as from applicants (see Annexes 7 and 8). There is a lot of goodwill for IFS.

However, and in the eyes of the ET, a more detailed analysis is needed to give a satisfactory answer the question of effectiveness. The ET distinguishes between the following levels:

1. Effectiveness of the IFS grant-giving procedures
2. The extent to which the grants are effective in terms of creating capacities and capabilities among early-career scientists.

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[35] See also www.kfpe.ch

[36] See article, cited in Annex 4

[37] An example: Article 3.1. in the (revised) grant agreement signed in February 2017 states that it is a precondition for disbursements in 2018 that IFS shows a clear progress in broadening its funding base.

[38] E.g. Latin America

Level 1
Between 2014 and 2017, IFS handled a large number of grant applications in a fair and transparent way. The IFS Secretariat pre-screened 5000 research proposals. For each of them, a young researcher had spent at least 10 days of work[39]. Scientists reviewed 1774 research proposals and provided detailed feedback[40]. The recommendations were subsequently discussed in annual meetings of the SACs (decision boards). The latter decided for 698 small research grants[41]. The IFS Director signed the contract, and the IFS Secretariat provides support in the purchase of equipment. This is proof of the reliability and the capacity of IFS to handle large numbers.

Level 2
The ET concludes that it is fair to say that IFS grants give many young researchers a first opportunity and encouragement, and also some know-how. This is positive. Effects on research capacity building - beyond "individual" effects or the provision of matching funds - are, however, relatively small. Proposal writing one among many elements needed to build up research capacity. Here, it is observed that IFS invests mainly upstream (proposal writing, grants) and not downstream (mentoring, monitoring). This limits its effectiveness.

2.3.2 To which extent has IFS contributed to intended outcomes? If so, why? If not, why not?

In terms of geographic distribution, the results are the following: 70% of the grants went to Sub-Saharan Africa, and 24% to Asia and the Pacific. Only 3% went to Latin America, also related to the fact that the number of eligible countries is small in Latin America.

Thematic-wise, research grants were more equally distributed. The largest segments are forestry/agro-forestry (23%), crop science (20%), and water resources (16%). Social science accounted for only 3%[42], and the interviewed experts in Benin and Vietnam suggested to increase this rate. At the country level, there were specific thematic preferences[43].

The country studies in Benin and Vietnam reveal the following: While research proposals are of good quality (outcome objective 1)[44], implementation is less convincing (outcome 2). What was too difficult to achieve were policy impacts (part of outcome 3). The expectations were too ambitious. Here, the approach is not yet convincing.

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[39] Data from the survey of applicants 2018 in Annex 8 suggest more than the double. Taking this into account, this is a very conservative estimate.

[40] 0.5 days per proposal; again a conservative estimate, based on interviews.

[41] including the revised proposals of applicants who were invited to re-submit their proposals.

[42] This is surprisingly low for a programme which wants to achieve policy impacts.

[43] In Benin, e.g., 55% of the proposals are focused on agroforestry. This is linked to the research domain of the coordinator of the Alumni.

[44] 100% conform with the thematic orientation of IFS; see Annex 9.

IFS targets its support on least-developed countries (LDC). This increases the workload for the IFS Secretariat, as the researchers from these countries often need substantial counselling already in the proposal-writing phase. IFS faces, in fact, a strategic choice: Does it want to develop research capacity in LDC; or does it want to invest in young researchers from LDC in neighbouring, higher developed science hubs which want to extend their research to these countries, with the objective to address the problems?

In terms of quality of applications and support for the applicants by alumni, the results in Benin are convincing. Here, IFS has a voice, also related to the fact that it invested a lot in training, open also to participants from other countries, and has a strong alumni organisation. IFS's performance in Benin can, however, not be replicated in other countries with the given financial resources.

With regard to outcome 2 and 3, interviews with grantees provide little evidence that IFS undertakes systematic monitoring. The ET considers the number of scientific publications reported by IFS and cross-checked by searches on Google Scholar Search (see Annex 5) as significant. Attributing all publications in peer-reviewed journals to small IFS grants, appears to be quite optimistic[45]. Often, the small IFS grant may allow to buy some equipment (often matching funds for other projects), to cover costs of field work or to pay for the chemicals in the laboratory.

Outcome 1: Improved planning of research by early-career scientists in low- and low middle income countries that is relevant to those countries

IFS succeeded to maintain the pool of around 1100 scientific advisors and encourage them to review 1774 research proposals. Apart from the Scientific Advisory Committees (SAC), there is little interaction among the members in the network or among the scientific reviewers and the applicants for IFS grants. This might be something to be re-considered in the new IFS strategy 2020-2029.

With the support of these reviewers, applicants with quality-assured and scientifically relevant research proposals were identified. This corresponds to 35% of the total of applications[46]. A third of the recommended applicants used the feedback and comments and re-submitted a revised application, from which 50% succeeded to receive an IFS grant.

The ET has the following specific observations:

1. For both the successful and unsuccessful applicants, the review systems developed capacity to write research proposals[47]. This is a good result.

[45] based on interviews and the analysis of samples carried out in the two country studies

[46] All figures up to December 2017; see annex 7.

[47] In Vietnam, 80% of successful applicants and 58% of unsuccessful applicants agreed.

2. Surprisingly, only 5% of the young researchers who submitted an application in 2018 had participated in IFS proposal writing courses. IFS alumni were involved in only 1% of the cases (see Annex 8). This shows that the coaching by alumni functions only in a few countries.

In Vietnam and Benin, a large majority of applicants agreed that the major strengths of IFS is that it supports early-career scientists[48] in a fair, individual, and transparent way. The IFS grants are easy accessible for early-career scientists, also as matching funds for larger projects. Grantees can learn their first grant management skills. The fact that IFS is independent of the national research system can have advantages.

In both countries, the ET noticed the courage of young researcher to embrace complex topics with very limited resources. Some of the projects analysed by the ET were quite innovative. In Benin, there were cases involving a risk of plagiarism, for example in projects where only the plant species or the site were varied.

Whether young researchers are met as target group, needs to be challenged to some extent. 47% of the persons who applied for an IFS grant in 2018, had earlier experience of applying for international funding, and > 75% were shortly before reaching the age on which they lost their eligibility, which is 35 years for men and 40 years for women, for IFS grants. Detailed data on the average and median ages of applicants and grantees is provided in Annex 5[49].

Around 19% of all the persons who had submitted an application in 2018 had a doctorate when they submitted their research proposal. This indicates that IFS is reaching mainly master students. The evaluation team has the impression that young researchers from LDC having a PhD and being interested to become junior research supervisors in their home countries would be an interesting target group for IFS grants. The IFS grants could motivate them to make research in their home countries.

The weaknesses raised in the interviews and the survey with applicants in 2018, are related to the long time needed for the proposal evaluation, and the small size of the grants.

Outcome 2: Increased production of quality research by early-career scientists in low- and lower-middle income countries that is of relevance to those countries

The two country studies clearly show that the IFS grants – also the ones provided as matching funds - are an entry mechanism for science. They help the grantees to initiate something (e.g. buy equipment or chemicals, do field work). It is, however, not possible to undertake high-level science with these small grants. The main effect is preparation and encouragement for early-career scientists.

[48] Vietnam: MSC, 80%, and PhD, 15.6%.

[49] The average age of applicants is 33 respectively 35 years for female, and 32 respectively 34 years for male. The average age of grantees varies from 34 to 35 years (female), and 33 to 34 years (for male).

The main outputs are scientific publications. The IFS grants enable the grantees to write a first publication which allows them to start a scientific career. The IFS secretariat provided impressive figures and a detailed about the number of publications of some scientific value (100 to 250 per year), also cross-checked in Google Scholar Search (see Annex 5). It concludes that the figures are probably significantly higher (200 to 300). The ET can share this analysis.

Measuring the quality of the publications and the journals remains an issue. As seen in the PCR[50], 40% did not publish in quality assured peer-reviewed journals. Google Scholar Search does not count predatory journals of low quality[51], but the ET also found cases in which IFS grantees published in such journals.

This area of publication needs attention. Here again, the cohort of reviewers and alumni as well as IFS mentors could contribute in the quality control of publications. In the last five years, the number of predator journals has increased. In Africa, young scientist move into that direction because of the pressure from the funders and the universities. For example, in Tanzania, a Master's student should publish at least two papers before the defence of the thesis.

Outcome 3: Increased use of quality research results produced by IFS-supported scientists in low- and lower-middle-income countries that is of relevance to those countries

The ET has analysed representative samples of reports about completed projects (PCR) in Vietnam and Benin. With regard to scientific outputs, the reports are overwhelmingly positive (see above). This may involve a bias since the respondents were inclined to give a good impression of their project results to the organization which provided the grant. Since IFS does not have a monitoring or follow-up of what happens with the grants, the reports are difficult to verify.

Rating by the national experts of these PCRs shows[52] that 60% of the grantees reported that they succeeded to leverage additional funding for their projects, and that 88% of the research topics are likely to be of scientific value. This is positive. 69% resulted in new techniques, methods, products or new services, and in 88% of the cases, other researchers or students benefitted from the IFS grants. There are also effects in terms of strengthening networks among researchers. In 88% of the cases, the IFS grant helped the researchers to establish working contacts to researchers. 93% of the grantees are still active in research, and in 78% of the cases, it is likely that the methods or the equipment will continue to be used after completion of the grant project.

These are positive results. The question remains to which extent they can be attributed to the IFS grant. Interviews indicate that IFS grants are often matching funds,

[50] See Annex 9

[51] In some Indian journals, it is possible to publish within 24 hours.

[52] See Annex 9

e.g. to buy equipment or to cover the costs of fieldwork. They encourage young researchers to proceed in a research career, or they complement financial resources of research groups which have other sources. Here, the global community of IFS alumni is a welcomed support.

IFS reports of success stories with regard to policy impact, product or service development, or other direct uses. This information is based largely on reports of the grantees. For example, IFS reports that 24 of the grantees had reported that they had influenced policy through sharing their research results either with government officials or Ministries, and nine had participated in different expert groups. In four cases, new products were developed, and 15 grantees reported on new services as an outcome of their projects. Such results are positive, but they are reported by only around 2% of the young researchers which received IFS grants[53].

The ET undertook a systematic analysis of representative samples of the Project Completion Reports (PCR) in Benin and Vietnam. 14 % of the grantees reported that they actually contributed to influence policy. The ET finds little plausible evidence that this is realistic; with the following arguments: (a) research which is not planned in consultation with decision-makers in government, is unlikely to have such impacts[54]; (b) to expect that early-career scientists can influence policies, is very ambitious; (c) attribution to the small IFS grant is difficult.

In countries like Vietnam, it is significantly more difficult to assign a clear link between research and policy-making. Policies are formulated in the ruling party and in the government. Whether research leads to policy results depends on specific constellations (e.g. whether a government research institute is involved; key persons in the research project).

2.3.3 Were the identified strategies/approaches realistic, appropriate and adequate to achieve results?

The IFS approach to research capacity building in this Sida-funded small grant programme can be characterised as follows: (a) there is a strong belief that relatively small grants can make a difference; (b) thus, as many researchers as possible should benefit from this opportunity (focus on numbers); (c) main investments are upstream (proposal writing, scientific reviews of the proposals, support to procurement); and (d) there is a lack of capacity for downstream investments (mentoring, monitoring of results).

With this approach, IFS reaches its target audience. Almost all of the users of the IFS website (94%) were from the South[55]. This is an indication that the open calls reached the target group of researchers in the South. Sharpening of the criteria might

[53] Also not clear whether the IFS grant was just a matching fund.

[54] See also article by IDRC in Nature, cited in Annex 4.

[55] Google analytics, presented in Annex 6.

help to better manage how many researchers will submit a proposal. The working environment of an applicant (research institute, supervisor) could be a more prominent criterion.

The ET questions whether the focus on numbers and the focus upstream is well balanced, appropriate and adequate to achieve the optimal result with the given financial resources provided by Sida. Based on the interviews, it concludes that a more balanced approach – higher grants, less numbers, more investments downstream, less paper and more interaction (reviewers, speaking directly to applicants)[56] – would make sense.

The investments upstream are considerable, and there is a particular focus on the role of the reviewers:

1. Reviewers: scientists, engaged to contribute in reviewing independently research applications.
2. Supervisors: senior scientists from the academia in charge of supervising the research up to the completion of the thesis.
3. Mentors (not yet included in the IFS approach): advisors that helps the young research in his/her early career development, e.g. to improve the quality. Mentors cannot be reviewers of the same project.

Specific comments

The IFS application form is quite detailed in terms of scientific quality. It does, however, not stipulate collaboration with an agency which might put the results into use[57]. Reference to the SDGs is made in one paragraph only.

IFS has a lot of experience in implementing pre-screening and scientific reviews in a correct way. This is a particular strength of IFS. The workload for the IFS Secretariat as the coordination platform is, however, significant, as it is involved in many of the steps.

The roles of the scientific reviewers and decision-making bodies (SAC) are clearly separated. Whether three layers – pre-screening of proposals, scientific reviews, decision in the SAC – and the centralisation of the decision boards (SAC meetings) needs a more careful analysis. Experiences in other programmes in Vietnam indicate that the processes could be simplified (e.g. more scoring, selection of best scored proposals for direct interaction with the applicant), or some of the tasks could be delegated (e.g. pre-screening).

Pre-screening and scientific review become more difficult with the Sida-funded programme moving more and more into low-income countries. Double funding can be a risk. The better the applicants know IFS, the better they can cheat[58]. The fact that

[56] Anonymous coaching by Skype; would eventually need less time and be more fun than writing reviews of proposal

[57] See application forms for IFS grants.

[58] Cited from an interview in Africa

IFS has no real presence in a country and lacks monitoring of what happens once a grant is provided, is considered a risk.

IFS provides capacity enhancement support (CES). This can be relevant. The applicants, however, do not operate in a vacuum. 53% of them got support from senior colleagues or scientific supervisors. Only 5% percent had attended an IFS proposal writing course. Only a few (14%) mention researchers who had already received an IFS grant as a resource, and IFS alumni organisations were known to only 1% of the applicants and seem to be relevant only in a few countries.

The funding decisions concerning reviewed research proposals are taken in the SAC meetings. The SAC meeting of May 2018 in Stockholm, to give an example, consisted of ten persons who discussed and decided on 128 research proposals[59]. For each proposal there was a "rapporteur". Some of the renewed applications were above IFS age criteria[60]. The SAC is highly committed to base decisions on scientific criteria. However, given the large number of projects to be processed, the process appears to be quite static.

Need for down-stream investments

The main message is to go less for numbers but to consider a better trade-off between number of grants provided (with up-stream investments) and the quality in the implementation of the research (down-stream investments). This was a clear result of the interviews carried out in Benin and Vietnam.

According to IFS, mentoring of the grantees is ensured, as all applicants have to list a mentor in their proposals. Here, practically all applicants interviewed in Benin and Vietnam, often referred to their supervisors. This is not yet a fully developed mentoring concept. IFS could provide to its grantees a list of IFS mentors from which the grantees can choose. The mentors would make follow-up and report to IFS.

Strengthening mentoring could be an argument for increasing the financial amount of the IFS grants. Another argument is that research institutes, particularly where equipment has to be maintained, are claiming overheads, often quite well justified since they have to pay for the electricity or the maintenance of the equipment. Until now, IFS has not considered such overheads. In case that there are problems, the IFS Secretariat checks with the institutions, also reminding them the equipment becomes property of the institutions after the grantee finished his/her research,

Downstream investments would also mean to strengthen monitoring. IFS's data and information on results achieved by grantees appear to be based mainly on reports submitted by the grantees. Some of the interviewed grantees would rather like to show the results of their research to scientific mentors, than to submit project completion reports (PCR) to IFS. There is a potential here.

[59] Data provided by IFS Secretariat.

[60] Age of women (42, 44) and of men (39

2.3.4 How effective has IFS been in responding to the needs of its beneficiaries?

Certainly, the demand for supporting early career scientists is vast. And without any doubt, a small IFS grant can always make a difference for an early-career scientist, also in cases in which other funding is available. From this point of view, this evaluation question is more rhetoric.

At present, IFS does not systematically assess the more specific needs of its beneficiaries to target its support. In Benin, 20 out of 48 (42%) of the interviewed or reviewed grantees[61] were able to leverage additional resources (e.g. funds, material, field support, transport, salary, travel costs). It is difficult to say whether this leverage was obtained during or after the termination of the grants.

The reports sent to IFS do not provide evidence of whether the funds were matching funds or double-funding. The acknowledgement sections in the publications do not provide systematic information on the source of funding despite the fact that IFS does require in its grant conditions that the funding sources are acknowledged in publications.

With such a loose monitoring and follow-up, double-funding is a risk. The ET has observed that IFS does not have a mechanism to cross-check if the projects are also funded from other sources. It has also not the capacity to be present in the countries in which it provides grants.

In Benin and Vietnam, USD 12,000 can be sufficient to cover costs of field work, or to buy some equipment or chemicals. Since the amount is low, the large majority of the grantees receive close this maximum level. They rely on matching funds, or they split up their proposals in two parts. Applicants would welcome if IFS would offer more options (e.g. higher level for projects involving laboratory; adapting to the price level in a country).

The ET made another observation: IFS grants are quite often used to purchase equipment, which could also be paid from other sources (standard equipment of students). Examples are personal computers, GPS for field work, or cameras. Here, the criteria might have to be formulated more stringently, to target the funding more on equipment which enables research.

The 47 training workshops, reaching around 1300 participants by the end 2017, were meeting a demand. They were highly appreciated by the applicants. Penetration among 2018 applicants was, however, in the order of 1% (see Annex 8).

IFS grants have particular advantages in cases in which the research environment is bureaucratic. Given the complexity in some countries with procurement, value-added tax (VAT) and overhead costs, IFS grants are a perfect option, also because of the procurement support provided by the IFS Secretariat. For example, a student in Vietnam reported that she preferred to buy chemicals directly and to pay for the VAT. If she would have informed the university about the IFS grant, she would have had to pay overhead of 15-20%, and for the laboratory and research facility.

[61] Including the PCR

Interviews carried out by the ET provided little evidence that South-South collaboration across continents is relevant for the career of young researchers in developing countries. Young researchers rather seek the collaboration with science hubs in their regions, in Europe, North America, or Australia, offering options for larger fellowships.

2.4 IMPACTS

2.4.1 How have IFS-supported individuals gained recognition for their research or achievements (e.g. through appointments, patents)?

The IFS grants are seed money with effects on the personal life of the early-career researchers. The young scientists are provided with skills in grant-writing, in conducting their research with equipment, and in editing first publications.

This has effects. In Benin and Vietnam, 93% of the IFS grantees reported that they continued to be active in research after the completion of the project. In 68% of the grants funded in Benin and Vietnam, the IFS grantee has made steps on the career ladder in research (e.g. scientific degree, appointments). The ET did not encounter cases of a patents in its representative sample in Benin and Vietnam.

To be an IFS grantee gives an early-career scientist more weight to negotiate with senior scientists. He/she is invited at the same table as senior researchers and can extent his/her network. Equally, he/she can pursue the career in a certain autonomy. This is all very positive. The IFS grants enable the grantees to write a first publication which allows them to enter into a scientific career. Though it remains difficult to say whether the IFS grant was the decisive factor (attribution)[62], the result is good.

Most importantly, the IFS grant allowed the grantee to establish working relationships to other researchers. In Benin and Vietnam, 88% of the grantees reported about such effects. In Benin, the ET has noticed a change in the "research ecosystem" in a very specific domain (agriculture and biodiversity). This is also related to the fact that this is the domain of the head of the alumni organisation.

2.4.2 To what extent have IFS supported researchers used research results to engage in debates on national priorities and challenges with external stakeholders?

The assumption that the research grants result in effects on policy development and practice in areas covered by the research, has not been fulfilled. To have a major impact would need follow-up and a longer-term capacity building approach, with significantly more funding[63]. For example, testing of results would be needed to convince policy-makers.

[62] In 60%, the IFS was likely just a matching fund; see Annex 9.

[63] The Sida strategy asks for longer term engagement.

About 45% of the grantees in Benin and Vietnam, reported that they were able to put the results in practical use. In 69% the research apparently resulted in new techniques, products, services, or new services. Again, and in the absence of monitoring data, it is difficult to say to which extent this was really the case or can be attributed to the IFS grant. The interviews carried out in Benin and Vietnam suggest being careful with this attribution.

Behavioural changes in communities and political transformations are complex. The ET lacks evidence to confirm what the grantees document in their reports. New knowledge is produced in some instances, but putting knowledge into use takes more time than the timescale of such small research projects.

For a partner like the Ministry of Science, Technology and Environment (MOSTE) in Vietnam, the funding provided by IFS is a rather small amount, difficult to achieve results which are of significant value and practical or political relevance.

2.4.3 Have positive changes been made in development policies or programmes, and can they be associated with IFS supported research?

The ET made a systematic analysis of random samples of project completion reports (PCR) in Benin and in Vietnam. Again, the basis are just reports of IFS grantees. Results are as follows:

1. In Benin, 83% of the analysed sample of PCR have a potential to lead to some relevant results. For real impact, a substantially more systemic approach would be needed.
2. In Vietnam, the results are similar. 74% of the research carried out with the IFS grant can be classified as somehow policy relevant. In some cases, the IFS grants allowed to finance innovative ideas and concepts for basic research. Key factors fostering possible impacts were selecting the right institute or research group which can make a difference and has access to policy or other, larger funding; and the provision of follow-up funding for research.

2.4.4 Are there important and unexpected outcomes which are not planned for in the IFS LogFrame?

The evaluation team identified the following outcomes:

1. Scientific advisors reviewing research proposals reported that they developed a decade-long relationship to the research team in the South. Personal contacts, regular visits and even financial contributions to research projects from personal resources of the scientific advisors were reported.
2. In Africa, there is an emerging trend to establish national and local research funding mechanisms[64]. IFS has contributed to pave the way for these initiatives.

[64] E.g. PASRES in Ivory Coast, or COSTECH in Tanzania.

2.5 EFFICIENCY

2.5.1 General findings

The ET examined the efficiency of IFS as implementer of the Sida-funded programme[65], with a particular focus on the following two levels:

1. Overall efficiency: the way in which the IFS budget is spent differentiating between operational costs and research grants;
2. Operational efficiency: the details of operational costs.

Overall efficiency

With operational costs ranging from 44% (2015) to 56% (2017) for running of the organisation (IFS) and the scientific review processes, including the development of new programmes and proposals, the efficiency of the overall system can be questioned.

IFS's financial report for 2017 mentioned that 56% of the budget was spent on operational costs. Only 44% were spent for research grants, including "Capacity Enhancement Support" (CES), to the South. The situation did not change a lot over the years.

