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Enabling poor rural people to overcome poverty

President's report on proposed grants under the global/regional grants window to CGIAR-supported international centres

Note to Executive Board representatives

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Annexes

Abbreviations and acronyms

CAADP	Comprehensive Africa Agriculture Development Programme
CGIAR	Consultative Group on International Agricultural Research
FAO	Food and Agriculture Organization of the United Nations
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFPRI	International Food Policy Research Institute
IPPM	Integrated Production and Pest Management
M&E	monitoring and evaluation
NAIP	national agricultural investment plan
NARS	national agricultural research system
ReSAKSS	regional strategic analysis and knowledge support system
SAKSS	Strategic Analysis and Knowledge Support System
SAT	semi-arid tropics

Recommendation for approval

The Executive Board is invited to approve the recommendation for grants under the global/regional grants window to CGIAR-supported international centres as contained in paragraph 7.

President's report on proposed grants under the global/regional grants window to CGIAR-supported international centres

I submit the following report and recommendation on three proposed grants for agricultural research and training to Consultative Group on International Agricultural Research (CGIAR)-supported international centres in the amount of US$4.1 million.

Part I – Introduction

1. This report recommends the provision of IFAD support to the research and training programmes of the following CGIAR-supported international centres: Bioversity International; International Crops Research Institute for the Semi-Arid Tropics (ICRISAT); and International Food Policy Research Institute (IFPRI).

2. The documents of the grants for approval by the Executive Board are contained in the annexes to this report:

   (i) Bioversity International: Improving Productivity and Resilience for the Rural Poor through Enhanced Use of Crop Varietal Diversity in Integrated Production and Pest Management (IPPM);

   (ii) International Crops Research Institute for the Semi-Arid Tropics (ICRISAT): Sustainable Management of Crop-based Production Systems for Raising Agricultural Productivity in Rainfed Asia; and

   (iii) International Food Policy Research Institute (IFPRI): Technical and Capacity Strengthening for Country-level Strategic Analysis and Knowledge Support Systems (SAKSS) in Selected African Countries.

3. The objectives and content of these applied research programmes are in line with the evolving strategic objectives of IFAD and the Fund's policy for grant financing.

4. The overarching strategic goal that drives the Revised IFAD Policy for Grant Financing, which was approved by the Executive Board in December 2009, is to promote successful and/or innovative approaches and technologies, together with enabling policies and institutions, that will support agricultural and rural development, empowering poor rural women and men in developing countries to achieve higher incomes and improved food security.

5. The policy aims to achieve the following outputs: (a) innovative activities promoted and innovative technologies and approaches developed in support of IFAD's target group; (b) awareness, advocacy and policy dialogue on issues of importance to poor rural people promoted by, and on behalf of, this target group; (c) capacity of partner institutions strengthened to deliver a range of services in support of poor rural people; and (d) lesson learning, knowledge management and dissemination of information on issues related to rural poverty reduction promoted among stakeholders within and across regions.

6. The proposed programmes are in line with the above-mentioned goal and outputs.

   (i) The programme on Improving Productivity and Resilience for the Rural Poor through Enhanced Use of Crop Varietal Diversity in IPPM is fully in line with the revised grant policy, and is particularly relevant to achieving its four outputs. The grant proposal is also consistent with the IFAD Strategic Framework 2011-2015, as it will contribute to achieving several of the strategic objectives, especially in: providing a natural resource base that is more resilient to climate change and environmental degradation; reducing poverty, improving nutrition and building resilience in a changing environment; supporting rural producers' organizations; and influencing policies and institutions.

   (ii) The programme on Sustainable Management of Crop-based Production Systems for Raising Agricultural Productivity in Rainfed Asia supports pro-poor research and development in partnership with national agricultural research systems (NARS) and IFAD loan projects, following a participatory approach and keeping smallholder farmers at centre stage, while producing international public goods, promoting market-oriented development in rainfed agriculture, empowering farmers and their families in sustaining resilient and productive rainfed cropping systems and harnessing diverse income-generating opportunities.

   (iii) The programme on Technical and Capacity Strengthening for Country-level Strategic Analysis and Knowledge Support Systems (SAKSS) in Selected African Countries is in line with IFAD's grant policy and supports its four main outputs. It is also consistent with IFAD's corporate priorities as it directly supports the objectives and outputs of the IFAD Strategic Framework 2011-2015, especially through "Enabling institutional and policy environments to support agricultural production and the full range of related non-farm activities," as well as "Improved policy and regulatory frameworks at local, national and international levels".

Part II – Recommendation

7. I recommend that the Executive Board approve the proposed grants in terms of the following resolutions:

   RESOLVED: that the Fund, in order to finance, in part, the programme on Improving Productivity and Resilience for the Rural Poor through Enhanced Use of Crop Varietal Diversity in Integrated Production and Pest Management (IPPM), shall make a grant not exceeding one million United States dollars (US$1,000,000) to Bioversity International for a three-year programme upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board herein.

   FURTHER RESOLVED: that the Fund, in order to finance, in part, the Sustainable Management of Crop-based Production Systems for Raising Agricultural Productivity in Rainfed Asia, shall make a grant not exceeding one million and five hundred thousand United States dollars (US$1,500,000) to the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) for a four-year programme upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board herein.

FURTHER RESOLVED: that the Fund, in order to finance, in part, the programme for Technical and Capacity Strengthening for Country-level Strategic Analysis and Knowledge Support Systems (SAKSS) in Selected African Countries, shall make a grant not exceeding one million six hundred thousand United States dollars (US$1,600,000) to the International Food Policy Research Institute (IFPRI) for a three-year programme upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board herein.

Kanayo F. Nwanze
President

Bioversity International: Improving Productivity and Resilience for the Rural Poor through Enhanced Use of Crop Varietal Diversity in Integrated Production and Pest Management (IPPM)

I. Background

1. Much of the 30 per cent of the world's annual harvest lost to pests and diseases occurs in developing countries. When farmers sow cultivated varieties with uniform resistance to a pest or disease, crops can become susceptible to attack by pathogens able to overcome resistance, and epidemics can result. Breeding programmes exist to develop new varieties and to replace varieties that have lost their resistance, but the maintenance cost of the current system is high, particularly for developing countries.

