--- Progress Report 2011 ---

Lead Center: International Rice Research Center (IRRI)
CGIAR Centers and global GRiSP partners: IRRI, AfricaRice, CIAT, Cirad, IRD, JIRCAS
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A. Key Messages

The Global Rice Science Partnership (GRiSP) was officially launched in November 2010 as the first new CGIAR Research Program (CRP). It became fully operational on January 1, 2011, involving over 900 research and development organizations worldwide. GRiSP's mission is to reduce poverty and hunger, improve human health and nutrition, reduce the environmental footprint and enhance ecosystem resilience of rice production systems through high-quality international rice research, partnership, and leadership.

The establishment of GRiSP as a CRP has increased the visibility of the CGIAR's contributions to the global rice development agenda, as evidenced by formal declarations of support in 2011 by the agriculture ministers of the G20 countries, the 24 member countries of the Africa Rice Center in the Center's 2011 Council of Ministers' meeting, and of the 10 member countries of ASEAN.

Efforts in 2011 have concentrated on (i) establishing the various elements of the operational plan for GRiSP, including the necessary management structure, agreements, guidelines, and processes for GRiSP, (ii) fine-tuning the GRiSP strategy and workplan, (iii) starting new research and capacity building initiatives, and (iv) enhancing partnerships. Of the 58 milestones due in 2011, 42 were fully achieved, 13 were partly achieved or are recurring annually, and 2 were not achieved or re-directed due to lack of funds.

A review of the 5-year GRiSP work plan was conducted during the three regional GRiSP Fora, resulting in a modest revision of selected products and milestones. Emphasis was given to better defining the deliverables and responsibilities, but also incorporating some new opportunities. The revised 2011-2015 logframe will serve as the basis for all future planning and reporting.

GRiSP expenditures in 2011 totaled USD 97.18 million, including USD 34.32 million from CGIAR Windows 1+2, 0.74 million from Window 3, and 61.12 million in bilateral (restricted) grants. This compares to an expected total funding of USD 98.8 million. Window 1+2 funding only became available after August 2011. Main challenges were: (i) uncertainty about funding from Windows 1+2, (ii) delays in critical Consortium and/or Fund level agreements (e.g., SRF, COF, PIA), (iii) lack of templates or concrete guidance on many issues related to the operation of a CRP. We have coped with those by pro-actively developing the key agreements and procedures

required for implementing GRiSP. The CGIAR Centers in GRiSP took on significant risks in terms of pre-financing many activities to cope with the delayed release of Window 1+2 funds.

B. Baseline

A detailed analysis of the baseline for GRiSP and an ex-ante assessment of the projected impact are provided in the full GRiSP CRP proposal. A brief summary is available at: http://www.grisp.net/page/vision-of-success-objectives

A preliminary performance indicators matrix was developed for GRiSP in 2011 (see Annex 1.2.), providing a basis for potential indicators and metrics of progress at the level of research outcomes (by GRiSP Themes and Product Lines), as well as contributions of GRiSP to the CGIAR System Level Outcomes (SLO) stated in the Strategy and Results Framework (SRF). The latter include:

GRiSP Contributions to CGIAR System Level Outcomes	Global/regional indicators
• By 2020, adoption rates of the latest input-efficient, stress-tolerant, higher-yielding, and enhanced-quality rice varieties will have accelerated. Rice will have become a much better engine for economic growth and employment through better integration of rice production, processing, and marketing, thus significantly adding value, reducing rural poverty, and enhancing livelihoods, particularly in sub-Saharan Africa and South Asia. By 2035, reductions in food prices lift 150 million people above the US$ 1.25 PPP poverty line (SLO 1 – Rural Poverty) • By 2035, the world will be capable of producing an additional 170 million tons compared with 2010, matching the projected total demand of around 830 million tons of paddy. Africa will be able to feed itself in terms of rice production. As a result of GRiSP's contributions to increased supplies and reduced rice prices, at least 60 million undernourished people can afford to reach caloric sufficiency, thus reducing hunger by more than 12% in target regions (SLO 2 – Food Security) • Nutritional enhancement of rice saves millions of disability-adjusted life years, formerly lost because of vitamin A, iron, and other micronutrient deficiencies (SLO 3 – Improved Nutrition) • By 2020, the vast majority of the genetic diversity of rice species will have been collected, preserved, and characterized, and genomes of the world's key collections of rice genetic resources will be available to all. By 2035, efficiencies of nitrogen, water, energy and other inputs will have grown by at least 30% in key intensive rice-growing areas. More eco-efficient rice production systems will also be more resilient to climate change. Increased productivity saves 5 million hectares of natural ecosystems from conversion to rice cropping; Nearly 1 billion tons of CO2 equivalent emissions will be averted (SLO 4 - Sustainability). • A new generation of rice professionals, at least 30% of them women, trained to be capable of leading the development of the world's rice sector (cross-cutting capacity building contributing to SLOs 1-4)	• Rice growing area, production and average rice yield of paddy rice per hectare per year • Rice prices (global, domestic – urban and rural) • Poverty indicators (gender disaggregated) • Malnutrition indicators (gender and income level disaggregated) • Changes in cropping system patterns and yield gaps (maps) • Adoption rates of the latest input-efficient, stress-tolerant, higher-yielding, and enhanced-quality rice varieties • Adoption rates of more input-efficient crop and resource management practices • Global water, fertilizer, pesticide and energy use in rice • Water, nitrogen, labor and energy use efficiency indicators (per unit food produced and per hectare) • Global greenhouse gas emissions from rice cropping systems (measurements and predictions) • Number of rice scientists and rice industry and extension professionals trained (gender disaggregated)

More work needs to be done in 2012/13 to prioritize these indicators and also develop mechanisms for tracking them in a reliable manner. This will requires a high degree of harmonization across all of the CRPs in the new CGIAR, but also technical support at the CGIAR system level. We need more specific guidance on that, as part of the new monitoring and evaluation system that is being implemented.

C. Progress in Producing Outputs

Program implementation

Each research Theme in GRiSP includes a number of Product Lines, which are families of more specific R&D Products. Each Product is implemented through activities that are part of the regional work plans for Asia, Africa and LAC, including a succession of milestones for the 2011-2015 period. A framework plan for GRiSP implementation which spells us this regional management approach was signed between the three CGIAR centers on 3 May 2011. Work plans for Monitoring and Evaluation (M & E), Gender, Communication and Capacity Building in GRiSP were developed (see Annex 1 and http://www.grisp.net/file_cabinet).

The Program Planning and Management Team (PPMT) of GRiSP consists of rice science leaders of IRRI, AfricaRice, CIAT, JIRCAS, IRD and Cirad and has met every month via WebEx since November 2010, including 2 face-to-face meetings. The GRiSP Oversight Committee (OC) was elected and met for the first time on October 8, 2011 at IRRI in the Philippines (see Annex 2). It includes 7 international experts, 5 BOT members from IRRI, AfricaRice and CIAT, and the DGs of IRRI and AfricaRice (ex officio).

A series of international workshops was conducted to develop new global and regional research initiatives and partnerships:

- Theme 1: Workshop on rice phenotyping (March 2011, Montpellier), resulting in the formation of a global phenotyping network supported by a New Frontiers grant from GRiSP.
- Theme 2: Workshop on rice yield potential breeding strategy (August 2011, Cali), resulting in the formation of a global yield potential network supported by a New Frontiers grant from GRiSP.
- Theme 5: Workgroup meeting on rice statistics databases (December 2011, Singapore).
- Theme 6: Workshop on mechanization of rice systems in Africa (June 2011, St. Louis, Senegal).
- Theme 6: Workshop on Information & Communication Tools for rice extension (December 2011, Los Banos, Philippines).
- Launch of Africa-wide Task Forces to provide synergy to research efforts across the continent. Five Task Forces were established in 2011, on (1) breeding; (2) agronomy; (3) postharvest & value addition; (4) policy; and (5) gender http://www.africarice.org/warda/newsrel-grisp-taskforce-dec11.asp
- GRiSP – West & Central Asia workshop (September 2011, Rasht, Iran), resulting in the formation of a regional rice research and training hub for the West-Central Asia region hosted by AREEO, Iran.