The IFS Secretariat explains this low overall efficiency[66] by the fact that a large part of the operational costs were in fact enhancing the capacity of young researchers in the South. In other words, they could be classified as programme expenditures. Examples provided are salaries of staff for scientific coordination, managing the scientific review processes and responding to individual requests of applicants and grantees; or salaries of the expert providing procurement support.

In the eyes of the ET, this is not a sufficient explanation. The bulk of the capacity building is done pro-bono, and it is not plausible why the processes cannot be simplified. Sooner or later, IFS will have consider steps to reduce these costs, and this is likely to imply major structural measures such as increasing or rationalising the level of the grants, simplifying the review process, and/or gradually delegating some of the tasks to partners in the South[67].

The IFS Secretariat does not monetise the costs of the researchers involved in pro-bono work. Without this support IFS would be unable to process the research pro-

[65] This makes sense since IFS splits the operation costs between the Sida-funded program and other programs or core contributions.

[66] Programmes providing small grants for the promotion of art and culture, count with 10-30% of administrative costs for the management of the grant review and provision process. This must be a realistic benchmark, also for IFS.

[67] The proposals have to be made by IFS. The ET cannot elaborate this further. The experiences made by IFS in Uganda have also to be taken into account.

posals in a meaningful manner. A conservative estimate, based on interview data collected by the ET, is that 600 days of input was provided by scientific reviewers (three person years) over the whole project period. This needs to be included in a full-cost analysis of the efficiency of the IFS approach.[68]

Operational efficiency

In the present programme period, IFS has made steps to reduce its operational costs[69]. For example, the IFS Secretariat recently moved to a smaller office in Stockholm. There were also no salary increases[70]. The number of SAC meetings was reduced from two to one. These measures affected some of the smaller expenses in the operational costs.

In 2017, the by far largest part (79%) of the operational costs were related to the category "scientific coordination". They consist mainly of staff costs at the IFS Secretariat in Stockholm. In 2014, the percentage was in a similar order (81%). Over the years, IFS has reduced the number of staff at the IFS Secretariat from 20 (2010) to 12 (2018).

The introduction of the Database Management System (DMS), designed by the business consulting company Fluido Salesforce, was a significant step for IFS. It allowed to substantially reduce staff at the IFS Secretariat[71]. Concrete savings were automatic letter printing, time and deadline management, integration of all information into one platform. The investment will allow additional savings in the future. The IFS website has been transferred to WordPress which also has constituted a major cost of USD 60,000.

Despite that the operational costs of the IFS Secretariat are quite high, staff reports that it runs at the limit in terms of workload. The ET confirms this. It is not possible to handle significantly more applications with the present highly individualised system and processes.

Conclusion

With regard to finances, IFS is in a delicate situation, and this requires leadership and strategic decisions. It is not possible to further scale down the IFS Secretariat[72]. Op-

[68] Further upstream, it merits also to consider the conservative estimate of around 50,000 days of input of young researchers to write research proposals (200 men years).

[69] Not included in scientific coordination.

[70] IFS is member of an NGO member organisation. The ET was informed that it has similar salaries as the other NGOs.

[71] From 5 scientific coordinators and 5 scientific administrators, to only 5.

[72] In 2014, there were 20 persons, and now there are 12.

tions to share staff with other organisations have been discussed. Many of the interviewed persons have been affiliated with IFS for a very long time, and many of the staff of the IFS Secretariat are close to retirement age[73].

At present, The BOT has little specialised know-how in law, management, or fund-raising. It has the final responsibility to lead the organisation. However, roles and responsibilities are not clearly defined to make the BOT independent of operations. BOT members also participate in operational activities in IFS when there is a need[74]. Some were beneficiaries of IFS in their early research careers or contributed with reviews. This increases the risk that IFS becomes a closed system, resisting change, or delaying decisions of strategic importance. On the positive side, the BOT members and members of SAC, all working pro-bono, are very familiar with and committed to IFS.

2.5.2 What are particular strengths and weaknesses of the set-up and processes, in particular with regard to the efficiency of programme implementation?

The present global and organisational set-up is defined in the IFS Statutes. It has strengths and weaknesses. The main strength is the pool of scientific expertise and pro-bono work which IFS succeeds to mobilise. The main weaknesses is the complexity of the organizational structure.

With regard to efficiency, the ET identified the following particular strengths:

1. Mobilization of pro-bono work is exceptionally high.
2. The IFS grantees are linked to a pool of global expertise, though the level of interaction could still be improved.
3. The DMS contributed to the efficiency.

Weaknesses are:

1. The grants are very small. In fact, the input to manage a small grant is almost the same as the input for managing a large grant.
2. With the present system of open calls, it is difficult to find the optimal level in terms of numbers of applicants. The more investment in promoting the IFS grants, the more the workload increases for the IFS Secretariat, which can rapidly lead to decreased efficiency.
3. The focus on low-income countries affects the efficiency. Here, it could make sense to reflect on regional networks with science hubs.
4. To motivate young scientists to become reviewers, willing to work pro bono, takes increasingly time and effort.

[73] The young collaborators - in general: the young generation - should be invited to contribute to the further development of IFS.

[74] Unclear understanding of roles are quite common in IFS. Examples are: SAC members being members of the BOT, the strategic board; the director is involved in operations; BOT members are pre-screening research proposals.

5. Difficulty for IFS Secretariat to be really up-to-date regarding what happens in the field.

Rationalising the level of the grants (options for higher grants) appears to be necessary. It would, however, also imply that the funding basis of IFS is increased. With regard to the organisation of the process, it could make sense to look at models of other organisations. Some preliminary ideas:

1. The presentation of the first proposal could be made much simpler. The pre-screening would, then, also be faster, almost automatic.
2. A limited number of applicants would be invited to submit a more detailed proposal which, then, would be reviewed with scoring; also including the scoring of the capacity of the research institutes in which the researcher is working.
3. Based on this scoring, the IFS Secretariat would propose the top 30% of the proposals for funding.
4. The remaining projects would be identified in anonymous Skype interviews with the applicants.

The DMS simplifies the handling of the applications. The process is: (a) the applicants express their interest on the website; (b) in this process, they have to answer specific questions (e.g. age, country, topics); (c) if their answers identify them as eligible for the IFS grant, the IFS Secretariat will open an account with a license for the applicant[75].

The IFS Secretariat has at present no IT specialists but acts professionally. It is aware that these licenses can lead to additional costs. When selecting the system in 2016, the alternative would have been to simplify the IFS application and the review process, or to use more a standard software[76].

2.5.3 How effective is IFS collaborating with its stakeholders and partners in the implementation of the programme?

The annual report 2017 of IFS lists 143 affiliated organisations. Many of them are universities and scientific academies. They are located in more than 80 countries, many of them in the South.

Collaboration with these partners is not based on formal linkages. Nevertheless, it can be effective. A good example are training courses. IFS teams up with regional institutes which provide the facility for the training course. Another option is that IFS

[75] The IFS Secretariat is presently negotiating the price for these licenses.

[76] Sida grant projects e.g. use the software of the Swedish Research Council. The IFS process would have needed to be adapted accordingly. IFS explored the option. Participation in this system would have been more costly than the present system.

effectively provides thematic slots in ongoing courses, mainly in the area of research proposal writing skills. This is a good and efficient strategy.

The evaluation team got in contact with some of the seven organisations which are mentioned as "long-term collaborating partners of IFS" on the IFS website. On the website, IFS claims that it "has developed a joint long-term commitment to the support of scientists and scientific research in developing countries". The ET found that the relationship to the partners differs from case to case[77]. It would certainly be a good idea to further intensify and expand the list of such collaborations, as a strategic axe to develop IFS in the next decade.

To encourage collaboration and exchange between IFS and research and science institutions in developing countries, it would be useful if IFS could delegate some of its activities or have more presence in the South (e.g. coordinators). In some countries, there are national groups of IFS alumni. These groups are important but still seek formalization. It remains important for IFS to continuously foster links with national institutes and forge formal relations with national research funding organisations and leading research institutes.

In Vietnam, the ET contacted some partners of IFS, such as the National Foundation for Science and Technology Development (NAFOSTED), the Ministry of Science, Technology, and Environment (MOSTE). The NAFOSTED representative perceives IFS as a fund, providing small grants to young researchers, with a good proposal selection system, but less strict on controlling or reviewing outcomes. NAFOSTED has its own grant system. The HCM City Department of Science, Technology and Environment (DOSTE) has also a small grant programme "Innovative Science and Technology Incubator Programme".

2.6 GENDER EQUALITY

2.6.1 General findings

In summer 2018, IFS has employed a gender specialist. Similarly to the fundraising specialist, the expert works on an annual contract. The expert is well qualified and has some specific and good ideas to foster gender mainstreaming in IFS and in its work. She is committed to building on the considerable amount of research undertaken on gender equality and women's leadership in research[78] and has drafted a gender strategy for IFS.

The strategy is sound and based on best-practice. The work undertaken by the provider of open science information ELSEVIER on gender in global research is a good point of reference. The ELSEVIER recommendations are based on an analysis of research performance across 20 years, 12 countries, and 27 subject areas. The IFS

[77] Some information was more historic.

[78] E.g. guidelines for the promotion of gender equality in research organisations, with reference to best practices.

gender expert is aware of these recommendations as they are very relevant for the IFS programme.

2.6.2 Is IFS working to promote gender equality and women's research leadership? If so, with what results?

IFS senior management is committed to implement the gender strategy which has been elaborated by the gender expert. Though efforts are still needed to further improve the gender balance in IFS itself[79], the chances that the strategy can be successfully implemented are good. IFS is making efforts to strengthen women scientists, ensuring that at least 40 percent of grants go to female researchers.

In countries like Vietnam, most female researchers are very pleased with the IFS policy to promote gender quality and women's research leadership. Female researchers can submit proposal until the age of 40 year, while the male can file their applications until the age of 35. Many men claim that the age should be increased to 40 for both sexes.

Except the difference in age by gender in the application process, and as the gender strategy has been drafted relatively recently, no real mechanisms are yet in place to encourage women in science. Special programmes, awards or prices can make a difference.

2.7 SUSTAINABILITY

2.7.1 General findings

IFS is an independent foundation of almost 50 years of existence. In the eyes of the evaluation team, its future will heavily depend on whether it succeeds to draft and communicate a strategy for 2020-2019 which is attractive and convincing to donors and partners. This will be one of the prime tasks in the forthcoming years. The BOT is in the driver seat.

There is a risk that the IFS strategy for 2020-2019 is undertaken in a relatively superficial process under time pressure, without addressing the issues for which strategic decisions and comparisons with other organisations are needed. This could be related to the fact that the time slots reserved for such strategic discussions are quite short. The young generation is also not represented in the BOT, and the practices used for many years are not challenged.

The ET looked for examples of smart strategies. An example is IDRC in Canada. The vision is described in two lines: knowledge, innovation, and solutions to improve

[79] 11 out of 16 BOT members are men, and 76 % of SAC members are men. Respondents to the survey of scientific advisors were 73% men, and respondents to the survey of applicants 70% men.

the lives of people in the developing world. The three objectives are attractive: (a) invest in knowledge and innovation for large-scale positive change; (b) build the leaders for today and tomorrow; (c) be the partner of choice for greater impact[80].

2.7.2 What are prospects of IFS to become financially less dependent on Sida?

Legally, IFS is an independent foundation under Swedish Law which has its income from fundraising. The BOT has the final responsibility that this happens and funding is ensured. The evaluation team found little evidence that the BOT fills this role in a satisfactory way[81].

The financial reports indicate that action is required:

1. With the signing of the agreement with Sida for the present phase, IFS committed itself to extend its funding base. The opposite happened. The total of external funding, apart from Sida, has dropped from 11,543 TSEK (2014) to 8,789 TSEK (2017). The total external funding level for IFS has dropped from 36,543 TSEK (2014) to 24,930 TSEK (2017).
2. The financial statement for 2017 shows the following for the income side: (a) 24% of the contributions are core contributions; (b) of all the external contributions, Sida covers 65%; (c) fundraising from other donors is below 48% of what has been budgeted for in 2016. Budgeting of incomes was too optimistic.

IFS has a strong "strategy story". The ET considers this as an important asset for the future of IFS. Two years ago, a business consultant made an analysis of IFS's fundraising capacity. The consultant recommended (a) to hire a fundraising specialist, and (b) to develop a communication plan.

The first recommendation was implemented. The fundraising specialist joined in 2018. She has elaborated a strategy, recommending the establishment of a fundraising advisory board. According to her, this should lead rapidly to results. Whether the strategy works will become visible in spring 2019. This means that the dialogue with Sida about a follow-up programme can be based on results in terms of fundraising. And this is very positive.

In the eyes of the ET, there is close link between fundraising and the communication strategy recommended by the consultant. Here, the IFS Secretariat could greatly profit from a strong communication person, collaborating with fundraising specialists. At the moment, contents on the website are approved by the IFS Director. The website which has been transferred to WordPress with considerable costs of around

[80] For this, IDRC will take action in six significant ways to ensure that it is best positioned to make its mark. Among them are: focus IDRC's programming; work alongside the private sector; communicate strategically; be smart with resources; and invest in staff development.

[81] The ET found an exception: a Q/A type of reflection in the context of the preparation of the new IFS strategy 2020-2029.

60,000 USD is not yet responsive[82] and quite loaded with contents[83]. Today, responsive websites are a standard.

With the Secretariat in Stockholm, located close to Sida, IFS faces the limitation that it is perceived by many as a Swedish organisation. Other bilateral donors will not easily step in. IFS is aware of this and is now focusing on other donors, e.g. from the private sector or private foundations. Decentralization of some of the activities to the South could help to position IFS as a global organisation.

2.7.3 With what effect has IFS worked with alumni to strengthen results and increase sustainability?

IFS uses its large network of scientific advisors as scientific reviewers, mainly in an informal way and upon individual requests, e.g. to review research proposals. The opportunity of learning from the network has not yet been used. In Benin for example, it has been proposed to develop grant structured around teams supervised by scientific advisors and mentors.

The main strategy at the country level is to establish alumni organizations. In Benin, Kenya, Ghana, Burkina Faso, Nepal and Argentina good results have been achieved. In Benin, the alumni organisation is particularly active. There are also countries where there is also a large group of IFS grantees (e.g. Vietnam), but no alumni organisation.

The ET studied mainly the experience of Benin. Here, the alumni organization has contributed to the enlightenment of most of the research fellows in the process of application. The alumni played a role in guiding the candidates on the job or in quality control. It succeeded to double the number of applicants for IFS grants, and 60% of the research proposals were successful. The alumni contributed to training, coaching and quality control of applications, publications and reports. They provide self-confidence for young scientist. The alumni organisation has elaborated a strategy, and this needs support[84].

The Benin experience is also a good example to study potential deficiencies which need to be addressed. The ET identified the following:

1. Alumni work pro-bono. Time and resources are limiting factors for the alumni to better offer their support.
2. They are clustered in selected university departments or within a research group, and they do not cover the whole country. For example, the coordinator and vice-coordinator are from the same university.
3. The training sessions were not well advertised and only randomly organised around the calls.
4. The alumni organisations function on an informal basis and will need specific support to better provide advice and guidance. The alumni furthermore

[82] Automatically adapting to devices such as e.g. smart phones

[83] Potential funders will first look at the IFS website.

[84] Organisation of alumni around disciplines, for better coaching and guiding the IFS candidates.

need a good decentralised system in other Benin institutions. There is a plan to form a strong association but again it needs an event that mobilises participants from a diversity of institutions. This needs support and funding.

2.7.4 What is the likelihood of continuation and sustainability of project outcomes and benefits after completion of the projects?

Regarding the sustainability of the results achieved with the small grants, it has been noted several times that stronger mentoring and monitoring (downstream investments) are needed to achieve and to document the sustainability of the results. At present, this is not in place.

Despite these limitations, it can be concluded that the chances are high that the equipment purchased with the IFS grants will be used even after completion of the projects. This is reported in 79% of the PCR. It is also guaranteed by the contract which has to be signed by the research institution in which the IFS grantee carries out his/her research.

The provision of an institutional percentage to the research institutes in which the grantee works, is a factor to be considered in some countries (e.g. Vietnam). Without these overheads, the researcher is operating against the ruling system what could affect the sustainability of the results achieved with the IFS grant.

2.7.5 What are key factors that will require attention in order to improve prospects of sustainability?

Key factors that would improve the prospects of sustainability of the results achieved by small grants programme, funded by Sida, are:

1. Diversifying the programme by taking into account the new trends and special needs for achieving impacts;
2. Providing larger grants that also include an institutional component, funds for mentoring, follow-up, closer monitoring as part of each research grant;

Key factors that affect the sustainability of IFS as an organisation are:

1. Strategic and pro-active leadership in the Board of Trustees (BOT)
2. A well-defined multi-annual strategy that provides answers to the challenges that currently confront IFS. This strategy should also be attractive to foster external funding from Sida and other donors including private foundations.
3. Many key staff in the IFS Secretariat are close to the retirement age. On the one hand, this is a risk that know-how gets lost. On the other hand, it allows to envisage reforms within a reasonable time horizon.
4. A financial and a funding structure which provides IFS with a perspective for continuation and reverses the current trend of declining donor support.
5. A strategic approach to communication, to position the organization.

2.8 LOOKING TO THE FUTURE

2.8.1 General findings

IFS is an independent foundation. The BOT is the Strategic Board which has to lead IFS into the future. The present functioning can be described as follows: (a) the IFS Director, in close consultation with the Executive Committee[85], presents proposals to the BOT; (b) the BOT discusses and normally approves the proposals in its annual meetings.

From a financial point of view, IFS is in a delicate situation. The impression is that the 17 million SEK of Sida are below the optimal to keep the present global structure of IFS. The mechanisms have to be intensified to arrive at a convincing new strategy for 2020-2029.

2.8.2 What would be advantages and disadvantages of moving to a core funding modality?

The ET studied different models: (a) continue with the present programme funding; (b) move to a core funding modality; (c) a split option like in the International Science Programme (ISP)[86].

The ET findings are as follows:

1. Moving to a core funding modality would increase the financial stability of IFS. Monitoring and reporting could be simplified.
2. Moving to a core funding modality implies that the IFS strategy for 2020-2029 becomes the basis for the funding. An annual planning and reporting system for the whole organisation would have to be established[87]. In the present delicate situation (the new strategy 2020-2029 is being elaborated), it is difficult to take this decision.

2.8.3 What speaks for including the role of collaborative grants in a tentative next phase of the Sida-funded IFS programme?

IFS repeatedly asked Sida to consider funding its collaborative grants programme. The programme was initiated with project funding from private foundations and France.

The first call for collaborative research proposals in 2012/13 featured five pilot countries in Africa: Ghana, Nigeria, South Africa, Tanzania, and Uganda. The research teams comprised researchers from various, neighbouring countries. Before submitting their application, they had to agree on a collaboration charter, specifying

[85] According to article F.1 of the statutes, it consists of five members. The common practice is that the IFS Director coordinates with the Chair and the Vice-Chair of the BOT.

[86] ISP can split the overhead in (a) core funding, and (b) administration of bilateral exchange programmes.

[87] IFS has core funders. It reports mainly to donors.

issues such as authorship of publications, intellectual property, or coordination. Periodically, IFS together with its partners, provided Capability Enhancement Support (CES) to the collaborative teams.

The response to this call was very high. A survey in 2014 allowed analysis of some of the benefits. 94% of the research collaborators supported by IFS reported that collaborating has been a useful way of learning the social skills needed to work as part of a team. Even 100% reported that collaborating has been a useful way of learning the management skills. This is positive. Visibility, but also costs for coordination (e.g. for moving of equipment, administration, coordination) were higher than in individual grants.

Since then, the CES has been further developed. The model is now described in guidelines. Applicants must be citizens of LDCs[88]. The coordination and learning models are:

(1) Common group learning: intensive interaction, leading to common group knowledge
(2) Integration of research by a leader: a leader coordinates.
(3) Common research component in parallel implemented research projects
(4) Modelling: pooled scientific knowledge leads to models

Another survey (self-evaluation) was undertaken in 2017. Results were:

1. 96% of the interviewed collaborative researchers expressed that they liked being an IFS grantee, and 97% felt that collaborative research had absolutely been worth the effort.
2. 63% reported that they had achieved their research objectives entirely or to a large extent, and 37% felt that they have achieved a moderate level or even lower.
3. Regarding the form of organisation, 41% used the common research component model, 30% the common group learning model, and 27% the integration of research by a leader model. In 77% of the cases the team coordinator matched the different inputs well. The modelling approach was used only by 2%.
4. Mobile phone was by far the most important means for communication in the team (72%), and 53 % of the interviewed persons had at least one group meeting.

While the reports (testimonies, surveys) are, again, overwhelmingly positive, the ET encourages IFS to make an external evaluation of these experiences, comparing the model also with other models of research partnerships[89]. It could, for example, make sense to involve science hubs (e.g. South Africa, India, and China) more explicitly in the partnerships.

[88] A more systemic approach, involving science hubs such as South Africa, is hereby excluded.
[89] See e.g. KFPE, cited in Annex 4.

Collaborative grants lead to thematically more targeted support (thematic clusters). This is a new element for IFS which applied, until now, very much a bottom-up approach, not steering the process of identifying research topics at all. Collaboration clusters could also include a university from Sweden or from another science hub in the region. It could also mean to support teams instead of individuals.

Experiences from Benin suggest that the success of this collaborative model will depend significantly on the budget for workshops and the leadership of the team coordinator. Matching funds should be possible for larger projects (e.g. as in-kind contributions).

3 Conclusions, Lessons Learnt and Recommendations

3.1 CONCLUSIONS AND LESSONS LEARNT

3.1.1 General

IFS is a stable partner for Sida. It is also a resource for Sweden and Sida. It provides access to thousands of scientific advisors and young scientists, many of them working in sectors relevant for the Sustainable Development Goals (SDG). All of them have a very positive image about Sweden (reputational effect).

IFS invests mainly upstream (proposal phase, review). This gives the grantees important initial encouragement in their research career. To achieve results in terms of research capacity building, investments into mentoring (downstream) to increase the quality would be equally important.

With regard to influencing policy or build-up recognised expertise in sectors relevant for meeting the SDGs (objective 3), the IFS grant can at best be a small contribution. Following the analysis in Benin and in Vietnam, some of IFS grantees succeeded to raise awareness for issues, which is positive.

The decision of Sida, on short notice, to resign from its financial promises for the year 2016, had a negative effect on the effectiveness of IFS. IFS had published an open call in late 2015, and IFS had to inform applicants that there was no resources for grants in 2016. The IFS Secretariat managed this crisis remarkably well.

At present, a very high amount of work is done pro-bono (BOT, scientific advisors, SAC). Identifying or renewing the pool with young researchers being available for such pro-bono work becomes more and more difficult. IFS operates at the limits of its very individualised approach.