2. Crop varietal diversity, including the indigenous and other knowledge farmers have acquired to manage this diversity, is one of the few assets available to poor farmers in developing countries to meet their livelihood needs. These small-scale farmers in developing countries, who make up 45-60 per cent of the world's rural "dollar poor" (the proportion of people living on less than a dollar a day), continue to depend on local crop genetic diversity and the associated knowledge in order to survive. The use of this diversity of traditional crop varieties continues to be part of the disease management strategy in genetically diverse systems.

3. Enabling resource-poor farmers to generate and maintain crop populations or sets of crop varieties that are less susceptible to new pathogens or to mutations of existing pathogens, as part of an IPPM strategy, means that their production systems will be more resilient to changes in pest and disease infestations, giving rural farmers increased adaptive capacity in their local production systems to buffer against unpredictable environmental change. This will not only reduce current crop loss and maintain yield stability, but also reduce the risk of genetic vulnerability or the potential for crop damage in the future. By providing rural households and extension services with an alternative to pesticides, many of which pose health hazards, farmers will have a reduced need for expensive chemical inputs.

II. Rationale and relevance to IFAD

4. Pesticide use is increasing all over the world, leading to serious harmful impacts on human and environmental health. Combating epidemics once they occur is costly to society, both in terms of garnering the resources necessary to control them and of compensating for the yield losses incurred. For developing countries and resource-poor farmers, compensation, in the form of crop insurance, is usually not economically viable. Pesticides are prohibitively expensive for poor farmers and their inappropriate use damages human health and ecosystem stability.

5. In 2002 a team of international and national experts from China, Ecuador, Morocco and Uganda met to discuss ideas on how traditional and modern crop varietal diversity could be used within crop production and pest management strategies to reduce current, and the potential for future, crop damage from pest and diseases. Each of the four countries contains areas of important traditional varietal diversity for an agreed set of six target crops: rice, maize, barley, common bean, fava bean,

banana and plantain,[1] with each country having different types of resistance to major pests and pathogens in their local crop varieties, maintained in traditional farming systems. The six target crops selected are major nutritional staples for large segments of poor people in the developing world, and their yield stabilities are important factors in food security for the poor in these countries. Each of the four countries has at least two of their target crops in common with one of the other countries, thus linking diversity of primary centres of diversity to secondary centres.

6. During the last eight years, the United Nations Environment Programme/Global Environment Facility (UNEP/GEF), the Swiss Agency for Development and Cooperation and the Plant Production and Protection Division of the Food and Agriculture Organization of the United Nations (FAO) have funded: (i) investigation of farmers' knowledge and practices; (ii) cross-site on-farm trials; (iii) field and laboratory trials; (iv) economic analysis of the trade-offs of crop genetic resources compared with other management methods to reduce pest and disease damage; and (v) analyses of legal regulations, policies and institutions using a policy-framework analysis method developed by the partners. The previous phase of this programme was approved as a continuous five-year effort, but only three years of planned activities were funded due to an unexpected shortfall in GEF funds. The programme has had a formal external evaluation by UNEP/GEF; the major recommendation of the evaluation was the funding of a second phase.[2]

7. The proposal is fully in line with the revised grant policy, and is particularly relevant to achieving the policy's desired outputs. It is also consistent with the IFAD Strategic Framework 2011-2015, as it will contribute to achieving several of the strategic objectives. In terms of thematic areas, it is particularly relevant to: natural resources (biodiversity), climate change adaptation, technical skills development and support to rural producers' organizations.

III. The proposed programme

8. The overall goal of the programme is to sustain food production and improve ecosystem health through the improved use of crop genetic diversity within the production system. The programme's three main objectives are to:

   - Improve crop productivity for poor women and men farmers by reducing crop loss from pest and disease damage through the increased availability and use of crop genetic diversity within farmers' production systems;
   - Reduce genetic vulnerability of crops in farmers' fields to future pest and disease attacks;
   - Reduce smallholder farmers' costs, through the use of crop genetic diversity in the production system, as a viable alternative for reducing or replacing pesticide use.

9. The target group and major beneficiaries are local, indigenous and minority ethnic communities in China, Ecuador, Morocco and Uganda. Women researchers and decision makers are key beneficiaries, as they are actively sought for leadership, management and research roles in the programme. Farmers are direct beneficiaries

[1] The set of crops was also chosen with a view to representing different breeding systems (cross-pollinated, partially outcrossing, self-pollinated, clonal), as differences between varieties would be expected to be less prominent in cross-pollinated crops than in self-pollinated ones. Banana and plantain, as a result of their sterility, have followed a clonal crop improvement strategy, with farmers doing most of the selection breeding. Pests and pathogens cover those that are determined by major and minor genes (one gene or a complex of genes provide resistance), seed-borne, soil-borne and air-borne diseases, and pathogens or pests affecting different plant organs (aerial and roots). Moreover, the life cycles of major pests and diseases affecting these crops are well studied. In this way, the host/pest or host/pathogen interactions within this programme are representative of a much larger set of interactions, allowing for scaling up.

[2] The evaluator stressed that unless a second phase takes place, "a significant amount of important work will be lost with little possibility of realizing the full potential of many of the trials, experiments, training, outreach and analysis that have been initiated and implemented over the first three years."

and implementers of the use of crop genetic diversity in their production systems, and their participation is crucial to the programme – both as implementers and as decision makers helping to establish research and development activities. Farmers, extension workers, local educational institutions and community-based organizations will benefit from representative partnerships with local and national researchers.

10. The three-year programme will comprise three main components:

- **Practices and procedures to determine and optimally use crop genetic diversity to reduce pest and disease pressures**. Under this component, scientists and farmers will work together to test practices and procedures using crop genetic diversity to reduce these pressures.
- **Enhanced pro-poor capacity and leadership of farmers and other stakeholders to use local crop genetic diversity to manage pests and diseases**. This component continues leadership- and capacity-building of indigenous and local communities to enable them to participate more effectively in local and national decision-making forums, including actively increasing the number of women in management, research and decision-making roles.
- **Scaling up of genetic-diversity-rich methods to reduce crop damage and sharing of the benefits derived**. This component centres on implementation of actions to support scaling up of these methods for limiting damage caused by pests and diseases and sharing of the resulting benefits.

