CGIAR

RESEARCH PROGRAM ON
Dryland Systems

2015
Annual Performance Report

Submitted to CGIAR Consortium Office
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Att: Wayne Powell
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1000, Avenue Agropolis
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France

Subject: Letter of transmittal of 2015 Dryland Systems Annual Performance Report

Dear Wayne and colleagues,

I am pleased to herewith submit the 2015 Dryland Systems Annual Performance Report (in Word and Pdf formats). This report was prepared in accordance with the Consortium Office template and guidelines and took into account the CO's comments on the 2014 reports. It includes information and links to evidence of our 2015 activities and performance against the program's Impact Pathway and Results Framework that are aligned with the CGIAR Strategic Results Framework.

In 2015, the Program invested significant time, efforts, and resources in the requested Task Force, the CRP Commission External Evaluation (CCEE), an internal audit and its follow up, and preparation of Phase II CRP proposal that envisions a merger between Dryland Systems and two other CRPs on Grain Legumes and on Dryland Cereals. The CCEE Report - deemed excellent by the IEA - concluded that *"Dryland Systems is highly relevant" and that "there is a clear need for investing improving sustainable productivity of dryland agricultural systems which could benefit hundreds of millions of poor people*." Our response to the CCEE list of recommendations, coupled with the Mission Critical Areas for Research identified by the Task Force in April 2015, informed our plan of action and timeline to ensure our Program **legacy** - in terms of its unique systems approach, key research knowledge, result-based management tools (MEL Platform) and lessons learned - is effectively transferred to the Phase II CRPs on agri-food systems.

I am also very proud to report that our unique **integrated systems approach** was key to shaping thinking and policy recommendations of the UNCCD 3rd Scientific Conference, as well as the landmark global agreement on Land Degradation Neutrality (LDN). In our role as scientific coordinator of the Economics of Land Degradation (ELD) initiative, we helped bring to fruition a 4-years research effort - between 30 partner organizations - on The Value of Land. This is now being widely cited including by those in the private sector. Our robust scientific evidence on the value of land and its untapped potential for boosting economic prosperity through sustainable land management were presented to the European Parliament, and to the 70th Summit of the UN General Assembly on adopting the Sustainable Development Goals (SDGs) of the post-2015 development agenda.

Through encouraging efforts of our PMU we report 558 publications, a significant increase over 2014. There were many lessons learned from this experience that I will share with the CO at our June meeting. For now I am happy to respond to any questions that you may have regarding the report.

Yours sincerely,

Richard Thomas, Director of CGIAR Research Program on Dryland Systems

TABLE OF CONTENTS

LIST OF ACRONYMS

A4NH	CGIAR Research Program on on Agriculture for Nutrition and Health
AAS	CGIAR Research Program on Aquatic Agricultural Systems
ALS	Agricultural Livelihood Systems
APSIM	Agricultural Production Systems Simulator
ARIs	Advanced Research Institutes
AVRDC	World Vegetable Center
Bioversity	Bioversity International
BISA	Basin Irrigation System Authorities
CapDev	Capacity Development
CAZRI	Central Arid Zone Research Institute
CCAFS	CGIAR Research Program on Climate Change, Agriculture and Food Security
CCEE	CRP Commissioned External Evaluation
CCO	Cross-Cutting Outcomes
CIAT	International Center for Tropical Agriculture
CIP	International Potato Center
CO	CGIAR Consortium Office
CoP	Community of Practice
COP	Conference of the Parties
CRP	CGIAR Research Program
DAHBSIM	Dynamic Agricultural Household Bio-economic Simulation Model
DC	CGIAR Research Program on on Dryland Cereals
DCL	CGIAR Research Program on Dryland Cereals & Legumes
DEAP	Data-Envelopment-Analysis Programming
DFID	Department for International Development
DS	CGIAR Research Program on Dryland Systems
DSSAT	Decisions Support System for Agro-technology Transfer
EC	European Commission
EC-IFAS	Executive Secretariat of the International Fund for Saving Aral Sea
ELD	Economics of Land Degradation
ESA	East and Southern Africa
FAO	Food and Agricultural Organization
FO	Farmer Organization
FSN	Food Security and Nutrition
FTA	CGIAR Research Program on on Forests, Trees and Agroforestry
FTE	Full-Time Equivalent
Genebanks	CGIAR Research Program for Managing and Sustaining Crop Collections
GL	CGIAR Research Program on Grain Legumes
GO	Governmental Organization
IAS	Agricultural Innovation Systems
IAT	Integrated Analysis Tool
IBLI	Index-Based Livestock Insurance
ICARDA	International Center for Agricultural Research in the Dry Areas
ICRAF	World Agroforestry Centre
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics

IDOs	Intermediate Development Outcomes
IEA	Independent Evaluation Arrangement
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
IPs	Innovation Platforms
ISI	Institute of Science Index
IWMI	International Water Management Institute
KMC4CRPs	Knowledge Management and Communications for CRPS
L&F	Livestock & Fish
LAMPT	Landscape-level Sustainable Land Management Planning Tool
LDN	Land Degradation Neutrality
LUANAR	Lilongwe University of Agriculture & Natural Resources
LUDAS	Land Use Dynamics Simulator
M&E	Monitoring and Evaluation
MAIZE	CGIAR Research Program on Maize
MEL	Monitoring, Evaluation, and Learning
NARS	National Agricultural Research Systems
NAWA	North Africa and West Asia
NGO	Non-Governmental Organization
NSC	National Seed Corporation
OCS	One Corporate System
OECD-DAC	Organisation for Economic Co-operation and Development-Development Assistance Committee
PIM	CGIAR Research Program on Policies, Institutions and Markets
PMU	Program Management Unit
POWB	Plan of Work and Budget
RRS	Reuse and/or recycling of Residues
RSSC	Rajasthan State Seeds Corporation
RTB	CGIAR Research Program on Roots, Tubers and Bananas
S&I	Science and Implementation
SDGs	Sustainable Development Goals
SLM	Sustainable Land Management
SLOs	System Level Outcomes
SRF	Strategy and Results Framework
SWM	Soil and Water Management
TC	Theory of Change
TF	Task Force
UNCCD	United Nations Convention to Combat Desertification
UNGA	United Nations General Assembly
VBSE	Village-Based Seed Enterprises
W3	Window 3 Funding
WASDS	West African Sahel and Dry Savanna
WHEAT	CGIAR Research Program on Wheat
WLE	CGIAR Research Program on Water, Land and Ecosystems

A. KEY MESSAGES

A1. Synthesis of progress and challenges

In 2015, the CGIAR Research Program (CRP) on Dryland Systems (hereinafter referred as Dryland Systems) invested significant time, efforts and resources in the requested Task Force (TF), its external evaluation process (known as CCEE), an internal audit and its follow up and the preparation of the second phase CRP proposal that envisions a merger between Dryland Systems and two other CRPs on Grain Legumes (GL) and on Dryland Cereals DC). The CCEE Report issued in October 2015 - deemed excellent by the Independent Evaluation Arrangement (IEA) - concluded that *"Dryland Systems is highly relevant"* and that *"there is a clear need for investing in improving sustainable productivity of dryland agricultural systems which could benefit hundreds of millions of poor people."* Indeed in 2015, war and political instability ravaged many dryland countries in the Middle East and North Africa. A growing body of scientific evidence suggests a strong correlation between climate change, land degradation, conflict, and the issue of the day – migration. The case for continuing to support research interventions in drylands has never been stronger.

The Program Management Unit (PMU) response to the CCEE list of recommendations, coupled with the Mission Critical Areas for Research identified by the Task Force in April 2015, informed our plan of action and timeline to ensure the legacy of Dryland Systems - in terms of its unique systems approach, key research knowledge, tools produced and lessons learned - is effectively transferred to the Phase II CRPs on agri-food systems. A notable re-orientation of our CRP in 2015 relates to the re-organization of the flagships from five geographical regions to three groups of Agricultural Livelihood Systems (ALS) in line with the conclusions of our 2nd Science and Implementation (S&I) meeting held in April 2015, as well as in response to the severe budget cuts suffered by the Program from USD $10.5 million to USD $6.9million during 2015. We continued to prioritize and adjust our activities by revising our Plan of Work and Budget (POWB2016) – twice in 2015 - under enormous pressure to maintain effective partnerships, consolidate and reduce research action sites, and deliver results with extremely limited funds.