With the present set-up and processes (global structure, review processes, small grants) efficiency cannot be substantially increased. More promotion for IFS, or an increase in the funding available for grants, would inevitably lead to the need to hire new staff at the IFS Secretariat.

The evaluation team questions whether there would be not opportunities for a better alignment of IFS with other programmes. At present, IFS appears as a niche, claiming to have an impact on strengthening early-career scientists. Alignment with other programs could help to be more effective.

Taking into account that 73% of the grants go to Africa, and only 3% to Latin America, the ambition to keep the global programme structure needs to be challenged. IFS could keep the promise of being a global programme if the funding base and, last but not least, the funding by the core donor Sida would be substantially higher than SEK 17 million.

The IFS strategy is presently being revised. A new strategy for 2020-2029 is being prepared. This would be a perfect moment for Sida to take up the dialogue. The dialogue would have to be sincere as the evaluation team does not have the impression that IFS has presently the capacity to comply with all the promises[90] or to make any significant changes.

3.1.2 Main Achievements

IFS has achieved a lot in relation to its outcome objective 1, less in relation to objective 2, and significantly less in relation to objective 3. To assume that research results lead to upstream effects at the policy-level, is a bold and mostly incorrect assumption. To have a major impact would need follow-up and a longer-term capacity building approach, with significantly more funding.

Results in science-related areas are very good. The reviews have contributed to improve the quality of the applications (e.g. study design and methodology), but has not directly improved the capacity of the applicants.

The IFS Secretariat pre-screened 5000 research proposals. Scientific advisors reviewed 1774 research proposals and provided detailed feedback. Based on these reviews, the Scientific Advisory Committees (SAC) selected 698 small research grants. The IFS Secretariat gave professional support to the selected grantees (e.g. procurement support).

Seventy percent of the grants went to Sub-Saharan Africa, and 24% to Asia and the Pacific. Only 3% went to Latin America. Thematic-wise, and at the global level, research grants were quite equally distributed.

The main outputs are scientific publications. The IFS grants enable the grantees to write a first publication which allows them to enter into a scientific career. Despite the fact that 40% did not publish in quality assured peer-reviewed journals, the results are good.

IFS has mapped the whole application and review process into a database management system (DMS), designed with a private firm. This allowed the quite complex processes to be automatized. The costs have to be observed.

In a few countries, IFS succeeded to establish alumni organisations. In Benin, which is among the best examples, the alumni organisation has played a role in guiding candidates on the job or in quality control. Time and resources were a limiting factor for the alumni to better offer their support.

Not being part of the national arenas, is one of the strengths of IFS. Support by the IFS Secretariat is very close what helps to solve problems for the individuals. But all this has its price.

[90] Budgets were often too optimistic. To position IFS as an organization in the context of the SDG is sometimes also quite unrealistic.

3.1.3 Main areas to further improve

With operational costs ranging from 44% (2015) to 56% (2017) for running of the organisation and the scientific review process and courses, the efficiency of the overall system is clearly low. It cannot be justified by the positive effects which the scientific reviews have on research capacity building.

It is important that issues requiring structural reforms are addressed by the new strategy for 2020-2029. The BOT is the strategic board which should lead the organisation. It has to be proactive and not leave all the issues to the IFS Secretariat.

Former IFS grantees who are now scientific reviewers or even members of a decision board (BOT, SAC) speak highly of IFS. There is a risk that this becomes a self-referencing system.

IFS has not sufficiently taken into account options to decentralise capacities and tasks to the South. This has contributed to the present imbalance between operational and programme costs.

Another issue is the “going for numbers” (upstream), instead of having a more focused approach, oriented towards research capacity building. Here, there is a need for more downstream investments (e.g. mentoring) and an independent monitoring of the results.

How to achieve efficiency gains, needs more sincere reflections. Options could be to increase the grant level substantially; simplify the review process; offer webinars instead of courses; and delegate more to the South. The more drastic options would inevitably imply a revision of the statutes.

The network of scientific advisors needs to be managed more proactively. IFS should have the capacity to propose to grantees a list of potentially interested mentors for their projects.

Fixing the amount of the grants, needs a more rational approach, considering factors such as type of project, country and complexity of procurement. In most cases, the inclusion of an institutional overhead of 10% is required. Mentoring needs to be strengthened, but mentors do not necessarily need a financial incentive.

The area of publication needs attention. In the last five years, the number of questionable predator journals has increased, and young scientist move into that direction because of the pressure from the funders and the universities.

Better targeting of specific beneficiary groups or alignment to other Sida-funded programmes could make sense. For example, IFS could enable researchers who took their PhD as part of a Swedish exchange programme or another science hub, to start a career as junior advisors in their home countries.

IFS reports that the collaborative partnership grants are promising. An independent evaluation is needed, comparing the IFS model with other models.

3.2 RECOMMENDATIONS

3.2.1 General recommendations

1. IFS should strengthen its governing body (The Board of Trustees, BOT) with specific competences (e.g. fundraising, management, strategy). The BOT should lead the reflections and action on the results of this evaluation.
2. The BOT should take steps to increase the overall efficiency of IFS. Rationalising and differentiating its approach to grants such as more targeting, providing larger grants without dropping the option of small grants for PhD students, a simpler review process, or decentralizing some of its operations could already make a difference.
3. The new strategy 2020-2029 is the ideal vehicle for discussing such reforms, studying options, and presenting the conclusions. To formulate and communicate this strategy is likely to use more time than anticipated. Sida should give this time (e.g. extension of the present phase until December 2020).
4. To fuel the process with fresh ideas and to avoid that the strategy process is driven mainly by the IFS Secretariat, the BOT could establish a (temporary) strategic think-tank which discusses and presents options to the BOT, to lead IFS into the new decade.

3.2.2 Recommendations to Sida

1. Sida should give IFS the resources (time, financing) to embark on this process. Sometimes in summer 2019, it should take a principle decision regarding the future level of Sida funding to IFS. By then, IFS should be able to present options to increase its efficiency, and first results of fundraising efforts will be visible.
2. If Sida wants to keep IFS as a Stockholm-based and globally operating organisation under the present Statutes, offering access to a large pool of researchers, and clear benefits for the reputation of Sweden, it should make a strong commitment and provide substantially more and regular funding to IFS.

   In this case, core funding would be a good option. The decision should, however, depend on whether IFS is able to present a realistic and attractive strategy 2020-2019 to Sida.
3. If this is not an option, Sida should have a dialogue with IFS on a programme which it is willing to finance in a next phase. This proposal could include: (a) support to researchers from developing countries who made their PhD in a "science hub" (e.g. Europe, USA, South Africa, India) and are committing to become junior advisors in their countries; (b) better align with bilateral grant or university exchange programmes of Sweden or other like-minded countries; and/or (c) a regional programme.
4. Apart from funding a new programme, Sida should consider funding of an institutional component in IFS. This could be a contribution to costs in a transition phase, or, later, funding of certain activities in the IFS Secretariat.

3.2.3 Specific recommendations to IFS

1. IFS should consider rationalising and differentiating its approach to grants. Larger grants, without dropping the option of small grants for PhD students, or establishing a streamlined review process could already make a difference. Here, IFS should study experiences of other organizations.
2. Upstream investments (proposals, reviews) should be complemented with a reasonable level of downstream investments (e.g. mentoring, institutional overheads).
3. Acknowledgment in the publications should provide the source of funding and how each funder contributed. Furthermore, grantees should be required to specify in the application and in their reports, whether they have or expect to leverage other funding resources for their projects, with specific details.
4. IFS should strengthen its corporate communication.

Annex 1 - Terms of Reference (ToR)

Terms of Reference for Evaluation of the Sida Supported Research Capacity Building Program 'International Foundation for Science'

Date: 2018-05-21

1. Evaluation purpose: Intended use and intended users

The purpose or intended use of the evaluation is to 1) provide Sida with input to the upcoming assessment and preparation of a possible new phase of contribution, and 2) provide the International Foundation for Science (IFS) with input of what works well and less well in order to inform decisions on how the implementation of the programme may be adjusted and improved in the new phase.

The evaluation will collate and analyze lessons learned, challenges faced and best practices obtained during the implementation which will inform the next programming cycle 2019-2023. The emphasis of the evaluation is on learning lessons in order to understanding what has and what has not worked as a guide to future planning.

The primary intended users of the evaluation are Sida's Unit for Research Cooperation and the management team of IFS.

The evaluation is to be designed, conducted and reported to meet the needs of the intended users and tenderers shall elaborate on how this will be ensured during the evaluation process.

2. Evaluation object and scope

The object for this evaluation is the International Foundation for Science (IFS) with which Sida in 2014 entered into a five year grant agreement (2014-06-12- 2018-12-31) to support a programme to strengthen the capacity of young scientists in low and lower middle income countries to conduct relevant and high quality research on sustainable management of biological, water and energy resources. The program aims to promote excellent science by early-career scientists and to harness the transformational power of relevant sciences, technology, information and communication to contribute to the safe and fair stewardship of our natural resources. The program emphasizes building a scientist's capability - in other words their opportunity and ability to generate valuable research outcomes, combined with increasing a scientist's agency - or what a scientist is able to do and to achieve with his/her research. The project offers small competitive research grants and provide capability enhancing support to

individual early-career scientists in low-income and lower middle- income countries in support of excellent research.

The scope of the evaluation shall cover Sida-funded activities for the period 2014-2018. The geographical scope of the evaluation covers all of IFS activity but focuses specifically on IFS activities in Benin and Vietnam. The analysis should be put into a larger context of Sweden's strategy on research cooperation, IFS's strategic direction, as well as the broader context of global and regional trends with relevance for scientific research and research training.

3. Evaluation objective and questions

The main objective of this evaluation is to evaluate the effectiveness, impact, relevance and sustainability of IFS activities and formulate recommendations as an input to upcoming discussions concerning the preparation of a new phase of the project.

More specifically, the evaluation should provide answers to the following questions:

Relevance

1. Is the IFS 2014-2018 programme and the IFS 2011-2020 Strategy (2017 update) consistent with Sida's 2015-2021 strategy for research cooperation and research in development cooperation?
2. To what extent has IFS ensured that the research topics of selected projects/beneficiaries are relevant to loval development challenges?

Effectiveness

3. Were the identified strategies/approaches realistic, appropriate and adequate to achieve results?
4. To which extent has IFS contributed to their intended outcomes? If so, why? If not, why not?
5. Are IFS's logical framework and outcome indicators appropriate for indicating the progress of the programme? Are important outcomes captured?
6. How effective has the IFS been in responding to the needs of its beneficiaries?

Impact

7. How have IFS-supported individuals gained recognition for their research or achievements (e.g. through appointments, patents etc)?
8. To what extent have IFS-supported researchers used research results to engage in debates on national priorities and challenges with external stakeholders?
9. Have positive changes been made in development policies or programmes and can they be associated with IFS-supported research?

Gender

10. Is IFS working to promote gender equality and women's research leadership? If so, with what results?

Sustainability

11. With what effect has IFS worked with alumni to strengthen results and increase sustainability?
12. What is the likelihood of continuation and sustainability of project outcomes and benefits after completion of the projects?
13. What are the key factors that will require attention in order to improve prospects of sustainability of outcomes and the potential for replication of the approach?

Questions are expected to be developed in the tender by the tenderer and further developed during the inception phase of the evaluation.

4. Methodology and methods for data collection and analysis

It is expected that the evaluator describes and justifies an appropriate methodology and methods for data collection in the tender. The evaluation design, methodology and methods for data collection and analysis are expected to be fully presented in the inception report. In terms of methods the evaluators shall visit IFS's grantees in both Benin and Vietnam.

Sida's approach to evaluation is utilization-focused which means the evaluator should facilitate the entire evaluation process with careful consideration of how everything that is done will affect the use of the evaluation. It is therefore expected that the evaluators, in their tender, present i) how intended users are to participate in and contribute to the evaluation process and ii) methodology and methods for data collection that create space for reflection, discussion and learning between the intended users of the evaluation.

Evaluators should take into consideration appropriate measures for collecting data in cases where sensitive or confidential issues are addressed, and avoid presenting information that may be harmful to some stakeholder groups.

It is highly recommended that local consultants are included in the team.

Relevant documents and data will be made available to the evaluators by Sida and IFS. The evaluators are also expected to independently search for data and documents, when deemed suitable and necessary, for example in scientific databases.

Documents to be made available to the evaluators may include the following:
- Applications to Sida
- Agreements with Sida
- Minutes from Board meetings
- Notes and e-mail communication regarding the Annual Meeting between IFS and Sida.
- Annual narrative and financial reports
- IFS reports and publications
- The Sida evaluation of IFS in 2012, including the management response
- The Swedish 'Strategy for Sida's support for development research cooperation 2010-2014'
- The Swedish 'Strategy for research cooperation and research in development cooperation 2015-2021

5. Organisation of evaluation management

The evaluation is commissioned by the Unit for Research Cooperation at Sida. IFS has contributed to the ToR and will be provided with an opportunity to comment on the draft inception report as well as the draft final report, but will not be involved in the management of the evaluation. Hence the commissioner will evaluate tenders, approve the inception report and the final report of the evaluation. IFS will be participating in the start-up meeting of the evaluation, inception meeting, debriefing workshop, as well as in the workshop where preliminary findings and conclusions are discussed, and in the conclusion seminar.

6. Evaluation quality

All Sida's evaluations shall conform to OECD/DAC's Quality Standards for Development Evaluation[91]. The evaluators shall use the Sida OECD/DAC Glossary of Key Terms in Evaluation[92]. The evaluators shall specify how quality assurance will be handled by them during the evaluation process.

7. Time schedule and deliverables

It is expected that a time and work plan is presented in the tender and further detailed in the inception report. The evaluation shall be conducted in August-December 2018. The timing of any field visits, surveys and interviews need to be settled by the evaluator in dialogue with the main stakeholders during the inception phase.

The table below lists key deliverables for the evaluation process.

Deliverables	**Participants**	**Deadlines**
1. Start-up meeting at Sida HQ in Stockholm/or virtually	Evaluators, Sida, IFS	Week 33 (August 13-17)
2. Draft inception report		Week 33-35
3. Inception meeting at Sida HQ in Stockholm/or virtually	Evaluators, Sida, IFS	Week 35 (August 27-31)
4. Comments from intended users to evaluators		September 6

[91] DAC Quality Standards for development Evaluation, OECD, 2010.

[92] Glossary of Key Terms in Evaluation and Results Based Management, Sida in cooperation with OECD/DAC, 2014.

5. Final inception report		September 19
6. Debriefing workshop	Evaluators, Sida, IFS	Week 42 (October 15-19)
7. Presentation of draft report, Sida, Stockholm	Evaluators, Sida, IFS	November 5
8. Comments from intended users to evaluators		November 12
9. Final evaluation report		December 5
10. Conclusion seminar, Sida HQ/virtually	Evaluators, Sida, IFS, key stakeholders	Week 51 (December 17-21)

The inception report will form the basis for the continued evaluation process and shall be approved by Sida before the evaluation proceeds to implementation. The inception report should be written in English and cover evaluability issues and interpretations of evaluation questions, present the methodology, methods for data collection and analysis as well as the full evaluation design. A specific time and work plan for the remainder of the evaluation should be presented which also cater for the need to create space for reflection and learning between the intended users of the evaluation.

The final report shall be written in English and be professionally proof read. The final report should have clear structure and follow the report format in the Sida Decentralised Evaluation Report Template for decentralised evaluations (see Annex C). The methodology used shall be described and explained, and all limitations shall be made explicit and the consequences of these limitations discussed. Findings shall flow logically from the data, showing a clear line of evidence to support the conclusions. Conclusions should be substantiated by findings and analysis. Recommendations and lessons learned should flow logically from conclusions. Recommendations should be specific, directed to relevant stakeholders and categorised as a short-term, medium-term and long-term. The report should be no more than 35 pages excluding annexes.

The evaluator shall, upon approval of the final report, insert the report into the Sida Decentralised Evaluation Report for decentralised evaluations and submit it to Sitrus (in pdf-format) for publication and release in the Sida publication data base. The order is placed by sending the approved report to sida@sitrus.com, always with a copy to the Sida Programme Officer as well as Sida's evaluation unit (evaluation@sida.se). Write "Sida decentralised evaluations" in the email subject field and include the name of the consulting company as well as the full evaluation title in the email. For invoicing purposes, the evaluator needs to include the invoice reference "ZZ610601S," type of allocation "sakanslag" and type of order "digital publicering/publikationsdatabas.

8. Resources

The maximum budget amount available for the evaluation is 700 000 SEK.

The Program Officer/contact person at Sida is Nils Ohlanders, Unit for Research Cooperation. The contact person should be consulted if any problems arise during the evaluation process.

Relevant Sida documentation will be provided by Nils Ohlanders, Unit for Research Cooperation. Relevant IFS documentation will be provided by Nighisty Ghezae, IFS.

Contact details to IFS supported researchers will be provided by Nighisty Ghezae, IFS.

The evaluator will be required to arrange all logistics.

9. Annexes

Annex A: List of key documentation

Agreement and Application

- Grant Agreement Sida-IFS
- Application for international research collaboration support 2014-2018. "Working together to plan, produce and put science in to use." December 2013

Board meetings

- Minutes from Board meetings and meetings with the Executive Committee to the Board

Annual Narrative and Financial reports

- Annual Report 2014
- Annual Report 2015
- Annual Report 2016

Former evaluations

- External evaluation of the International Foundation for Science (IFS). Final report, February 2010 (R. Muragari-Mwololo, R. Schertenleib & A. Svensson)
- Evaluation of the International Foundation for Science, Final Report, December 2012 (I. Christoplos & J. Bergman Lodin)

Other relevant IFS publications

- IFS Strategy 2011-2020
- Minutes from Donor Support meeting 2016
- Minutes from Donor Support meeting 2017

Sida strategies

- Swedish strategy for research cooperation and research in development cooperation 2015 – 2021
- Policy for Research in Swedish Development Cooperation 2010-2014 and Strategy for Sida's support for Research Cooperation 2010-2014.

Annex B: Data sheet on the evaluation object

Information on the evaluation object (i.e. intervention, strategy, policy etc.)	
Title of the evaluation object	IFS, Int Foundation for Science 2014-2018
ID no. in PLANIt	54100053
Dox no./Archive case no.	2012-000026
Activity period (if applicable)	2014-2018
Agreed budget (if applicable)	99 000 000 SEK
Main sector	Research
Name and type of implementing organisation	International Foundation for Science (NGO)
Aid type	Project type
Swedish strategy	Research cooperation
Information on the evaluation assignment	
Commissioning unit/Swedish Embassy	Unit for Research Cooperation, Sida
Contact person at unit/Swedish Embassy	
Timing of evaluation (mid-term review, end-of-programme, ex-post or other)	End-of-project evaluation
ID no. in PLANIt (if other than above).	11619

Annex C: Decentralised evaluation report template

Annex D: Project/Programme document

Annex 2 - Programme of the Evaluation

Date	Main Program (TL)	Country Studies (Experts)
20/21 August 2018	Kick-off meetings in Stockholm	
29 August 2018	Submission of the draft inception report	
31 August 2018	Inception meeting (by video)	
6 September 2018	Comments on draft inception report	
19 September 2018	Submission inception report	
20-30 September 2018	Drafting of Methodology for Interviews, Surveys, Country Studies Start of interviews	Comments on the methodology; testing, and start with interviews
2-5 October 2018	TL visits Stockholm for interviews	Field work for country studies
6-31 October 2018	Interviews, global survey, report writing	Field work for country studies
1 November 2018	Synthesis of results Debriefing meeting (by video)	Synthesis of results Debriefing meeting (by video)
2-7 November 2018	Report writing	Editing country reports
8 November 2018	Submission draft evaluation report	
9 November 2018	Presentation of the draft final report in Stockholm	Inputs by video from the field
23 November 2018	Sida and IFS comment on the draft final report	
12 December 2018	Submission of the final version of the evaluation report	
13 December	Conclusion seminar	Short discussion regarding the conclusions and processes (by video)

Annex 3 – List of Persons Interviewed

Sida

Afli, Karin, Research Cooperation Unit, Controller
Ohlanders, Nils, Research Cooperation Unit, Research Advisor
Ohlsson, Research Cooperation Unit, Research Advisor
Oltorp, Anna Maria, Research Cooperation Unit, Head

Board of Trustees

Abegaz, Behanu, Representative Africa
Beveridge, Malcom, Chair
van Damme, Patrick, Vice Chair
Havnevik, Kjell, Norway
Malmer, Anders, Sida nominated
Schenker, Elisabeth, Swiss Research Foundation
Taleisnik, Edith, Representative Latin America
Upreti, Bishnu, Representative Asia

IFS Secretariat

Edin, Ulf, head of administration
Eriksson, Annika, programme administrator
Ghezae, Nighisty, director
Heegaard, Louise, fund raiser
Leemans, Ingrid, scientific programme coordinator
Lindberg, Josiane, purchasing manager
Lindhe, Ingrid, programme administrator
Orlendo, Elvis, Social media and information manager
Persson, Nathalie, scientific programme coordinator
Rostig, Eva, programme administrator
Wallin, Jill, office manager, purchasing manager and administrator

Scientific Advisory Committees or Reviewers

Boisvert, Valerie, pro-bono scientific advisor to IFS
Deplazes, Peter, pro-bono scientific advisor to IFS
Segner, Helmut, professor, pro-bono scientific advisor to IFS

Benin and neighbouring countries

Applicants and grantees Benin

Dicko Aliou
Salifou Chakirath
Symphorien Agbahoungba
Soclo, Wilfried Parfait
Geirges Djohy
Gnansounou Setondé Constant
Badoussi Marius Eric
M'Mouyohoun Kouagou
Fabienne Adigoun
Kelomey aude
Serge Gildas Zanvo
Ahuéfa Bolda Faridah Mauricel Bijou Kegbe
Koura Bossima
Gilberg Atindogbe
Houaga Isidore
Degbey Atindogbe
Houaga Isidore
Degbey Hervé
Farris Okou
Séraphin Mouzon

Resource Persons

Assogbadjo, Achille, professor, alumni organization, Benin
Daouda Dao, Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, Ivory Coast
Wellington Ekaya, BECA-ILRI hub, Kenya
Tokpa-Heitz, Kathrin; Afrique One-ASPIRE, Ivory Coast
Ndour, Prisca, Ecole Inter-Etats des Sciences et Médecine Vétérinaires, Senegal
Diby Lucien, World Agroforestry Centre, Ivory Coast
Adiza Abass, University of Legon, Ghana
Solange Aka, University Nangui Abrogoua, Ivory Coast
Afolaby Dindé, Arlette; University Nangui Abrogoua, Ivory Coast
Traoré, Sylvain, University Pelefero Gon Coulibaly, Ivory Coast

Vietnam and neighbouring countries

Applicants and grantees Vietnam

Dr Thi Nhung NGUYEN, not recommended applicant
Nhung Thi NGUYEN, grantee

Anh Ngoc TONG THI, grantee
Dr Do Thi XUAN, not recommended applicant
HOA MINH LUONG, not recommended applicant
Vo Hoai Bac, grantee
Dr Thi Ngoc Ha LAI, grantee
Dr LE Hai Trung, grantee
Mr Tuan NGUYEN ANH, grantee
Kha Chan Tuyen, grantee
Mr NGUYEN VU PHONG, grantee
Hoang Duy LE, grantee
Lan Anh Thi Nguyen, grantee
Ngo Thi Diem Trang, grantee
Nguyen Thi Mai Phuong, grantee
Mr Duc Loc NGUYEN, not recommended applicant
Nguyen Thi Thanh Binh, grantee
Ms Thi Thu Thuy NGUYEN, not recommended applicant
Dr Thanh Son LE, not recommended applicant
Dr Van Khuong DINH, grantee
Ms Tinh TRAN THI, not recommended applicant

Applicants from other countries

Phyoe Aungkhang Huyo, Myanmar
Win Htet Htet, Myanmar, not commended applicant
Joshna Shrestha, Nepal, not recommended applicant
Keshab Bhattarai, Nepal, not recommended applicant
Bijan Shrestha, Nepal, grantee
Rajani Shrestha, Nepal, not recommended applicant

Others in Vietnam

Truong than Huyen, Vietnam, NAFOSTED
Ky Phung, Vietnam, HCMC DOSTE

Others

Castle, Paul, Syngenta Foundation
Haylor, Graham, former General Secretary of IFS
Lys, Jon-Andri, Swiss Commission on Research Partnerships KFPE, Secretary
Oeman, Cecilia, International Science Programme, Dpty. Programme Director

Annex 4 – List of Documents Reviewed

Documents about the Sida/IFS Programme

(1) IFS, 2014: Working together to plan, produce and put science into use; application to Sida.
(2) IFS, 2014 ff.: Audited financial statements 2014, 2015, 2016 and 2017
(3) IFS, 2014 ff.: Narrative and financial reports 2014, 2015, 2016 and 2017
(4) IFS, 2018: IFS Program and Sida-supported research building program 2014-2018. PPT Presentation to the evaluation team.
(5) Sida, IFS, 2014: Grant Agreement
(6) Sida, IFS, 2017: Grant Agreement, revised.