11. The approach complements and extends IPPM practices and strategies by using and managing traditional crop varieties themselves as a key resource, making use of intraspecific diversity among the varieties maintained by farmers. The techniques and approaches used are being developed and will be scaled up and replicated for areas and crops beyond those selected for the programme. This scaling up will be possible through collaboration with FAO's network of Farmer Field Schools, and through linkages with national agricultural and environmental extension programmes through the CGIAR Systemwide Program on Integrated Pest Management (www.spipm.cgiar.org) and the ecosystem services component of CGIAR Research Program 5: Water, Land and Ecosystems (www.iwmi.cgiar.org/CRP5/BB7.aspx).

IV. Expected outputs and benefits

12. The programme will provide three major outputs:

- **Practices and procedures that optimally use crop genetic diversity to reduce pest and disease pressures,** which consist of (i) evaluation and promotion of farmers' ongoing practices and local crop materials that reduce pest and disease damage; (ii) development of intraspecific mixtures or variety sets with non-uniform resistance; and (iii) integration of national resistance-breeding procedures with farmer selection practices and local material and participatory breeding practices to improve other production and quality traits (including taste and grain quality) of locally-resistant varieties and the resistance of locally adapted non-resistant varieties.
- **Enhanced capacity of farmers and other stakeholders to use local crop genetic diversity to manage pest and pathogen pressures.** Leadership skills and capacity of indigenous and local communities built – for more-effective participation in local and national decision-making forums, including more women in management, research and decision-making roles. Capacity and leadership skills specifically targeted towards "mid-level" institutions, i.e., local- or site-level educational, technical and research institutes.

- **Actions that support the adoption and benefit-sharing of genetic-diversity-rich methods for limiting damage caused by pests and diseases.** This includes: (i) agricultural extension packages that contain local crop genetic diversity; (ii) improved and increased access to diversity-rich seeds and other planting materials; (iii) education curricula adapted to include the use of local crop genetic diversity; and (iv) benefit-sharing protocols developed for genetic material and new methods of diversity management among farmer communities and national programmes.

13. Major outcomes envisioned from the outputs produced will be:

- Increased human capital of men and women farmers improves their incomes through the development of skills, knowledge and an enabling environment for using crop biodiversity to reduce crop loss from pests and diseases.
- National natural resource managers support and create partnerships with small-scale farmers, who use crop biodiversity to reduce vulnerability in their production system while maintaining productivity.
- Consumer and retailer norms and behaviours support agricultural production systems that reduce vulnerability and promote continued productivity through enhanced ecosystem services.
- Policies, legal measures and incentives support production systems with less dependence on external inputs.

V. Implementation arrangements

14. The programme management and implementation structure is based on each country's national policies and organizational set-up. The project management unit (PMU) has a national project director, national project manager, national project assistant and technical or thematic advisors. National PMUs are already operative in each country. Country partners have also established committees at national and site levels in each country for better coordination of programme activities: a national steering committee (NSC), site coordination committee, national teams of technical or thematic experts, and site teams. Over the past three years, these committees have operated regularly and met at least once a year.

15. Bioversity International will serve as the executive agency at the global level. It will oversee global programme management, located at its headquarters in Rome and supported by staff in its regional offices. Global programme management will be under the overall management of its Agricultural Biodiversity and Ecosystem Project Coordinator. Bioversity International is responsible and accountable to IFAD for grant funds transferred to the implementing partners, including provision of consolidated audit reports. This will also be reflected in the partner agreements (memorandums of understanding) between the grant recipient and its implementing partners.

16. An international steering committee (ISC) has been established. Membership includes representation of each of the national PMUs (national project director), Bioversity International (executing agency), and representatives of the international partners (FAO, IFAD and Washington State University). ISC responsibilities include: reviewing progress and financial reports and annual summary progress reports, providing policy guidance to the programme, assisting PMUs in developing linkages with other related projects, and overall guidance for the programme implementation.

17. NSCs have been established and have responsibility for: approval of programme planning and monitoring at the national level; review of progress and financial reports and annual summary reports; advising the national PMU on implementation problems and suggesting suitable modifications to the subsequent work plan. NSCs include representation of: Ministries of Agriculture and of the Environment, national

executing agencies, including national project directors, local institutions, NGOs, farmers' organizations and/or farmers. IFAD country staff will be invited to participate in NSC meetings.

VI. Indicative programme costs and financing

18. The total cost of this three-year programme is US$3.09 million, of which US$1.0 million is sought from IFAD. Collaborative support in cash and in kind has already been secured from the national partners: China, Ecuador, Morocco and Uganda. In addition, cofunding has also been confirmed from the Swiss Agency for Development and Cooperation. Cofinancing of US$500,000 has been received from the European Commission (EC)/IFAD CGIAR Programme.

Summary of budget and financing plan
(Thousands of United States dollars)

Number	*Type of expenditure*	*IFAD*	*Cofinancing*
1	Personnel	120	251
2	Consultancies	14	29
3	Travel	53	111
4	Contracts with national partners	560	1 170
5	Training and fellowships	14	29
6	Conferences and meetings	43	90
7	Supplies and services	52	109
8	Publications	14	29
	Subtotal	870	1 818
9	Overhead	130	272
	Total	**1 000**	**2 090**

Note: All funds under the budget line "Contracts with national partners" are funds transferred to national PMUs through standard letters of agreement. Funds under "Training and fellowships" and "Conferences and meetings" are used for regional and global activities that involve participation by national partners.

