INTERNATIONAL FOUNDATION FOR SCIENCE

IFS COLLABORATIVE RESEARCH GRANTS

IFS has introduced its new approach of Collaborative Research Grants as a pilot project with limited eligibility.

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Contents

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1. Introduction

The International Foundation for Science primarily exists to support 'young' scientists to become established in research careers within the developing world. We believe it is vital that science in developing countries should expand. Young people today constitute the largest youth cohort in human history, with the vast majority in developing countries; young people are in the vanguard of research endeavours.

Research on a particular problem may require a wider range of skills than any single individual, or even a single institution, is likely to possess. Researchers working together to achieve the common goal of producing new knowledge can derive mutual intellectual benefits and social influence from their collaboration. 'Breaking the fences' that separate scientists, laboratories, institutes, countries, and disciplines can achieve greater research outcomes. We believe there may be a range of benefits from a Collaborative Research Approach. Benefits such as: sharing of knowledge, skills and techniques; tacit knowledge transfer; learning social and team management skills; sourcing creativity; intellectual companionship; greater scientific visibility; and pooling equipment.[1]

It is clear that working together, developing world scientists are well placed to identify the challenges they face, and to propose transformational research, to build resilience to global volatility; to engage in global negotiations; and to innovate for sustainable futures. Researchers who start collaborating early in their careers are known to be more likely to be strategic in their collaborative decision making, enhancing the benefits and productivity of their collaborations. There is therefore a clear coherent rationale to help to bring together scientists, to build capability early in researchers' careers, to understand and manage collaboration, and in so doing possibly to contribute to the scale, scope and efficacy of research outputs. These are the drivers behind the IFS Collaborative Research Approach.

In 2011 IFS launched a new ten-year strategy[2] in which it formulated three approaches to the support of young scientists in developing countries. They are:

- Approach 1: Individual research
- Approach 2: Collaborative research
- Approach 3: Contributing innovation

Within Approach 2, **Collaborative Research Grants** will be awarded on merit to small teams of 3-5 researchers who fulfil the eligibility criteria.

The introduction of Approach 2 and the Collaborative Research Grants begun at the end of 2012 with the first pilot Project focussing on research on Neglected and Underutilized Species, and with eligibility limited to 5 African countries. A second pilot focussing on Biodiversity was conducted in 2014 with eligibility limited to 8 African countries. The Pilot Project will continue with a third pilot in 2016 and will focus on research on Climate Change Adaptation and Mitigation for researchers in 9 Asian countries. The Pilot Project will be duly evaluated and IFS will subsequently formulate the permanent Collaborative Research Grants Approach.

[1] See the full paper associated with the launch of the IFS Collaborative Research Approach pilot entitled *Breaking Fences May Make for Good Neighbours in Collaborative Research*

[2] See http://www.ifs.se/IFS/Documents/Publications/IFS%20Strategy%202011-2020.pdf

2. Pilot Collaborative Research Grants Approach, 1st session, 2012-2013

The Pilot Project was carried out during 2012-2013 and resulted in the awarding of 10 Collaborative Research Grants to small team of young researchers (total 38 researchers) in the eligible countries.

The eligible countries in that session were Ghana, Nigeria, South Africa, Tanzania and Uganda, and the scientific scope of research supported was Neglected and Underutilized Species (NUS).

This pilot was financed by the Carnegie Corporation and the Carolina Mac Gillavry fund.

3. Pilot Collaborative Research Grants Approach, 2014 session

In 2014, IFS offered a number of Collaborative Research Grants in the 2nd session of the pilot project. The project was limited to eight countries in Africa (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Nigeria, Uganda, Tanzania and South Africa) and the scientific scope restricted to the broad field of biodiversity.

This resulted in Grants being given to 13 small teams comprising 48 researchers.

The second pilot, was backed with multi-donor support (Carnegie Corporation, Belgium Science Policy Office, and the Carolina Mac Gillavry fund.)

