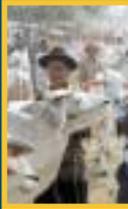




INTERNATIONAL
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Annual Report 2000

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United Nations University (UNU/INRA)

IFS Mandate

The IFS shall contribute to the strengthening of capacity in developing countries to conduct relevant and high quality research on the management, use, and conservation of biological resources and the environment which these resources occur in and depend on.

The activities shall include identifying, through competitive grants and a careful selection process, young promising sci-

entists with a potential for becoming future lead scientists and science leaders; supporting them in their early careers to enable them to become established and recognized, nationally and internationally; and continuing, once their official association as IFS grantees is completed, the support of these scientists, whenever feasible and relevant.

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Inside back cover: IFS Trustees; IFS Staff

A Small Organization with a Large Mission in a Rapidly Changing World

The year 2000 has been a special one for IFS: the External Evaluation 2000-2001 was started; the Joint Meeting, attended by Trustees, Donors, Scientific Advisers, grantees, and staff members, produced interesting ideas and lay the groundwork for future discussions; and a new Director took over the leadership of IFS with the intention of developing and achieving new goals. The year has not only marked the change of the millenium and the century, it has also witnessed rapid changes in the world around us that may force IFS to rethink its mission and responsibilities.



Photo: Brian Porter

Bruno Messerli,
Chairman of the
Board of Trustees

During the 20th century, the world population increased six-fold, while the consumption of energy increased 80 times. Since the beginning of that century, we have witnessed continuous changes in the earth's ecosystems, which have resulted in the loss of biodiversity and alterations in the climate, the exploitation of non-renewable resources, the depletion of marine fisheries, the increased use of accessible freshwater, as well

as the expanded use of land and its subsequent degradation. It might well be that the 21st century will confront us with water and food scarcity, together with a wider and deeper division between rich and poor countries. It is in this context that IFS must rethink its increasingly significant mission and responsibilities.

New questions and new ideas came up during 2000 that need to be more carefully discussed in the near future. To begin with, is the focus on biological resources research sufficient or should IFS make support for water and soil research more explicit in its Programme? How does IFS wish to deal with inter- and

transdisciplinary research projects? Should IFS aim at a more integrated approach to complex problems, similar to those that are occurring elsewhere in global change research? How can IFS better contribute to sustainable development in different regions of the developing world? What can IFS do to identify funding for selected least-developed countries through a closely-knit, well-functioning network of grantees, Scientific Advisers, Member Organizations, universities, and political authorities?

Whatever path IFS chooses to take, the focus for all activities will remain on the grantees, their qualifications and education, their current and future scientific careers, and their potential for contributing to the world of tomorrow. To fulfil this task, IFS can rely on the solid experience of its corps of Scientific Advisers. Especially important is the commitment and participation of Donors from both science foundations and aid organizations. The big challenge for IFS will be to show everyone that high standards in scientific research can be combined with furthering progress and development in poor regions of the world.

The year 2000 was a year of departure—of new ideas and new horizons. At such a turning point in time for IFS, we should not forget that changes, if they are to be successful, can only be done from a solid base. In this context, we would like to thank the former Director, Björn Lundgren, as well as my predecessor, Ebbe Schiöler, for all that they have done for IFS. We would also like to wish at this time the new Director, Thomas Rosswall, all the best for the successful development of a small organization with a large mission in a rapidly changing world!

Bruno Messerli
Chairman of the Board of Trustees

IFS in the New Millennium

In May 2000, IFS organized a Joint Meeting, which provided an opportunity for Trustees, Donors, Scientific Advisers, and Secretariat staff to discuss and exchange views on IFS. It also provided an opportunity to develop a common platform for understanding how IFS works and why we do what we do. Different IFS stakeholders discussed their views, concerns, and suggestions for how IFS should develop at the dawn of the new millennium.

Present at the meeting were two of the first IFS grantees (both are now Scientific Advisers), Dr Maria

Valdés from Mexico and Dr Berhanu Abegaz Molla from Ethiopia (now working in Botswana), who discussed how their IFS grants affected their careers. Both received their first grants in the mid-1970s, and both are now internationally well-known scientists. It was clear that the IFS grants were important for their early research careers, but equally important were the contacts established and the networks developed as a result of their association with IFS. We provided

them not only money for research but also international recognition, and this characteristic was stressed by both keynote speakers.

Although three months would pass before I would take over as the sixth IFS Director, I was invited to attend this meeting, which was an excellent introduction to IFS. It also offered possibilities to meet with many of those with whom I would work for the coming five years. What impressed me most about this special IFS day was the enthusiasm and dedication of all

those present. Opinions were voiced and debated, experiences shared, and conclusions drawn. The presentations by Dr Valdés and Dr Abegaz gave not only a perspective from the past but also a basis for developments in the future.

To me, one statement, made by Dr Valdés, was particularly important: "IFS treated us as individuals rather than numbers!" This is what IFS is all about—identifying bright young scientists in developing countries, and, after an international peer review, awarding them small research grants for projects related to the sustainable use of natural resources.

IFS does not, however, only give research grants. IFS also offers travel grants to grantees; Scientific Advisers provide contacts to the community of international science; IFS purchasers help procure equipment; workshops are organized for grantees and other scientists; networking activities are promoted; literature searches are provided; and training courses are held to help grantees and other young scientists write research grant applications. All these efforts will hopefully help grantees become not only lead scientists but also science leaders.

In 2000, IFS provided 180 grants, of which 135 were first grants, to grantees in 40 countries (a total of USD 1.86 million). Of the grants, 43 went to scientists in Africa, 34 to Asia and the Pacific, and 103 to Latin America and the Caribbean. The proportionately high number of grants awarded in Latin America is probably due to the fact that 2000 was the last year when applications for first grants would be accepted from Argentina and Uruguay, so IFS received a very

Photo: Eva Gerson



Dr Berhanu Abegaz Molla



Dr Maria Valdés

Photo: Brian Porter

high number of applications from these two countries. In addition, 72 travel grants were awarded.

IFS has 118 Member Organizations (MOs) in 81 countries. They are of different types: national academies of sciences, ministries or governmental granting bodies, and regional and international organizations. All MOs are very important for IFS, as they provide links to important sectors of the international science community.

While IFS has MOs in most countries where it has grantees, there are some countries which are missing, and attempts are continuously being made to add key organizations to the list. In 2000, six national, one regional, and six international organizations were admitted. We are particularly pleased that the Chinese Academy of Sciences has joined, as over the years more grants have been awarded to Chinese scientists than any other nationality.

We are also very pleased that the Consultative Group on International Agricultural Research (CGIAR) has become a Member. Discussions were held during 2000 with representatives of both the CGIAR as well as with its 16 Centres in order to strengthen collaboration. Many scientists working at the Centres are IFS Scientific Advisers, and a number of scientific meetings and workshops have been organized jointly in the past. Many other opportunities for collaboration and co-operation exist and should be exploited.

In the autumn, the Executive Committee decided to cancel plans to organize the 9th IFS Assembly, which was to be held in Kuala Lumpur, Malaysia, in 2001, in conjunction with the 4th Asian Science and Technology Conference. The Executive Committee agreed with the conclusions of the External Evaluation 1992 that Assemblies are not the most effective mechanism for the exchange of information, or for the soliciting or proffering of advice. The funds set aside for the Assembly could be more efficiently used in support of developing country scientists by providing more grants, strengthening supporting services, and promoting networks. The Executive Committee was also of the opinion that more effective means of interacting with MOs exist and requested the Secretariat to come up with a proposal.

One way to strengthen the flow of information, not only to MOs but also to the wider IFS constituency, has been the establishment of a quarterly IFS electronic newsletter. The first issue of IFS eNews was sent out in December and was very well received. The layout is simple (it was distributed as an email message), so that it can be received and read by as many grantees

as possible. In many instances, not only grantees but also Advisers do not have a personal email address; these persons receive a paper copy of eNews.

The last issue of IFS News was published in October. The focus was on women in science. Prof Gelia Castillo, Chairperson of the External Evaluation 1992, was the guest editor. The number of female grantees has increased from 26% in 1991 to 40% in 2000. Last year, 60% of the grantees from Latin America and the Caribbean were women. Only 16% of the grantees in Africa were women, but this is still a relatively high percentage compared to the total scientific population for the region. Initiatives that focus on young women researchers will continue to be pursued.

During my first months in office, I made a special effort to meet Donors. It is essential that we have very close contacts with key Donors and listen to their views and priorities. In 2000, we were very pleased to receive a first grant from the European Commission after several years of discussion. This grant will make it possible to further support scientists from ACP (Sub-Saharan African, Caribbean, and Pacific) countries. We were also very pleased with MISTRA's decision to renew the collaborative programme IFS/MISTRA Networks for Scientists for a second three-year term.

In addition to a closer dialogue with the Donors, IFS has also focussed on strengthening its partnership with key organizations. Besides CGIAR, I have visited UNESCO, FAO, and ICSU to explore ways for collaboration. In addition, I have also discussed avenues of possible collaboration with TWAS with its Executive Director, Prof Mohamed H A Hassan.

A crucial event in 2000 was the decision of the Board of Trustees and the Donors Group to commission the External Evaluation 2000-2001, and we were very pleased that they recruited four persons with wide experience of the problems facing researchers in developing countries. The Evaluation Team started their work by spending one week in Stockholm in September when staff could meet with them and provide them with background information. For me as the incoming Director, it was excellent to start with the Evaluation, and we look forward to the Evaluation Report, which will help focus our discussions and sharpen our ability to set priorities. Some aspects of our work may become intensified, while others may be diminished.