- GRiSP Africa forum, September 2011, Cotonou, Benin; GRiSP Asia and Global forum, September 2011, Los Banos, Philippines.
- A GRiSP Coordinating Committee was formed in Japan and a JIRCAS International Symposium on *Trends of International Rice Research and Japanese Scientific Contribution - Support to GRiSP and CARD* was held in November 2011 in Tsukuba.
- The first Global Rice Science Leadership Course was held at IRRI in partnership with the University of Leuven, Belgium, with 23 young scientists from Asia, Africa and South America (including 10 women).
- Formation of a French Rice Science Partnership (FRiSP) bringing together many French institutions involved in rice research. A GRiSP – Germany workshop was held in March 2011 in Bonn, organized by BMZ.
- Formation of a new Sustainable Rice Platform (SRP) to develop and promote standards for Good Agricultural Practices through public and private sectors partners.

Three new competitive programs were successfully launched and managed by the PPMT:

- A competitive GRiSP New Frontiers Research program; 5 proposals funded in 2011/12. http://www.grisp.net/page/new-frontiers-research
- A Global Rice Science Scholarship (GRiSS) program; 188 applicants from 40 countries; 31 PhD scholarships were awarded, including 14 young women. http://www.grisp.net/page/grisp-scholarship
- Partnership development initiatives (travel grants, exchange visits, small group meetings)

A GRiSP Gender research team with representatives from each of the three CGIAR Centers in GRiSP has been formed and is now responsible for implementing the cross-cutting gender research in GRiSP. In addition to ensuring that Gender and Diversity aspects are well integrated in all major GRiSP Product Lines for which they are particularly relevant, the team developed a general research strategy and work plan to also address more strategic issues. “Changing climate, food security and gender roles in rice-based production systems” was chosen as the first strategic research topic to pursue globally. In 2011, US$ 0.3 million was allocated from the GRiSP PCCB budget to support this first joint gender research activity, which will continue throughout 2012 and 2013 with additional budget allocations. Implementation is progressing well in all three world regions. The Gender team also reviewed the milestones in the overall GRiSP work plan to ensure that Gender & Diversity goals are well represented.

Achievement of milestones

A GRiSP workshop, including external experts and representatives from donors, the Consortium, the ISPC was held in March 2011 at IRRI to develop the overall M&E plan for GRiSP (see Annex 1.1.). Within this overall framework, performance monitoring includes:

- Monitoring the achievement of milestones
- Monitoring, documentation and wide dissemination of selected significant achievements

Milestone tracking in GRiSP is a bottom-up assessment tied into the annual review and planning process, using a simple traffic light system (3 categories) for scoring the achievement level of milestones that were due in 2011, as well as identification of achievements not originally envisaged (unexpected discoveries). Annex 3 provides a full description of the achievement of

the milestones that were due in 2011, by Research Themes, Product Lines and Products. Of the 58 milestones due in 2011, 42 were fully achieved, 13 were partly achieved or are recurring annually, and 2 were not achieved or re-directed due to lack of funds. In 2011, scientists from the six international research centers in GRiSP (IRRI, AfricaRice, CIAT, Cirad, IRD and JIRCAS) published about 250 articles in international peer-reviewed journals on research related to GRiSP (Scopus search).

D. Progress in producing outcomes

The first annual report of GRiSP Achievements in 2011 (see GRiSP Annual Report 2011 public) provides, as examples, 14 stories of major scientific outcomes as well as new initiatives that have been undertaken in 2011. More are included in the annual reports of the international centers involved in GRiSP or have already been published in recent issues of Rice Today – the GRiSP flagship magazine. Examples featured in the annual public report for 2011 include:

- Conservation, sharing and improved characterization of rice genetic resources have much advanced in 2011, including full backup of rice genetic resources from IRRI and AfricaRice in the Arctic Vault.
- A new gene for resistance to rice yellow mottle virus has been discovered and is utilized in molecular rice breeding in Africa.
- The global blast network has become a primary source of information and materials for blast research and resistance breeding.
- Enhanced understanding of Striga resistance mechanisms will allow significant improvement of upland rice breeding in Africa.
- New submergence-tolerant rice varieties are grown on more than 1 million ha in Asia. New “2 in 1” varieties - combining submergence with drought or salinity tolerance – are moving into farmers’ fields for evaluation. Yield advantages of 1-1.5 t/ha are common for these materials.
- 18 NERICA and 60 NERICA-L varieties are now available to rice farmers in sub-Saharan Africa. Adoption reached over 700,000 ha in 2011.
- Hybrid rice development is accelerating. Membership in the Hybrid Rice Development Consortium (HRDC) increased to 31 public and 31 private sector members in 2011. New hybrids are under expanded testing in Asia, Africa and Latin America.
- Nutrient Manager - a first mobile phone application for rice farmers – was released in the Philippines and will soon be released in other countries, including West Africa.
- Impact assessment studies have shown high returns from investments in rice genetic improvement in Asia. Farmers in Vietnam, Indonesia, and the Philippines harvested an extra $1.46 billion worth of rice a year as a result of IRRI’s rice breeding between 1985 and 2009.
- A new global rice policy simulation model and a new high-resolution radar imaging platform were developed and are being used for crop monitoring, forecasting and policy analysis.
- Farm machinery from Asia has been adapted for local use in Africa.
- 25 Extension agents from Africa were trained in the Philippines to become future leaders of rice extension.

E. Risk Management

The main challenges faced in 2011 were: (i) uncertainty about funding from CGIAR Windows 1+2, (ii) significant delays in critical Consortium and/or Fund level agreements (e.g., SRF, COF, PIA) and in release of Window 1+2 funds, (iii) lack of templates or concrete guidance on many issues related to the operation of a CRP, including new contractual relationships between the CGIAR Centers involved. We have coped with those by pro-actively developing the key agreements and procedures required for implementing GRiSP as well as continued active fundraising. Efforts for implementation of full cost recovery mechanisms have been accelerated in all three CGIAR Centers involved in GRiSP. However, to cope with the delayed release of Window 1+2 funds, these CGIAR Centers had to take on significant risks in terms of pre-financing many GRiSP activities. This is a particular issue for the lead center, which cannot be expected to pre-finance CRP activities by other CGIAR Centers.

Over the medium to longer term, the biggest risks for GRiSP include (i) uncertainty about multi-year funding and (ii) the need for establishing a transparent fund allocation mechanism within the CRP, which has to be tied to actual activities, costs, and performance. We have not been able to implement some work at the full scale that was originally planned because Window 1+2 funds have been less than expected. Dependence on short-term bilateral funding remains large and bears the risk of fragmentation of the research programs in GRiSP.

We are also concerned about an increasing level of CGIAR system costs, unclear functions, and complex administrative relations in the new system, which appear to slow down decision-making. Many of the new structures that have been put in place have yet to demonstrate that they will add value to the CRPs and the research done by the CGIAR Centers and their partners, and thus allow fulfilling the six goals of the CGIAR reform process.

F. Lessons Learned

Analysis of variance from what was planned

Overall, GRiSP has produced the expected results in 2011, despite the initial delays (funding, agreements). Only two milestones had to be re-directed because funding was insufficient. The original impact pathways still stand, but a number of new partnership development mechanisms were put in place to further enhance the expected impact (see section C).

A review of the 5-year GRiSP work plan was conducted during the regional GRiSP Fora held in 2011, resulting in a modest revision of selected products and milestones. Emphasis was given to better defining the deliverables and responsibilities, but also incorporating some new opportunities. The revised 2011-2015 work plan (logframe), broken down by regions for implementation, will serve as the basis for all future planning and reporting (see Annex 4).

Analysis of changes in effectiveness and efficiency:

The establishment of GRiSP as a CRP has increased the visibility of the CGIAR's contributions to the global rice development agenda, as evidenced, for example, by formal declarations of support in 2011 by the agriculture ministers of (i) the G20 countries, (ii) the 24 member countries of the Africa Rice Center in the Center's 2011 Council of Ministers' meeting, and (iii) the 10 countries in ASEAN.