4. Pilot Collaborative Research Grants Approach, 2016 session

In 2016, IFS will offer a number of Collaborative Research Grants in the 3rd session of a pilot project which began in 2012. The project will be limited to nine countries in Asia (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste, Vietnam) and the scientific scope restricted to Climate Change Adaptation and Mitigation.

This pilot is backed by the financial contribution of SEARCA. The application period will be time-limited and announced on the IFS website (http://www.ifs.se) and through targeted email notifications.

The total value of a Collaborative Research Grant will be between USD 45-75,000. This breaks down to 80% for research and 20% for team coordination and collaboration activities. The actual value of a grant and the distribution of the grant money among the collaborators will be determined by need and the team's budget.

4.01 Eligibility criteria for the 2016 pilot project

[The permanent eligibility criteria for Collaborative Research Grants will be formulated after the pilot project has been evaluated.]

Country eligibility:
For the pilot project in 2016, applicants must be citizens of Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste or Vietnam, and must do their research in one of those countries.

Personal eligibility:
For the pilot project in 2016, first-time IFS applicants must hold a minimum qualification of MSc or MA and be, for men, younger than 35 years of age, and, for women, younger than 40 years of age.

Those researchers from the eligible countries, who are already IFS or SEARCA Grantees, may apply for a Collaborative Research Grant as a renewal (2nd or 3rd) grant, irrespective of age. In order to enhance capability in collaborative research team management, priority will be given to teams with early-career Team Coordinators.

The researcher must be attached to a university, a non-profit making national research institution or a Non Governmental Organisation in one of the eligible countries that is able to provide the basic research facilities. It is necessary that the 'institution' is adjudged to provide a reasonable academic environment conducive to research, and that the researcher already has a salary (or other source of income) for the duration of the research. As usual with IFS grants, researcher's salary will not be covered by the research grant.

Team eligibility:
Teams must consist of 3, 4 or 5 collaborators, all of whom must fulfill the eligibility criteria.
Applications will be judged on scientific merit, but when choosing between applications of similar merit,

- teams which are gender balanced,
- teams including a mix of researchers from the eligible countries, and
- teams including researchers from Cambodia, Laos, Myanmar, Philippines, Timor-Leste or Vietnam

will be prioritised.

4.02 Research scope of 2016 pilot project

The pilot project will be limited to research on Climate Change Adaption and Mitigation (CCHAM). Researchers of any discipline, who fulfill the eligibility criteria above, are welcome to participate in forming small teams of 3-5 scientists.

IFS and SEARCA have welcomed the historic achievement of the 2015 Paris Climate Change conference (COP21).

The Paris Climate Change Agreement identifies a clear goal of "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels."

This call will contribute to global GHG reduction goals. IFS and SEARCA recognise the critical need to develop the capacity of young researchers to understand, and to contribute to situated collaborative knowledge on climate change and adaptation through research. This call will contribute towards building scientific capacity for addressing climate change and enhance South East Asia preparedness for the projected impacts of climate change and assist to adapt to increased risks mitigation.

Some suggested thematic areas and sub-themes include:

- Assessing climate change impacts and risks for policy, plans and investments
    - Impacts of climate change on and risks to agriculture, forestry, fisheries and livestock
    - Impacts and risks assessment of climate change on environmental goods and services, especially on biological diversity
    - Socio-economic impacts and risks of climate change to small-scale farmers, fisherfolks and marginalized groups and identification of the most vulnerable especially women and priority geographic areas and communities for climate change interventions
    - Development and testing of vulnerability/risk and impact assessment tools for agriculture, forestry, and fisheries

- Advancing low-carbon agricultural and rural development
    - Assessment of the contribution of agriculture, forestry, fisheries, and livestock through GHG sequestration/emission to climate change
    - Determination of low-emission agricultural/rural livelihood technologies and practices
    - Policies to promote low-carbon agriculture and rural development including incentive system (e.g. payment for environmental services) to benefit the vulnerable communities and groups