A2. Significant achievements

In 2015, we continued to improve our overall management processes with further development of our user-friendly and interactive Monitoring, Evaluation and Learning (MEL) platform. This platform has enabled us to apply a systematic and results-based management approach to capture, analyze, learn from and communicate timely, open and relevant information and analysis on what works and doesn't in terms of Program performance, research outputs, outcomes and impact. The platform facilitates sharing of such information with Program management, scientists, partners, communications specialists, partners and donors. The MEL platform has been already adopted by 4 other CGIAR research programs and 2 CGIAR centers, setting a standard for common results-based research management and learning across the CGIAR.

Our goal to apply systems thinking to research solutions (shared with Humidtropics and AAS) to address development challenges in drylands and beyond became widely accepted across the CGIAR this year, and is reflected in the its new strategy and research portfolio that signal a radical overhaul of research programs around agri-food systems, as opposed to traditional commodity-based approaches. In particular, we were pleased to also contribute our systems research experience and outputs to shape the Wheat CRP Phase II proposal.

Our unique integrated systems approach was key to shaping thinking and policy recommendations of the 3rd Scientific Conference of the United Nations Convention to Combat Desertification (UNCCD), as well as the landmark global agreement on Land Degradation Neutrality (LDN) reached at the 12th Conference of the Parties (COP) of the UNCCD. We brought to the table scientific evidence and innovative approaches to enrich global science-policy dialogue and collaboration for better policies and practices on land degradation issues. The UNCCD Bureau of the Committee on Science and Technology, proposed to parties to the Convention and relevant organizations *"to develop and use a systems approach to assess vulnerability and adaptation capacities..."* and *"...to develop a user guide outlining the requirements of a systems approach to trans-disciplinary research on issues of land degradation,*

climate change and biodiversity, and between socio-economic and biophysical systems." Our impact on this agreement will ensure a critical pathway for global action to meet the food, water, and energy needs of close to 10 billion people by 2030.

In its role of scientific coordinator of the Economics of Land Degradation (ELD) initiative, Dryland Systems helped bring to fruition a 4-year research effort - between scientists, academics, development practitioners and policy makers from over 30 different organizations worldwide - with the publication of The Value of Land report and Recommendations for Policy and Decision Makers. Our robust scientific evidence on the value of land and its untapped potential for boosting economic prosperity and sustainable development at national and global levels were presented to the European Parliament, and to the Special 70th Summit of the UN General Assembly on adopting the Sustainable Development Goals (SDGs) of the post-2015 development agenda. The European Commission recognized the timely relevance of this research to the critical challenges of developing sustainable agriculture, ending poverty and hunger, curbing migration, and enabling global political and socio-economic stability. On the other hand, the UNGA approved a special SDG and target 15.3 on LDN. In addition the private sector is now using the Value of Land report in its efforts on integrating landscapes into investments. (e.g. ref Kepler Chevreux 360 report 2016)

A3. Financial summary

Dryland Systems expenditure in 2015 was USD 42million. The expenditures were met 16% by funding from W1/2, 80% by funding from W3 and bilateral sources, and the rest from Center/partner own sources. The partners' shares in expenditures were: ICARDA, 31%, Bioversity 2%, CIAT 1%, CIP 0.3%, ICRAF 40%, ICRISAT 17%, ILRI 14%, IWMI 1% and PMU 4%. W1&2 funds were reduced in the final Financing Plan to $6.9 million USD. Personnel costs made up 29%, partnerships 31% and travel 6% of the expenditures. WAS Flagship was the largest project, making up 39% of the expenditures; ESA Flagship accounted for 30% and NAWA Flagships for 12%. CRP management and cross cutting themes (Gender, Systems Analysis, Communication) made 9% of the expenditures. However centers experienced difficulties in reporting cross-cutting themes in W3 and bilateral projects using the current format for financial reporting (L-series – L-136). A review for all cross-cutting themes financial reporting tables and related center financial systems structure (mainly OCS) is advisable in Phase II.