IFS Documents and videos

(7) IFS, 2002: Statutes for the International Foundation for Science
(8) IFS, 2011: IFS Strategy 2011-2020. Stockholm.
(9) IFS, 2014 ff.: IFS updates, and IFS newsletters
(10) IFS, 2014 ff. IFS Annual Reports.
(11) IFS, 2014: Presentation to the BOT about IFS (IFS, an update)
(12) IFS, 2014: Strengthening capacities and informing policies for developing value chains of neglected and underutilized crops in Africa. Nairobi.
(13) IFS, 2014: Influencing Scientific Equipment Policy Development and Change.
(14) IFS, 2014: Task Force: Resource Mobilization and Communications Group: TOR.
(15) IFS, 2014: Statutes for the IFS, revised.
(16) IFS, 2014: The clusters of research supported by the International Foundation for Science.
(17) IFS, 2015: Supporting and empowering young scientists in the developing world. Brochure.
(18) IFS, 2016: Collaborative Research Support: Summary of our work. Paper.
(19) IFS, 2015: IFS resource mobilizing and associated communication for the post 2015 development funding landscape (including background documents)
(20) IFS, 2015: PPT Presentation on IFS
(21) IFS, 2016: IFS Collaborative Research Conference, Nairobi.

(22) IFS, 2016: IFS Collaborative Research Grants.

(23) IFS, 2016: Supporting Collaborative Research in Africa. IFS-AAS Briefing Document 5/2016.

(24) IFS, 2016: Description of approach 3: Contributing Innovation.

(25) IFS, and the African Academy of Sciences, 2016: Supporting Collaborative Research in Africa.

(26) IFS, 2018: Collaborative Grantee Survey 2017. Stockholm.

(27) IFS, 2018: Approach 2 – Collaborative Research Support – Summary of our work. Internal paper.

(28) IFS, 2018: Draft of a Theory of Change (TOC) of the IFS

(29) IFS, 2018: Towards an IFS Theory of Change. PPT Presentation.

(30) IFS, 2018: Video from IFS collaborative research experience

(31) IFS, 2018: Strategy Development Framework and Action Plan. Internal Paper.

(32) IFS, 2018: IFS is recruiting a Trustee for 2019 for Africa and Latin America and the Caribbean. Internal paper, listing core criteria for IFS Trustees.

(33) IFS: full documentation about IFS applications and grants: numbers, names, proposals, reviews, letters sent by IFS

(34) IFS: full documentation about BOT and SAC meetings

(35) IFS: full documentation about use of IFS websites (google analytics)

Others

(36) Government of Sweden, 2015: Strategy for research cooperation and research in development cooperation 2015-2021

(37) IDRC, 2015: Investing in solutions. Strategic Plan 2015-2020. Ottawa.

(38) Haylor, G. et al., 2015 : Investigating costs and benefits of collaborative research. Results of survey of IFS collaborative research aspirants and grantees. Stockholm.

(39) Lebel, J. and McLean, R., 2018: A better measure of research from the global south. IIn: Nature: 559, p. 23

(40) Michel, C. et. Al, 2013 : Promoting research-user collaboration : an assessment of funding schemes. Berne : NCCR North South dialogue, volume 49

(41) National Centre of Competence in Research North-South, 2013: Final Report. Berne.

(42) Niras, 2012 : Evaluation of the International Foundation for Science. Stockholm.

(43) Niras 2016 : Evaluation of the Sida supported programmes « CLACSO Knowledge for a sustainable world 2013-2016 » and « South-South Tri-continental 2013-2015 ». Stockholm.

(44) PWC, 2017: Responsibilities of the Board of Directors IFS. PPT Presentation.

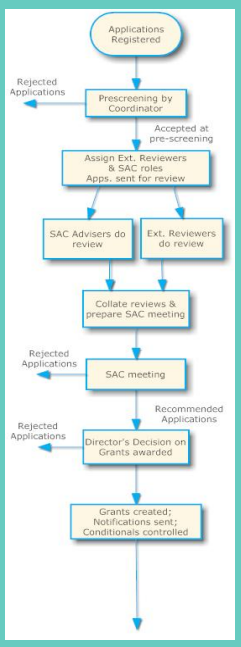
(45) Syngenta, 2018: Syngenta Foundation for Sustainable Agriculture: Review 2016-2018. Basel.

Annex 5 – Key Data Provided by IFS

Process of Assuring Scientific Quality & Building Science Capacity

Our review process:

- Involves multiple evaluations of applications
- Detailed feedback to successful and unsuccessful applicants
- Careful selection of the best applicants for research grants
- Rigorous peer review, equipment and equipment procurement services, mentoring and backstopping from an attentive secretariat



IFS INTERNATIONAL FOUNDATION FOR SCIENCE

Program Activities

Year	Applications received	SAC reviewed	Grants awarded	Gender	Capacity buiding	Closely mentoring & coaching
2014	1227	509	235	36% F 64% M	718	274
2015	1353	435	153	34% F 66% M	918	282
2016	1338	293	72	20% F 52% M	1045	221
2017	No open call	170	101	40% F 60% M		69
2018-1	1065	367 (first session)	137	39% F 61% M	698	230
2018-2	331	ongoing	(100)			

INTERNATIONAL FOUNDATION FOR SCIENCE

Program Activities

Year	Supplementary grants	Travel grants	Equipment procurement services	Training & workshops
2014		8 grantees	120 grantees, 302 transactions	14 workshops, 450 participants
2015	25 grantees		148 researchers benefitted, 439 transactions	11 workshops, 300 participants
2016	31 grantees		79 grantees, 160 transactions	12 workshops, 400 participants
2017	11 grantees	17 grantees	53 grantees, 84 transactions	10 workshops, 150 participants
2018	ongoing	15 grantees	ongoing	ongoing

IFS INTERNATIONAL FOUNDATION FOR SCIENCE

Achievements so far

Outcome 1: Improved *planning* of research by early-career scientists in low- and lower-middle-income countries that is relevant to those countries

Performance Indicator of Outcome	Achievements up to 2017
Extent to which reviewers consider the applicants well-qualified and likely to produce high quality research of relevance	**1774** well qualified applicants with quality-assured and relevant research projects were identified from the **5000** received applications
Extent of use of feedback and comments by applicants for revised or future proposals	**619** applicants used feedback and comments and resubmitted revised or rewritten applications of which almost 50% succeeded
Extent of use of digital spaces	A consolidated system into a single platform that includes communities of applicants, reviewers and grantees, IFS staff pre-screen applications and manage external reviewes, SAC meetings and grants

IFS INTERNATIONAL FOUNDATION FOR SCIENCE

Achievements so far
Outcome 2: Increased *production* of quality research by early-career scientists in low- and lower-middle-income countries that is of relevance to those countries

Performance Indicator of Outcome	Achievements up to 2017
Proportion of grantees receiving recognition (e.g., acknowledgements, policy input, patents)	70% of all submitted project completion forms (PCF) mentioned different forms of recognition (e.g., obtaining a higher academic degree, promotion, travel grants, awards of various distinctions)
Number of peer-reviewed publications produced annually	Our tracking of the published research results of our grantees identified 681 international publications that are direct outcomes of the IFS grant. More manuscripts are in progress and close to submission; others report publishing in languages other than English or French
Proportion of grantees obtaining additional research funding (% of grantees able to secure additional funding as a result of IFS grant)	59% of final project reports mention that they obtained funding from other sources, ranging from minor amounts for field work and participation in conferences to major research grants

IFS INTERNATIONAL FOUNDATION FOR SCIENCE

Achievements so far
Outcome 3: Increased *use* of quality research results produced by IFS-supported scientists in low- and lower-middle-income countries that is of relevance to those countries

Performamce Indicator of Outcome	Achievements up tp 2017
Number of grantees invited to present or participate at policy meetings or expert groups	24 grantees reported that they have influenced policy through sharing their research results either to government officials or to ministries; nine grantees report that they are participating in different expert groups
Extent of dissemination, including TV, radio, policy briefs, booklets/cartoons	All those that reported that they have shared their research results used differents means of sharing
Number of new products developed by IFS-funded researchers	Four new products reported by our grantees
Number of new services developed by IFS-funded researchers	Fifteen grantees reported on new services as an outcome of their projects

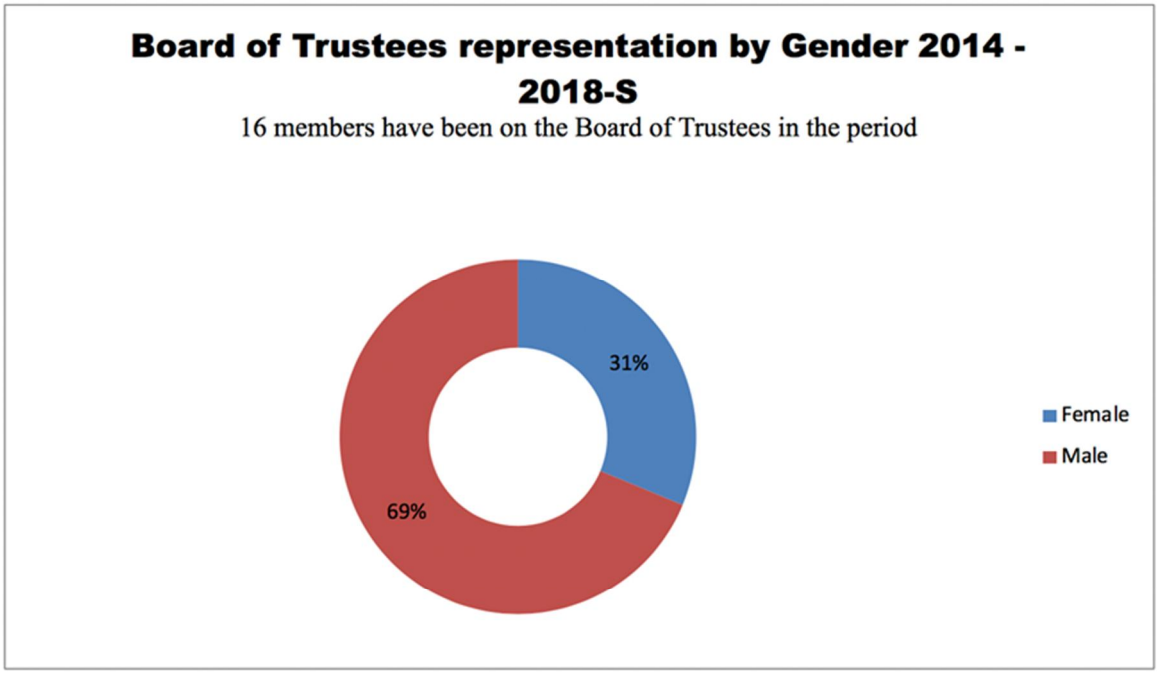
IFS INTERNATIONAL FOUNDATION FOR SCIENCE

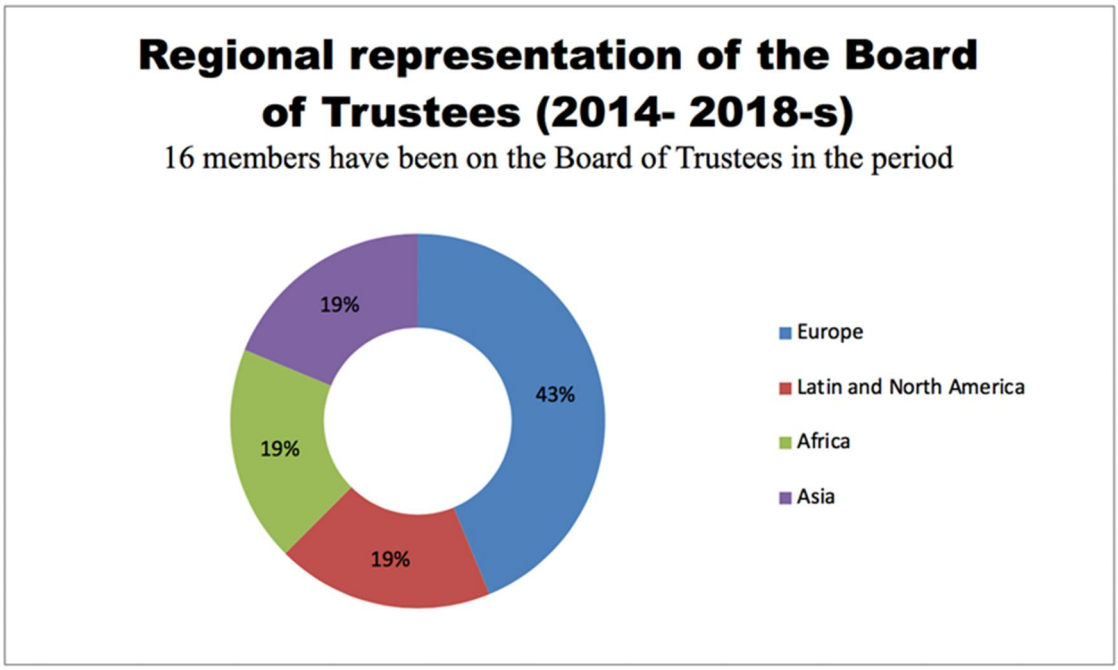
Age of Applicants and Grantees

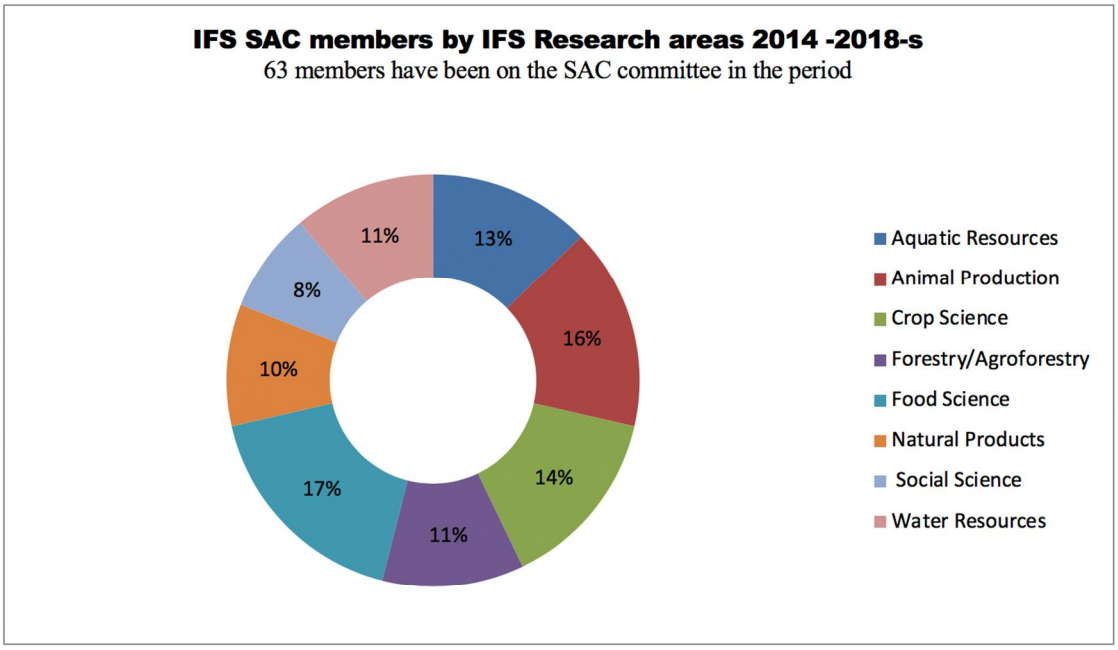
Ages of Applicants and Grantees (2017 and 2018)					
2017 Applicants	**N (Usable records)**	**Minimum**	**Maximum**	**Mean**	**Standard deviation**
Female	58	26.25	43.58	34.9885	4.5307
Male	102	25.25	52.08	33.7435	4.95550
All	160	25.25	52.08	34.1948	4.8289
2018 Applicants	**Usable N**	**Minimum**	**Maximum**	**Mean**	**Standard deviation**
Female	381	21.92	44.67	32.9565	4.53959
Male	679	23.25	52.75	31.8618	3.68738
All	1060	21.92	52.75	32.2553	4.04671
2017 Grantees	**Usable N**	**Minimum**	**Maximum**	**Mean**	**Standard deviation**
Female	38	26.25	42.42	34.9408	4.35566
Male	61	25.25	52.08	33.6393	4.92623
All	99	25.25	52.08	34.1389	4.73554
2018 Grantees	**Usable N**	**Minimum**	**Maximum**	**Mean**	**Standard deviation**
Female	57	23.58	44.67	34.1082	4.40821
Male	79	27	43.83	32.7500	3.55727
All	136	23.58	44.67	33.3192	3.97801

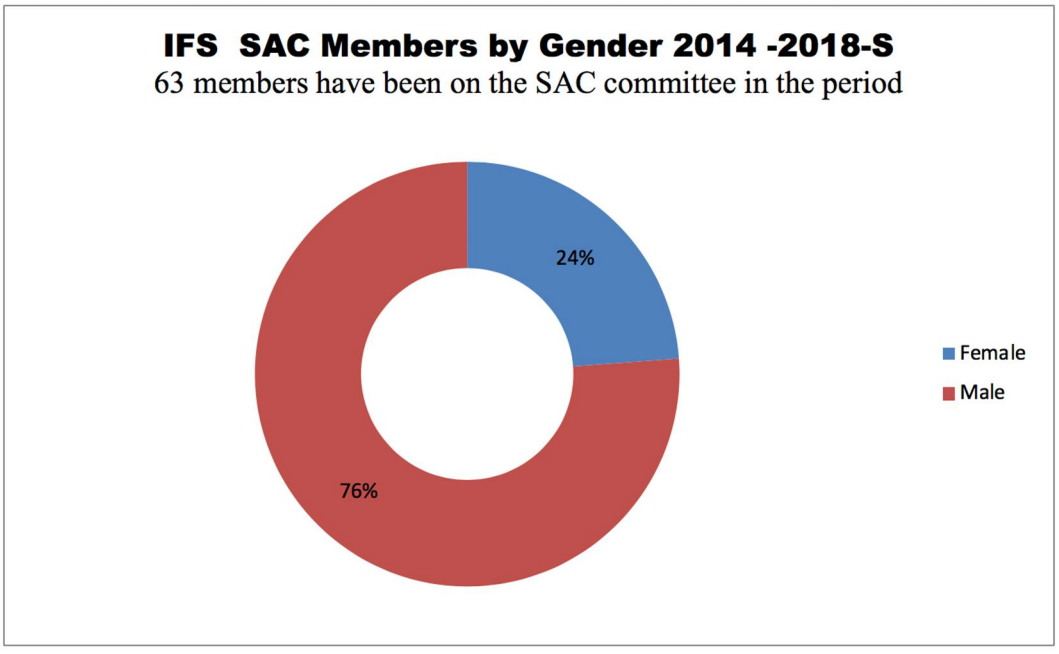
Number of publications, as reported by grantees and found on Google Scholar Search

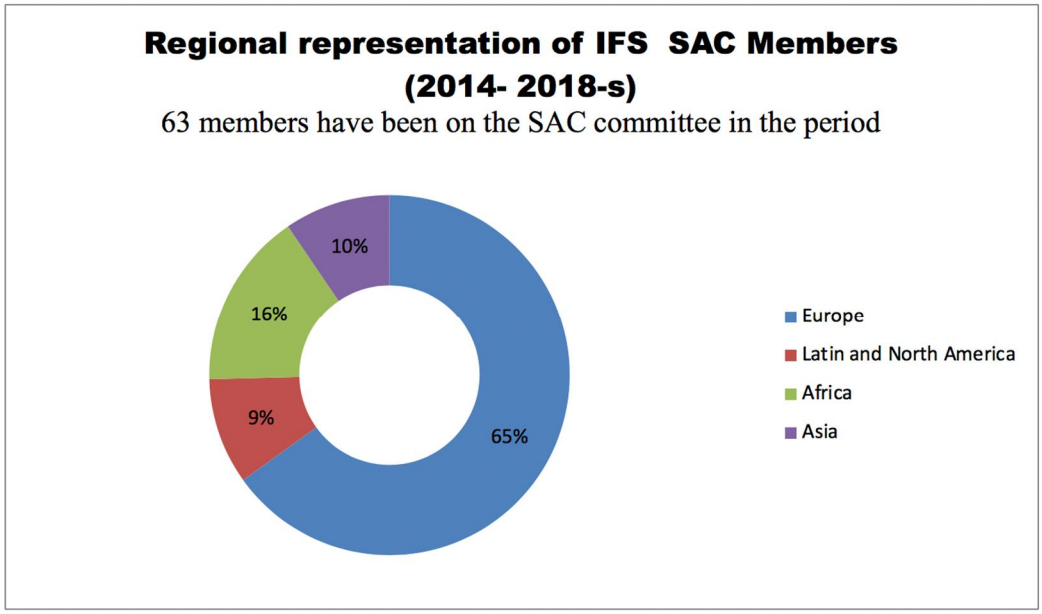
Reporting year/ Grant year	# grants given/Reporting year	Publications reported to Sida (AR or PCF), **at the latest** by 31th Dec of reporting year	Google Scholar Search "International Foundation for Science" in full dd 12 Dec 2018	Google Scholar Search "International Foundation for Science" (IFS) dd 12 Dec 2018
2014/2010	232	105	446	285
2015/2011	153 (+35 coll)	214	431	261
2016/2012	72	250	347	261
2017/2013	92	112	363	198
2018/2014	126	>150 (not yet complete)	351	208
Total		**> 831**	**2002**	**1245**