- Enhancing pro-active adaptation to climate change, variability and extremes
    - Tested, effective and proactive adaptation technologies and practices in agriculture and rural livelihoods that meet the needs of vulnerable groups/communities and geographic areas
    - Indigenous knowledge and practices on climate change adaptation
    - Options, constraints/limits and economics of adaptation particularly among poor farmers, women, and other marginalized groups
    - Climate risk -reduction and -sharing in agriculture and rural development (e.g. early warning system and agricultural insurance) that benefit smallholder/poor communities
    - Role of various sectors (government, private sector, and civil society) in transformational adaptation

- Enabling policies and governance for climate resilient agricultural and rural communities
    - Analysis of constraining and facilitating current and emerging policies with pilot policy intervention case studies for climate-resilient agriculture and rural development
    - Decision-support tools for policy advocacy and development and making investment choices in climate-resilient agriculture and rural development
    - Enabling policies and institutional mechanisms to mainstream integration of adaptation and mitigation in agriculture and rural development planning
    - Climate advisory services
    - Effective communication and best practices in bridging the science-policy-practice divide
    - Climate financing and investments

- Scaling up good and innovative practices on climate adaptation and mitigation

4.03 Preparing proposals and applying for grants in the 2016 session of the pilot project

Online collaborative environment
Eligible scientists, who express interest in the programme when the call is published, will be invited into an online environment wherein they will be able to interact with other prospective applicants. Relevant tools, enabling searching, interaction and collaboration will be available.

It is expected that prospective applicants will be able to form teams and formulate research projects and proposals for funding, within this environment.

Joining the online environment is a pre-requisite for applying for an IFS Collaborative Research Grant.

This online collaboration environment will continue to be available during the research project period for those research teams who are successful in winning grants.

Application Forms
There will be three electronic application forms (available only through the online working environment):

- A Collaborator Form for each applicant, to be submitted by the Team Coordinator
- A Team Form, to be filled out and submitted by the Team Coordinator (with input from the other Collaborators)
- A Curriculum Vitae Form, to be filled out by each applicant

The Application Forms will be available at the appropriate time in the online environment.

More details regarding filling out the application forms and the information needed will also be available to prospective applicants in the online environment.

5. Collaborative Research and Team Models

Collaborative research may bring together scientists from a single discipline or may involve interdisciplinary working, especially between social and natural sciences, and considers science as a multi-stakeholder process, leading to the creation of new knowledge, modes of thinking, or theory.

5.01 Team Models

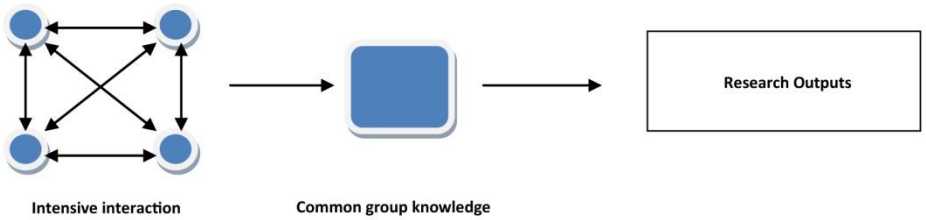
When designing a project, choosing the right organisational model and communication within the team about the model and the implications of this choice are essential for success. The choice of the model determines the way the research is structured, the division of tasks and the planning in time and space.

Below, IFS has adapted some of the most common organisational models that may be suitable in the current context of small team research. (Adapted from Rossini & Porter,

1979[3] and Becx and van Hofwegan, 2006[4])

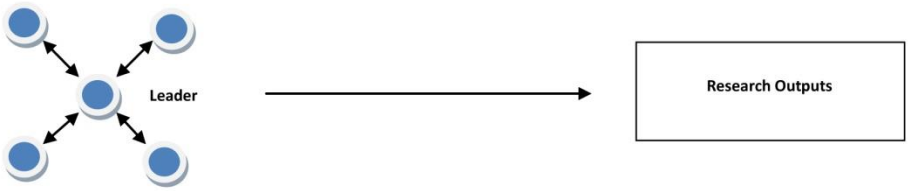
When applying for an IFS Collaborative Research Grant, the applicants are asked to choose either one of the team models below, or to explain their own model and to establish their roles within the team. It is expected that this will be done by communication amongst the collaborators, and only when they have come to agreement about these things, will they make their application.