B. IMPACT PATHWAY AND INTERMEDIATE DEVELOPMENT OUTCOMES (IDOS)

In 2015, we continued to develop and refine our conceptual and practical understanding of Dryland Systems impact pathways through empirical analyses of long-term field level research, and a newly updated Theory of Change (ToC) and Program Impact Pathway (IP) to reflect the new CGIAR Strategy and Results Framework (SRF). Our revised IP for research-in-development interventions contributes directly to the three CGIAR Systems-Level Outcomes (SLOs) on: 1) Reduced Poverty, 2) Improved Food and Nutrition Security for Health and 3) Improved Natural Resources Systems and Ecosystems Services and four Cross-Cutting Outcomes (CCO) on: a) Climate Change, b) Gender & Youth, c) Policies and Institutions, and d) Capacity Development. Baseline data, indicators results, and reporting are enabled and monitored through our web-based MEL platform, and used to evaluate program performance, in close consultation with partner centers and the CGIAR Evaluation Community of Practice (CoP). The Program works to achieve the SLOs and CCOs by applying an integrated systems approach to research activities in four iterative phases: (1) integrated systems analysis for identifying system and context-relevant intervention strategies, entry points and actors involved; (2) on the ground integrated system interventions to promote synergistic/convergent improvements in agricultural production, livelihoods and natural resource base; (3) integrative assessment of system performance and impact for managing trade-offs and options, and; (4) integrated system analysis and synthesis for scaling out and up site-specific research outcomes. The results of activities in the first two phases capture the Program research outputs (i.e. system contexts understood and context-relevant management options identified and verified). The results of research in the two later phases capture Program outcomes and impact. These 4 phases correspond to the SRF phases of discovery, proof of

concept, pilot and scaling up.

C. PROGRESS ALONG THE IMPACT PATHWAY

C1. Progress towards outputs

C 1.1. PUBLICATIONS

In 2015, we produced **558 publications** compared with 162 in 2014, including 135 peer-reviewed journal articles, 8 books, 19 book chapters and 61 articles in conference proceedings. 61% of the journal publications (83 articles) were indexed by Thomson Reuter ISI. The proportion of peer-review journal articles with a multidisciplinary and/or system-based perspective is about 49% (66 articles). More than 85% of all our 2015 publications are open access. This scientific output far exceeds the publications planned in the POWB 2015. **In 2014 ISI publications/FTE was 0.39, this year it is 0.78**. Areas of significant scientific contributions through these publications are summarized below:

- Development of concepts for sustainable intensification in dryland, food system resilience and mission critical research areas for sustainable dryland development.
- Integrated systems analyses for identifying context-relevant constraints, needs and preferences, priorities, intervention strategies, entry points and actors involved across major agricultural production and livelihood systems in drylands at different scales, ranging from farming system, regional, continental and global (about 25% of peer-reviewed publications).
- On-ground testing and validation of interventions that increase agricultural production, improve rural livelihoods and conserve and enhance the natural resources base (about 60% of peer-reviewed publications).
- Integrative assessments of system performance and impact for managing trade-offs, options and synergies (about 10% of peer-reviewed publications, expected to be increased in 2016).
- Integrative system synthesis and lessons learned for scaling out and up site-specific outcomes: at least 3 key multi-authored and multi-institutional publications are planned on global synthesis and lessons learnt are either accepted or in preparation. These include the global assessment of degradation hotspots and socio-ecological context types for supporting better targeting and scaling out and up, an international review of integrated systems methods applied in Dryland Systems, and global syntheses of systems frameworks, platforms applied and multi-cases based lessons on scaling up sustainable land/farm management practices.