Board of Trustees representation by Gender 2014 - 2018-S
16 members have been on the Board of Trustees in the period
31%
69%
Female
Male


Regional representation of the Board of Trustees (2014- 2018-s)
16 members have been on the Board of Trustees in the period
43%
19%
19%
19%
Europe
Latin and North America
Africa
Asia


IFS SAC members by IFS Research areas 2014 -2018-s
63 members have been on the SAC committee in the period
13%
16%
14%
11%
17%
10%
8%
11%
Aquatic Resources
Animal Production
Crop Science
Forestry/Agroforestry
Food Science
Natural Products
Social Science
Water Resources


IFS SAC Members by Gender 2014 -2018-S
63 members have been on the SAC committee in the period
24%
76%
Female
Male


Regional representation of IFS SAC Members
(2014- 2018-s)
63 members have been on the SAC committee in the period
10%
16%
9%
65%
Europe
Latin and North America
Africa
Asia

Annex 6 – Google Analytics

Period: 1 Sept to 30 Dec 2016

10.	Malaysia	120	2.46%

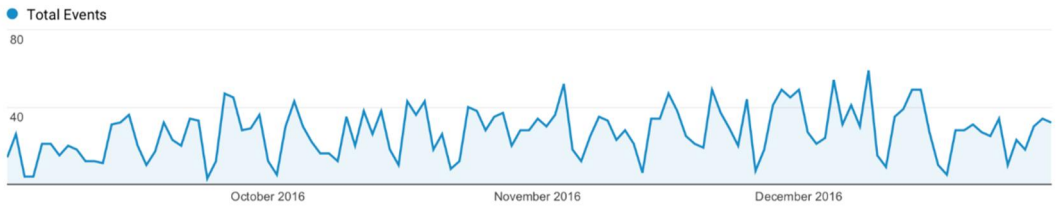
Top Events

All Users
100.00% Unique Events

1 Sep 2016 - 30 Dec 2016

Explorer

Event



Event Category	Total Events	Unique Events	Event Value	Avg. Value
	3,281 % of Total: 100.00% (3,281)	2,942 % of Total: 100.00% (2,942)	0 % of Total: 0.00% (0)	0.00 Avg for View: 0.00 (0.00%)
1. ApplicationForms	2,540 (77.42%)	2,249 (76.44%)	0 (0.00%)	0.00
2. Publications	382 (11.64%)	352 (11.96%)	0 (0.00%)	0.00
3. Calls	286 (8.72%)	272 (9.25%)	0 (0.00%)	0.00
4. How-to-do	73 (2.22%)	69 (2.35%)	0 (0.00%)	0.00

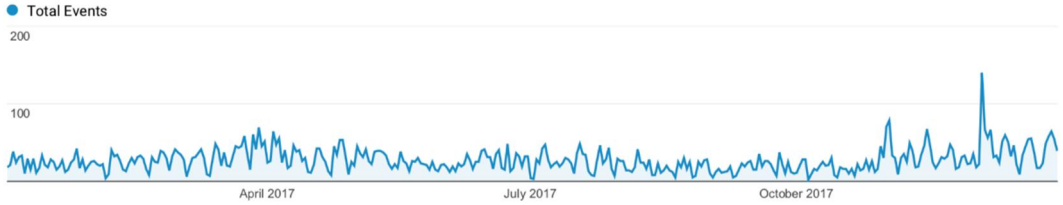
Period: 1 Jan to 30 Dec 2017

All Users
100.00% Unique Events

1 Jan 2017 - 30 Dec 2017

Explorer

Event



Event Category	Total Events	Unique Events	Event Value	Avg. Value
	9,767 % of Total: 100.00% (9,767)	8,801 % of Total: 100.00% (8,801)	0 % of Total: 0.00% (0)	0.00 Avg for View: 0.00 (0.00%)
1. ApplicationForms	8,137 (83.31%)	7,314 (83.10%)	0 (0.00%)	0.00
2. Publications	921 (9.43%)	855 (9.71%)	0 (0.00%)	0.00
3. How-to-do	469 (4.80%)	415 (4.72%)	0 (0.00%)	0.00
4. Calls	240 (2.46%)	217 (2.47%)	0 (0.00%)	0.00

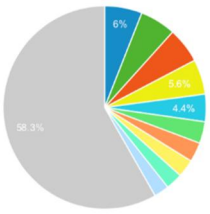
All Users
100.00% Users

1 Jan 2017 - 31 Dec 2017

Map Overlay

Summary

Country	Users	Users	contribution to total: Users
	61,069 % of Total: 100.00% (61,069)	61,069 % of Total: 100.00% (61,069)	
1. Sweden	3,693	5.97%	
2. United States	3,533	5.71%	
3. Nigeria	3,488	5.64%	
4. India	3,441	5.56%	
5. Pakistan	2,701	4.37%	
6. Kenya	2,140	3.46%	
7. Ethiopia	1,917	3.10%	
8. Vietnam	1,760	2.85%	
9. Benin	1,651	2.67%	
10. Indonesia	1,482	2.40%	



Annex 7 – Results of the Quick Survey of IFS Scientific Advisors

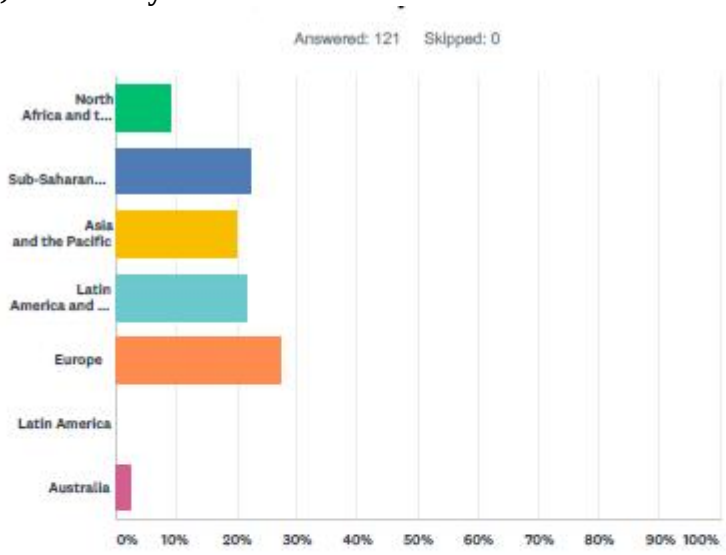
Sample size

Sent to: 457 persons
Total number of respondents: 121
Response rate: 26%

Gender

Male:	87	72%
Female:	34	28%

Continent, on which you are located



ANSWER CHOICES	RESPONSES	
North Africa and the middle east	9.09%	11
Sub-Saharan Africa	22.31%	27
Asia and the Pacific	19.83%	24
Latin America and the Caribbean	21.49%	26
Europe	27.27%	33
Latin America	0.00%	0
Australia	2.48%	3
Total Respondents: 121		

Since when do you stay in contact as Scientific Advisor or Reviewer with IFS?

ANSWER CHOICES	RESPONSES	
Since 2014 or later	30.58%	37
My first contacts date back to 2005-2014	38.02%	46
Before 2005	32.23%	39
Total Respondents: 121		

Your involvement in reviews of research proposals submitted to IFS or in IFS workshops and conferences:

ANSWER CHOICES	RESPONSES	
Regularly, annually	48.76%	59
From time to time (not every year)	33.06%	40
Occasionally	12.40%	15
Rarely	4.13%	5
Never	1.65%	2
Total Respondents: 121		

Are you a member of a Scientific Advisor Committee (SAC)?

Yes:	53	44%
No:	68	56%

How can you describe your motivation to be part of the IFS network of Scientific Reviewers?

	VERY RELEVANT	RELEVANT	IRRELEVANT	TOTALLY IRRELEVANT	NO ANSWER	TOTAL	WEIGHTED AVERAGE
It is my duty or a noble task to help young researchers in the South	76.86% 93	22.31% 27	0.83% 1	0.00% 0	0.00% 0	121	3.76
Development of my network, e.g. by establishing contacts to new research partners	11.57% 14	37.19% 45	37.19% 45	10.74% 13	3.31% 4	121	2.43
Perspective to get remunerated for such services	3.31% 4	7.44% 9	31.40% 38	52.07% 63	5.79% 7	121	1.50
My interest in sustainable development of countries in the South	66.12% 80	30.58% 37	1.65% 2	0.00% 0	1.65% 2	121	3.60
Professionality of IFS as an organization	50.41% 61	38.02% 46	4.13% 5	3.31% 4	4.13% 5	121	3.27
Personal relationship to people involved in the program	14.05% 17	29.75% 36	30.58% 37	19.83% 24	5.79% 7	121	2.26
A particular attachment to a country or a region	9.92% 12	23.14% 28	42.98% 52	20.66% 25	3.31% 4	121	2.16
Others	12.61% 14	11.71% 13	5.41% 6	3.60% 4	66.67% 74	111	1.00

Your Opinion about IFS

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO ANSWER	TOTAL	WEIGHTED AVERAGE
Flow of information is sufficient	26.45% 32	61.16% 74	9.09% 11	0.83% 1	2.48% 3	121	3.08
Remuneration of services provided to IFS (including cover of expenses) is sufficient	11.57% 14	32.23% 39	8.26% 10	4.13% 5	43.80% 53	121	1.64
The process of proposal reviews is well organized	41.32% 50	56.20% 68	2.48% 3	0.00% 0	0.00% 0	121	3.39
I can profit from the network of Scientific Advisors	13.22% 16	29.75% 36	24.79% 30	8.26% 10	23.97% 29	121	2.00
Methods for network management are professional and sufficient	24.79% 30	47.93% 58	9.09% 11	0.00% 0	18.18% 22	121	2.61
Vision and strategy of IFS are clear and adequate to needs	39.67% 48	49.59% 60	4.13% 5	0.00% 0	6.61% 8	121	3.16

Your Recommendations to further improve the IFS Programme (open question)

Point	No of responses
Increase the level of the grants	7
More promotion or local contact points in the countries which are eligible for IFS	6
Inform reviewers about the status and the success stories of the proposals they were involved in	5
Invest into the network (e.g. newsletter, meetings of reviewers, interactive webpage)	4
Focus more, e.g. by introducing incentives for really successful researchers (e.g. awards for good publications, prime level grants)	4
Revise and simplify the application platform	4
Clear ToR and some reimbursement for reviewers	3
Individual grants are the true expertise of IFS	2
The review process is too complicated and should be simplified	2
More regular self-reflection with Board of Trustees and SAC members	2
Include more countries in the programme	2
Funding of thematic workshops or thematic synthesis	2
Periodically review the thematic lines as the context is chang-ing	2
Stronger post-project evaluation	1
Collaborate more with universities	1
Use means of teleconferencing	1

More staff at the IFS Secretariat to make more professional pre-screening	1
Be more aware that academic environment in developing countries often lacks transparency	1
Focus more on young scientists who have already experience in science (post-docs)	1
Revision of the proposal evaluation criteria (e.g. more emphasis on assessing the quality of the laboratory or institute)	1

Annex 8 – Results of Survey of Applicants 2018

Sample size

Sent to: around 1000 applicants
Total number of respondents: 416
Response rate: around 40%

Gender

Male:	289	70%
Female:	127	30%

Continent, on which you are located

ANSWER CHOICES	RESPONSES	
North Africa and the middle east	2.17%	9
Sub-Saharan Africa	78.80%	327
Asia and the Pacific	14.46%	60
Latin America and the Caribbean	0.72%	3
Other	4.58%	19
Total Respondents: 415		

Country of residence

Benin:	86	21%
Vietnam	24	5%
Other:	307	74%

In which session did you submit your research proposal?

First session 2018:	271	62%
Second session 2018	87	20%
Both	79	18%

Your highest scientific qualification when you submitted the proposal:

Bachelor	3	1%
Master	333	80%
PHD	65	15%
Post-Doc	16	4%

The research proposal which you submitted for the 2018 open call was:

A first-time application (including a revised application)	364	87%
A renewal application (including revised and renewal)	54	13%

Your recommendations to further improve the programme

The 318 comments which were received, can be classified as follows:

Point	No of responses
Proposal review process takes too much time	35
Online application process is, in general, too complicated, and should be simplified and be made available more easily	25
Need more feedback on why my proposal was rejected	23
Give preference to first time applicants and early-career scientists	15
More information on the reviewers (email, phone) and/or their reviews to get in contact with them	13
Higher budgets per grants or separate budgets needed	13
Review is too complicated or not satisfactory	7
On-line platform needs to be adapted on specific points (e.g. more space for the description of the project, or more details on the budget; information during the evaluation process).	7
Increase the number of grants	7
Make two calls per year	7
Remove the limitation of age	7
Be more aware of language problems of non-English applicants, e.g. with the online platform (French translations)	5
Include also other countries and regions	5
Response of IFS secretariat to questions takes too much time	4
More presence or information at the universities (e.g. focal points at the universities)	4
Evaluation criteria on the website should be sharpened; or give examples of documents to be submitted	4
Travel budgets for presentations of the results at the end	3
IFS should revise the thematic lines, to adapt to new and emerging trends in research in Africa	3

PHD scholarships or priority to PhD students involved in North-South projects	2
Two step process: (a) review in country by experts; (b) international review	1
Reviewers should not be from the country from which the proposal was submitted	1
More time for the preparation of the proposals needed	1
Return to applicant the evaluated documents	1
Bribing of reviewers is a problem in some countries	1
Online technical support service in case of problems with the platform or the application process	1
There should be a platform on which grantees can exchange results	1
Webpage should be improved	1

Proposal review takes sometimes more than six months. This is too long and too complicated.

Allow the applicants to respond to the queries from the reviewers

Who supported you in the preparation of the research proposal which you submitted to IFS (several answers possible)?

ANSWER CHOICES	RESPONSES	
Nobody	22.98%	94
Senior colleagues or scientific supervisors	52.81%	216
Researchers who had received an IFS grant	13.94%	57
IFS alumni organization in your country	0.98%	4
I attended a proposal writing course	5.38%	22
Other	3.91%	16
TOTAL		409

Approximately how many working days did you spend on preparing the proposal?

22 days[93]

[93] Including only the approximately 40% of the answers which appeared to be realistic; what means below 1.5 months. The others were clearly above.

Do you have earlier experience of applying for international funding on your own (e.g. as primary investigator)?

Yes:	192	47%
No:	217	53%

Have you submitted this particular research proposal which you submitted to IFS, also to other funding agencies beside IFS?

Yes:	51	12%
No:	358	88%

What was the decision in the first response which you received?

ANSWER CHOICES	RESPONSES	
Proposal rejected, without a justification or rejected for formal reasons	14.48%	43
Proposal reviewed by Scientific Advisors, but not recommended for funding	26.60%	79
Proposal not recommended for funding, but with an invitation to submit an improved version in a second round	43.77%	130
Proposal approved for funding	16.50%	49
Total Respondents: 297		

Your opinion about the review process

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO ANSWER	TOTAL
The criteria for the review were clear	37.59% 109	38.28% 111	8.97% 26	4.83% 14	10.34% 30	290
I got a timely response	27.24% 79	43.45% 126	16.21% 47	7.24% 21	5.86% 17	290
The review was fair and transparent	26.57% 76	40.91% 117	9.79% 28	6.64% 19	16.08% 46	286
From a scientific point of view, the review was correct	31.58% 90	40.35% 115	10.53% 30	6.67% 19	10.88% 31	285
The comments received were constructive and helped me to improve my research proposal	42.01% 121	27.43% 79	9.72% 28	6.25% 18	14.58% 42	288
Thanks to these comments, I feel more confident in applying for funding from international donors in the future	44.03% 118	31.34% 84	7.84% 21	4.85% 13	11.94% 32	268

Overall relevance of the IFS programme

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO ANSWER	TOTAL
The criteria for the review were clear	37.59% 109	38.28% 111	8.97% 26	4.83% 14	10.34% 30	290
I got a timely response	27.24% 79	43.45% 126	16.21% 47	7.24% 21	5.86% 17	290
The review was fair and transparent	26.57% 76	40.91% 117	9.79% 28	6.64% 19	16.08% 46	286
From a scientific point of view, the review was correct	31.58% 90	40.35% 115	10.53% 30	6.67% 19	10.88% 31	285
The comments received were constructive and helped me to improve my research proposal	42.01% 121	27.43% 79	9.72% 28	6.25% 18	14.58% 42	288
Thanks to these comments, I feel more confident in applying for funding from international donors in the future	44.03% 118	31.34% 84	7.84% 21	4.85% 13	11.94% 32	268

Annex 9 – Analysis of Project Completion Reports

Sample, randomly selected

Benin: 23, Vietnam: 19, Total: 42

Year of the start of the project

Before the present phase (2014-2018): 20
After January 2014: 22

Duration of the project

1 or 2 years	3 or 4 years	5 or more years	No answer
20	14	4	4

Gender[94]

Female:	13	32%
Male:	28	68%

Amount of the grant

Less than 11,000 USD	Between 11,000 and 12,000 USD	More than 12,000 USD	No answer
14	20	6	2

[94] 1 answer missing

Results of the rating by the national consultants (cross-checked by the TL)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO ANSWER POSSIBLE	TOTAL	WEIGHTED AVERAGE
The quality of the content of the PCF is sufficient to carry out this rating	14.29% 6	30.95% 13	47.62% 20	4.76% 2	2.38% 1	42	2.62
The research topic fits the thematic orientation of the Sida-funded IFS program	26.19% 11	73.81% 31	0.00% 0	0.00% 0	0.00% 0	42	3.26
The grantee was able to leverage additional funding for this project	21.43% 9	38.10% 16	33.33% 14	2.38% 1	4.76% 2	42	2.93
The research topic is likely to be of scientific value	26.19% 11	61.90% 26	11.90% 5	0.00% 0	0.00% 0	42	3.14
In principle, the results of this research could be relevant for the sustainable development of the country or the region	2.38% 1	57.14% 24	28.57% 12	0.00% 0	11.90% 5	42	2.98
The results of the project were put into practical use	7.14% 3	38.10% 16	47.62% 20	0.00% 0	7.14% 3	42	2.74
They were relevant for the sustainable development of the country or the region	0.00% 0	45.24% 19	35.71% 15	0.00% 0	19.05% 8	42	3.02
The research resulted in new techniques, methods, products or new services	0.00% 0	69.05% 29	26.19% 11	0.00% 0	4.76% 2	42	2.83
The research has a potential to influence policies in the country, either directly or indirectly	0.00% 0	28.57% 12	33.33% 14	4.76% 2	33.33% 14	42	3.24
The research actually contributed to influence policy, e.g. through contributions in debates, stakeholder meetings, etc.	0.00% 0	14.29% 6	33.33% 14	2.38% 1	50.00% 21	42	3.62
Other scientists benefited in some way from this IFS grant	14.29% 6	73.81% 31	9.52% 4	0.00% 0	2.38% 1	42	3.10
Other research students benefited from this IFS grant	33.33% 14	54.76% 23	9.52% 4	0.00% 0	2.38% 1	42	3.29
The grantee published in quality assured peer-reviewed journals	19.05% 8	40.48% 17	21.43% 9	9.52% 4	9.52% 4	42	2.98
The grantee published in other relevant journals	9.52% 4	33.33% 14	35.71% 15	9.52% 4	11.90% 5	42	2.79
There were direct benefits from this IFS grant for the research institute in which the research was carried out (e.g. equipment, methods, reputation)	30.95% 13	59.52% 25	4.76% 2	0.00% 0	4.76% 2	42	3.36
The research grant helped the IFS grantee to establish working contacts to researchers	19.05% 8	69.05% 29	7.14% 3	0.00% 0	4.76% 2	42	3.21
The researcher achieved degrees, diplomas, thanks to this IFS grant	26.19% 11	42.86% 18	26.19% 11	0.00% 0	4.76% 2	42	3.10
The IFS grantee continued to be active in research after completion of the IFS grant	40.48% 17	52.38% 22	0.00% 0	0.00% 0	7.14% 3	42	3.55
The grantee is still active in research	33.33% 14	59.52% 25	0.00% 0	0.00% 0	7.14% 3	42	3.48
The grantee has made steps on the career ladder in research, e.g. by obtaining other research funds	26.19% 11	42.86% 18	21.43% 9	0.00% 0	9.52% 4	42	3.24
He/she has made steps on other career ladders (e.g. public administration)	19.05% 8	33.33% 14	23.81% 10	0.00% 0	23.81% 10	42	3.43
It is likely that methods or equipment will continue to be used after completion of the project	35.71% 15	42.86% 18	4.76% 2	0.00% 0	16.67% 7	42	3.64

Positive Changes being made in development policies, associated with IFS supported research

Benin

The project has built the capacity of a specialist in taxonomy in the institution. As research Assistant, the fellow is active in administration as secretary of Master school

New grants and mentoring toward a postdoc position to avoid the load of administration.