IFS has always been very fortunate in having a large number of dedicated Scientific Advisers. The IFS Advisers Forum III was organized in Sweden in November, in conjunction with the Scientific Advisory Com-

mittee Meetings. This provided an excellent opportunity for Scientific Advisers to give opinions on the future of IFS. Their hard and conscientious work is the core of the IFS project appraisal process. Therefore, it was considered important that they be given an opportunity to reflect on the future of IFS. The leader of the Evaluation Team, Erik Thulstrup, was present. Scientific Advisers from each of the six Research Areas gave presentations on how they would like to see the organization develop. Their suggestions are summarized as follows:

- respond to new priority areas for research and integrate cross-cutting (eg socio-economic) issues into the Programme;
- provide applicants with assistance for preparing applications for research proposals;
- develop mechanisms to support research teams;
- provide support for post-graduate training;
- support research on issues of local significance;
- increase partnership: IFS with other organizations, grantee-grantee, grantee-Scientific Adviser;
- improve and increase supporting activities;
- use grantees and Scientific Advisers to promote IFS activities more effectively; and
- provide better post-grant support.

During 2000, initial discussions were held on a possible strengthening of IFS support to global change research. The production potential of biological natural resources will be affected by anticipated changes in the earth system and management practices which in turn affect the global system. Thus, the topic is of great relevance to the IFS Mandate. With the experience that IFS has in administering small grants, it will be able to collaborate with other organizations in efforts to strengthen capacity building in global change research.

The awarding of small research grants is at the core of the IFS Mandate. However, supporting activities are also extremely important to the scientific development of IFS grantees. If we are to contribute to capacity building, IFS must be able to support its grantees not only through small grants but also through a number of other measures that are crucial for their success. Thus, the IFS purchasers provide an essential service to many grantees. There has been a programme on service and maintenance of scientific equipment, and during the autumn we discussed plans for a possible second phase of such a programme.

In the past few years, in collaboration with CABI, IFS has provided a literature search service for grantees.

Not as many as we had hoped took advantage of this offer. We have during the autumn looked at various database services as a basis for a new attempt to provide literature searches to our grantees. Although databases are increasingly available via Internet, many grantees do not yet have easy access to it. It is evident from many of the grant applications received by IFS that applicants do not have adequate access to scientific literature.

In addition, applicants often lack the skill to present their proposals in a convincing way. During the past year, the IFS Research Area Forestry/ Agroforestry organized training courses for writing grant applications. This is another component of a programme that will hopefully help our grantees become lead scientists and science leaders.

During the autumn, staff developed a Workplan for 2001, which was accepted by the Executive Committee in December. A Workplan should be a strategic document setting priorities and describing activities for the following years. It should give sufficient details to guide IFS activities without being prescriptive or overly detailed.

The IFS Annual Report 2000 has changed its appearance. The goal has been not only to report on the activities of the past year but also to provide a booklet that could be used for promotional purposes. The IFS Annual Report 2000 is also part of a new graphic profile, which we hope will increase the visibility of IFS, and consequently increase the number of applications, strengthen the supporting activities to grantees, and expand the funding base through the interest, generosity, and commitment of its Donors.



Thomas Rosswall,
Director

A handwritten signature in black ink, appearing to read 'Thomas Rosswall', written over a white background.

Thomas Rosswall
Director

Survey of African Scientists

IFS is well on its way to having a tool for measuring the impact it has had on the achievements and careers of its grantees. The Monitoring and Evaluation System for Impact Assessment (MESIA) includes, besides the "Survey of African Scientists" reported on here, data analysis from the IFS database, country case studies, interviews of IFS grantees, and a review of their scientific output. Funding for the "Survey of African Scientists" has been provided by IFS, the European Commission (DG RTD), the French Ministry of Foreign Affairs, and the French Institut de Recherche pour le Développement (IRD).

There are very few studies describing and assessing the conditions under which African scientists carry out their research activities. The study "Survey of African Scientists," briefly presented below, was undertaken in order to fill this gap. While it is especially relevant for IFS, it should provide guidance, and hopefully inspiration, for everyone who is involved in scientific capacity building in Africa.



Dr A Agueguia, Cameroon, and Dr Jacques Gaillard.

The study is based on a questionnaire sent to IFS grantees in Africa and African beneficiaries of the STD3 and INCO-DEV1 programmes (referred to as INCO beneficiaries in the rest of the text) of the European Commission. IFS grantees are working in the biological, agricultural, and environmental sciences, while INCO beneficiaries are active in the agricultural, environmental, and medical sciences. Half of the IFS grantees and close to one-third of the INCO beneficiaries answered the questionnaire. A total of 702 questionnaires were received.

Many characteristics of the population surveyed are representative of the African scientific community today as observed in the different country case studies: 83% are male, 75% are more than 40 years old, 90% are married, and more than two-thirds have between one and three children. Their spouses are overwhelmingly skilled workers (researchers, university lecturers, and schoolteachers account for about one-fourth of the total). Few are housewives. Over 90% of the scientists surveyed work at public universities (60%) and public research institutes (33%). Relatively few work for NGOs (4%), private institutes (2%), or private universities (1%). Being the result of a selection process at an international level, these African scientists are likely to be better off than the average African scientist, and this is probably especially true for the IFS grantees.

Both the survey and the interviews show that African scientists who applied for an IFS grant were planning already at the time of application on staying in their own countries. IFS has no doubt enabled them to achieve that goal: more than 25 years after the first grant was given to an African scientist, most of the IFS grantees in Africa are still active within their national scientific communities. Many of them have progressed in their careers and obtained higher degrees and higher

Satisfaction with IFS/INCO mode of work

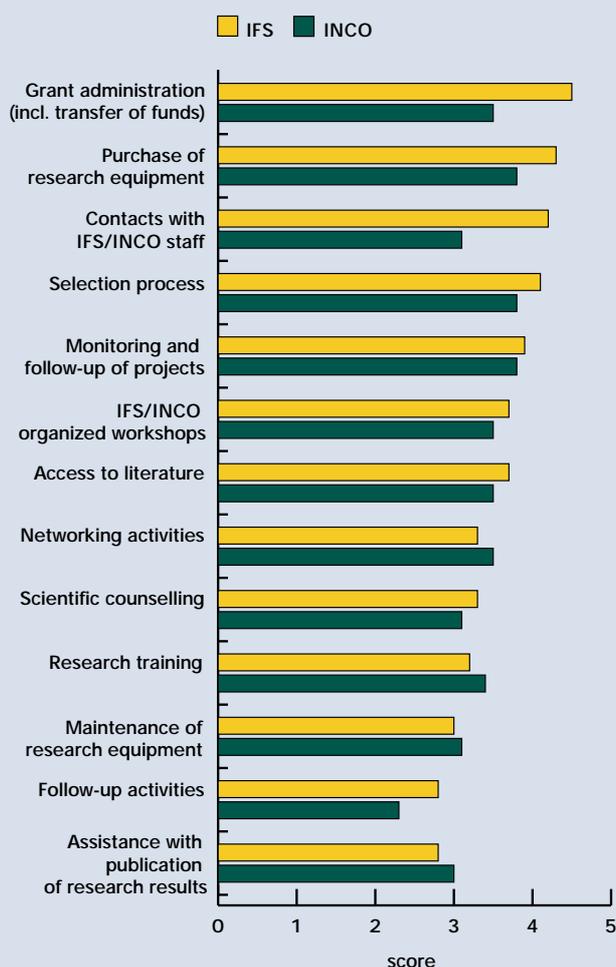


Fig. 1 Mean satisfaction with IFS/INCO mode of work (1=unacceptable, 2=poor, 3=satisfactory, 4=good, and 5=excellent) training and networking (scientific counselling, research training, networking activities, access to literature), maintenance of research equipment, and follow-up activities such as assistance with the publication of research results.

positions. A few are Ministers, several are Vice Chancellors, and many are Deans and Directors of research institutes. Few could be classified as true cases of brain drain. While the IFS African grantees spent on average altogether 5.5 years abroad, most of this time was spent on higher education (5 years).

In general, the mode of work of IFS was very favourably assessed (Fig 1). IFS gets particularly high scores in the following areas: grant administration,



Grantee and Scientific Adviser Khalid Khallaayoune, Morocco.

purchase of research equipment, and contacts with staff. Activities getting the lowest scores relate to scientific training and networking (scientific counselling, research training, networking activities, access to literature), maintenance of research equipment, and follow-up activities such as assistance with the publication of research results.

Lack of funds was reported to be the main constraint holding back research, followed by the availability of research equipment, including its maintenance and repair. Then come poor library facilities, lack of competent support staff, low salaries/lack of incentives, heavy teaching and administration loads, and lack of transportation. Public research budgets in Africa have been cut to such an extent that, with a few exceptions, hardly any research can be undertaken without foreign aid. A sizeable proportion of the respondents (30% for the IFS and 24% for INCO) reported no research budget at all during 1999. Responses to the questionnaires also suggest that IFS support is more important today than 15 or 20 years ago.

The main component of research funding for the respondents came from international organizations (52%), followed by the home institution (20%), national public funds (13%), foreign industry and foreign private foundations (6%), and national industry

and national private foundations (2%). Altogether, in addition to IFS, more than 300 foreign research-funding sources were reported. The four main funding sources were: USAID, the European Union, Coopération française, and WHO. Excluding IFS, organizations most appreciated for the quality of their support are: the Rockefeller Foundation, the International Development Research Center (Canada), as well as a number of organizations in the Nordic countries, including NORAD, Norway.

Low salaries and lack of incentives, particularly in Sub-Saharan Africa (excluding South Africa), no doubt impact on the amount of time devoted to research activities. Whereas the African scientists are largely satisfied with job security, they are largely dissatisfied with their salary and the social benefits. Although they earn on average nine times the minimum salary in their respective countries, most of them cannot live on their salary alone. Half of them supplement their incomes with extra jobs providing on average four times more income than their salary. To supplement their incomes, they are employed as teachers (25%), in private business (37%), in their own consultancy or private business (20%), or farming (13%).