C 1.2. DATA REPOSITORIES AND DATABASES

Open-access Geo-databases of drylands are public goods: in 2015, we established and/or maintained 55 open-access databases. More than 3068 data sessions were recorded by the Dryland Systems component of ICARDA's Geo-informatics portal (open-access), with 1670 registered users from 119 countries. Among others, these databases include the global Geographic Information Systems (GIS) maps of hotspots of biomass-based productivity degradation and associated drivers (Le et al. 2015); the Sub-Saharan African GIS map of similarity domains of soil erosion drivers (Tamene and Le 2015); the Central Asia GIS maps of food production systems, their productivity and trend (Biradar et al. 2015a); the maps of livestock routes in Ethiopia and Kenya. A database of geo-referenced Sustainable Land Management (SLM) practices across global drylands is also under development. Global socio-ecological contextual types shaping SLM adoptions and outcomes are being developed. It is anticipated that a first version of global web-based GIS for SLM Options-by-Context will be delivered in 2016.

Data on household livelihood assets (natural, physical, human, financial and social dimensions) and typologies: At landscape scale, 8 comprehensive integrated databases of household livelihood typologies (Central Asia: 3, North and West Africa: 2, West Africa: 1, Eastern Africa: 1, South Asia: 1) composed of more than 2000 surveyed households were established.

C 1.3. INTEGRATED TOOLS

Tools for whole smallholder system analysis to inform system performances regarding total productivity, nutrient- and labor- use efficiencies, soil resource protection, related risks and trade-offs: Nutrient Monitoring (farm-NUTMON) with Data-Envelopment-Analysis Programming (DEAP), and Integrated Analysis Tool (IAT) models - were calibrated with household-farm data in West Africa. A Dynamic Agricultural Household Bio-economic Simulation Model (DAHBSIM) was prototyped and is being

calibrated and validated for Meknes region in Morocco. Well-known crop simulation packages (Agricultural Production Systems Simulator (APSIM) and Decisions Support System for Agro-technology Transfer (DSSAT) were calibrated for main crops in West Africa (Nigeria, Niger, Burkina Faso), East Africa (Ethiopia) South Asia (India) in order to capture scenarios of climate changes and technological options. These databases and calibrated models are linked to the IAT model for assessing the behavior of whole mixed crop-livestock rainfed systems.

Socio-ecological system tool linking farm-household and community-landscape processes: Land Use Dynamics Simulator (LUDAS), a spatially explicit agent-based system was customized for rainfed mixed crop-livestock systems in West Africa. The model is being calibrated for implementation as a decision-support in Dryland System action sites in Burkina Faso. A Landscape-level Sustainable Land Management Planning Tool (LAMPT) was calibrated and specified for study catchments in Burkina Faso, Ghana, and Togo to support SLM planning at catchment level. These tools will be further customized and implemented for selected sites in Tunisia and Uzbekistan in 2016.

Participatory systems analysis guidelines: Guidelines for research objective-driven selections of integrated systems framework and tools, and common steps in integrated systems analyses with examples were developed with NARS. A Manual on the Influence Diagrams methodology for participatory systems analysis was developed with natural resources management case studies for Ethiopia and Malawi, outlining the need to address complexity interactions from systems perspective. We also produced and disseminated Gender Guidelines for Biophysical Researchers to mainstream gender throughout the research project cycle from inception, development and implementation.

C 1.4. OUTREACH AND MAJOR GLOBAL EVENTS

We developed a number of communications tools (including program website and MEL platform) and promotional products (Program Flyer; Banners; Brochure; Program Poster; Innovation Poster) to help explain the mission and vision of the Program, and promote its activities and achievements internally and externally to various audiences at local and global levels. Several guidance documents were produced, such as our Branding Strategy and Guidelines, Outcome Story Toolkit, and Open Access Explained. These products were used in various global, regional and local workshops, meetings and conferences that were either organized by Dryland Systems or where program scientists were invited to present and participate, thus helping to positively reinforce the Program brand and reputation for its unique systems research approach and quality of science. A partial revamp of the website was implemented to ensure branding compliance, to upgrade the News/Blog platform, and to increase the quantity and relevance of research content and news features. Compared to the previous year, we experienced a 735% increase in Website Users (21,057 vs. 2,522), 319% increase in the number of Pages Viewed (83,221 vs. 19,872) and 388% increase in the number of Sessions (31,981 vs. 6,554) exploring different website sections and contents. Of these, 70.4% were recorded as New Sessions. The blog stories published in our website in 2015 – coupled with our new robust approach to social media are paying off in terms of an increasing number of Program followers and engagement, leading to increased discovery and understanding of our research activities and achievements. Facebook and Twitter are the main social media platforms responsible for driving 93.7% of our website traffic.