1. Common Group Learning



This organisational model is well suited to small teams collaborating closely together. The research output reflects the common intellectual property of the entire research group. After defining the problem, the research is divided into areas based upon the expertise and interest of the collaborators of the research group. Subsequently, the input of the collaborators is discussed and evaluated in the group and written up by the team.

2. Integration of research by a leader

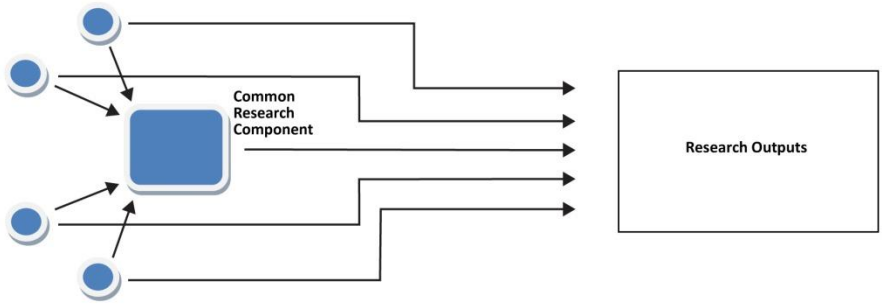


This organisational framework is considered effective for small research teams but requires a good leader to co-ordinate the complexities of managing research integration. The method is based on a division and allocation of parts of the research problem as separate tasks for different collaborators based on their expertise and then, later, an integration of the various contributions. It is important to ensure that enough time is taken in planning, which should be flexible and adaptive. Sometimes it is necessary that elements of the research are started at different times, where the use of tools, like network planning can be important.

[3] Rossini F.A. and Porter A.L., 1979 *"Frameworks for Integrating Interdisciplinary Research." "Research Policy."* 8/1 70–79 pp.

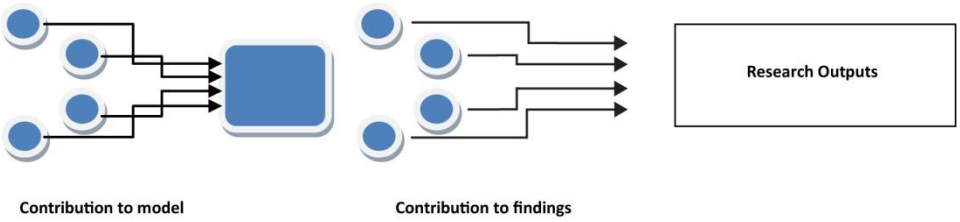
[4] http://www.resilience-foundation.nl/docs/interdisciplinary_research.pdf

3. Common Research Component



This organisational model is characterised by each researcher pursuing his/her own research, and simultaneously contributing to a common research component which adds both a new dimension and value to all their individual projects. Research outputs would be expected both from the individual researchers regarding their individual research projects as well as from the team regarding the common research component. This model is probably most suited to those who are already researching a specific topic and wish to continue with that, while at the same time collaborating with others on some element which can be developed together.

4. Modelling



This approach involves combined scientific work on a model and then researching its verification. The technique works best amongst closely related disciplines, because everyone has to agree on the approach used for modelling. Interdisciplinary models should be understandable for all collaborators.

5.02 Team Roles

Naturally, the roles played by the different collaborators in a team will depend firstly on the team model chosen and also on the competence, experience and wishes of the individuals. In some models there will be a difference in the research work associated with the different roles, in others there may be no difference in terms of research but only in terms of administration. All teams will require administrative coordination.

Teams applying to IFS for Collaborative Research Grants will be asked to agree on the roles of the collaborators before applying. The role of each collaborator is to be stated on the Application Form.