Contribution to the development of bio fertilizers to increase maize production

Typology of varieties of Pearl millet and the nutritional value for human food

Characterisation of the varieties of Vigna subterrenea (Voadzou) and seed multiplication

Generation of knowledge on the diversity of PFNL in Benin, the condition for restoration of biodiversity and the value chain evaluation for the population especially women

Contribution to bush fire management for improving grazing and forest conservation

Repertoire of useful woody species for which conservation is priority in Benin
Conservation and threats to *Mimusops andongensis* in Benin and option for conservation

Validation of the scarcity of Hyphaene thebaica and developement of production techniques

Evidence on regeneration weakness of *Afzelia africana* and use of data to model the distribution under climate change scenario
Identification of the pods to be of high nutritional value of Prosopis African (SUBJECT MODIFIED)
MNP-enriched fonio's impact of the nutritional status of children, change in the cooking system to avoid iron deficiency
Storage condition on the nutritional properties of baobab pulp milk nectar
Optimisation of the treatment of Pentadesma seeds for biobutter production
Food transformation technique development

Knowledge on Acacia spp. and new molecule from plant as candidate for antimicrobial drug

Regulation of human activities that have quality impact on groundwater

Knowledge on the status of lake eutrophication and advise to control the phosphorus and sensitize stakeholders

Vietnam

Building capacity on waste water treatment by wetland and re-use aquaculture water
Training the institute staff in research on aquaculture and fishery immunology
Three master, 1 international report, 2 national paper
Strongly confidence on research activities and promote to vice head of Department of research and Development for livestock technology, National Institution of Animal Science.
Receive the New Zealand ASEAN Scholar Awards for here PhD at institute of Maine Science University of Auckland New Zealand (2015)
The project help grantee gain more knowledge and experience on species diversity conservation, especially on protect and recover the forest. Due to the project he finished his Master degree and continue with Ph.D. programme in Korea.
The IFS fund helps grantee publishing many scientific papers and improve his skills and techniques to train other researchers; provide the basic regional biodiversity data of taxonomy for further species conservation decision making.
The IFS fund helps grantee achieving her PhD degree during researching time, providing more knowledge on primate nutritional ecology and therefore help conservation of critically endangered primate species in Ha Giang in particular and Vietnam in general.
Better lecture notes or training materials and environmental protection, create potential of waste emission reduction for fish processing industry.
Explore the potentials of using Sim plants as food addients
Small research group was established on Gac (Momordica cochinchinensis) and start to build the network. Research opens more changes to explore the potential on Gac.
Provide grantee an initially important funding for her set up research, make the small IFS alumni and exchange to other country network. It also help to explore the value of Sim plant for environmental friendly development.
Provide grantee an initially important funding for conducting first research, make the small research group and exchange to other country network. The product of research was used continuously in the laboratory.

IFS provided funding for research and encouraged him to pursue academic career and also helps to develop deeper researches on bioactive of proteins and polysaccharides from medicinal plants, developing
IFS provided funding for a young researcher in private University in Vietnam and encouraged the potential cooperation between this University with one private pharmaceutical enterprise to scale up the research.

Research support the urban sustainable development but ignores or is less concerned with social aspects/ethnics.
IFS is really a seeding fund for grantee to start and enable his research and academic career in Vietnam which allows him to achieve later grants for further researches.

Key factors requiring attention in order to improve prospects for sustainability of outcomes and the potential for replication of the approach of this project

Benin

New grants and mentoring toward a postdoc position to avoid the load of administration.

Product development with private sector

Support in the production of combined fertilizer and identification of condition of effectiveness in the field
Typology of varieties of Pearl millet and the nutritional value for human food
Supporting seed production system and quality control (free of infections)
Engagement with the population and the market demand of the products

Establish the calendar of bush fire based on the climate variability together with the stakeholders

Publication of a technical book for users (stakeholders, NGOs and conservation actors)

For better conservation support seedlings transplantation for vegetative propagation
Support multiplication of the Hyphaene thebaica in the ecological zone

Management of the plot of *Afzelia africana* and longitudinal evaluation under climate change scenario
Consumption pattern, regulation and policy

Adapted technology development to preserve the properties in the market
Technology co-development with the stakeholders
Cost-effectiveness of the technology
Support to develop and test new compounds
Regulatory intervention

Integrated management of the lake

Vietnam

Support for her career
Establishing working contact through foreign researchers and domestic researchers
Maintain the activities and collaboration of working contract network
Publish more. Scientific paper
Project research trainee is short
Grantee continues his research and more species forest plantation.
Put into practice use and maximize benefits from research based results or taxonomy.

Continue the research and monitor the relocated primate species in conservation areas.

Provide publications and extend network to other scientist especially foreign scientist.
Continue relevant researches to confirm the value of sim.

Continue the research and cooperate with the food company to receive more fund to scale up the research and conduct pilot production.

Being promote to the vice –head of department and support other young IFS applicants or grantees.

Being a leader researcher in the University and helping other young researchers.
Publish the research results in science journals and continue relevant researches.
Continue relevant researches and publish the results of research students.
Publish the research results and completing the book and continue relevant research.

Support the researches developing the biosensor for detecting iron and manganese in water samples.

Annex 10 – Analysis of Research Proposal and Scientific Reviews

Sample

Total: 46 (Benin, Vietnam)

Year of first application

2011	2012	2014	2015	2016	2017	No answer
1	2	12	15	8	7	1

Gender

Female:	20	44%
Male:	25	56%

Age of the applicant in the year of application

27	1
28	2
29	1
30	2
31	1
32	6
33	3
34	1
35	5
36	2
37	2
38	2
39	4
40	2
No answer	12

Attended an IFS proposal writing course

Yes:	3	7%
No:	41	93%
No answer	2	

Category of the applicant

Rejected by the IFS secretariat	Reviewed and not recommended	Not recommended, but with invitation to improve	Grant	No decision	No answer
3	9	3	23	2	6

Rating of the Proposal by the National Consultants

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO ANSWER	TOTAL	WEIGHTED AVERAGE
The research proposal fits the thematic orientation of the Sida-funded IFS program	0.00% 0	80.43% 37	10.87% 5	0.00% 0	8.70% 4	46	2.63
The proposal has been elaborated by an early-career scientist	2.17% 1	80.43% 37	6.52% 3	2.17% 1	8.70% 4	46	2.65
The research has a potential to lead to results which are relevant for the country	4.35% 2	67.39% 31	10.87% 5	0.00% 0	17.39% 8	46	2.41
The proposal is of good scientific quality	6.52% 3	36.96% 17	34.78% 16	6.52% 3	15.22% 7	46	2.13
The applicant is well qualified to carry out this research	15.22% 7	63.04% 29	13.04% 6	0.00% 0	8.70% 4	46	2.76
The research institution in which he/she works is a good place to carry out this research (e.g. supportive environment, experience in this research area)	17.39% 8	69.57% 32	4.35% 2	0.00% 0	8.70% 4	46	2.87
The workplan is realistic	4.35% 2	39.13% 18	41.30% 19	2.17% 1	13.04% 6	46	2.20
It is likely that the applicant can reach the goals described in the research proposal	2.17% 1	41.30% 19	45.65% 21	2.17% 1	8.70% 4	46	2.26
The proposal was professionally reviewed	21.74% 10	39.13% 18	2.17% 1	0.00% 0	36.96% 17	46	2.09
The decision of IFS was plausible and justified	23.91% 11	23.91% 11	6.52% 3	0.00% 0	45.65% 21	46	1.80
The review was in time	0.00% 0	41.30% 19	0.00% 0	0.00% 0	58.70% 27	46	1.24

Rating questions, to be answered by Applicants in the interviews

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO ANSWER	TOTAL	WEIGHTED AVERAGE
IFS Alumni contributed or were contacted in the proposal writing phase	2.70% 1	48.65% 18	43.24% 16	5.41% 2	0.00% 0	37	2.49
Digital spaces were used for developing research collaborations	0.00% 0	32.43% 12	56.76% 21	8.11% 3	2.70% 1	37	2.19
The review developed my capacity to write research proposal or to improve my proposal	35.14% 13	35.14% 13	18.92% 7	2.70% 1	8.11% 3	37	2.86
The proposal writing courses which I attended were helpful	0.00% 0	16.22% 6	37.84% 14	10.81% 4	35.14% 13	37	1.35
The efforts which I had to make to obtain this grant were justified for what I received at the end	16.22% 6	48.65% 18	24.32% 9	0.00% 0	10.81% 4	37	2.59
Interaction with the IFS secretariat was supportive, helpful and respectful	25.00% 9	50.00% 18	19.44% 7	0.00% 0	5.56% 2	36	2.89
The time period between the submission of my proposal and the decision about the funding was adequate	0.00% 0	70.27% 26	24.32% 9	2.70% 1	2.70% 1	37	2.62
I know other applicants who have received IFS grants in the same year as I received the grant	10.81% 4	62.16% 23	13.51% 5	2.70% 1	10.81% 4	37	2.59
The processes and criteria for applying for IFS grants are transparent and clearly communicated	29.73% 11	64.86% 24	2.70% 1	0.00% 0	2.70% 1	37	3.19
Management of the IFS grant program is professional, transparent, and according to these processes	27.03% 10	54.05% 20	0.00% 0	0.00% 0	18.92% 7	37	2.70
The funding which I received from IFS was adequate to carry out my research	0.00% 0	62.16% 23	21.62% 8	0.00% 0	16.22% 6	37	2.30
IFS has comparative advantages to other grant programs for research funding	8.11% 3	72.97% 27	2.70% 1	2.70% 1	13.51% 5	37	2.59
The process for the purchasing of equipment for my research worked well	2.70% 1	56.76% 21	8.11% 3	0.00% 0	32.43% 12	37	1.97
The IFS funded equipment is used by several researchers	13.51% 5	56.76% 21	0.00% 0	0.00% 0	29.73% 11	37	2.24
Participating in social networks of IFS grantees brings a benefit for me	0.00% 0	32.43% 12	13.51% 5	8.11% 3	45.95% 17	37	1.32
I made experiences that IFS is promoting gender equality and women's research leadership	18.92% 7	51.35% 19	5.41% 2	2.70% 1	21.62% 8	37	2.43
IFS forced or encouraged me to think about how I can hand over equipment or my research, to have an effect beyond the grant period	10.81% 4	48.65% 18	10.81% 4	0.00% 0	29.73% 11	37	2.11

Note: As it was not possible to contact all of the applicants from the sample for interviews, the number of the total is only 37.

Annex 11 – Country Report Benin

Country report Benin

Prof. Dr. Bassirou Bonfoh, former Director General *Centre Suisse de Recherches Scientifiques en Côte d'Ivoire,* Director of Afrique One-ASPIRE

Introduction

The process of the interviews went, in principle, well with the majority of the IFS applicants who were included in the sample (average time of 50 minutes per candidate). Quite a number of IFS applicants (8) identified could, however, not be contacted; neither by phone nor by mail or by the alumni organization.

In addition, we were able to be in contact with a dozen of applicants who were willing to keep in touch for more information about IFS. We have established a good link with the alumni coordinator in Benin for more questions.

We invited some institutions to support the evaluation in providing more information on questions like: What are the factors influencing access to funding? What funding is available? What are the motivations of young people for research? What mechanisms of governance and encouragement are available? The organizations were: African Academy of Sciences (AAS), International Livestock Research Institute (ILRI BECA hub), *Centre Suisse de Recherches Scientifiques en Côte d'Ivoire* (CSRS) with 8 fellows registered in 4 public universities of Côte d'Ivoire (Félix Houphouet-Boigny, Pelefero Gon Coulibaly, Allassane Ouattara, Nagui Abrogoua) and the "Programme Stratégique de Recherches Scientifiques en Côte d'Ivoire" (PASRES).

Analysis of a sample of Project Completion Reports (PCR)

We analysed a sample of 20 project completion reports (PCR) which had been randomly selected from the total of 51 PCR by the team leader (TL) of the evaluation. The sample is representative and the questionnaire, mainly with rating questions, had been elaborated by the TL as well. The TL cross-checked 20 percent of the ratings which had been carried out by the consultant, and the quality was found good.

Most of the projects reported to have started between 2012 and 2015 with a drop in 2016. The duration of the projects was between 2-4 years, with a few of less than 2 years. This duration complies with Post-MSc and Post-PhD. It is within the time frame of a PhD.

Most of the grantees received an amount of project around 12'000 USD, with few exceptions of double or long-term funding (12%). The main area of funding focused on agroforestry (Figure 1) as part of the domain of the program. This situation is also linked to the research domain of the coordinator of the Alumni and/or the orientation

of the Department at the University. From the total of the sample, 23% of female benefited from the grants. The PCRs have different formats (project abstract, CV missing) and did not always allow a systematic analysis and rating. We noticed variation of diversity and quality of reporting.

In general, the contribution of IFS was "a learning from first grant application" on what is considered as catalytic funding for lab equipment. It also helped to train the students "on the job" (practical experiment). The fellows have valued the specific site visits from IFS as well as the establishment of the Alumni. Alumni contributed exceptionally to increase the number of grantees due to the coaching in grant application processes and project management.

We have found that reports (PCR) are given, but that there is no feedback from IFS as to see the effectiveness of the results. Only publications can be monitored but one should pay attention on the exact contribution of IFS in such publications by quality control on the acknowledgement, also as double funding on the same project occurs. Fellows have raised the issue of their network development beside the alumni establishment.

The equipment received were not well described in the PCRs, as to know the contribution to their research of to the institutional development. We have noticed basic fellow equipment and material (computer, printer, camera, field material, office materiel) that are very specific individual needs which might be covered also from personal resources. The type of material should reflect the specific need of the research rather than generic material and equipment needs.

The main subjects of projects are biodiversity (crop, forestry) value chain and conservation techniques. We have noticed the courage of young researcher to embrace complex topics in complex zones with very limited resources. Most of the projects are innovative but one should consider the risk of plagiarism in projects where only (as the example of agroforestry) the plant species or the sites vary.

In their reports, grantees have raised the importance of travel grants for network and partnership and also funding seniors for their long-term research. This can be extended to conferences and workshops. They proposed to develop a platform for gathering the grantees community.

In general, the capacity to achieve some objectives (development, implementation, prototype design, products development…) are limited due to lack of communication skills, no involvement of end users and limited funding. The main reasons are that the end users (populations) are not involved at the beginning of the projects design. In general, sharing results with the communities or users does not mean putting them into applications for adoption. Application or adoption would be another layer of project. The scope of research may not provide enough evidence for changing behaviour or policy.

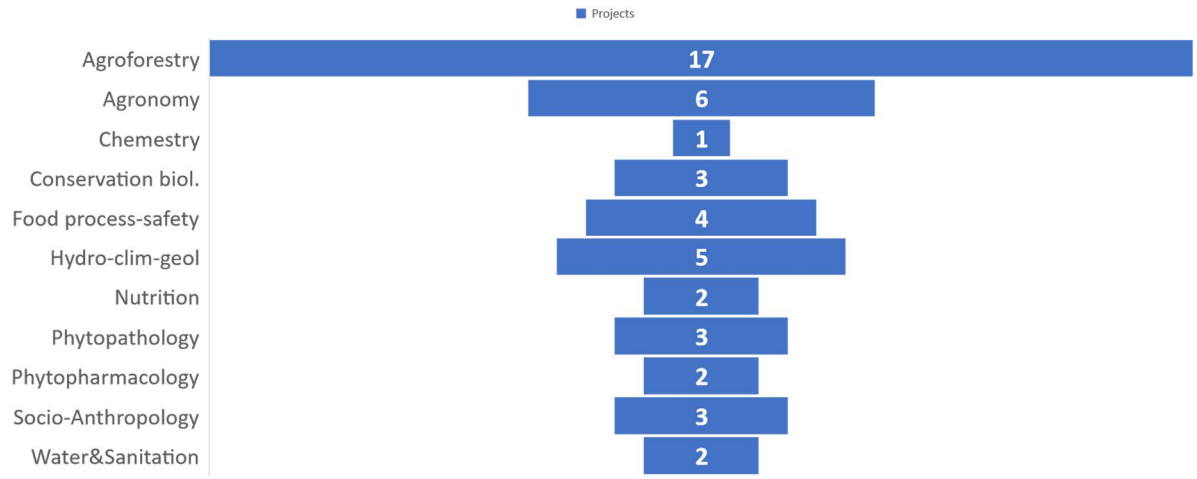


Figure 1. Research domains

Analysis of a sample of research proposals, including interviews

Information on the sample

We analysed a sample of 23 applicants which had been randomly selected from the total of 169 research proposals by the TL of the evaluation. The TL had also proposed a methodology for the rating of the proposals. He cross-checked 20 percent of the ratings. As stated above, it was not possible to interview all of the applicants who were in the sample.

The analysis of research proposals has shown a continuity, however with a break in 2013 without any major reason. We counted 28% of female applications, and have noticed that only few (8%) of the applicants have attended the IFS proposal writing course (Figure 2).

Among the projects in the sample, 10 were accepted for funding. IFS had an accompanying role by taking the fellows to improve their applications by asking them to resubmit after the reviewers observations. This was well appreciated except the few projects which were rejected as not complying with the grant conditions or eligibility.

The majority of projects (90%) requested fund between 12’000 and 13’000 USD. The age of the applicants are in the majority less than 35 years.

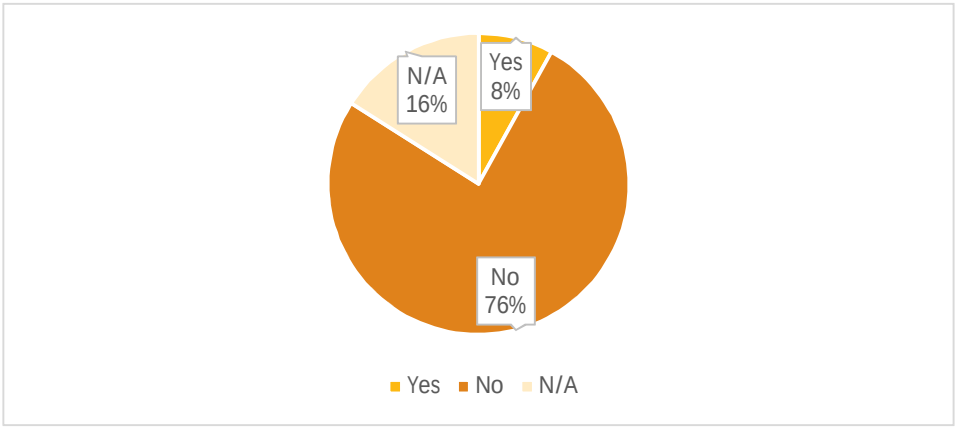


Figure 2. IFS training attendance

Rating of the research proposals and results of scientific reviews

By considering the scope of the program, the topics and the eligibility requirements, we noticed that most of the original proposals were over-ambitious in their goals and planning (Figure 3). There were also weaknesses in the methodologies affecting sometime the quality of the projects.

All these weaknesses could, however, be mitigated by the quality of the IFS reviewers that helped the applicants to focus and consider the relevance to the development. Most of the grantees appreciated the contribution of the reviewers in the improvement of their applications.

In general, the projects fitted well with the institutional set-up as well as the need for the country. The project has also contributed to build their career pathways. We have not been able with the documents to have all information pertaining to the SAC reviews on timing, decision and professionalism. But based on the few answers and the observations given during interviews, we can consider that the decisions were plausible and justified (Figure 4) with a high professionalism. But the timing is difficult to assess without a clear indicator in the documents.

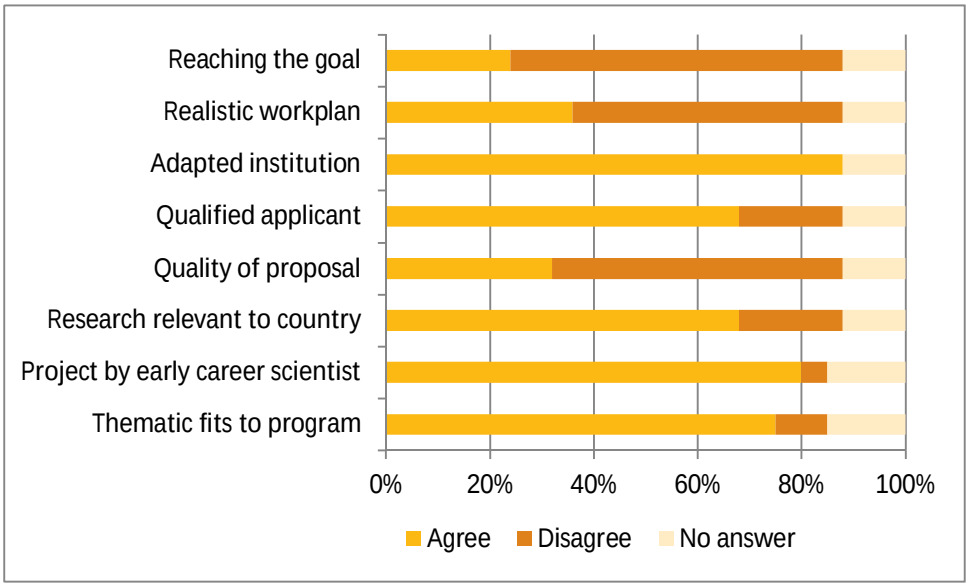


Figure 3: Ratings of the research proposals by the national consultant

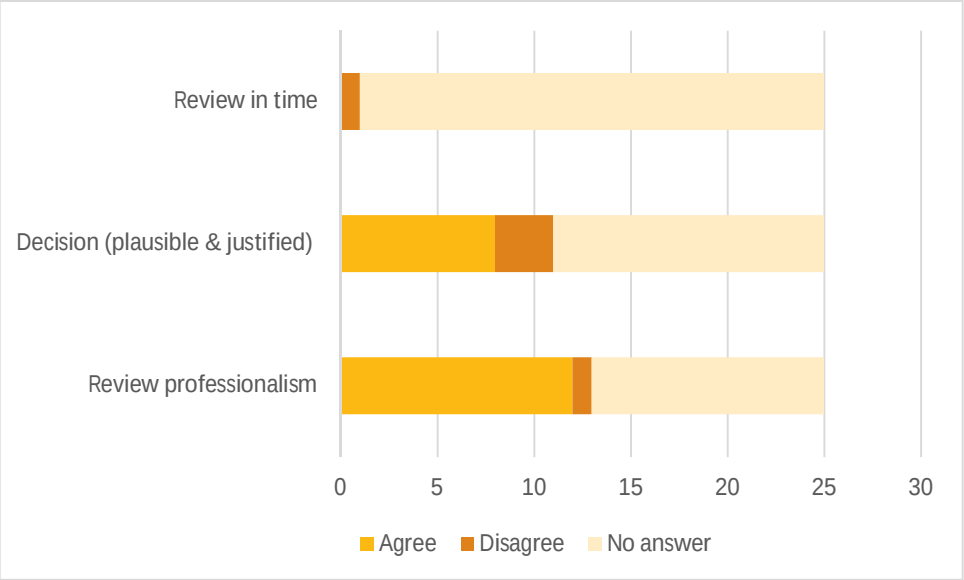


Figure 4: Analyses of the scientific review by the national consultant

Semi-structured interviews with applicants

After completion of the projects, the personal equipment is kept but lab material remains the property of the institutions, depending on the governance structure. It is important to clarify in the Memorandum of Understanding (MoU) with institutions how to manage the equipment at the end of the projects if this does not exist. In the majority of cases, the equipment was shared with younger fellows.