Results-based logical framework

	Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
Goal	Sustain food production and improve ecosystem health through improved use of crop genetic diversity within the production system	• 10% of the families in 31 indigenous communities have a more stable food supply of project crops. Diversity-rich practices substitute pesticide use in 31 local and indigenous communities.	Project reports that include quantification of reduced crop loss and cost savings from reduced pesticide use.	Stable and favourable political environment Committed policy makers and partners
Objectives	(1) Improve crop productivity for poor women and men farmers, by reducing crop loss from pest and disease damage through the increased availability and use of crop genetic diversity within the farmers' production systems. (2) Reduce genetic vulnerability of crops to future pest and disease attacks in smallholder farmers' fields. (3) Reduce smallholder farmers' costs, through the use of crop genetic diversity in the production system, as a viable alternative to reduce or substitute for pesticide use	• Crop losses reduced by 10% from reduced disease and pest damage for at least 20% of the farms in project sites. • Increased number of different landraces with different resistance available to farmers • A portfolio of diversity-rich practices provide alternatives to pesticide use to minimize crop damage in project sites.	Report comparing baseline data to final project survey data	Target crop host resistance exists/available in countries Farmers, stakeholders open to adoption of diversity-rich approaches
Outputs	(1) Practices and procedures that optimally use crop genetic diversity to reduce pest and disease pressure (2) Enhanced capacity of farmers and other stakeholders to use local crop genetic diversity to manage pest and pathogen pressures (3) Actions that support the adoption and benefit sharing of genetic diversity-rich methods for limiting damage caused by pests and diseases.	• At least two diversity-rich practices or options developed for each of the six target crops • Damage abatement framework in place to estimate the value of diversity-based approach • Farmer associations per site, and 2 male and female farmer representatives in decision fora • Breeding programmes have increased use of local-diversity and indigenous knowledge. • Benefit sharing mechanisms among farmer communities and national programs adopted	Technical reports of field trials of diversity-rich options Published manual Report and papers from involved partners Community feedback Training manuals, lecture notes and presentations Extension service packages Policy guidelines	Decision makers are open to adoption of diversity-rich approaches to manage pest and disease damage Commitment of the project partners is ensured and farmers are receptive.
Key Activities	(1) Identify/evaluate/promote farmers' practices, local crop materials (2) Develop intra-specific mixtures and participatory resistance breeding using farmer selection practices (3) Increase gender equity in project management (4) Enhance leadership and knowledge of farmers to take decisions on pest and disease management (5) Reinforce local farmer organizations in seed activities and increase access to diversity-rich seeds (6) Build local institutional capacity to sustain activities (7) Devise agricultural extension packages that contain local crop genetic diversity (8) Establish benefit-sharing protocols for genetic material and new methods of diversity management.	• Number of farmer practices evaluated, mixtures developed, and participatory plant breeding experiments. • Number of women and men in leadership courses, and technical courses on pest and disease management. • Number of diversity fairs, community seed banks, farmer cross site visits. • Number of revised extension packages • Number of benefit sharing mechanisms developed	Project reports, project brochures, Project WEB site.	Commitment of the project partners is ensured and farmers are receptive.

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT): Sustainable Management of Crop-based Production Systems for Raising Agricultural Productivity in Rainfed Asia

I. Background

1. Food production would need to increase by 70 per cent to meet the demand of the world's growing population, expected to reach 9.1 billion by 2050. In developing countries, 80 per cent of the necessary production increase would have to come from increases in yield and cropping intensity and only 20 per cent from expansion of arable lands. The scope for increase in arable area in Asia is very limited. Rainfed agriculture, which is practised on more than 80 per cent of the world farm area and currently generates almost 60 per cent of the world's staple food, will have to play a greater role in ensuring future food security and economic development, particularly in developing countries. However, the low and variable productivity of these lands remains a major concern and a cause of rural poverty.

2. Of the 1.4 billion people living in the semi-arid tropics (SAT), 560 million (40 per cent) are classified as poor and 70 per cent of the poor reside in rural areas. Each 1 per cent increase in global agricultural productivity leads to a decrease in the percentage of people living on less than a dollar a day of between 0.6 and 1.2 per cent. If rural poverty is to be eliminated, it is imperative to improve the overall productivity and sustainability of rainfed agriculture.

3. IFAD-supported grant projects implemented by ICRISAT in the recent past have generated new or improved agricultural technologies suitable to semi-arid areas. These include: drought-tolerant crop varieties; low-cost production technologies; introduction of new cropping seasons (summer groundnut in India, autumn-winter groundnut in Viet Nam); and introduction of new crops (*kabuli* chickpea in tribal areas of India, groundnut in Nepal) and new cropping systems (mung bean in monocrop rice fallows and soybean in the fallow winter season in Viet Nam) that have been enthusiastically adopted and scaled up by partner NGOs and farmers. These and other technologies that mitigate climate change need to be replicated and scaled up in ongoing and future IFAD loan projects in the SAT.

4. Livestock is the lifeline of millions of poor smallholders in developing countries. Promotion of a mixed crop/livestock system can have significant impact on rural poverty and ensure livelihood security. However, before the level of integration of crop and livestock can be enhanced, intensification and productivity enhancement in rainfed cropping systems are needed to avoid annual feed shortages and to generate enough dry matter (crop residues) to support livestock productively and profitably.

II. Rationale and relevance to IFAD

5. New emerging challenges are putting tremendous pressure on already fatigued and exhausted rainfed agriculture. Among these, year-to-year variability in the quantity and distribution of rainfall may be the biggest threat to sustainable rainfed agriculture. By assessing micro-level drought vulnerability and communicating it to farmers in advance, better drought preparedness can be achieved, minimizing its adverse effects.

6. Drought-tolerant cultivars not only enhance system productivity but also reduce yield variability under adverse climatic conditions. A recent study of IFAD grant project no. 954 in Anantapur, India, indicated 23 per cent more yield, a 30-per-cent reduction in yield variability and 36 per cent greater net returns per hectare from the drought-tolerant groundnut cultivar ICGV 91114 over the local variety TMV 2.

At 35-per-cent area coverage in the district, the annual value of total benefits from the adoption of ICGV 91114 remains huge – 694 million Indian Rupees (INR) at a discount rate of 5 per cent, and INR 508 million at a discount rate of 8 per cent. Similar observations have been recorded in Viet Nam.

7. Small-scale farmers are more risk-averse and they benefit more from adoption of improved drought-tolerant varieties than do less-risk-averse large-scale farmers. Technologies and policies that reduce production risks potentially also reduce the vulnerability of smallholder farmers to economic hardships, poverty and malnutrition.

8. The proposed grant programme focuses on pro-poor research addressing emerging challenges that increase risks and vulnerability of smallholder farmers, particularly in the SAT, following participatory research design and technology diffusion. Adaptation to climate change through resilient crop-based production systems – harnessing synergies and complementarities of crops through selection of appropriate crop genotypes and low-cost production technologies, seed sufficiency at the local level and linking smallholder farmers to markets – will not only enhance the production and productivity of rainfed agriculture, but also move it upwards from subsistence level to near-commercial agriculture. Capacity-building in NARS for innovation and for knowledge empowerment of smallholder farm families, enabling them to make informed decisions, will go a long way towards sustainably enhancing the productivity of rainfed agriculture and thereby improving the livelihoods of poor farmers.