Apart from direct funding of the African scientists, IFS and INCO programmes have a number of catalytic effects, including obtaining additional funding and collaborating with new partners. Most of the respondents (87%) continue to collaborate with the new part-

ners once the IFS/INCO support is terminated. As repeatedly pointed out during the interviews, IFS support is more than a grant. The IFS grant brings recognition nationally and internationally and opens new avenues and contacts; the turning point of a grantee's career has often been an invitation to participate in a workshop or scientific meeting, or a meeting with a senior scientist, which in its turn has opened new networks of contacts and participation in networking activities.

The vast majority of the scientists surveyed work with other scientists or in teams (93%). The proportion of IFS grantees working alone was only 8%. Given the fact that IFS targets its support to individual scientists, this result is partly unexpected and tends to indicate that team work is more the rule than the exception in Africa. Similarly, scientists work in multidisciplinary teams to a very large extent (85%). Many IFS grants targeted to individual scientists have in fact led to the formation and strengthening of research groups. Yet—and this despite the rapid development of communication technologies in Africa—many African scientists interviewed during the last two years complained that they still suffer from a feeling of isolation.

At the time of the survey, slightly more than half of the respondents had Internet connection and slightly less than half had access to bibliographic databases. Respondents have attended an average of 20 scientific conferences since the beginning of their research ca-



reers. More than half of these conferences took place in the respondent's own country (56%), mainly with national and self-support; followed by conferences in the rest of Africa (20%), mainly with foreign support; and conferences in Europe (16%), also mainly with foreign support. Respondents reported attendance at conferences in other parts of world as follows: USA (5%), Asia (2%), and Latin America and the Caribbean (1%).

There is not one Africa, but several: important differences exist between Northern Africa and Southern Africa, and between these two groups of countries and the rest of Africa. The countries located in Sub-Saharan Africa (excluding South Africa) are the most dependent and the weakest scientifically and otherwise, and it is here that IFS support is most needed.

This short text can report only some of the main findings of the "Survey of African Scientists." These findings are highlighted and discussed in the conclusion of the report in light of the extent to which they may affect the IFS mode of work in Africa. A number of recommendations are made, including the establishment of special sub-regional programmes for Africa, closer collaboration with national Member Organizations and national research grant schemes to better ensure national ownership, the strengthening of strategic alliances with other organizations working in Africa, the establishment of a new reward system, a strategy to improve communication and Internet connection, as well as a number of programmes aiming at

improving, among other things, the quality of applications, scientific networking, the maintenance of scientific equipment, and the publication of research results.

Jacques Gaillard
Deputy Director

Pictures page 8:

Grantee Martin Nwugo, Nigeria.

Ebby Chagala, Kenya, and grantee Ogunlade Adeparusi, Nigeria.

Pictures page 9:

Grantee Toudou Adam, Niger, (*far right*).

Grantee Thomas Ofuya, Nigeria, (*far right*).

Grantee Mamadou Lamine Dia, Mauretania.



IFS Support to Science in Argentina



Edith Taleisnik, right, is currently involved in research dealing with forage grass productivity under saline conditions.

Argentina has been, after China, the largest recipient of IFS support, but, as of 2001, on account of the country's GDP per capita, is no longer eligible for IFS support. It is thus an appropriate time to analyse the contribution of IFS to Argentina and, also, to reflect on possible alternative ways of sustaining the link between IFS and this country in the future.

The first grant to an Argentinean applicant was in 1978, and, since then, over USD 3.4 million have been invested by IFS in Argentine science projects, supporting a total of 204 grantees. About 50% of the support has been given to researchers working directly with agriculture and livestock production, sectors which constitute 60% of national exports. However, the other areas of IFS support are also related to this sector. This indicates that IFS support to Argentina has been channelled to relevant research, in accordance with the first goal expressed in the IFS Mandate.

The IFS Mandate states that to fulfil the goal of building scientific capacity in developing countries, it will identify and support young talented scientists with a potential of becoming future established researchers. The accomplishment of this objective can be assessed by analysing the current assimilation of IFS grantees into the scientific institutions of Argentina. Affiliation to CONICET (the National Research Council of Argentina) was taken as a parameter. Only 24% of active scientists belong to this institution; however, they produce 68% of the publications. Becoming a member of CONICET means passing a very selective competition in terms of scientific production and undergoing periodical performance evaluations. Affiliation to CONICET may, therefore, be used as a yardstick for measuring scientific accountability.

Sixty-six percent of Argentinean grantees who obtained their first grant before 1997 currently belong to CONICET, and this figure excludes the 10% employed

by INTA (the National Institute for Agricultural Technology). Affiliation to CONICET among grantees decreases after this, but this decrease is probably due to the fact that the most recent group of grantees are by definition young scientists and therefore have not become established enough to join CONICET.

Taking into account that at least 70% of Argentinean IFS grantees for the period 1978-1996 are still active in science today, and working in the country, it can be concluded that the IFS Mandate has clearly been accomplished in Argentina.

Argentina devotes approximately 0.5% of its GDP to research and development activities, and grants to young scientists for career initiation is a sector which has generally received limited attention. Support provided by IFS has thus made a tangible difference. The acknowledgements to IFS in final reports provide many personal accounts of crucial support. Objectively, the impact of IFS assistance to the scientific population under 40 can be assessed by comparing its contribution, in terms of grant numbers and amounts, with that of domestic granting agencies. In the period 1997-1999, support provided by IFS has been of a comparable magnitude to that of two local institutions which have active granting programs targeted to the same population: the Agencia Nacional de Promoción Científica y Tecnológica (National Agency for Scientific Development, the most important public source of grants); and the Fundación Antorchas, a very active and prestigious private charity. This indicates that IFS grants have provided a very significant complement to domestic efforts directed to building scientific competence by supporting a sector, which is a vital source of intellectual material for the future of science in any country.



Effect of viral disease on sweet potatoes. The trial is located at the Institute of Phytopathology and Plant Physiology, Córdoba, Argentina. Notice infected rows are yellowish and smaller than healthy controls.



Experimental infection of grass seedlings with virus-bearing insects. Ms Liliana Di Feo is a technician at the Institute of Phytopathology and Plant Physiology. She is studying the transmission of Mal de Rio Cuarto, a maize virus disease, to wheat, by *Delpahcodes kuscheli*, the grasshopper vector.

It is only appropriate then to reflect in what ways Argentina could contribute to building on the substantial support already provided by IFS. A straightforward way of doing it would be to join efforts with IFS in training young scientists from developing countries. Argentina has a well developed network of research institutions, and former and actual grantees in many renowned laboratories. It has a good record of scientific production, and solid international scientific contacts. This is an ideal combination for providing sites and persons for training opportunities and scientific exchanges. By becoming a partner to IFS in this venture, Argentina could participate in the fulfilment of the IFS Mandate and contribute to the strengthening of scientific capacity in developing countries.

Edith Taleisnik, IFS Scientific Adviser
Instituto de Fitopatología y Fisiología Vegetal, INTA,
Córdoba, Argentina

IFS/Sida Support for Dryland Forestry

The IFS/Sida Small Grants Programme for Forestry/Agroforestry Research has been one of the most successful Special Programmes ever administered by IFS. Sida (Swedish International Development Cooperation Agency) has provided funding to IFS, which IFS has used to promote the objectives of the Programme—the support of young scientists in developing countries and their research efforts in the field of forestry in dry regions.

Since the programme started in 1993, 115 research grants have been provided to 108 young scientists in 29 developing countries. This support has been in the form of small research grants, and the topics of the research projects have related to forests, trees, and the management of natural resources in dry regions. Scientists supported within the Programme also qualify for other kinds of support provided by IFS, such as help in the purchase of equipment, access to scientific literature, travel grants, participation in workshops and

training courses, and networking. If anything, the programme has provided more of these important activities to grantees than is normally possible. There have been a great many exciting scientific events and special opportunities for forestry researchers, especially in the past two years, as a result of Sida's decision in 1999 to double the level of funding for the Programme's third period (1999-2001) from USD 540,000 to USD 1.1 million.

An important objective of the Programme is the promotion of scientific collaboration and networking in a South-South context. The African Forestry Research Network (AFORNET), initiated by IFS and the African Academy of Sciences (AAS) in collaboration with other organizations, was established with Sida funding. AFORNET is organized with three nodes—in Ghana, Kenya, and Malawi—each one well-positioned to facilitate research collaboration and information dissemination between African forestry researchers. During 2000, several workshops were organized and nine research proposals for funding were submitted to AFORNET. At the AFORNET Steering Committee Meeting in Ghana two proposals—both with IFS grantees leading the teams—were approved.

A workshop on the management of trees for farmland rehabilitation and development was sponsored by IFS, the Technical Centre for Agricultural and Rural Co-operation ACP-EU (CTA), the African Academy of Sciences (AAS), and UK's Department for International Development (DFID). It was held in Khartoum and attended by 60 participants from 7 African and other countries. Everyone who participated at the meeting had first-hand experience working on tropical drylands and the research constraints and options existing in this eco-region on forest management, farmland rehabilitation, and agricultural or forestry extension. The participants had the chance to prolong their



Photo: Olavi Luukkainen

Here in Southern Darfu State, Sudan, local farmers are cultivating pearl millet with *Faidherbia albida* trees. A problem, of which they all are too aware, is the land degradation and decrease in agricultural production that occurs when trees become old or are cut down.

contacts through an email discussion group, moderated and run by IFS during a six-month period.

IFS co-sponsored a training course on forestry research strategy formulation, planning, and management in Kuala Lumpur in September. Helping researchers understand the principles of planning forestry research programmes from the very beginning is especially important. Trees, and forests, grow slowly, and the forest ecosystem is a highly complex one, with its myriad number of species, its multitude of products, and its many and varied uses. The course was attended by 17 IFS grantees and some 25 others, who also had the chance to participate in the International Union of Forestry Research Organizations (IUFRO) World Forestry Congress, which was held just after the training course.