The Program contributed significantly to many international events, including strategic engagement at the following key events:

- **International Systems Conference**, Ibadan, Nigeria, March 2015 (keynote speech by Program Director, press release, social media campaign, etc.)
- **UNCCD 3rd Scientific Conference** in Cancun, Mexico, March 2015 (keynote speech by Program Director, blog story, side event, social media campaign, etc.)
- **European Parliament:** Launch of ELD Value of Land in Brussels, Belgium, August 2015 (press release, event video, social media campaign, media interviews, etc.)
- **70th UNGA Summit**: Launch of ELD Value of Land, September 2015 (keynote speech by Program Director, blog story, press release, UNTV event video, social media campaign, media interviews.)
- **UNCCD, COP12** in Ankara, Turkey on November 2015 (blog story, side event, social media campaign, etc.)

We also produced a new animation video on Drylands: The Opportunities You Never Imagined to raise awareness of drylands and investment opportunities for research of critical dryland issues, which was screened during many workshops and events.

C2. Progress towards achievement of research outcomes and IDOs

C2.1 System and context-specific analysis for improving options, strategies and prioritization for improved agricultural livelihoods: Building on our 2014 research, this year we continued to systematically consolidate the analysis and prioritization across agricultural livelihood systems in drylands at farm-household, national, regional and global scales.

The benefits of household livelihood context-specific analysis to promote sustainable land management practices – in comparison to status-quo "uniform blanket" treatments - have been fleshed out through best practice case studies across global drylands. Livelihood typologies of smallholder systems, i.e. types of social and ecological conditions/assets defining household livelihood contexts were identified in rain-fed based systems in Mali (Falconnier et al. 2015), Burkina Faso (Thiombiano and Le 2015a, 2015b), Malawi (Mponela *et al*., 2015) and India (Haileslassie et al. 2015, Kumar and Whitbread 2015, Shalander et al. 2015); in irrigated based systems in Morocco (El Ansari et al. 2015), Kyrgyzstan (Dosov 2015a) and Tajikistan (Dosov 2015b); and in agro-pastoral systems in Uzbekistan (Darvan et al. 2015). The analysis of these livelihood contexts has teased out the critical factors that affect positively household strategies and prioritization for adoption of sustainable land management practices, thus enhancing agricultural productivity and natural resource outcomes. The livelihood context-specific approach demonstrates to be an effective and comprehensive way of analysing all the systems elements that need to be taken into account (constraints, opportunities, as well as who/whom, where, what, how) in order to prioritize research questions and identify relevant options for intervention. Context-specific household analysis helps to improve targeting of interventions that increase the overall performance of agricultural livelihood systems with respect to productivity, resource use efficiency, building of natural and human capital and flexibility in coping with and adapting to change in externalities.

Regional and global context analysis were conducted and used to create extrapolation domains for supporting the scaling out and up of site-specific outcomes. In Central Asia, cropping patterns and productivity of rain-fed, agro-pastoral and irrigated agro-ecosystems were assessed by means of agro-geoinformatics hotspots of land degradation to prioritize investments in SLM given limited resources (Biradar et al. 2015a). Global hotspots of human-induced biomass productivity declines, a state-of-the art global assessment on this issue, were mapped (Le et al. 2015). This provides a basis for global recognition of areas where land degradation is most acute, and priority actions for in-depth research and governance and policy measures to combat land degradation worldwide. These research findings and tools were applied to global research design and planning with the help of our international partners, such as the ELD initiative (where Dryland Systems plays the role of scientific coordination) and the CRP on Policies, Institutions and Markets (PIM). Similar spatial domains of soil erosion drivers were mapped across Sub-Saharan Africa - a traditionally data scarce sub-continent, and demonstrated to be extremely useful in better prioritization exercises and cost-effective erosion assessments (Tamene and Le 2015).