IFS had comparative advantages compared to other funders, as access is easier and information transparent. Other funders usually use the value created by IFS to enter into the system, IFS becoming catalytic or matching funds. IFS grantees also are a sign of quality. We have not noticed a problem in the fund management, procurement as well as the communication with the IFS secretariat that was well scored positive. But still there should also be a system of assessing the management performance of the institution in handling IFS fund. It has also been observed that IFS funds management does not different from big grants as the same time and resources may be mobilised.

The reviews have contributed a lot in improving the quality of the applications and the success but not directly the capacity of the applicants. In some cases, reviews contributed to shape the research question or change the orientations in the context where the applicant is weak in study design and methodology. Not all the applicants are aware of the alumni. It will be important in the call template to provide information on alumni as for the fellow to contact them for advice.

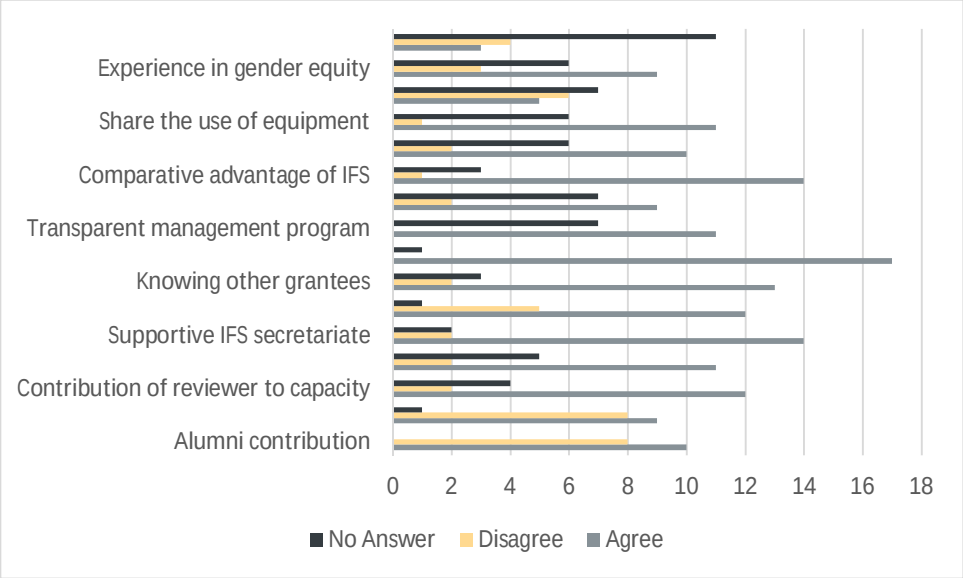


Figure 5: Rating of IFS by applicants

Strengths and weaknesses, as seen by the applicants

The major strengths are the fact that IFS supports early-career researchers (MSc, PhD), with good communication and a well-designed application platform. In addition, IFS is flexible to give more management autonomy to the grantees who are learning and developing their first grant management skills.

The raised weaknesses (table 1) are related to (i) long time deliberation or evaluation process, (ii) the amount ceiling that does not match the current technology development and (iii) the high cost of research. With inflation and the development of technology, the IFS grant has not adapted to the evolution. The fellow also expected to have more involvement of alumni.

Table 1: Strengths and weaknesses, listed by interviewed applicants

Strength	**Weaknesses**
Support to PhD degrees/ early young career (x8)	**Long deliberation/ evaluation process (x8)**
Good communication/ application platform (x6)	**Grant envelop ceiling/ Small amount of funding with technology development (x7)**
Autonomy, lean in management, rigor in management (x5)	**Alumni Follow up of alumni (x5)**
Equity in eligibility no differences/ discrimination (x3)	Not considering living cost in the field
Transparency in project judgement (x3)	Age limitation (x2)
Reviewer contribution / feedback to capacity (x3)	Duration for feedback, reports (project linked with season or biological phenomenon) (x2)
Moral support & encouragement from Alumni (x3)	Funding mobility, conference grants (x2)
Equipment procurement system, shared equipment with researches (x3)	Staff turnover at IFS
Leader/ good experience in research funding (x2)	Access to fund (Benin problem)
	Non communicating list of fellow/ lack info on
	No quota per region and domain
	Eligibility of Methodological and conceptual project
	Technical support for publication quality

Training in grant writing/ good reporting (x2) Adequate fund for early career researchers (x2) Fostering publication/ science development (x2) Quality assurance of projects (x2) Good interaction with grantees/support in the process (2)	Site visit from IFS, Alumni or reviewers Reviewers too severe in certain domain/ give chance

Capacity needs and factors to improve results impacts

The current capacity needs in research (table 2) can be summarised in five major points (i) grant writing, (ii) introduction to new technologies, (iii) training in networking with mobility grants (iv), statistics and methodology and scientific writing. IFS addresses the first of the five points.

Table 2: Factors to improve result impacts, as listed by interviewed applicants

Capacity needs	Research impacts factors
Competitive grant writing training (x7) **New technologies, biotechnology, modern equipment, platform (x6)** **Training in networking, mobility grants (x5)** **Biostatistics, research methodology (x5)** **Scientific English, scientific writing, career pathways (x4)** Project management, training in leadership (x3) Valorisation of research, vulgarisation (x2) Designing research based on new challenges (x2) Communication, engaging with society, decision makers beyond publication (x2) Access to documentation, publication (x2) Integration of social science and gender sensitive questions	**Extension services, vulgarisation, cost for feedback to communities (x5)** **Involving NGOs, local authorities, decision makers, private sectors (x4)** **Conference, summer school and science events for IFS fellows, platform meeting (x4)** Quality assurance of tools and methods (x2) Training in communication with media, decision makers (x2) Sites, field visits, (x2) Funding socio-economic component of research (x2) Exchange and network with other labs Funding entrepreneurship (x2)

In order to have more impact, fellow suggested involving extension services which has cost in the project implementation. They also suggested the involvement of NGOs, private sector and to organise summer schools where grantees can present their results and exchange experiences.

Research system in Benin

Some of the main funders in Benin are:

- CBRSI : Centre Béninois de la Recherche Scientifique et de l'Innovation
- INRAB : Institut National des Recherches Agricoles du Bénin
- UAC (Université d'Abomey Calavi) 100 millions de CFA/ 3 years (around 173,000 USD)
- Government : 45% a monthly salary for at least 1 paper published a year

The Government of Benin plans to inject 25 billion Fcfa (around 43 million USD) in research but the mechanism is not yet developed (ex. Fonds National pour le Development Agricole, FNDA, in 2019).

Research seems to not to be a priority in the country with a dichotomy between universities and national research centres. Most results of research conducted are not used or taken into account at national level. There is a chronic lack of national research funding. Other aspects are considered as impeding research: lack of funds and adapted training, under-equipped laboratories, maintenance, reliable energy etc.

IFS contributes and complements highly in research capacity in Benin. Private sector should also be brought in by allocating funds and establishing partnership for research uptake.

Discussion with IFS Alumni and other resource persons

We have taken the liberty to contact some partners of IFS (Ex. AAS, ILRI/ Beca-Hub, CSRS/ PASRES) to have more information that could help to construct new strategies. The interviews show that, in Benin, IFS has a name, a network and alumni, and that it has penetrated the large community in Africa, and particularly in Benin. The quality of the program relies on the strong network of alumni and there is a need to pitch that value within the partnership.

The value of the alumni is well appreciated by all actors. Their working conditions need attention as it still a priesthood for many and based on voluntary. They contribute heavily in training, coaching and quality control of applications, publications and reports (e.g. in Benin, the alumni have contributed to have up to 50-60% success rates for applicants). Alumni provide self-confidence for young scientist for whom the IFS grant is a “scientific start up” in their career development.

However, the alumni work is not well distributed across the country and only work on silo institutions and Departments. The implication of local authorities may have improved transparency in the way alumni support all applicants or candidates. The IFS approach is sustainably robust and has generated a cohort of alumni and mentors and improve the critical mass of young scientist.

For each young scientist, IFS is the first success in a grant application. The growing number of mentors has not really benefited from accompanying measures with a structural and critical capacity development skills to support the system. They have been used as reviewers in an informal way. The opportunity of learning from such cohort are missed. It has been proposed for example to develop structuring grants around teams supervised by the mentors. Knowing that IFS is more than a grant-funding agency, it has a big grant accompanying measure component.

IFS has not been able to assess the increasing cost of the scientific research. The scope of the grant amounts, even when adapted to some specific projects as a seed or supplementary, seems too small for the type of science needed if we want to tackle hard-core science or even boost changes.

The grant ceiling of 12’000 USD is still dogmatic for IFS but it is possible to expand or vary it for different schemes. Examples are: (i) start-up grants, (ii) matching funds and (iii) structuring projects with teams at national or regional levels. By doing that, IFS will get out of modest grant ambitions to a more evolutionary system according to

the need. But whatever the case might be, the equipment grant is a strong merit of IFS. “For a young researcher, having a first computer is a pride to embark into science”.

The young researchers need today to move beyond technical lab-oriented capacity to embrace more soft or enabling skills (good science, grant writing, grant management, communication with non-scientists, understanding how to connect different disciplines, understanding policy) as well as introducing social and economic sciences on an interdisciplinary way. They need to learn how to talk to each other. Other issues such as integrating gender and SDGs in the research design as well as research impact assessment are needed.

The area of local M&E is raised as there is no formal body to perform monitoring and evaluation. A transparent information system may help the country research administration to evaluate the impact of the program in term of capacity, scientific outputs and impact on society.

IFS has a considerably centralised administration. It has experienced decentralisation in some countries through alumni. But this was not enough to bridge the administration gap locally. It is still important to liaise with local/national funding agencies and leading research institution as to find new mechanism for relaying IFS on specific need area (e.g. transferring the centre of gravity in Africa as AESA negotiated with WT/ DFID).

Joint funding could also be encouraged as the type of partnership with many other funders (e.g. training with BECA, PASRES). In the later experience on scientific writing, BECA has seen an added value of cost sharing that enable fellows to double the number of publications with a well designed monitoring and evaluation.

The area of publication needs also attention and here again, the cohort of reviewers and alumni could contribute in the quality control of publications. The last five years, the number of predator journals has increased with young scientist moving into that direction because of the pressure from the funders and the universities (ex. in Tanzania, a Master student should publish at least two papers before the thesis defence).

Discussion of the results

Relevance of the program

The program is well known by the alumni, but in the application process, the fellow did not know that the calls are part of a program. This has sometime made a confusion on the eligibility of certain projects not aligned with the program. The relevance of IFS for the research ecosystem of a given country is difficult to measure. In Benin, IFS has achieved a level of penetration in which it is relevant in certain sectors, but this is difficult the same effort is difficult to replicate in other, e.g. larger countries.

Efficiency

The administration cost of managing small grants are the same as for managing larger grants. Small grant programs face, therefore, an efficiency problem. The impact of the small grants can, however, be significant not only in term of finance but also social impact and how the grants develop research and capacity.

The best way to reduce the cost of management is to decentralised IFS or give a specific role to leading institutions in the South. Salary costs are lower. Though research funding platforms in the South are still weak, the options for such as decentralization are increasing, and IFS could develop such scheme with emerging lead research institution and universities.

CSRS has been doing this type of work for the local funding program (PASRES). It moved at the beginning from 20% of the running cost up to 40% when the program reached a critical number of fellows. It had to train applicants, to introduce an evaluation system, and to increase the number of reviewers due to the diversity of topics and the number of applications. IFS needs to calculate the process and unit costs (how much it costs from the application to the reporting) or set a ratio admin/ cost of project. The process of review and evaluation is part of the research and sometime more expensive. To develop research capacity development needs, however, it is important to also look at costs of mentoring and monitoring of the results.

Effectiveness

IFS is the solely funder for early-career researchers in Benin. IFS is now an institution in Benin research system as any young wanting to embark in science is guided to have an IFS grant. IFS then opens the doors and provides trust (self) and trust from other funders who use the IFS grant as a criteria for further funding.

What IFS should also do is to work with the national research system to push for taking part of responsibilities (e.g. research questions, agenda, needs, database of project, research authorisation etc., to avoid double funding). However, and as mentioned above, the experience of Benin is difficult to replicate in other countries with resources available.

The program is effective a proven to meet the need of the fellows and the research environment. The alumni approach is good and may play a good role, but it is not well known. Its activities are limited to few departments and universities. The current Alumni does not favour equity and should be embedded in the national research system (Ministry of research) and not only in the hand of few former grantees. The fact to not giving resources to Alumni to organise national event is also seen as a limiting factor.

Impact

At this stage, the impact can be measured with a national database in term of individual capacity, institutional capacity (equipment). But in term of science, a different level of sampling and questions are needed such as the contribution of IFS in number of scientific or policy papers. The same thing applies to the local impact of research and policy. In some very specific domains (agriculture, biodiversity) we have noticed a change in the research ecosystem. The impact could eventually be measured by the rank of the country in science performance.

Gender

Gender is promoted through the motivation of female applications and age discrimination. In the current analysis, a quota was also proposed as well as special calls for fe-

male researchers addressing also gender sensitive research questions. Sub-Saharan Africa needs more women scientists in different research to accelerate development and build leadership skills for women. Innovative motivation schemes are needed.

Sustainability

The idea of alumni is good and has contributed to the enlightenment of most of the fellow in the process of application. The alumni played a role in guiding candidates on the job, or in quality control of the research proposals. But time and resources were limiting factors for the alumni to better offer their support. The personal and pro-bono engagement was, however, well appreciated.

One of the limitations is that the alumni are clustered in selected Departments within a given university or within a research group and did not cover the whole country. The trainings were not advertised too much and only randomly organised around the call. But the strategy developed by the alumni needs support especially the organisation of alumni around disciplines and domains for coaching and guiding the candidates. The alumni have raised the success rates of applicants from Benin to 50-60% with quite low resources.

Some fellow raised the issue on monitoring and evaluation on site as to see how research is conducted and how resources and material are used. IFS does not have a mechanism to cross-check what they are funding and if the same project is sold elsewhere. A shared project database with other funders would help.

We have seen many fellow accessing additional funds from other donors without specifying what is the component of IFS and the others. Again, here the relation with the institution (Department or University) in line with the Ministry may help to have a control system. The issue can also be controlled with the publication and the acknowledgment and funding section.

Looking in the future

IFS funds one link in the research value chain which is the initial stage of a career of a researcher, with first research questions and at the upstream level. To develop research capacity or to reach the intervention research and the communication with communities, decision makers and inform policy, needs another level of intervention and a more comprehensive strategy. It can only be achieved by larger programs, funding research groups across countries and disciplines on national and regional challenges, with a long-term approach.

It will be important to look into the area of research impacts, valorisation and communication. Equally, it will be important to specify the role of the IFS and the research institutions in mentoring of the grantees, monitoring and evaluating the funded projects.

Conclusions

There is a huge need for quality control (e.g. site visits to improve implementation; monitoring where the fellow publishes). Predatory journals are often of low quality. At present, IFS invests mainly up-stream (proposal reviews) and little down-stream so monitoring and evaluation should be the integral part of the funding system.

It is clear that procurement is a nightmare in Africa. But due to the small amount of funds and the time for procurement coupled with the administrative load of our universities, direct procurement is fine. But there are now emerging institutions with whom IFS could partner for decentralized funding as to build the capacity of local institutions in fund management. That will allow to revise the ratio admin/cost of research.

Funding systems vary according to each funding mechanism (Foundation, SNF, SDC, and NCCR). The best thing is to set up a good financial management of fund by candidate, and institutions to handle them. This is the current experience of the AAS that could be used by IFS.

Sustainability means to shift the gravity to where the research is done. But again, it is difficult to engage in such a plan by granting only 12,000 USD, because the administration support costs are huge (10-20%) compared to the grant volumes. Here also country level or regional level decentralization to targeted institutions would be an approach. But this would need selection criteria and MoUs between these institutions and IFS on fund management.

Annex 12 – Country Report Vietnam

Country Report Vietnam

Prof. Dr. Nguyen Thi Van Ha, Dean of the *Faculty of Environment of the HCM City University of Natural Resources and Environment*

INTRODUCTION

The Vietnam country analysis was conducted during the month of September and October 2018. The list of interviewed persons is presented in Annex 3 of the main evaluation report.

The survey included:

(i) Interviews with informants in the country: Semi-structured interviews with three key informants (e.g. IFS alumni, institutions), to get more information about the program, and how the IFS secretariat collaborates with the partners. The list of interviewed persons is presented in Annex 3 of the main evaluation report.

(ii) Content Analysis of project completion reports (PCRs) 2011-2015: A representative sample of 21 randomly selected interviewees was assessed and rated with the aid of a checklist. A sample of the ratings (20%) was cross-checked by the team leader of the evaluation, with a positive result (no mayor deviations in the ratings). Of the 21 PCRs, 61% were complete by male and 39% by female. The granted amounts are shown in Figure 1 below. Most of the projects lasted for < 3 years. Few projects had two phases and lasted for more than seven years.

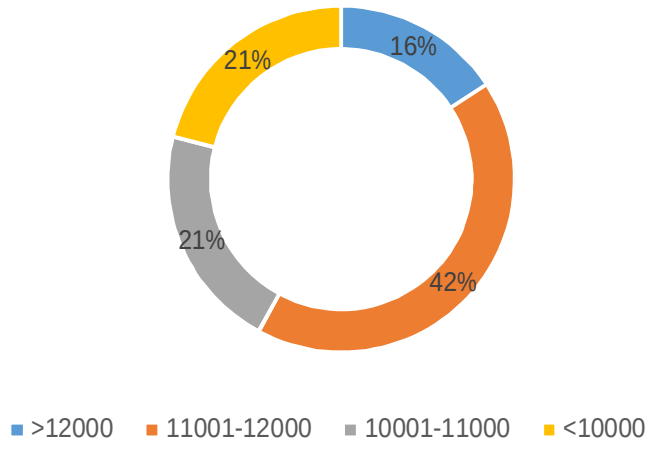


Figure 1: Amount of the grants, documented in the PCR

(iii) Interviews with applicants and grantees 2014-2017: Semi-structured interviews were conducted with 21 representatives of Vietnamese researchers. A few additional interviews were held with applicants from Myanmar (2) and Nepal (4). All had submitted a research proposal to IFS from 2014 to 2017.

Each interview lasted about 40 minutes. During the interviews, we also conducted an analysis and ratings of the research proposals and scientific reviews of the representative sample of applicants and grantees 2014-2017. Only the ratings of applicants from Vietnam (21) were included in the quantitative analysis (see also **Annex 10** in the main report).

Regarding Vietnam, 57% were female and 43% male. 66% received the IFS grant, 10% were reviewed and not recommended, and 24% were not recommended but with an invitation to revise the proposal. Not all of them attended IFS proposal writing training workshops. They did not know about such workshops. The age distribution is displayed in Figure 2 below. A total of seven respondents skipped the answer as they did not receive the grants.

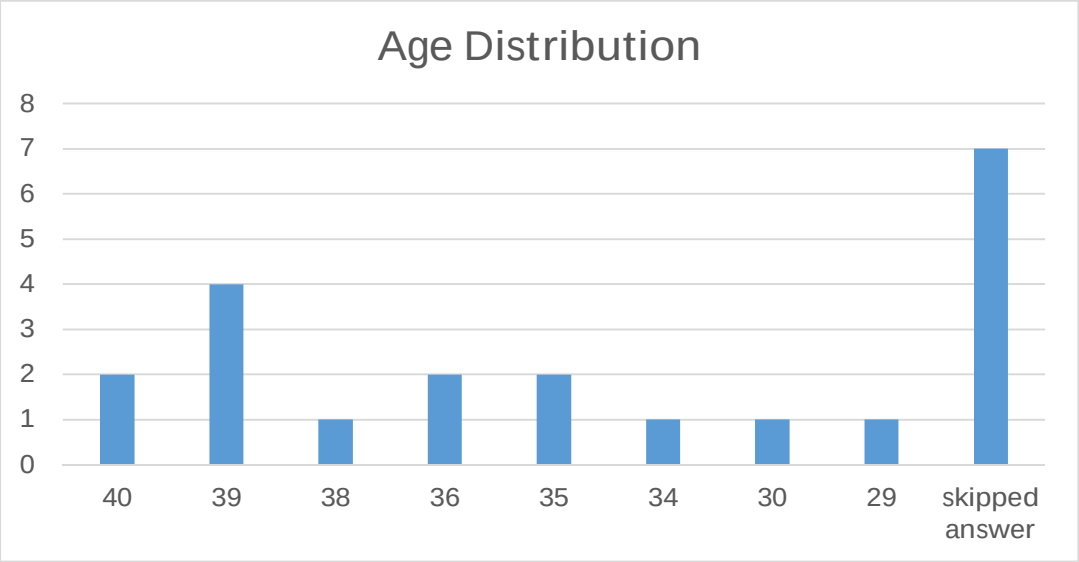


Figure 2. Age distribution among grantees.

RELEVANCE IN THE CONTEXT

Development of the context

In recent decades, Vietnam has been developing rapidly on both economic and social traits. Therefore, the demand for higher education is very high. There is not only a lack of human resources but also a lack of high quality research which can lead the country into green growth and sustainability.

In a country like Vietnam, the figures are impressive. In 2017, Vietnam had about 235 universities and institutes (including 170 public, 60 private and five institutions with 100% foreign capital), of which 37 scientific research institutes have been assigned to provide doctorate programs. According to statistical data of the Ministry of

Science and Technology and Environment (MOSTE) in 2017, Vietnam had about 24,000 persons with a doctor degree of which 12,261 were participating in research. The total number of Master students registered was 105,801, an increase of 12.8% compared with 2015-2016. Meanwhile, the number of doctoral students registered was 13,587 (an increase of 25% compared with 2015-2016).

Economic and social development increases the need for researchers, particularly with regard to basic science, innovation, and advanced research. The fast growing demand of higher education (teaching) is another pressure on research pursuits.

It is important to see that the Vietnamese culture focuses a great deal on education and certification. The education level receives more attention than the real qualification, experience and personal capacity. Those traditional thoughts have influenced education and research quality. Often, research outcomes are not applicable and lack depth in science or a longer-term vision. In addition the national budget for research is limited and not stable so that it is very hard to find enough budget for scientific research. Especially for the early-career researchers, it is not easy or even a possibility for them to achieve any research fund.

The integration of research outputs into practical implementation in developing countries like Vietnam is quite weak, especially with regards to decision-making and policy influence. The country´s expectations are: to keep the learning and research activities alive; to develop competence which contributes to the development of the country; (science, technology, sustainable development).

Relevance of the IFS program in this context

Given the large demand, the IFS support is definitively necessary. An IFS grant can be a door opener, especially for young researchers or early-career scientists. It enables them to conduct their own research.