They also had the chance to attend another training course, which took place just after the research management course. This IFS training course, and a similar one held in Zimbabwe in 1999, focussed on how researchers can improve their skills in writing research proposals. Participants were encouraged to give the course when they returned to their home countries. IFS provides modest financial support and IUFRO supplies course material. So far, 10 such courses at institutions in developing countries have taken place and a few more are in the pipeline. Some 500 scien-

tists from 100 developing country institutions have been reached, and it is important to stress that the skills considered in the course are not specific to IFS application routines or forms—once learned, these techniques can be used when applying to other research funding organizations for support of a research project.

IFS foresees an increased interest in the IFS/Sida Small Grants Programme for Forestry/Agroforestry Research as a result of a recruitment campaign that involved the co-operation of some key organizations during the year, including the Third World Academy of Sciences (TWAS), the Food and Agricultural Organization (FAO), the Consultative Group of International Agricultural Research Centres (CGIAR), the International Union of Forestry Research Organizations (IUFRO), UNESCO, and others who are active in promoting scientific capacity in developing countries.

The reason that the programme has worked so well can be attributed to the efforts and goodwill of many individuals and organizations. Another reason is the way the programme has been integrated into the overall mode of IFS support, which is known and appreciated for its flexibility and continuity. The overall result has benefitted not only forestry researchers in dry regions, but other researchers as well, working in related and relevant fields of natural resources management.



Photo: Olavi Luukkanen

ASOMPS and Its Role in Asian Bioresources

Today, networks are the preferred format for organizing and promoting scientific collaboration. They exist in all shapes and forms, from formal ones with secretariats and restricted memberships to more casual versions—open to one and all. Networks have, of course, been in existence for a long time—for the most part with long names and witty acronyms to indicate their mandates. The Asian Symposia on Medicinal Plants, Spices and other Natural Products (ASOMPS) goes back to the days before the Internet or email facilities made networking activities so apparent.

ASOMPS was created at a meeting in Peshawar, Pakistan, in 1960 in order to promote co-operation between Asian scientists doing research in a wide range of disciplines on natural resources in Asia. By opening the symposia to researchers in many different disciplines,



Lennart Prage

eg chemistry, pharmacology, pharmacy, biochemistry, botany, and biotechnology, multidisciplinary approaches were promoted in a scientific world that was, and still is, constrained by narrow academic disciplines.

UNESCO organized this first meeting in Peshawar and has continued to be the prime convenor of the symposia. IFS and UNESCO have been the major sponsors of ASOMPS since the 1970s, providing support to grantees and potential grantees, as well as IFS Scientific Advisers, to attend the symposia. Thus, ASOMPS has become a regular forum for scientists at different stages of their careers with a common interest in research related to bioresources. Although the symposia have an obvious Asian focus, representatives of African and Latin Ameri-

can networks active in natural products research are regularly invited in order to promote the sharing of experiences between the different geographic regions, especially on issues relating to property rights. This kind of support has enabled IFS to promote and support key scientists from Asia within the scientific areas covered by ASOMPS; the network has been a useful vehicle for encouraging transdisciplinary and regional co-operation.

IFS grantees, some of whom have been promoted to senior positions in science in their own countries, play an increasingly important role in ASOMPS. ASOMPS VII was held 1992 in Manila and was organized by grantees Drs Betty Guevara and Lourdes Cruz; and ASOMPS VIII, held in Melaka, Malaysia, in 1994 was organized by another grantee, Dr Nordin Lajis. ASOMPS X was arranged in 2000 in Dacca, Bangladesh, with Prof M Mosihuzzaman as Chairman and Prof Nilufar Nahar as General Secretary of the Organizing Committee. Present at this meeting were Prof Jack Cannon from Australia; and, from Sweden, Prof Finn Sandberg, Prof Rune Liminga, and myself. All four of us have been closely associated with IFS and committed to ASOMPS, which honoured us with the ASOMPS X Awards for contributions to ASOMPS over the years. It has been an extremely rewarding relationship for all of us.

In the late 1980s, it became evident to many scientists in many different parts of the world that developing countries have within their borders valuable and rich sources of molecules that are of future use to mankind. Extremely effective medicines are derived from natural compounds, and it is likely that we have only discovered and identified a minute fraction of the potentially useful molecules. Intellectual property rights of natural products were intensely discussed at the ASOMPS meetings in Manila and Melaka, and these



discussions resulted in the Manila and Melaka Declarations, outlining recommendations to the scientific communities in Asia on how to approach these issues.

Research on natural products has always been divided into two scientific cultures—those of chemists and those of biologists. Chemists isolate and structurally describe large numbers of more or less complex molecules extracted from plants with reputed medical effects. Pharmacists investigate, in animal experiments and in later years in cell culture, the medical effects of plant extracts, which are not defined at the molecular level. ASOMPS and IFS have tried to reduce this scientific dichotomy by encouraging chemists and biologists to form teams in the study of natural products with documented biological effects. Efforts are continuously being made to identify and support biologists in those Asian countries where IFS is active and to link good chemists to biological institutions in countries such as Australia and Japan.

Lennart Prage, former IFS Scientific Secretary
International Office
Swedish University of Agricultural Sciences (SLU)
Uppsala

The grantees pictured here are all active in ASOMPS.

Pictures from top: Bansari Hazra, India, *second left:* Mangala Manandhar, Nepal; Nilufar Nahar, Bangladesh.

In the Field: IFS/MISTRA Collaboration in Latin America

During 2000, the Swedish Foundation for Strategic Environmental Research (MISTRA) agreed to provide funding to IFS in the amount of USD 600,000 for a second, three-year phase of the collaborative programme IFS/MISTRA Networks for Scientists. This funding will allow IFS to pursue the activities initiated in 1996. These have focused on promoting scientific contacts between developing country scientists drawn from the IFS constituency of grantees and Scientific Advisers and Swedish scientists associated with MISTRA. The sphere of mutual interests for these scientists is sustainable food production, and environmental and ecology-related research. The scientific activities have been joint workshops, exchange visits, and the comparison between and sharing of different research methods and techniques. The long-range goal is to build effective international networks for research collaboration.

An important event in 2000 was a field course attended by scientists from Sweden and Latin America working on pest management techniques utilizing natural signal substances, eg pheromones and kairomones. The course took place at the Rio Clarillo National Park Reserve, Chile. After an initial training period, the students chose research topics they would study during their three-week stay, all of which relate to ecology. They include the relationship between insects and flowers, sexual behaviour of insects, colouration in lizards, energy-saving movements in rabbits and quails, thermoregulatory behaviour in ants, and herbivory and fitness of plants. The following abstracts summarize the students' research and their findings

Nectar and petal attraction for pollinators on artificial flowers (A-K Ivarsson & J Larsson). In selecting flowers (*Rubus ulmifolius*) for pollination, what factor is more important to the insect—the presence of honey, or the existence of petals? In one study artificial paper

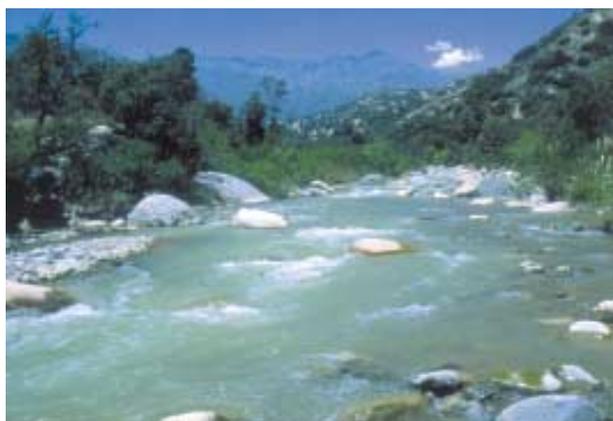


Photo: Mats Pettersson

flowers of different colours were used to re-enforce the visual attraction, and these proved to be far more important than the presence of nectar for attracting hymenopterans, which liked white, red, yellow, and blue artificial flowers attached to *R. ulmifolius*.

Daily activity pattern and abdominal lifting behaviour in *Camponotus* ant (L Borg, C Guerrero-Bosagna & C Nygren). While the ant genus *Camponotus*, found in Rio Clarillo, has been shown to lift its stomach as a thermoregulatory response, this behaviour was not observed by the students in the ant *Cataglyphis rosenhaueri*, in which the daily activity is bimodal.

Sexual competitive behaviour in the pond skipper *Gerris chilensis* (K Rodriguez-Auad, D H Tapia & C A Villagra). Four different behaviour patterns were defined: aggression, grabbing, coupling, and interference. Five experimental treatments (varying adult sex ratios) were used to test this hypotheses. The mate-finding behaviour occurred almost exclusively in males and was non-existent in nymphs. Aggression was highest among nymphs and adult females. Results were discussed in terms of sexual competition among male and intraspecific competition related to resource limitation in nymphs and females.



Photos: Mats Pettersson

Relationships between different characteristics of colouration in *Liolaemus tenuis* during breeding season (G Andersson, A Briançon & A-K Roos). Female and male lizards may possess different morphological colouration during the breeding season. The relationship between throat redness and size in males and females and body colouration and pregnancy amongst females were studied. There was a positive correlation between throat redness and length in females but not in males. This may indicate that males and females with the same colouration may have it for different reasons.

Does herbivory affect reproductive effort in herbaceous plants? (A Lindau and R Trigo-venario). The relationship between herbivorous insect damage on leaves, and the number of flowers or fruits in five plant species were investigated. The species were *Helenium aromaticum* (Asteraceae), *Alstroemeria ligtu* (Alstroemeriaceae), *Gnaphalium robustum* (Asteraceae), *Sonchus oleraceus* (Asteraceae) and *Madia sativa* (Asteraceae). Height, number of flowers, and the degree of damage were measured. No overall significant difference between damaged and non-damaged plants was found, but different responses to herbivory were observed and discussed.