Having a single strategic framework and work plan that (i) integrates the activities of CGIAR Centers and other international research organizations and (ii) provides better opportunities for other partners to contribute or lead specific components is a major positive achievement. Research output, outcomes and impacts are improving through 1) enhanced ex ante impact assessment, priority setting, focused strategic planning and product-oriented R&D; 2) increased efficiency due to consolidation of program management and reporting, and harmonization of agendas; 3) enhanced visibility and salience through greater critical mass for problems affecting rice production. Increased research synergies have been generated by better coordination and the reduction of overlaps or even competition among collaborators, particularly in research areas that require a global effort, such as, for example, research on gene discovery (genotyping and phenotyping), yield potential, stress-tolerant rice, hybrid rice, nutrient management, mechanization etc. We have already seen a large increase in scientific interaction among the participants in GRiSP, leading to much enhanced research collaboration at the scientist level, but also to a new dimension of cross-regional and cross-institutional learning.

Implementing GRiSP has generally been efficient, for the following reasons:

- GRiSP has clear subsidiaries, as regional implementation of agreed priorities is the domain of the lead IARC in each region (IRRI for Asia and Global, AfricaRice for Africa, and CIAT for LAC). Each Theme and each Product in GRiSP has clearly assigned leaders and focal points from each center for planning, implementation and reporting purposes, in line with the center's comparative advantage.
- No new managerial or administrative positions with unclear roles have been created. Instead, internal re-alignment of research programs and their management in the CGIAR Centers was done to fully match the GRiSP structure. There is a clear structure of reporting from center programs to CRP leadership, with the domain of decision making for each defined.
- The PPMT is effective in making consensus-based decisions on global coordination components, new frontiers research and capacity building.
- Transparent new mechanisms and communication – everyone has access, with www.grisp.net as the main communication portal for the global community as well as for specific sub-groups in GRiSP.
- Support teams that interact well across Centers on specific issues, e.g., Finance, Communication, Gender, Capacity Building etc.

G. Financial Report

IRRI is the lead center of CGIAR CRP3.3 with the approved title of Global Rice Science Partnership (GRiSP). It started on 1st January 2011 for a period of five years with an approved total budget of USD 594.37m. For the year 2011, the Fund Council approved a budget of USD 98.8 M (compared to the USD 99.8 M in the original GRiSP proposal) and the W1-2 funding was capped to USD 34.86 M. Detailed financial tables are provided in Annex 5. In 2011, GRiSP expenditures totaled USD 97.18 million, including USD 34.32 million from CGIAR Windows 1+2, 0.74 million from Window 3, and 61.12 million in bilateral (restricted) grants. Window 1+2 funding was less than requested (as per approved CPA and PIA) and only became available after August 2011. This includes funding for Theme Research activities, Institutional Capacity, Program Coordination and Capacity Building (PCCB) and, New Frontier research.

Summary of actual expenditure by activities and CGIAR centers:

	IRRI	Africa Rice	CIAT	Total Actual	Total Budget
T1-Genetic Resources	10.92	2.15	1.92	**14.99**	**16.73**
T2-New Varieties	23.26	5.41	3.36	**32.03**	**27.37**
T3-Production Systems	14.10	5.38	0.34	**19.82**	**18.27**
T4-Value Chains	2.39	1.95	0.09	**4.43**	**4.08**
T5-Technology Targeting & Policy	5.29	1.79	0.14	**7.22**	**8.59**
T6-Delivery	8.88	1.88	0.09	**10.85**	**13.29**
Total Research Theme	**64.84**	**18.56**	**5.94**	**89.34**	**88.32**
Institutional Capacity	3.20	1.44	0.54	**5.18**	**5.05**
Program Coordination & Capacity Building	**1.83**	**0.36**	**0.04**	**2.23**	**3.85**
New Frontier Research	**0.43**	**-**	**-**	**0.43**	**1.58**
Total GRiSP	**70.30**	**20.36**	**6.52**	**97.18**	**98.80**

H. Annex - Detailed documentation

The following reference materials are provided and also available at: **http://www.grisp.net**

1. GRiSP Planning documents
    - 1.1. Monitoring and evaluation framework
    - 1.2. Preliminary performance indicators matrix for GRiSP
    - 1.3. Gender strategy
    - 1.4. Communication strategy
    - 1.5. Capacity building strategy
2. GRiSP Oversight Committee
    - 2.1. Oversight Committee TOR and Members
    - 2.2. Oversight Committee meeting 2011
3. GRiSP Achievement of 2011 milestones
4. GRISP Revised 2011-2015 work plans for Asia, Africa and Latin America (logframes)
5. GRiSP financial report for 2011