Assessment of current seed systems in Central Asia reveals village-based seed enterprises (VBSE) as an alternative option for increasing incomes and empowering women (Bishaw 2015). These participatory regional assessments identified main issues of the current seed systems, as well as the drivers for establishing farmer-based seed business: (1) production niches for different crops, (2) government policy and market demands supporting diversification (3) availability of improved varieties and associated agronomic technologies, (4) role of formal public seed sector, and (5) existing local institutions for potential uses for farmer-based seed enterprises, and (6) aspects of economic empowerment of women and youth. The needs for alternatives approaches for seed production and marketing by mobilizing farmers, using existing institutions or creating new associations were identified and closely described. The participating private sector partners are now aware of follow-up steps and the expected level of successful VBSE performance. The VBSE demonstrate a critical role for improving women's condition and access to important deciding making processes in Afghanistan, a country where social and cultural norms and patriarchal structures are highly restrictive. VBSE approach created

opportunities for women to be involved in this activity which is often further exacerbated by their limited land rights (*Saharawat* et al. 2015 flagged at CGIAR).

C2.2 Integrative options for improving performance of agricultural production systems and soil-water resources validated and adopted

Sustainable land/farm management options for improving farm productivity, household incomes, soil and water resources and gender equity were tested and validated in several specific livelihood contexts in drylands. These Dryland Systems research activities are quite different to other commodity-based research activities implemented by other projects/programs in terms of being: (1) driven by constraints, opportunities, needs/preferences and capacities in specific to rural livelihood contexts, (2) oriented to system performances (improved total productivity and stability, natural resources base and social equity), (3) integrative interventions to create convergent changes, and (4) being co-learnt and co-produced through multi-stakeholder innovation platforms.

Conservation soil and water management practices: Raised-bed and cutback furrow irrigation technologies demonstrated the enhancement of water productivity, energy use efficiency and mitigate salinitization for irrigated based systems in Central Asia (Nurbekov et al. 2015) and the Nile Delta (Dhehibi et al. 2015). In rainfed and agro-pastoral systems, technological options proved to contribute effectively to agricultural production and income preferred by partners including: zero-till, hill slope soil and water conservation, supplemental and deficit irrigation and dual-purpose cattle farming (Mohawesh et al. 2015, Louhaichi et al. 2015a, 2015b; Sraïri et al. 2015; Mponela et al. 2015a, 2015b; Ibrahim et al. 2015). Traditional micro-ponds were found to be useful for increasing water use efficiency and stabilize water sources in arid rainfed system in India (Kakumanu 2015). (IDOs on NATURAL CAPITAL ENHANCED 3.1, SUSTAINABLY MANAGED AGRO-ECOSYSTEMS 3.3, MITIGATION AND ADAPTION ACHIEVED A.1).

Reuse and/or recycling of residues (RRS): Multi-purpose crops (Homann-Kee Tui et al. 2015a, 2015b), buffering shrubs/trees with/without micro fertilization (Ibrahim et al. 2015, Mponela et al. 2015b) were found useful for increasing both crop yields and protecting soils. The reuse and/or recycling of crop and animal residues for fertilizing crops proved to be an economically and ecologically efficient option across Sub-Saharan Africa and South Asia (Valbuena et al., 2015; Thiombino and Le 2015b). However, there are trade-offs between different competing uses of crop residues (e.g. mulching vs. cooking fuels or fencing; manure collecting/composting vs. labour shortage or off-farm preference) depending on specific livelihood conditions of households. However, RRS in principle is a suitable strategy for sustainable intensification in dryland, where net primary production potential is low. Furthermore, the reuse/recycling of livestock manures in principle helps increase subsidiary linkages between livestock and crop, whilst being less focused. This issue is being researched and examined further in 2016.

Diversification options: High value crops that are low biomass-based such as medical plants (The Time of India 2015, ICRISAT 2015), or resilient to drought such as tree-based products (Luedeling et al. 2015) or cactus production and transformation (Roy et al. 2015, Hassan et al. 2015) were found to be complementary to the intensification of traditional or staple crops (IDOs on INCREASED INCOMES AND EMPLOYMENT 1.3, NATURAL CAPITAL ENHANCED 3.1, SUSTAINABLY MANAGED AGRO-ECOSYSTEMS 3.3, MITIGATION AND ADAPTION ACHIEVED A.1).