Rabbit (*Oryctolagus cuniculus*) and Californian quail (*Lophortyx californica*) movement patterns on hillsides (A Broby and P Haglind). Animals are restricted in their behaviour by energy budgets, and uphill movement demands more energy than horizontal. It would not be at all surprising if animals living on hillsides consider this in their movement patterns. In this study, tracks of rabbits (*Oryctolagus cuniculus*) and Californian quails (*Lophortyx californica*) were observed in the context of the topography in order to map their patterns of movement; rabbits move more horizontally than vertically. The movement for quails

did not differ significantly. There was a marked difference in movement pattern between the two species, and no correlation between the level of steepness of slope and the propensity for horizontal movement for either species.

Flower morph preferences among insects visiting *Salpiglossis atropurpurea* (Solanaceae) (B Johansson, A Lagerqvist and A Mendizábal). Two different morphs of the flower *Salpiglossis atropurpurea* (Solanaceae) were studied. The hypothesis tested was that there would be a higher insect visitation rate to the normal morph compared to the dark morph. The experimental design included a pair-wise comparison to determine the preference of the visiting insects. The results showed that the normal morph is the most common in the study area, and this morph is also preferred by the insects. This behaviour could result in a directional selection pressure towards more yellow flowers.

This field course was the second scientific event where Swedish and Latin American scientists have been brought together through the IFS/MISTRA Networks for Scientists to discuss biological findings that can be used in pest management strategies. The first was in 1999, when a training programme on plant-insect interaction was held at the University of Chile. Activities included orientation lectures, evening discussions, planning sessions, and a tour to the Rio Clarillo National Park Reserve, where this field course was held. Both the training programme and the field course were valuable opportunities for collaboration between researchers from different countries.

Jan Pettersson, IFS Scientific Adviser
Department of Entomology
Swedish University of Agricultural Sciences (SLU)
Uppsala

About IFS: Building Scientific Capacity in Developing Countries

IFS was founded in 1972 as an independent, non-governmental organization, with the Mandate to contribute to the strengthening of capacity in developing countries to conduct relevant and high quality research on the management, use, and conservation of biological resources. IFS does this by identifying, through competitive grants and a careful selection process, young promising scientists and supporting them in their early careers to enable them to become established and recognized in national and international circles.

Small Research Grants to Individuals

The main kind of support given by IFS is in the form of a research grant—in the maximum amount of USD 12,000—which can be awarded to a researcher up to three times. The grants are used to purchase equipment, supplies, literature, local travel, and extra manpower. IFS awards around 200 grants per year; to date some 3,000 scientists in nearly 100 developing countries have received support.

Services and Opportunities Help Grantees Break the Isolation Barrier

Besides the research grant, IFS grantees are provided with a range of services and complementary financial support that include help in the purchasing of equipment and supplies, as well as participating in scientific networks and collaboration, and scientific meetings and training opportunities. These services and opportunities have been shown to be extremely effective in helping developing country scientists, who often work in isolated research communities, break the isolation barrier.

IFS has an award scheme that gives recognition to IFS grantees for noteworthy achievements associated with research supported by IFS. The IFS/Danida Award and the IFS Jubilee Award are given annually and the Sven Brohult Award, triennially.

Who Qualifies for an IFS Grant?

Since IFS support is intended to facilitate the establishment of young scientists in their research careers, first-time applicants must be under the age of 40



(under 30 for applicants from China) and at the beginning of their research career. They must have an academic degree of not less than an MSc or the equivalent. Applicants have to be citizens of and carry out the research in a developing country.¹

Scientific Advisers: a Major Resource

A real strength of IFS must be attributed to the commitment of the Scientific Advisers, experts in their fields, who contribute their time in advising the Secretariat and Trustees on scientific matters. The Scientific Advisers—they number around 1,000 from all over the world—scrutinize qualifications of the applicant and the scientific merit and feasibility of the proposal, as well as possible environmental and socio-economic issues that need to be considered. The Scientific Advisers are also active in recruiting applicants, visiting and advising grantees, and participating in IFS scientific meetings and workshops. They work in a voluntary capacity.

Getting in Touch with IFS

The IFS Secretariat is located in Stockholm, Sweden. The Secretariat will gladly answer any questions you might have about IFS and can provide you with application forms (in English and French). The application forms are available on the IFS website as well: www.ifs.se. IFS has an electronic newsletter, IFS eNews, which you can subscribe to by contacting IFS at info@ifs.se.

¹ Specifically excluded are countries in Eastern and Central Europe, including Turkey and Cyprus, as well as countries belonging to the former Soviet Union. Uruguay and Argentina are not eligible for first grants. As of 10 January 2002, grantees from Uruguay and Argentina will not be eligible for renewal grants either.



Pictures from far left:

Grantee Liu Jian-Xin, China.
Grantee Antonius Suwanto, Indonesia.
Grantee and Scientific Adviser Akiça Bahri, Tunisia, and grantee Mariam Naciri, Morocco.
Grantee Boumadiane Berrag, Morocco.
Grantee and Scientific Adviser, Nguyen Van Uyen, Viet Nam.

From top of the page:

Patricia Folgarait, Argentina.
Touria ba M'hamed, Morocco.



IFS Awardees

Recognizing that an award scheme can act as an incentive to young researchers, IFS gives a total of up to 20 IFS/Danida and IFS Jubilee Awards every year to grantees who have conducted research with IFS funds. The IFS Awards are given for noteworthy achievements clearly associated with work supported fully or in part by IFS and are in the amount of USD 2,000.

IFS/DANIDA Awards

Dr Anthony BOOTH

Rhodes University, South Africa

Understanding the life history of panga, *Pterogymnus laniarius* (Pisces: Sparidae) from a spatial perspective

Dr Mamadou Lamine DIA

Centre National d'Élevage et de Recherches Vétérinaires, Mauritania

Epidemiology of camel trypanosomiasis *T. evansi* in Mauritania

Dr Oyedapo FAGBENRO

Federal University of Technology, Nigeria

Utilization of winged bean seed meal as a protein source in production diets by clariid catfish (*Clarias gariepinus*)

Dr John Ngong FONWEBAN

Université de Dschang, Cameroon

An operational growth and yield model for management of *Terminalia ivorensis* and *Louva trichiloides* stands in Cameroon

Dr Augustin NKENGFAK

Université de Yaoundé, Cameroon

Chemical studies of the *Erythrina* and some antifungal/antibiotic plants of Cameroon

Silver Jubilee Awards

Prof Abdel-Ali BENSLIMANE

Université Cadi Ayyad, Morocco

Contribution to the genetic improvement of the date palm: analysis of the genomic variability and estimation of the conformity of in vitro plants

Dr Boumadiane BERRAG

Institut Agronomique et Vétérinaire Hassan II, Morocco

The pathology and pathogenesis of small lungworm infections of goats

Dr Patricia FOLGARAIT

Universidad Nacional de Quilmes, Argentina

Colonization and ecological control of *Camponotus punctulatus* ants in recently abandoned rice fields in Argentina

Dr Miguel GOMEZ LIM

Centro de Investigación y de Estudios Avanzados (CINVESTAV) del IPN, Mexico

Molecular characterization of genes involved in mango fruit ripening and softening

Dr Edgar KORNISIUK

Universidad de Buenos Aires, Argentina

Small proteins from mamba snake venoms highly selective for muscarinic receptor subtypes

Prof LIU Shu-sheng

Zhejiang University, China

An investigation of behavioural and ecological variations among populations of *Trichogramma dendrolimi* Matsumura in China

Prof LIU Jian-Xin

Zhejiang University, China

Evaluation of bamboo shoot shell as a supplementary feed to ruminants on ammonium bicarbonate-treated rice straw-based diets

Dr Marcela PASCUAL

Instituto de Biología Marina y Pesquera Almte Storni, Argentina

Oyster culture in the San Matias Gulf

Audited Financial Statement

Statement of Income and Expense

(amounts shown in SEK; USD 1≈10 SEK)

	2000	1999
Income		
Core contributions	27 434 567	27 207 669
Donor restricted contributions	8 412 851	9 774 957
Membership fees	178 183	181 694
Grants withdrawn	1 227 668	994 476
Overhead from restricted programmes	581 300	611 750
Other income	45 068	54 409
Other income - pension insurance carrier (SPP)	3 772 110	0
Total Income	41 651 747	38 824 955
Expense		
Programme Costs		
Research grants	17 755 166	16 374 989
Travel grants	1 686 806	1 978 448
Awards and other grants	349 208	574 827
Network support and local workshop costs	2 052 930	1 760 680
Travel costs, staff and others	1 404 152	2 078 054
Total Programme Costs	23 248 262	22 766 998
Personnel Costs		
Salaries and wages	6 394 908	6 185 511
Payroll taxes, insurance and pension costs	3 121 681	2 631 546
Staff training, health and other benefits	345 708	382 539
Staff recruitment costs	177 681	133 001
Total Personnel Costs	10 039 978	9 332 597
General and Administrative Costs		
Occupancy costs	1 997 015	1 807 558
Other general and administrative costs	3 225 921	2 791 355
Depreciation	100 416	209 655
Total General and Administrative Costs	5 323 352	4 808 568
Total Expense	38 611 592	36 908 163
Surplus	3 040 155	1 916 792
Interest Income and Expense		
Interest and exchange rate income	777 023	612 902
Interest and exchange rate expense	128 914	28 278
Net of Interest Income and Expense	648 109	584 624
Net surplus for the year	3 688 264	2 501 416