9. In line with the strategic priorities of IFAD's Asia/Pacific divisional strategic workplan, the grant programme addresses issues related to the risks and vulnerability of the rural poor associated with climate change in SAT agricultural areas of selected regions in India, the Lao People's Democratic Republic, Nepal and Viet Nam. At the same time, strong linkages with IFAD-supported investment and grant projects and country programme management teams (CPMTs) would contribute to achieving the key objectives of the programmes of participating countries.

III. The proposed programme

10. The overall goal of the programme is to improve the well-being of poor rural women and men engaged in rainfed agriculture in India, the Lao People's Democratic Republic, Nepal and Viet Nam through sustainable, enhanced productivity and diversified income-generating opportunities. The programme's objectives are to: (i) transform existing low-productivity rainfed cropping systems in the target regions of partner countries into resilient, productive cropping systems by deploying appropriate farmer-friendly agricultural technological innovations; (ii) provide technical innovation services to project partners and enhance their capacities and expertise to support agricultural developments in the SAT; (iii) promote inclusive market-oriented development in rainfed agriculture; (iv) "knowledge-empower" smallholder farmers and their families to sustain resilient, productive rainfed cropping systems and harness diverse income-generating opportunities; and (v) scale technological innovations out and up through appropriate partnerships.

11. The target group consists of poor and marginal farmers engaged in rainfed agriculture in India (Jharkhand, Madhya Pradesh and Rajasthan), the Lao People's Democratic Republic (northern and southern areas), Nepal (western mid-level hills region) and Viet Nam (Ha Tinh and Cao Bang provinces).

12. The four-year programme combines both research and developmental activities. As the programme has a new partner country (the Lao People's Democratic Republic) and new partner locations in India (Madhya Pradesh and Rajasthan), the farmer-friendly technologies generated in earlier IFAD-supported programmes will require fine-tuning and validation before their scaling up and out. Moreover, their

integration into the production system will require additional research. Thus a four-year period is required to generate the projected outputs. In Nepal, Viet Nam and Jharkhand state in India, ICRISAT has worked with national partners for several years in implementing an earlier phase, and the proposed programme will build on that experience.

13. The programme will focus on major cropping systems in target regions of the partner countries – millet/sorghum/rice-based in India, rice-based in the Lao People's Democratic Republic and rice/maize-based in Nepal and Viet Nam. Legumes being considered for interventions include groundnut, pigeonpea, chickpea, greengram, lentil, fieldpea and clusterbean in India, groundnut, soybean and greengram in the Lao People's Democratic Republic and Viet Nam, and groundnut, pigeonpea, soybean, lentil and phaseolus bean in Nepal.

14. The programme will involve four components:

- **Designing resilient productive cropping systems.** Major activities include:
  - Identification and agroecological characterization of key sites, their existing crop production systems, and the roles of men and women in those systems;
  - Identification of potential areas of intervention in the major cropping systems to enhance their resilience, productivity and gender sensitivity;
  - Preparation of a database on market/consumer-preferred and gender-sensitive traits in various crops included in diversified cropping systems to facilitate the selection of appropriate genotypes;
  - Inventory of the most promising cereal and legume genotypes for testing in appropriate drought-prone rainfed cropping systems;
  - Identification of one or two resilient productive cropping systems in each rainfed agroecology; and
  - Development and testing of pro-poor crop management options in the varying agroecologies, production systems and needs of men and women farmers.
- **Technical support and scaling out and up of innovations.** Major activities include:
  - Technical support to women and men in communities and NARS partners, including IFAD loan projects: (i) a decision-support system integrating improved drought forecasting based on the assessment of micro-level drought vulnerability; (ii) crop diversification strategies; (iii) appropriate, cost-effective integrated crop-management practices in the context of gender-based roles, responsibilities and preferences; and (iv) seed support, to ensure seed sufficiency of farmer-preferred varieties at the local/community level;
  - Analysis to develop options for strengthening public policies and institutions;
  - Strategies for knowledge capture and sharing;
  - Establishment/strengthening of networks and capacity-building of project partners in the tools and techniques needed for documentation and dissemination of project-generated knowledge; and
  - Strategies for scaling out (through linkages with IFAD loan projects) and scaling up (through integration with other development programmes and extension services).

- **Inclusive market-oriented development.** Major activities include:

– Appropriate seed-production business models, including community-based seed-production systems;

– Linkages between smallholder farmers and markets through value addition at the local level; and

– Special attention to women's participation in decisions on the choices of crops and crop varieties, input and output marketing and household food management.

- **Building of capacity within NARS and among farmers to support and participate in agricultural development in the SAT.** Major activities include:

– Develop expertise in innovation skills, decision-making tools and communication skills; and

– Knowledge empowerment.

IV. Expected outputs and benefits

15. The expected outputs include:

- Resilient, productive, diversified cereal/legume cropping systems and their management technologies;
- A decision-support system integrating improved drought forecasting and crop diversification strategies;
- Sustainable, local seed support systems and opportunities for value addition at the local level;
- NARS personnel trained in developing innovations and decision-support systems; and
- Knowledge-empowered farmers adopting project-generated innovations and technologies.

16. These outputs are expected to enhance the overall productivity of rainfed agriculture by 20-25 per cent and to substantially reduce variation in yield stability in target regions of the programme, resulting in a 15-20-per-cent increase in net returns from rainfed agriculture. Enhanced availability of legumes will add to the food and nutritional security of smallholder farm families. Increased availability of protein-rich legume fodder will enhance livestock productivity. The cumulative gains from programme outputs will have a significant impact on improving the livelihoods of poor farmers engaged in rainfed agriculture. At least 40,000 farmers in each IFAD loan project area are expected to benefit directly through adopting project innovations.