IFS supports research in three cluster topics such as water and aquatic resources, biological resources in terrestrial system, and food security, dietary diversity and healthy livelihoods. These topics are very relevant in Vietnam.

Ecosystem and biodiversity are usually ignored or regarded as less important under the pressure of economic and industrial/urban development in Vietnam. With IFS support, researchers contribute their sound research on raising awareness on the value of bio-ecosystems. Awareness it a first step to protect and rehabitate them.

EFFECTIVENESS

IFS has good system of project screening, reviewing, and selecting to ensure the selected research topics are relevant to local development challenges. As seen in the analysis of project completion reports (PCR), 60% of the selected topics were relevant to country or region development.

In the IFS proposal application form, however, there is only one question that applicants are requested to answer and which is related to the practical relevance. Applicants who have not attended proposal writing courses do not focus sufficiently on this specific aspect. They are not sufficiently aware of this point, and they do not know how to address it.

The country study shows that IFS does not have a strong enough system for mentoring, coaching and counselling grantees, particularly with regard to this practical relevance. The PCRs are not a sufficient instrument. They focus mainly on quantitative indicators of success, e.g. number of publications, number of beneficiaries, but less on performance or qualification. During the review of PCRs, we could not understand how the grantees are going to apply their results, and we are not sure whether the successful grantees are aware enough about their contribution to society or country development. Only 19% of the completed research could be classified to have a potential to influence country policies, and only 5% (1 proposal) of having actually contributed to policies in the country.

To ensure the grantees to pursue the society-contribution aims, IFS needs a better system to encourage them or scoring their outputs. Interviewed IFS grantees reported that IFS has a good and strict proposal screen system but does not monitor or control the project outcomes. This is a weakness.

To better align with national priorities, IFS could announce annually to potential applicants the prioritized topics or emerging issues for each region and each sector. The prioritized topics should be based on the analysis of the outcomes of IFS-funded research and should be in line with the countries' development strategies/plans. This could help IFS to save time for project screening. We also suggested that some sound research after rating need to be continued in 2nd and 3rd phases to response to long-term trends of country.

Research Planning

Based on the opinion of the interviewed persons, IFS has contributed to training and building capacity for researchers on research planning (outcome 1). The survey and interview results show that both non-grant and grant proposal leaders thought that IFS reviewing system developed their capacity to write the proposal. In the case of the unsuccessful applicants, the rating is, however, lower (see Figure 3).

Out of the respondents, 100% did not attend the proposal writing training workshop and it seemed that they did not know about such workshops. 20% expressed that such training workshops would be important and necessary for them.

Again, based on the reports of interviewed persons, IFS also helped to increase the applicants' capacity on research skills and management, set up research teams, attempt to be research group leader, defence of their proposal and research idea with reviewers and become more realistic when planning and controlling their project resources and budget.

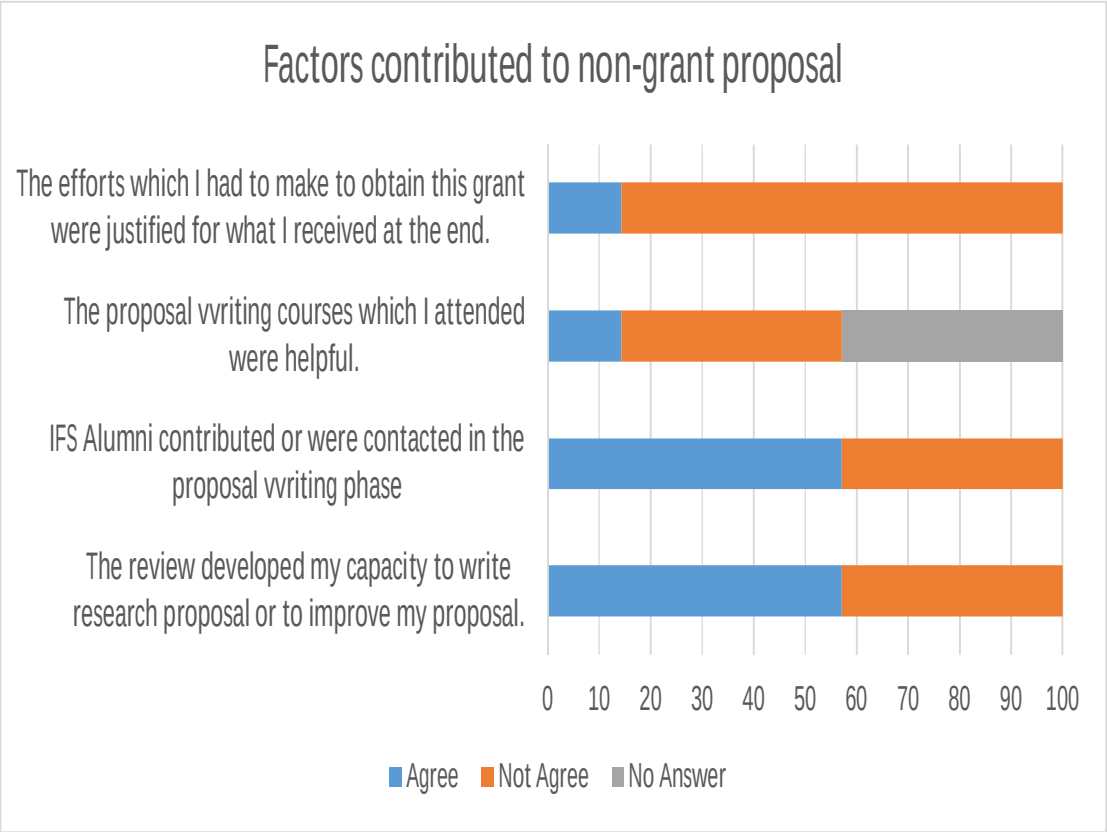


Figure 3. Assessment by unsuccessful applicants

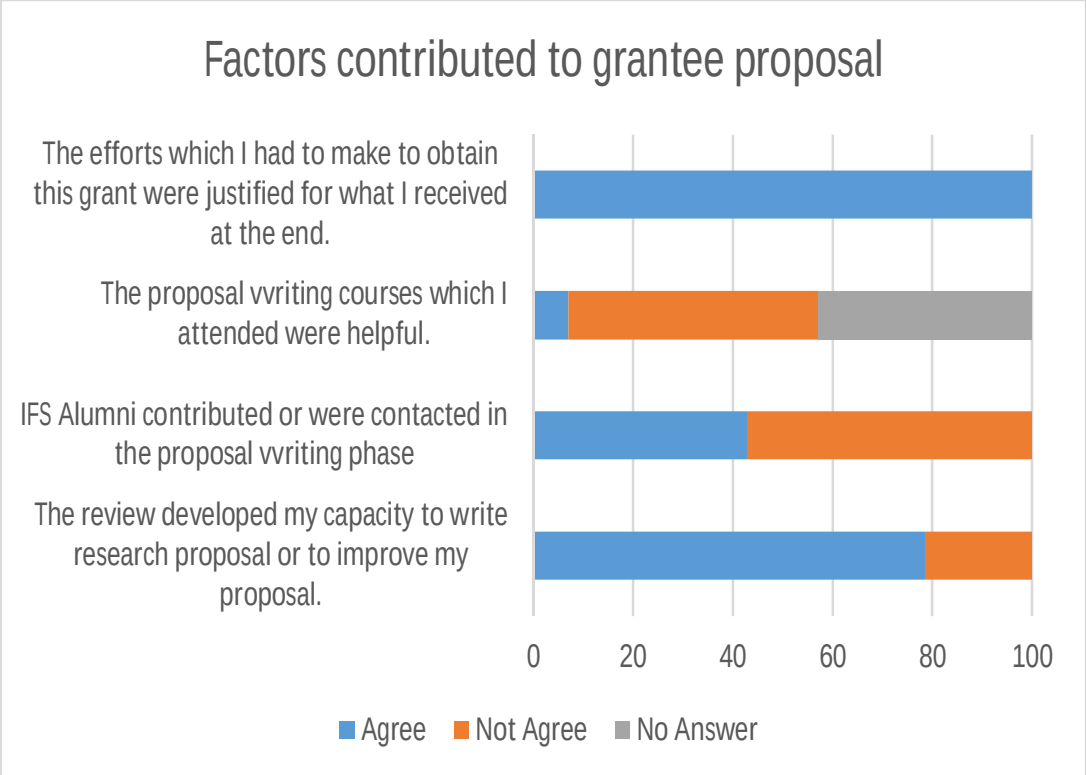


Figure 4. Assessment by successful applicants

According to the rating of the proposals, carried out by the consultant, 71% of the proposals have a realistic workplan, and 92% of the applicants were working in a research institution which is considered a good research environment to carry out the research. 100% of the applicants are well qualified to carry out the research which they propose.

There are some areas where the research proposal preparation could be improved such as: (a) two reviewers commented that the proposals could be revised to be more condense and simple; (b) another two applicants mentioned that the online application tool needs to allow for revision or modification. The new electronic application forms are more difficult to manage than the older forms.

Research Production

The analysis of the 19 randomly selected PCRs gives the impression that around 90% of the IFS-supported research is likely to be of scientific value. Around 80% may have resulted in new techniques, methods, products or new services (not verified independently). Equally, IFS- grantees report that more than 50% of the research were put into practical use, and 50% of the results relevant for sustainable development of Vietnam. However, based on the consultant's assessment, only 25% of the IFS supported (or co-funded) projects have a potential to influence policies in the country, directly or indirectly but only less than 5% actually contributed to influence policy via debates and stakeholder meetings.

Positively, 100% of the IFS grantees in this sample are still active in research, more than 90% made steps on the career ladder, 74% were able to leverage additional funding, and 74% published in quality assured peer-reviewed journals. This could also be an indication that IFS mainly co-funded already existing research groups, and that the IFS-grant was simply an additional source of funding. 54% of the grantees reported that they built up relationships with international researchers, 67% of the grantees increased the number of publications and 100% think that IFS grants help them improve their research capacity (all information based on the PCR, completed by the grantees).

A few of the interviewed grantees stated that they were able to achieve other funds easier after they had received the IFS research grant. However, partners of IFS also mentioned that they cannot recognize the difference between IFS grantees and non-IFS grantees. IFS funds are small and limited in size and time. Therefore, they could not have significant impacts on the life and career of early-career scientists.

Research use

Following the representative sample of PCR, 100% of the IFS-supported researchers reported that they are continuing to use the method or equipment gained from IFS funding. Equally, 100% of the grantees are still active researchers, and also 100% strongly agree that local scientists, researchers and students benefited directly or indirectly from the IFS grants. All this is based, however, on the reports of IFS grantees.

The number of available grants and the financial volume of the IFS grants are low. 38% of the interviewed applicants recommend IFS to increase the number of funded projects as well as the grant amounts.

Proposal review system

One strength of IFS is the established scientific review system and review network. All interviewed IFS partners, reviewers and applicants classified the IFS review system as fair, clear, creating autonomy. Based on these interviews it can be concluded that the reviews have contributed to improve the quality of the applications and the success rate of applicants, but not directly the capacity of the applicants. In some cases, the reviews contributed to shape or change the orientations in the context where the applicant is weak in study design and methodology. It seems that only a few of the applicants are aware of alumni, and, at least in Vietnam, alumni play a very small role to help new applicants preparing the research proposal.

43% of the interviewed applicants strongly stated that the IFS review system is good, but 29% thought that the review system is quite heavy and takes too much time, also leading to the situation that young researchers miss chances to get access to other funds. It was suggested (a) that the proposal evaluation time should be shortened, (b) that the reviewer may have more power to approve the proposals (not only comment), and (c) that they also have more responsibility with monitoring the project implementation.

There is room to optimize the scientific review process. Scientific reviewers may also dialogue directly with the applicants via Skype meetings, without showing their names and faces. IFS should establish the relationship or relevant activities among reviewers and among reviewers and applicants.

IFS alumni

In Vietnam, IFS alumni play a very little role for helping or extending the IFS network of applicants. Only few applicants reported to know about IFS as an organization, and even fewer had any contact with former IFS grantees.

How effective has the IFS been in responding to the needs of its beneficiaries?

100% of the beneficiaries reported that they were satisfied with the IFS supports. More than 80% interviewees believe that IFS has comparative advantages to other grant programs. The interviewees rate the management of the IFS grant program as professional, transparent, and according to the processes. 28% disagree that the time period between the submission of the proposal and the decision about the funding was adequate.

Most probably, the last figure relate to applicants whose research proposals were rejected, though they had to wait for a long time for the final decision by IFS.

IMPACT

The consultant noticed that IFS financed (or co-financed) a few new ideas or concepts of basic research which the other funds did not fund. To transform these results into practical action or even systemic impacts, is beyond the scope of IFS and would require another type of support (e.g. larger grants) and specific qualifications of the researchers.

EFFICIENCY

IFS is a non-profit organization. It should apply the exemption from VAT for the purchasing of equipment and goods for research, and the exemption from taxes for imported equipment and chemical. Applying unit prices as standard can help to remove the VAT (5-10% in Vietnam) from chemical and equipment purchase. At the end, this increases the budget which is available for research by 10%.

Strengths and weaknesses listed by the interviewed applicants are displayed in table 1. Most interviewed applicants strongly agreed that the major strengths of IFS are: IFS has clear objectives, autonomy, lean and rigor in management; support is in-time, transparent and fair. The raised weaknesses are related to: (a) The limitation of the grant ceiling and number of individual applications compared with current technology development and the high cost of research or of long-term research needed to achieve impact; (b) too long review and approval progress; and (c) the fellows expect to receive the IFS grant directly to their personal bank account like it is the case in other research funding systems, also to avoid the unnecessary red-tape procedures of the local financial systems in some of the host organizations (universities).

Strengths	Weaknesses
- Clear objectives, autonomy, lean and rigor in management, timely, transparent and fair system, good administration (x9) **- Good opportunities and open-door for early career researchers (x8), help the first time of being real research leader** **- Comments are specific, professional and not so difficult to fulfil (x6)** - Create incentive dynamic for further academic pursue (PhD) (x2) or apply for other research funds (x3) - Receive money only 2 months after receiving the grant (x3). Time for revision after receiving comment is adequate (x1). Problem solving is very good & fast (x1) - IFS alumni encourages other colleagues participating (x3) - Request grantee take more responsibility and need to follow and achieve what proposed in proposal (x2) - Funding is flexible, financial report is simple and efficiency (x2), grants for purchasing equipment (x2). Amount of grant is good enough for basic research (x1) - No need to pay for overhead cost, management cost to IFS	**- Grant envelop ceiling/ Small amount of funding with technology development (x8)** **-Too long approval process/long deliberation process (x6)** **- Overhead cost of some institute or organization is more than 10% (x4) or 5% (x2)** - Support for attending workshop, publish the researches outputs , provide opportunity for experience exchange workshop (x5) -Use the organization's bank account, it could create unnecessary administration works (budget plan or review committee for research proposal) (x5) - No proposal writing training workshop (x3) or no announcement about this workshop - IFS alumni network is weak (x3) - Less applicable projects and not cooperate with private companies for funding (x2) - IFS did not inform comments or review to applicants in the case of non-grant (x2) - Online application form is simple but it can't be revised - Can't apply more than one grant

- Online form is simple and can implement easily -New applicant should be less than 35 years old but not applied for the 2nd submission - International competitive candidates - Focus on basic and laboratory researches and samplings, therefore sometimes it needs the other funds to cover other parts which could not be covered by IFS - Support women doing researches - Organization benefits from grants such as reputation, equipment, publication, etc. - Very efficient and productive program - Have no influence on publishers, decision for granting is less influenced by external factors	-Some chemical needed to be bought from oversea, IFS can support to buy and payment but the import customer procedure is complicate in Vietnam. - Proposal submission requirement is comprehensive e.g. Need to mail the original letter from the organization after sending the scanned one, Need to look for the relevant international experts

Table 1: Strengths and weaknesses as listed by the interviewed applicants

Collaboration with partners

The consultant contacted some partners of IFS (e.g. NAFOSTED, MOSTE/HCMC DOSTE, IFS alumni) and cross-check information with other available research funds in Vietnam. Collaboration of IFS with these partners which are partly also financed through bilateral programs, is very low.

The interviews showed that IFS, despite this lack of collaboration and the few and small grants, is recognized among young researchers and organizations. This is particularly true for countries like Myanmar or Nepal, where IFS is almost the only funding opportunity for early-career researchers.

The representative of the National Foundation for Science and Technology Development (NAFOSTED) sees IFS as providing small grants, specifically targeting young researchers. He perceives IFS of having a good proposal selecting system but of being less strict on monitoring and controlling research outcomes. There is no collaboration between IFS, and NAFOSTED which is well established in Vietnam but also quite close to the Ministry of Science, Technology and Environment (MOSTE).

NAFOSTED has a different approach. It is not focused on young researchers, but it has small grants for workshops, trainings and research structures. It has special grant program for emergency research problems and bilateral programs with different donors.

Similar to IFS, HCM City in Vietnam has established an “Innovative Science and Technology Incubator Programme”. It is implemented by the HCMC Department of Science and Technology and Environment (DOSTE), in collaboration with the HCM City Youth Union. The program supports young researchers (<35 years old) with grants of 7,000 USD for one year. It has prioritized 15 thematic sectors. Here, IFS has more specific fields.

HCMC also established a “Young Scientist Science Program”, together with the Center for Youth Science and Technology Development and the Viet A Technology Joint Stock Company. The program applies a new model of joint grants and was initiated in 2017. One of the limitations of such national research funds is the much lower exchange

between local researches and foreign reviewers or coaches. Here, IFS has particular strengths.

To strengthen the grant capacity and enhance the monitoring system, we suggested the cooperation between IFS and national organization to achieve the win-win solution in future.

GENDER

The study showed that 39% of the grantees which had submitted a PCR were female. Most of the interviewed female researchers are pleased with the IFS policy on promoting gender equality and women's research leadership.

Female researchers can continue to submit proposals until the age of 40, meanwhile male can submit them until the age of 35. 19% of the interviewed applicants think that it is not necessary to make difference in the system between the two genders, since research capacity should be equal for both men and women.

Continuing gender promotion policy is the good direction. Encouraging women research means building capacity for mothers and next generation as well.

SUSTAINABILITY

After receiving IFS grant, grantees continue searching for other funds to pursue their research in the long-term. According to the reports of IFS-grantees (PCR), grantees and institutes use IFS-funded equipment for other research and therefore extend to sustainable development of research organization.

Key factors requiring attention to increase sustainability of the outcomes are listed in Table 2 below.

Capacity needs	Key activities for IFS improvement
Conference, summer school and science events for IFS fellows, platform meeting, researcher exchange (x7)	**Increase number of grants and grant amounts (x7)**
Competitive grant writing training (x6)	**Develop efficient communication/dialogue between reviewers and applicants, coaching and monitoring (x7)**
Introduce and promote IFS to new and young researchers (x4)	**Link or co-fund with other funds/enterprises (x5)**
Develop and introduce research orientation (relate to local development) to applicants (x4)	**Transfer money from the grant to researchers' bank account (x5)**
Enhance local awareness on scientific research and outcomes (x4)	**Extend sound research to 2nd phase (x4)**
	Score/certificate or award sound grantees (x3)
IFS database on projects, grants, outcomes, networks (x2)	Develop group research (x2)
	Extend age of applicants up to 40 year -old (x2)
Integration of social science and social issues (x2)	Improve IFS alumni organization (x2)
	More practical research implementation (x1)

Enhance knowledge on background and hypothesis for applicants (x1) Check and modify the online application tool (x1)	Allow applicants apply more than one fund and one grant (x1)

Table 2. Key factors requiring attention to achieve sustainability

LOOKING INTO THE FUTURE

Based on the analysis carried out, the consultant presents the following options for further improving the IFS grant program:

- Increase the amount of the grants up to 15 KUSD or 20 KUSD (both reviewers and applicants comment). Encourage collaborative research by increase amount of grants for group research.
- Transfer money of the grants directly to the researcher's bank account
- Improvements in monitoring of research outcomes and ex-post-evaluations of research outputs are necessary to improve the quality and performance of the researchers
- Improved collaboration and mechanisms for co-funding with the national funding systems, in order to raise the amounts of the grants and to avoid overlapping fundings
- Use teleconference or skype assistance to support online- reviewing. The reviewers will not show their name and their face for confidential purposes but they can dialogue and comment directly with the applicants.
- Build up and strengthen capacity and efficiency of the IFS networks such as the network of scientific reviewers, IFS alumni and sponsor networks
- Put more emphasis on strengthening relationships in these networks, also by organizing exchange workshops among researches and scientific reviewers
- In countries like Vietnam, IFS alumni organization is set up, but they are not functional or it is quite weak. Transform IFS alumni is necessary to change IFS image.
- More promotion to introduce IFS to new universities, faculties, applicants, e.g. by organizing proposal writing workshops.

MAIN CONCLUSIONS

Here a summary of the main conclusions:

1. During the interviews it became clear that IFS spends too much effort for reviewing proposals compared to quality control on outcomes.
2. Nurturing the early-career scientist will take time. Therefore, continuous support over a longer period of time is important. Young scientist incubation centers, as implemented by HCMC, are a suggested model. IFS should collaborate with the national incubation programs.

3. Cooperate with enterprises to explore the opportunities of research co-fundings or transferring research outcomes to them.
4. The grant amount is small, which can be transferred directly to the researcher's bank account for management. Grants should also include the option to cover expenses for attending at international workshops.
5. Encourage the applicants to search for more grants when they can register more outcomes (more publication or implementation program).
6. The consultant did not found evidence that a proposal-writing workshop was organized in Vietnam. Proposal writing training workshops would, however, be important, especially to draw attention of young researchers. IFS should select and train key persons in universities or research institutes (it could be senior IFS alumni) and ask them to continue the annual training workshops at their organizations.
7. To improve qualification of proposals, IFS should propose the research priorities for each region to link the research with local development issues.
8. Strengthen IFS researcher network, set up and share IFS database of research outputs and publications.

Evaluation of the Sida supported research capacity building programme “International Foundation for Science”

This report, which has been commissioned from NIRAS Sweden AB by Sida’s unit for Research Cooperation, presents an evaluation of the Sida funded research capacity building programme, implemented by the “International Foundation for Science” (IFS). Sida is the main donor to IFS. The evaluation team concludes that IFS is a stable partner for Sida and also a resource for Sweden and Sida. It provides access to thousands of scientific advisors and young scientists. General recommendations from the evaluation team are that overall efficiency has to be increased, and that IFS should strengthen its governing body with specific competences (e.g. fundraising, management, strategy). The process for the formulation of a new institutional strategy 2020–2029 is the ideal vehicle for reflecting on the results of this external evaluation.

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