Audited Financial Statement

Balance Sheet

(amounts shown in SEK; USD1≈10 SEK)	December 31, 2000	December 31, 1999
Assets		
Furniture and Equipment	0	0
Long-term Assets		
Long-term receivable - pension insurance carrier (SPP)	1 757 546	
Total Long-term Assets	1 757 546	0
Current Assets		
Current Receivables		
Donor receivables	5 362 860	2 686 200
Other receivables	259 054	118 158
Other receivables - pension insurance carrier (SPP)	960 000	
Prepaid expenses and accrued income	1 183 720	685 915
Total Current Receivables	7 765 634	3 490 273
Investments - due within one year	16 834 835	18 831 718
Cash and Bank Balances	4 122 946	1 519 515
Total Current Assets	28 723 415	23 841 506
Total Assets	30 480 961	23 841 506
Fund Balances and Liabilities		
Fund Balances		
Accumulated surplus (deficit), January 1	1 719 098	(782 318)
Surplus for the year	3 688 264	2 501 416
Accumulated surplus, December 31	5 407 362	1 719 098
Current Liabilities		
Research grants and awards payable	18 478 236	18 017 164
Deferred restricted contributions	4 860 598	2 450 879
Accounts payable	609 596	159 961
Other liabilities	215 214	235 890
Accrued expenses	909 955	1 258 514
Total Current Liabilities	25 073 599	22 122 408
Total Fund Balances and Liabilities	30 480 961	23 841 506
Pledged assets	0	0
Contingent liabilities	0	0

Comments on the Financial Statement

For the year 2000, income from 19 Donors totalled SEK 36 million (USD 3.6 million)—an increase of 25% over the past five years. Additional income, including interest, overhead from restricted programmes, and membership fees, totalled SEK 2.8 million (USD 280,000). Total expenses were SEK 39 million (USD 3.9 million) resulting in a breakeven financial result for the year (see the audited financial statement summarized on the preceding pages).

Core funds from Australian Centre for International Agricultural Research (ACIAR); Department for Development Research, Royal Danish Ministry of Foreign Affairs (Danida); Ministère des Affaires Étrangères (MAE), France; Deutsche Forschungsgemeinschaft (DFG), Germany; Norwegian Agency for Development Cooperation (NORAD); Swedish International Development Cooperation Agency, Sida SAREC; and Swiss National Science Foundation (SNSF) accounted for 77% of the Donor contributions, while restricted funds accounted for the remaining 23%.

IFS also had income as a result of a one-time refund from its pension insurance carrier in the amount of SEK 3.8 million (USD 380,000). This refund will be used over the next three years to offset pension insurance costs of the organization.

One hundred and eighty research grants were provided as well as 72 travel grants. Total grant expense was SEK 22 million (USD 2.2 million), which in addition to the research and travel grants, also included literature support, awards for outstanding achievement, and support to grantees through various networks, such as the IFS programme funded through Foundation for Strategic Environmental Research (MISTRA), Sweden.

Funding was provided during the year from the Organisation of Islamic Conference Standing Committee on Scientific and Technological Cooperation (COMSTECH); Consejo Nacional de Ciencia y

Tecnología (CONACYT), Mexico; Swedish International Development Cooperation Agency, Sida NATUR; and United Nations University's Institute for Natural Resources in Africa. Together with IFS support, the awarding of 47 research grants for a total of SEK 2.9 million (USD 290,000) was made possible.

In addition, IFS has received a three-year contract, beginning with 2000, from the European Commission, DG Development. This new source of income, restricted to activities in Asia, the Caribbean, and the Pacific (ACP), co-funded 15 research grants for a total of SEK 1.0 million (USD 100,000). EC support to IFS is part of an EC contribution to a number of research centres of the Consultative Group on International Agricultural Research (CGIAR).

Funding earmarked for the External Evaluation 2000-2001 of IFS was provided by seven Donors: ACIAR (confirmed in 2001), DFID, DFG, MAE, NORAD, Sida SAREC, and SNSF. IFS also received SEK 97,000 (USD 9,700) via IRD from the EU-DG RTD, INCO Programme, for the "Survey of African Scientists," a component of the IFS MESIA project. The DFID and IRD continued their secondment of two staff positions at IFS.

Scientific Meetings

These scientific meetings were attended by grantees, supported by IFS travel grants. The training courses were organized and sponsored by IFS. Some meetings were partially supported by IFS.

ASANET (African Safou Network) Assembly, Yaoundé, Cameroon

ASOMPS X, (Asian Symposium on Medicinal Plants, Spices, and other Natural Products), Dacca, Bangladesh

IFS Training Course: Forestry Research Strategy Formulation, Planning, and Management, Kuala Lumpur, Malaysia

IFS Training Course: Planning and Writing a Research Proposal, Kuala Lumpur, Malaysia

IUFRO (International Union of Forestry Research Organizations) World Conference, Kuala Lumpur, Malaysia

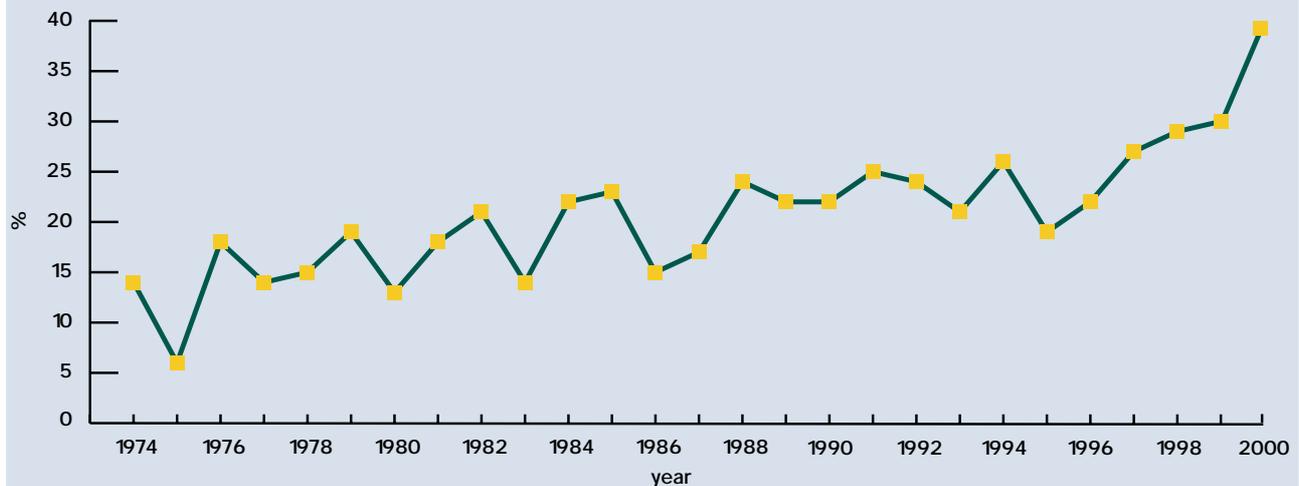
Management of Trees for Farmland Rehabilitation and Development, El Obeid, Sudan

Scientific Research for Sustained Use and Efficient Management of Natural Resources, Manila, the Philippines

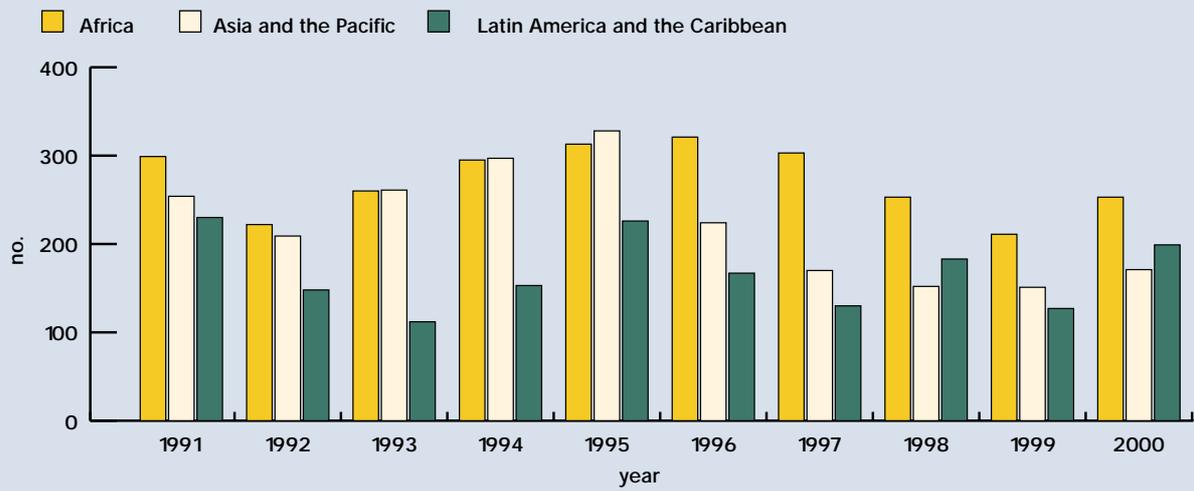
3rd International Crop Science Congress, Hamburg, Germany

XIIIth World Congress on Animal, Plant, and Microbial Toxins, Paris, France

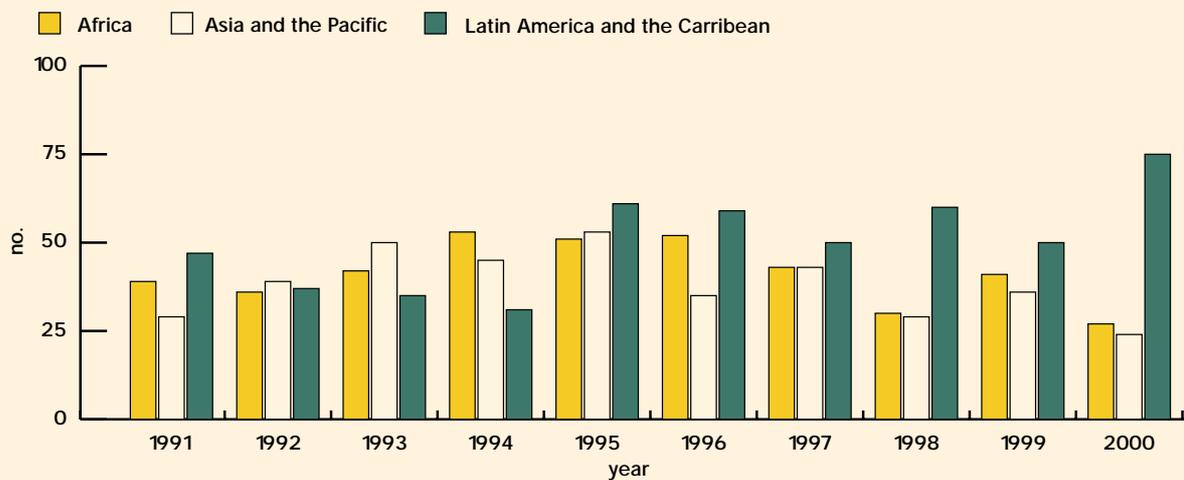
Grants to women (1973-2000)