V. Implementation arrangements

17. ICRISAT will be the main implementing agency, leading a consortium of partners from India, the Lao People's Democratic Republic, Nepal and Viet Nam consisting of IFAD-supported investment projects and other national programmes. The project will be part of a broader programme under CGIAR Research Program (CRP) 3.5 (grain/legumes), in which ICRISAT is an important partner. It will also be linked to CRP 1.1 (dryland systems), CRP 7 (climate change) and CRP 2 (policies and market). A multidisciplinary team of scientists from ICRISAT and state agriculture universities (SAUs) will provide technical input to the programme. Through a designated project coordinator, ICRISAT will coordinate and implement project activities in partnership with consortium members. ICRISAT will be responsible and accountable to IFAD for ensuring that grant resources are used in accordance with

the provisions of the financing agreement and are fully accounted for, including the provision of consolidated audit reports.

18. A website for the programme will be created within the IFADAsia portal (http://asia.ifad.org). The project coordinator will use the website as a project management tool and a means to communicate, coordinate and share resources. S/he will maintain and enhance international and national partnerships, especially with IFAD loan-financed projects.

19. A project steering committee, consisting of representatives of ICRISAT, IFAD and partner country institutions, will oversee implementation of the programme, review progress and approve annual workplans and budgets. Overall supervision will be carried out by IFAD. An on-site supervision mission will be carried out each year and a supervision report with recommendations will be prepared and followed up.

VI. Indicative programme costs and financing

20. The estimated total cost of the programme for four years is US$2.5 million. Of this, IFAD is requested to contribute US$1.5 million (60 per cent). ICRISAT will contribute US$0.7 million in kind (28 per cent), and NARS partners are expected to contribute US$0.3 million in kind (12 per cent). In-kind contributions from ICRISAT and NARS include part of the costs of professional staff, field and laboratory facilities and infrastructure support.

Summary of budget and financing plan
(Thousands of United States dollars)

Number	*Type of expenditure*	*IFAD*	*Cofinancing*[a]
1	Personnel (professional)	462	350
2	Research supplies, equipment and support services	188	0
3	Travel	30	0
4	Monitoring, meetings and public awareness	112	0
5	Training and fellowships	33	0
6	Field and laboratory facilities	0	400
7	Infrastructure support	0	250
8	Research subcontracts	480	0
9	Administrative overhead	195	0
	Total	**1 500**	**1 000**

[a] In kind from ICRISAT and NARS partners.

Results-based logical framework

	Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
Goal	Improved well-being of the rural poor engaged in rainfed agriculture in India, Laos, Nepal and Vietnam	• 15-20% increased net returns from rainfed agriculture; improved food and nutrition security of smallholder farm families	• Base line data • Progress/impact assessment/ IFAD loan project reports	• Favourable Govt. policies for rainfed agriculture • Existing beneficiaries' demand
Objectives	• Smallholder farmers empowered to adopt resilient productive cropping systems in rainfed agro-ecologies • Technical services to enhance innovative capacities of partners provided • Inclusive market-oriented development in rainfed agriculture promoted	• At least 40,000 w/m farmers in each partner country adopt project innovations • About 20-25% sustainable increase in productivity in target areas of the project • One training course on drought forecasting and crop diversification strategies organized • At least one appropriate seed production business model for each location identified	• Progress/impact assessment/ IFAD loan project reports • Records of trading in cereals and legumes in local markets • At least one trained NARS staff (trainer) at each location • Enhanced availability of quality seed of FPVs at local level	• Unfavourable Govt. policies, climatic conditions and commodity prices for rainfed agriculture • Difficult access to micro-credit facilities • Lack of Govt. recognition to informal seed sector
Outputs	• Resilient/productive/diversified cropping systems and their ICM technologies • Decision support system for crop diversification strategies • Seed systems and value addition at local level • Trained NARS staff, empowered farmers	• Two docs on improved gender-sensitive drought and crop diversification strategies developed • 20,000 pamphlets in vernacular languages on resilient cropping systems including climate responsive varieties published • At least one seed and one value addition enterprise promoted among a cluster of villages • Need-based training modules	• Progress/impact assessment/ IFAD loan project reports • Breeder seed production records of ICRISAT and SAUs • Interview with farmers and other partners • Farmer-friendly literature on resilient cropping systems, their ICM and FPVs	• Govt. supports rainfed agriculture and informal seed sector and provides easy microcredit facilities • Agril commodity prices remain remunerative to farmers • Rural youth (m/w) and farmers interested in agro-business enterprises
Key Activities	• Develop decision support systems for drought-proofing/crop diversification • Devise and validate resilient rainfed cropping systems and their ICM technologies • Prepare advocacy briefs for strengthen public policies and institutions • Knowledge management and sharing	• Technological innovations addressing needs of w/m farmers generated and shared with farmers before each cropping season • 1-2 resilient cropping systems with their ICM technologies advocated to farmers • 2-3 Advocacy briefs in each partner country • 35-40% w/m farmers within IFAD loan project areas aware of resilient productive cropping systems	• Project reports and documents • Articles/programs in electronic and print media • IFAD loan project reports • IFADAsia website and APR Newsletter	• Satellite data for project locations available • CURE/other projects welcome encourage collaboration with the new project • Produce meets market standards

International Food Policy Research Institute (IFPRI): Technical and Capacity Strengthening for Country-level Strategic Analysis and Knowledge Support Systems (SAKSS) in Selected African Countries

I. Background

1. The Comprehensive Africa Agriculture Development Programme (CAADP) has created a strong platform for policy and partnership renewal in the agriculture sector, with the goal of raising investment and improving policy and strategy implementation and outcomes. A compact was developed to formalize African governments' commitment to meet a 10-per-cent budget share for agriculture in support of development and implementation of the country's agriculture investment plan. Rwanda was the first country to hold a CAADP Round Table and sign a compact in March 2007. The Economic Community of West African States (ECOWAS) signed its CAADP compact in 2009 and became the first regional economic community to do so. More countries, particularly members of the Common Market for Eastern and Southern Africa (COMESA), and COMESA itself are still drafting their compacts and preparing for round tables. Countries that have already held them are now at various stages of elaborating their national agricultural investment plans (NAIPs), undergoing technical reviews of the plans or discussing financing modalities and review mechanisms for them.

2. At the heart of the CAADP agenda is a need to improve the quality of policy and strategy planning and implementation in order to accelerate growth and progress towards poverty reduction and food and nutrition security. This in turn calls for capacities, analytical tools and information to generate credible, timely and high-quality knowledge products to inform and guide agriculture-sector policies, in particular planning and review processes. Thus the setting up of regional knowledge platforms – the regional strategic analysis and knowledge support system (ReSAKSS) to facilitate peer review, dialogue, and mutual learning as part of the CAADP implementation process – was a key priority during the first phase of IFPRI's support to the CAADP implementation process from 2006 to 2009.