The following table shows which roles will be appropriate within the above mentioned team models:

Team model	Which roles exist	Notes
1. Common Group Learning	Team Coordinator	One person must take on this role. Mostly administrative in this model.
	Collaborator	All collaborators in the team operate in a collegiate way, sharing tasks and collaborating closely together

Team model	Which roles exist	Notes
2. Integration of research by a leader	Principle Investigator (PI) [and Team Coordinator]	One person must have this role. Most likely in this model is that the PI has the research idea and engages with collaborators with essential skills to contribute to the research project. This person will also take on the Team Coordinator role for the team.
	Collaborator	All other collaborators in the team undertake parts of the research, as agreed by the team, and based on their specialisations.
3. Common Research Component	Team Coordinator	One person must have this role. This researcher will coordinate the formulation of the common research component, the research process itself and guide the formulation of reports or other outputs related to the common component. This person will also take on the administrative coordination of the team.
	Collaborator	All other collaborators in the team will pursue their research component and be responsible for their outputs as well as contributing to the team research output
4. Modelling	Team Coordinator	One person must have this role. This researcher will coordinate and draw together the research outcomes that are inputs to the model. This person will also take on the administrative coordination of the team.
	Collaborator	All other collaborators in the team will contribute to inputs to modelling as agreed by the team and ensure they are understandable to all

All applicants, irrespective of team roles, will fill out a CV and those applicants in the role of Team Coordinator will also be responsible for all coordination and filling and submitting out the Team Application Form and a Collaborator Application Form for each collaborator in the team.

5.03 Team Coordination

In an IFS Collaborative Research Grant it will be possible to apply for up to USD 45,000 per team for a team of 3, USD 60,000 per team for a team of 4, or USD 75,000 per team for a team of 5 collaborators. 80% will be for research and 20% for coordination and collaboration activities. The latter is intended to cover the costs of activities such as travel to come together as a team, communication and meetings which will facilitate the researchers in the team working together and sharing of work, combining outputs, challenges, etc.

The team's Team Coordinator will plan and coordinate these activities which are also to be specified on a separate sheet of the Team Budget.

5.04 IFS Collaborative Charter

Collaborators in Teams applying for IFS Collaborative Research Grants will be expected to discuss amongst themselves issues such as authorship of publications, availability of project outputs for collaborators, research accountability and intellectual property before submitting an application to IFS. A document called the IFS Collaborative Charter outlines these issues and can also be used as a signed agreement between collaborators. It will be available to all participating researchers.

6. Review Process

After the closing of the application period, the proposals will be evaluated by the IFS Advisers and Advisory Committees. All applicants will be notified by email of the results.

7. Research Grants

7.01 Grant administration, contracts and signatures

The agreed grant portion to each collaborator will be administered by each grantee's own institution – the amount of the grant money that is allocated to a Grantee on the research project's budget is the amount that will be transferred to that Grantee's institution.

To finalize the contract, signatures of both the Grantee and the Head of his/her institution are needed. There is a 'signatures template' available for downloading – it must be physically signed and returned to IFS by ordinary postal services.

7.02 Transfer of money

Grant money can be transferred when all the formalities are complete. Grants are only transferred to institutions' accounts, never private accounts.

Each Team Collaborator's institution will receive the amount allocated to that researcher on the Team Budget.

7.03 Purchasing

IFS has a purchasing service and offers purchasing assistance to Grantees at no cost. Those Grantees wishing to avail themselves of this service may leave all or some of the grant at IFS and make arrangements with IFS for how they wish to use it.

7.04 Doing the Research Project

For those teams successful in winning research grants, the online collaborative environment used during the application process will continue to be available. Each team will have a private space which they can use for communication, collaborative preparation of plans, records or files and storage of common material.

7.05 Capability Enhancing Support

From time to time, often with partners, IFS makes available **Capability Enhancing Support** (CES) to grantees. Such support can include building skills in interdisciplinary

research, communication, science writing, policy influence, as well as access to databases, and networking opportunities organised by IFS. Further information about the supporting services mentioned here will be made available to researchers with approved project proposals.

7.06 Reporting

There will be two kinds of reporting requirement for grantees: an annual report and a final report at the completion of the research project.

IFS wishes to be advised of all publications and impacts that arise from IFS grants.

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