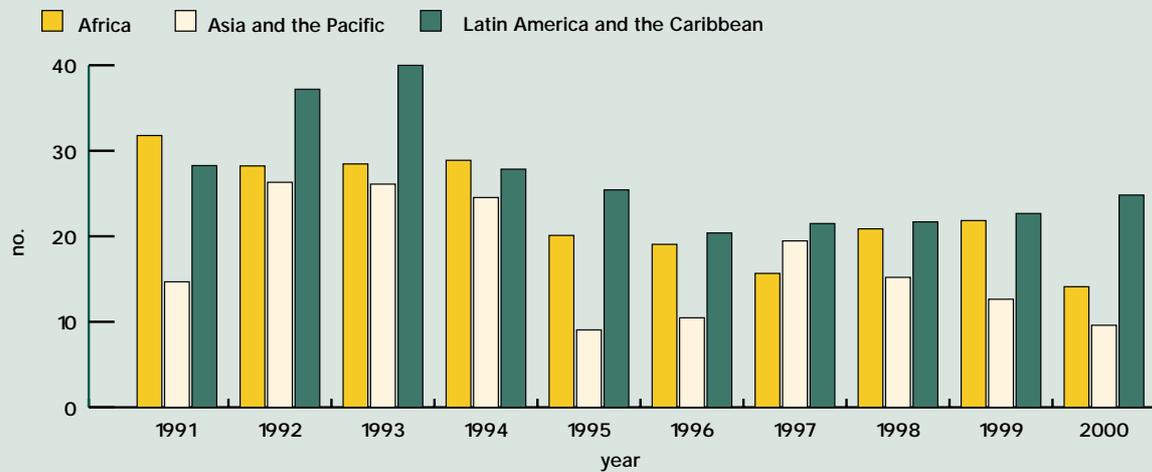
Applications for first grants by geographic region (1991-2000)



First grants awarded by geographic region (1991-2000)



Renewal grants awarded by geographic region (1991-2000)



IFS dans le nouveau millénaire

En mai 2000 la Fondation a organisé une réunion conjointe aux administrateurs, donateurs, conseillers scientifiques et membres du secrétariat, leur permettant de se rencontrer et d'échanger leurs points de vue. Cette rencontre avait pour objectif de mieux faire comprendre le fonctionnement de l'IFS et la finalité de ses activités. Il est apparu que si les allocations de recherche SONT importantes en début de carrière pour les jeunes scientifiques, l'ensemble des services de soutien telles les activités de contact et de mise en réseaux offerts par la Fondation ne l'étaient pas moins. Tous ces efforts visent à permettre aux boursiers de devenir non seulement des scientifiques de premier rang, mais aussi des leaders scientifiques.

En 2000, l'IFS a alloué 180 bourses de recherche (dont 135 nouvelles), dans 40 pays, pour un montant de 1,86 millions de dollars US. La répartition des bourses s'est opérée entre l'Afrique (43), l'Asie et le Pacifique (34) et l'Amérique Latine et les Caraïbes (103). La sur-représentation de cette dernière région provient du fait que l'année 2000 a constitué la dernière opportunité de soumission des premières demandes de bourses pour deux pays du continent : l'Argentine et l'Uruguay. Le nombre de femmes allocataires a représenté 40% de l'ensemble (elles étaient 26% en 1991). De même, 72 allocations de voyages ont été attribuées.

L'année 2000 a également vu l'admission de 13 nouvelles Organisations Membres (6 nationales, 6 internationales et une régionale), portant le nombre des celles-ci à 118, dans 81 pays.

À l'automne, le Comité Exécutif a décidé d'annuler l'organisation de la 9^{ème} Assemblée de l'IFS, partant du principe que les fonds non affectés à cet événement seraient plus utiles s'ils étaient employés pour les scientifiques des pays en développement (PED), par l'attribution de bourses, le renforcement des services

annexes de soutien aux boursiers et le soutien aux réseaux.

Durant mes premiers mois de fonction à l'IFS, je me suis particulièrement attaché à rencontrer les donateurs. Il est important que nous maintenions des contacts privilégiés avec nos principaux donateurs et que nous soyons à l'écoute de leurs opinions et priorités. Nous avons été très satisfaits de recevoir, en 2000, la première allocation de la Commission Européenne. Nous avons également cherché à renforcer notre partenariat avec des organisations-clés. A cet effet, j'ai visité le GCRAI, l'UNESCO, la FAO, l'ICSU et la TWAS pour explorer des moyens de collaboration.

Le Conseil d'Administration et le Comité des donateurs ont décidé de lancer une évaluation externe et ont recruté une équipe hautement qualifiée qui a débuté cette troisième évaluation externe en passant une semaine à la Fondation en septembre dernier. Cela a constitué pour moi, nouveau directeur en charge, une excellente mise en route et nous attendons avec intérêt le rapport de cette évaluation qui nous aidera à mieux cibler nos discussions et définir nos priorités.

Le troisième Forum des Conseillers scientifiques a été organisé à l'automne dernier, en association avec les réunions des Conseils scientifiques. Cela fut l'occasion, pour ces derniers, de donner leur opinion sur l'avenir de l'IFS et de contribuer, ainsi, à l'évaluation.

Le plan de travail pour 2001 a été approuvé par le Comité Exécutif lors de sa réunion de l'automne dernier et sera soumis à l'approbation du Conseil d'Administration qui se tiendra l'automne prochain (cette réunion annuelle ayant été déplacée du printemps à l'automne). Ce plan, qui envisage le renforcement des activités de soutien aux recherches sur les changements globaux, sur la biodiversité et les ressources en eau, sera un document essentiel pour les activités futures de l'IFS. Ce sera également un docu-

ment utile pour informer les Donateurs, les Organisations Membres et les partenaires de l'IFS sur les priorités de la Fondation pour les trois prochaines années.

Durant l'automne dernier, l'IFS a examiné un ensemble de bases de données afin d'évaluer leur pertinence pour les recherches documentaires des boursiers. Concomitamment à cette aide cherchant à faciliter l'accès à une documentation scientifique à jour, une autre activité envisagée par l'IFS vise à former les jeunes scientifiques des PED à préparer leurs propositions de recherche. Au cours des dernières années, la Fondation a organisé des cours sur « comment préparer une demande de bourse ».

Le dernier bulletin de l'*IFS News* traite des femmes dans la science. Cette publication a été remplacée par une lettre électronique trimestrielle, laquelle a été très bien reçue. Le rapport annuel 2000 revêt un nouveau

format. Il fait partie d'un ensemble de documents présentés sous un nouveau design qui, nous l'espérons, contribuera à accroître la visibilité de l'IFS et, par voie de conséquence, à accroître le nombre des demandes de bourses, de même qu'à renforcer les activités annexes de soutien aux boursiers et à élargir les bases de financement de la Fondation. Au nom de l'IFS, j'aimerais remercier mon prédécesseur Björn Lundgren pour son important travail et pour sa coopération. J'aimerais aussi exprimer ma reconnaissance à l'ancien Président du Conseil d'Administration Ebbe Schiøler et souhaiter la bienvenue à son successeur, Bruno Messerli.

Thomas Rosswall
Directeur

La IFS en el nuevo milenio

En mayo de 2001 la IFS organizó una Reunión Conjunta, en donde los consejeros, donadores, asesores científicos y los miembros del consejo de administración tuvieron la ocasión de discutir e intercambiar sus opiniones en torno a la IFS. Fue una oportunidad para construir una plataforma común con el fin de entender cómo funciona la IFS y por qué hacemos lo que hacemos. Es indiscutible que las becas que otorga la IFS a los jóvenes científicos son claves para su desarrollo como investigadores al igual que son importantes los contactos y relaciones que establecen, además de otros servicios que les ofrece la IFS. Todos estos esfuerzos se hacen con el fin de que los becarios se conviertan no sólo en científicos líderes en su campo sino también líderes científicos.

Durante el año 2000 la IFS otorgó 180 becas, 135 de las cuáles eran primeras becas para becarios en 40 países (un total de 1.86 millones de dólares EU). De estas becas 43 fueron para científicos en África, 34 en Asia y el Pacífico, y 103 para Latinoamérica y el Caribe. Proporcionalmente el número de becas otorgadas para Latinoamérica es más alta. Esto se debe probablemente a que este fue el último año donde se aceptaron solicitudes de Argentina y Uruguay para primeras becas resultando en un alto número de solicitudes de estos dos países. Durante el 2000, 40% de los becarios fueron mujeres, mostrando un incremento de 26% comparado con 1991. Finalmente, 72 becas para viaje fueron otorgadas en el 2000.

La IFS cuenta con 118 organizaciones miembros (OM) en 81 países. En el 2000, seis organizaciones nacionales, una regional y seis internacionales fueron aceptadas como miembros.

En el otoño el Comité Ejecutivo canceló los planes para organizar la Novena Asamblea de la IFS. Consideraron que los recursos para la Asamblea podrían aprovecharse mejor apoyando a científicos de

los países en desarrollo mediante más becas, mejorando servicios de apoyo y fortaleciendo redes de comunicación.