3. In establishing knowledge platforms, IFPRI adopted a two-phase process in line with the original CAADP roadmap of a sequential strategy for creating adequate tools and platforms for CAADP review. The first phase was to establish the regional-level knowledge platforms that would centralize collective services in order to support cross-country needs and provide technical assistance to national knowledge systems. The second phase aims to set up country-level knowledge platforms focusing on country-specific analytical and capacity needs, while working in close collaboration with the regional-level platforms. The first phase has been successfully completed with the establishment of ReSAKSS, which is a network of three regional nodes in Southern Africa (ReSAKSS-SA), East and Central Africa (ReSAKSS-ECA), and West Africa (ReSAKSS-WA). ReSAKSS was established, coordinated and operated by IFPRI in collaboration with three leading regional economic communities – the Southern Africa Development Community (SADC), COMESA and ECOWAS – and four African-based CGIAR centres – the International Water Management Institute (IWMI) in South Africa, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Zimbabwe, the International Livestock Research Institute (ILRI) in Kenya, and the International Institute of Tropical Agriculture (IITA) in Nigeria. At the continental level, IFPRI works in partnership with the NEPAD Planning and Coordinating Agency (NPCA) of the New Partnership for Africa's Development (NEPAD) and the African Union Commission (AUC), with a governance structure chaired by NPCA and AUC. In 2007, ReSAKSS launched a website to help track CAADP implementation and

progress towards key CAADP targets, including allocating 10 per cent of annual national budgets to agriculture, reaching a 6-per-cent annual agricultural growth rate and achieving the first Millennium Development Goal of halving poverty and hunger by 2015.[c] Notable ReSAKSS knowledge products include its flagship Annual Trends and Outlook Report (ATOR), which also serves as the continental CAADP monitoring and evaluation (M&E) report, in addition to issue briefs and working papers on strategic issues affecting Africa's agricultural and rural development.

4. With 28 countries having completed CAADP round tables, several elaborating their investment plans, and many others working towards round tables, there is an urgent need to fully operationalize phase two – the setting up of country-level knowledge platforms (country SAKSS nodes) – to improve the quality of policy and strategy design and implementation at the country level, and to help strengthen local capacity for policy analysis through collaborative work and short- and long-term training. Under phase 1 of its support, IFPRI worked closely with the ReSAKSS nodes to pilot a SAKSS node in Rwanda. Under a separate project, IFPRI has also established SAKSS-like programmes in the Democratic Republic of the Congo, Ethiopia, Ghana, Malawi, Mozambique, Nigeria and Uganda as part of its country strategy support programme. ReSAKSS nodes have been fully established and they recently helped launch official country SAKSS nodes in Ghana, Nigeria, Togo and Uganda. They are now in a position to help support more countries in establishing country SAKSSs.

5. Thus the main objective of this proposal is to establish and operationalize or strengthen country SAKSS nodes in 11 African countries, depending on a country's state in the CAADP implementation process and in setting up a node. The countries form two groups, according to whether they require full or partial support. Seven countries requiring full support make up group 1: Benin, Cameroon, Democratic Republic of the Congo, Kenya, Mali, Senegal and Uganda. Group 2 consists of four countries requiring partial support: Ethiopia, Ghana, Mozambique and Rwanda. The programme will be carried out jointly by IFPRI, ReSAKSS-ECA (for Cameroon, Democratic Republic of the Congo, Ethiopia, Kenya, Rwanda and Uganda), ReSAKSS-SA (for Mozambique), ReSAKSS-WA (for Benin, Ghana, Mali and Senegal), and relevant country SAKSS partners, including the Ministry of Agriculture and other line ministries and their departments and agencies, bureaux of statistics, NGOs, farmers, universities, think tanks and donors.

II. Rationale and relevance to IFAD

6. The proposed programme is fully aligned with the Revised IFAD Policy for Grant Financing (2009) and supports its four main outputs. In terms of corporate priorities, the programme directly supports corporate objective 1: Enabling institutional and policy environments to support agricultural production and the full range of related non-farm activities, as well as outcome 2: Improved policy and regulatory frameworks at the local, national and international levels.

7. The programme was envisaged in the West and Central Africa (WCA) Division's 2012 Grant Strategic Workplan, and in particular supports priority theme 4 (targeted policy work), particularly on sensitive issues for which projects may not want to assume responsibility. The programme is anticipated to provide IFAD and its partners with a stronger basis for evidence-based policy dialogue, which is a priority for IFAD in WCA and East and Southern Africa. Such dialogue is consistent with increasing country presence and greater integration of IFAD's programmes into CAADP NAIPs, as well as with ensuring a commonly shared evidence basis and policy space to support scaling up of promising approaches. While the current grant is focused on countries in WCA, it facilitates IFAD's engagement in the SAKSS agenda on a continental level within the CAADP framework.

[c] For the ReSAKSS website see: http://www.resakss.org/.

III. The proposed programme

8. The overall goal of the programme is to provide technical and capacity strengthening for country-level strategic analysis and knowledge support systems (SAKSS) in selected African countries. The programme's objective is to have 11 well-functioning SAKSS country nodes, based on the provision of technical and capacity strengthening support in the areas of: (i) policy analysis tools and methodologies; (ii) data collection and management; (iii) strategic policy analysis; (iv) M&E of agriculture-sector performance; (v) policy dialogue, outreach and quality assurance; and (vi) effective local partnerships and long-term training.

9. The target group is the team implementing SAKSS activities at the country level. Direct beneficiaries will also include country policymakers, policy analysts, researchers, and representatives of universities, civil society, the private sector and NGOs engaged in designing, implementing, and monitoring and evaluating agricultural development policies and strategies. The programme will enable these beneficiaries to have access to and use country-specific baselines and long-term strategy options that help lead to improved agricultural policy planning, execution and outcomes. They will also have access to monitoring data to track development outcomes and progress in investment plan implementation. The ultimate beneficiaries will be poor and hungry people within countries that stand to gain from the successful execution of evidence- and outcome-based policies aimed at accelerating agricultural growth, reducing poverty and ending hunger.