Durante mis primeros meses en el puesto hice un esfuerzo especial por conocer a los donantes. Es importante que tengamos relaciones estrechas con los donadores clave para escuchar sus opiniones y prioridades. Anunciamos gustosos de haber recibido nuestra primera beca de la Comisión Europea. También nos hemos enfocado en fortalecer relaciones con organizaciones clave. He visitado la CGIAR, UNESCO, FAO, ICSU y el TWAS para averiguar vías de colaboración.

Los consejeros de administración y donantes de la IFS consideraron importante someternos a una evaluación externa la cual se llevo a cabo por un equipo sumamente capaz. La tercera evaluación externa empezó en septiembre con una semana en Estocolmo. En lo personal, como nuevo Director, fue bueno comenzar al mismo tiempo que la evaluación y aguardamos el reporte con entusiasmo ya que seguramente nos ayudará a enfocar nuestras discusiones y establecer prioridades.

En el otoño se organizó el Tercer Foro de Consejeros de la IFS en conjunción con las Reuniones del Comité de Consejeros Científicos. Esto fue una excelente oportunidad para que los consejeros científicos titulares contribuyeran con sus opiniones acerca del futuro del IFS y sus comentarios acerca de la evaluación.

En su junta otoñal el Comité Ejecutivo aprobó el Plan de Trabajo del IFS del 2001 y se espera la aprobación del Consejo de Administración el próximo otoño (su reunión anual ha sido recorrida de la primavera). El Plan de Trabajo incluye la posibilidad de apoyar investigación en las áreas de cambios global, biodiversidad y recursos de agua, y será un

documento esencial para nuestras actividades en el futuro. Igualmente será útil para nuestros donantes, organizaciones miembros y socios de la IFS como fuente de información acerca de nuestras prioridades para los siguientes tres años.

En el otoño la IFS analizó varios servicios de base de datos para ofrecer a sus becarios búsquedas de literatura. Además de ofrecer literatura científica actualizada es importante que la IFS ayude a los científicos jóvenes en países en desarrollo a capacitarse en como preparar propuestas de investigación. El año pasado la IFS organizó cursos de cómo llenar solicitudes para becas de investigación. Ambos son ejemplos de cómo la IFS ayuda a que los becarios se conviertan en científicos líderes y líderes científicos.

El último número de Noticias de la IFS se dedicó a las mujeres en la ciencia. El boletín tradicional fue

reemplazado por un boletín electrónico cuatrimestral el cual fue muy bien recibido. El Reporte Anual 2000 de la IFS tiene una nueva apariencia y formato. Esto es parte de una nueva imagen gráfica la cual quisieramos aumente la visibilidad de la IFS. Con esto esperamos incrementar el número de solicitudes, fortalecer las actividades de apoyo a los becarios, y ampliar nuestra base de financiamiento gracias al interés, generosidad y el compromiso de nuestros donadores. A nombre de la IFS, quisiera darle las gracias a mi antecesor Bjorn Lundgren, por su excelente trabajo y cooperación. Igualmente quisiera agradecer al previo presidente del Consejo de Administración, Ebbe Schioler, y darle la bienvenida a su sucesor, Bruno Messerli.

Thomas Rosswall
Director

Member Organizations

National Organizations

Argentina

- Academia Nacional de Ciencias Exactas, Físicas y Naturales
- Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)

Australia

- Australian Academy of Science

Austria

- Fonds zur Förderung der wissenschaftlichen Forschung
- Österreichische Akademie der Wissenschaften

Bangladesh

- Bangladesh Council of Scientific and Industrial Research (BCSIR)

Belgium

- Académie Royale des Sciences d'Outre-Mer
- Académie Royale des Sciences des Lettres et des Beaux-Arts de Belgique
- Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België

Bolivia

- Academia Nacional de Ciencias de Bolivia

Brazil

- Academia Brasileira de Ciências (ABC)
- Conselho Nacional de Desenvolvimento Científico e Tecnológico
- Fundação Oswaldo Cruz

Burkina Faso

- Ministère des Enseignements Secondaire, Supérieur et de la Recherche Scientifique

Cameroon

- Ministry of Scientific and Technical Research

Canada

- The Royal Society of Canada

Central African Republic

- Ministère des Enseignements de la Coordination des Recherches et de la Technologie

Chad

- Direction de la Recherche Scientifique et Technique, MESRS

Chile

- Academia Chilena de Ciencias

- Comisión Nacional de Investigación Científica y Tecnológica (CONICYT)

China

- Chinese Academy of Sciences (CAS)

Colombia

- Academia Colombiana de Ciencias Exactas, Físicas y Naturales
- Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (CIPAV)
- Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales (COLCIENCIAS)

Congo

- Direction Générale de la Recherche Scientifique et Technique, MENRST

Costa Rica

- Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICIT)

Côte d'Ivoire

- Fédération des Associations Scientifiques de Côte d'Ivoire

Cuba

- Academia de Ciencias de Cuba
- Ministry for Foreign Investment and Economic Cooperation

Denmark

- Akademiet for de Tekniske Videnskaber
- Det Kongelige Danske Videnskaberne Selskab

Ecuador

- Fundación para la Ciencia y la Tecnología (FUNDACYT)

Egypt

- Academy of Scientific Research and Technology

El Salvador

- Consejo Nacional de Ciencia y Tecnología (CONACYT)

Ethiopia

- Ethiopian Science and Technology Commission (ESTC)

Finland

- Delegation of the Finnish Academies of Science and Letters

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- Académie des Sciences
- Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)
- Institut National de la Recherche Agronomique (INRA)

- Institut de Recherche pour le Développement (IRD, formerly ORSTOM)

Germany

- Deutsche Forschungsgemeinschaft

Ghana

- Council for Scientific and Industrial Research

Guinea

- Direction Nationale de la Recherche Scientifique et Technique

Guinea-Bissau

- Instituto Nacional de Estudos e Pesquisa

Guyana

- Institute of Applied Science and Technology

Haiti

- Unité de Science et de Technologies Appliquées

India

- Indian National Science Academy

Indonesia

- Lembaga Ilmu Pengetahuan Indonesia (LIPI)

Israel

- The Israel Academy of Sciences and Humanities

Jamaica

- Scientific Research Council

Jordan

- Royal Scientific Society

Kenya

- Kenya National Academy of Sciences

Korea R

- National Academy of Sciences

Kuwait

- Kuwait Institute for Scientific Research

Latvia

- Latvian Academy of Sciences

Lesotho

- The National University of Lesotho

Liberia

- University of Liberia

Madagascar

- Académie Malgache

Malawi

- Ministry of Research and Environmental Affairs

*National Organizations, continued***Malaysia**

- Malaysian Scientific Association
- National Council for Scientific Research and Development

Mexico

- Consejo Nacional de Ciencia y Tecnología (CONACYT)

Morocco

- Centre National de Coordination et de Planification de la Recherche Scientifique et Technique (CNR)
- Institut Agronomique et Vétérinaire Hassan II

Mozambique

- Universidade Eduardo Mondlane
- The Scientific Research Association of Mozambique (AICIMO)

Nepal

- Royal Nepal Academy of Science and Technology

Netherlands

- Koninklijke Nederlandse Akademie van Wetenschappen

Niger

- Université Abdou Moumouni

Nigeria

- Federal Ministry of Science and Technology
- The Nigerian Academy of Science

Norway

- Det Norske Videnskaps-Akademi

Pakistan

- Pakistan Council for Science and Technology

Panama

- Secretaria Nacional de Ciencia y Tecnología e Innovación (SENACYT)
- Universidad de Panamá

Papua New Guinea

- The University of Papua New Guinea

Peru

- Consejo Nacional de Ciencia y Tecnología (CONCYTEC)

Philippines

- National Research Council of the Philippines

Poland

- Polish Academy of Sciences

Saudi Arabia

- King Abdulaziz City for Science and Technology

Senegal

- Délégation aux Affaires Scientifiques et Techniques, MRST

Seychelles

- National Research and Development Council

South Africa

- Foundation for Research Development

Sri Lanka

- National Science Foundation

Sudan

- National Centre for Research

Sweden

- Ingenjörsvetenskapsakademien (IVA)
- Kungliga Skogs- och Lantbruksakademien (KSLA)
- Kungliga Vetenskapsakademien (KVA)

Switzerland

- Conference of the Swiss Scientific Academies
- Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung

Tanzania

- Tanzania Commission for Science and Technology (COSTECH)

Thailand

- National Research Council
- The Thailand Research Fund (TRF)

Tunisia

- Direction Générale de la Recherche Scientifique et Technique, MES

Uganda

- Uganda National Council for Science and Technology

United Kingdom

- The Royal Society
- Natural Resources Institute (NRI)

Uruguay

- Programa de Desarrollo de las Ciencias Básicas (PEDECIBA)

USA

- American Academy of Arts and Sciences
- National Academy of Sciences
- New York Academy of Sciences

Venezuela

- Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICIT)

Viet Nam

- Ministry for Science, Technology and Environment (MOSTE)

Zambia

- National Council for Scientific Research

Zimbabwe

- University of Zimbabwe

Regional & International Organizations

- Third World Academy of Sciences (TWAS)
- International Service for National Agricultural Research (ISNAR)
- International Union of Forestry Research Organizations (IUFRO)
- Association of African Universities (AAU)
- The African Academy of Sciences (AAS)
- Western Indian Ocean Marine Science Association (WIOMSA)
- Center for International Forestry Research (CIFOR)
- International Board for Soil Research and Management (IBSRAM)
- Consultative Group on International Agricultural Research (CGIAR)
- International Organization for Chemical Sciences in Development (IOCD)
- Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)
- The Caribbean Academy of Sciences (CAS)
- Caribbean Agricultural Research and Development Institute

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