10. The three-year programme will comprise five main components:

- **Supporting operational readiness of country SAKSS**, including operational guidelines, terms of reference, staff recruitment and an inception workshop;
- **Developing and implementing an M&E framework and methodologies, and knowledge products and tools**, including selection of performance indicators, review of existing sectoral targets, collection, and production of the Annual Trends and Outlook Report;
- **Strengthening capacity for strategic policy analysis and research to fill knowledge gaps and assess policy and investment options**, including assessment of evidence gaps, strategic analysis and production of knowledge products;
- **Developing knowledge management, communications and policy dialogue platforms**, including websites, assessment of existing stakeholder knowledge systems and dialogue strategies, and workshops; and
- **Providing quality assurance control and strengthening capacity for effective collaboration, partnerships and long-term sustainability of SAKSS nodes**, including capacity strengthening for stakeholders on the implementation and use of key strategic analysis tools and communication strategies.

IV. Expected outputs and benefits

11. These are the following:

- Country SAKSS nodes are established and operating satisfactorily, so that country policymakers and other stakeholders have timely access to and use data, tools and analyses to inform and guide agricultural policy planning and implementation.
- An M&E system to track and evaluate agriculture-sector policy and investments and overall performance is developed and is providing the

information needed to monitor, evaluate and revise agricultural policy planning and implementation.

- Annual Trends and Outlook Report (ATOR) is produced and published annually and made accessible promptly as input into review, dialogue and benchmarking activities associated with NAIP implementation.
- Studies on emerging and strategic issues of importance to the country's agricultural development agenda are available to fill knowledge gaps.
- Capacity of country SAKSS and local institutions is strengthened.

V. Implementation arrangements

12. IFPRI will be the lead implementation agency working with counterpart government institutions (generally ministries of agriculture and planning), as well as universities, local consulting firms and think tanks, farmers' organizations and the private sector. IFPRI's role, beyond coordination of overall activities across Africa in collaboration with NPCA/AUC and regional economic communities, will be to ensure technical support to country-level partners in establishing the SAKSS and in the technical quality and sharing of the research and interpretation of knowledge products. Several researchers from different divisions of IFPRI will be sourced to engage in the programme, depending on their expertise and the programme needs. They will also be involved in carrying out training through hands-on collaborative research with local partners and through short-term courses.

13. In carrying out technical assistance, IFPRI will facilitate direct engagement with ongoing IFAD-financed support to sectoral M&E, such as in Cameroon, Mali and Senegal, as well as with all relevant CPMTs so as to ensure that IFAD-funded programmes are able to both contribute to and effectively use the outputs of the SAKSS nodes in programme planning, knowledge-sharing, M&E and policy dialogue. This process has already begun in the case of Mali and Senegal, and is continuing so as to ensure full engagement by the time programme activities are formally launched at the country level.

VI. Indicative programme costs and financing

14. The total grant amounts to US$9.8 million, with US$1.6 million being sought from IFAD and the remaining US$8.228 million sought from the Government of the Netherland's Ministry of Foreign Affairs (US$5.679 million, indicatively and to be confirmed), IFAD's country programme support (country grants and project funding – US$2.203 million) and IFPRI (US$0.346 million).

Summary of budget and financing plan
(Thousands of United States dollars)

Number	*Type of expenditure*	*IFAD*	*Cofinancing*[a]
1	Personnel (including subcontractors)	491	1 334
2	Professional services/consultancies	450	2 583
3	Travel costs	159	561
4	Administrative services	147	409
5	Operational costs, reporting	67	-
6	Equipment	20	25
7	Training/capacity-building	66	2 328
8	Overhead	200	988
	Total	**1 600**	**8 228**

[a] Indicative amounts, representing contributions from the Dutch Ministry of Foreign Affairs, IFAD country programmes and IFPRI.

Results-based logical framework

	Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
Goal	Improve the quality of policy and pro-poor strategy design and implementation in the respective countries through facilitation of well-informed agricultural sector planning, review, and dialogue processes	Country strategy, policy, and operational documents are based on evidence and are technically consistent and coherent	• ATOR • Final project evaluation	Government and other sectoral stakeholders will utilize information and evidence generated through SAKKS in policy and investment planning processes and debates.
Objectives	11 well-functioning SAKSS country nodes (7 countries requiring full support— Benin, Cameroon, DRC, Kenya, Mali, Senegal, and Uganda as well as in 4 countries requiring partial support— Ethiopia, Ghana, Rwanda, and Mozambique).	SAKSS support following in 11 countries: • Updated sectoral M&E available • Key sectoral data from different sources available centrally • Key policy issues identified and analysis carried out and disseminated • Enhanced exchange of relevant knowledge and experience on key policy and operational issues	• ATOR • Midterm Review • Semestrial progress reports • Sectoral working group and other stakeholder interviews	In-country institutional infrastructure is conducive to networking of national knowledge centers to collaborate on data collection, analysis, and reporting in support of policy dialogue and review
Outputs	• Capacity of country SAKSS and local institutions is strengthened. • An M&E system to track and evaluate agriculture sector policy and investments and overall performance is developed • Agricultural trends and outlook report (ATOR) is produced annually • Studies (working papers and issue briefs) on emerging and strategic issues.	• SAKSS unit staffed, steering committee meets regularly, outputs generated as planned • M&E system reports generated including disaggregated data by gender, youth, farm size, etc. • ATOR produced • Technical partners able to reproduce technical analysis and studies with minimal or no external support.	• Semestrial Progress Reports • ATOR • Midterm Review • Country level supervision mission reports	Government support maintained, including funding support for country-level activities.
Key Activities	1. Supporting operational readiness of country SAKSS 2. Developing M&E framework 3. Strengthening capacity for strategic policy analysis and research 4. Developing knowledge management, communications, and policy dialogue platforms 5. Providing quality assurance control and strengthening long term sustainability	• operational guidelines, terms of reference, staff recruitment, • selection of performance indicators, review of existing sectoral targets, • production of knowledge products • website, assessment of existing stakeholder knowledge systems and dialogue strategies • capacity strengthening of stakeholders	• Semestrial Progress Reports	Governments establish institutional mechanisms of SAKSS, including assignment of key staff, engagement with partner institutions and stakeholders