C2.3 Enabling better institutions, policies and governance for scaling out and up research outcomes and innovations

Several community-based innovation platforms adopting the integrated systems approach are making a difference to the re-greening process of silvo-pastoral systems in the Rajasthan desert of India. These include pastures, orchards, legume crops, medicinal plants, potato farms (ICRISAT 2015, HindustanTimes 2015), the integration of the native high value medicinal plant (*Convolvulus pluricaulis*) and the strengthening of the relevant value chains. (The Time of India 2015, ICRISAT 2015). The livelihood context-specific, action-based research approach embedded in the village-based innovation network, was scaled out from a limited number of pilot sites to more than 20 locations in western Rajasthan. These areas face similar challenges of water and fodder scarcity, and degraded lands. (IDOs on INCREASED INCOMES AND EMPLOYMENT 1.3, SUSTAINABLY MANAGED AGRO-ECOSYSTEMS 3.3, MITIGATION AND ADAPTION ACHIEVED A.1, ENABLING ENVIRONMENT IMPROVED C.1).

Catalysing change through multi-sector Innovation Platforms in Central Asia: Online discussions on Agricultural Innovation Systems (AIS) in Central Asia and Caucasus countries and China towards more sustainable Food Security and Nutrition (FSN) were facilitated by the Dryland Systems Innovation Platform, with participation of 48 experts, from 18 countries from different regions in both developed and developing economies. More than 10,000 people from 73 countries visited the discussion's webpage and more than 10,000 people received information on the consultation process. Roughly, 35% of the participants who took part in this consultation were women, and 10% young professionals. A Rural Women Learning Alliance in Uzbekistan is leading local community efforts to cope with the negative effects of climate change and land degradation. This Innovation Platform comprising of ARI, NARS, Policy Makers, private sectors (including banking services) has initiated discussions for improving market access to credit, output markets, productive inputs, and facilitate dissemination of technical knowledge and advice in reducing post-harvest loss. A Rural Women Learning Alliance in Pakistan is leading local community efforts to cope with the negative effects of climate change and land degradation (Shah et al. 2015). (IDOs on INCREASED INCOMES AND EMPLOYMENT 1.3, EQUITY AND INCLUSION ACHIEVED B.1, ENABLING ENVIRONMENT IMPROVED C.1, NATIONAL PARTNER AND BENEFICARIES ENABLED D.1).

National policy-level adoptions of innovations: The Nigerian government has pledged to triple wheat areas with new high yielding and heat tolerant wheat varieties that were introduced by ICARDA and which meet the required end use quality to 300,000 ha in 2017 (Giwzaw Assefa et al. 2015a, ICARDA 2015). This results from work with farmers and value chain actors (including the private sector) in the milling and baking industries, who were introduced to the new high yielding and heat tolerant wheat varieties. This initiative will impact on (1) reduction of dependence of national food system on wheat imports, (2) increased incomes for farmers, (3) creation of job opportunities for women and youth and alleviate poverty, as well as (3) strengthening of Nigeria's local capacities for processing and marketing. (IDOs on INCREASED INCOMES AND EMPLOYMENT 1.3, INCREASED PRODUCTIVITY 1.4, NATIONAL PARTNER AND BENEFICARIES ENABLED D.1).

Index-Based Livestock Insurance (IBLI) schemes were scaled up in Kenya and Ethiopia (Chelang'a et al. 2015; Jensen et al. 2015a, 2015b; Takahashi et al. 2016): IBLI was designed on the basis of research by ILRI and partners to protect to pastoralists from the risk of drought related forage scarcity. Since it's inception in 2001, over 10,000 pastoralists in Kenya have insured livestock worth over USD$5 million and these pastoralists have received indemnities totaling USD$120,000. In Ethiopia, over 3,000 pastoralists have insured livestock worth USD$1.2 million and have received indemnities totaling USD$30,000. In 2015, IBLI underwent a shift from an asset replacement to an asset protection contract, as the program scaled up to areas without sufficient livestock mortality data to estimate a statistical response function. Furthermore, the Government of Kenya launched the Kenya Livestock Insurance Programme that will offer limited livestock insurance contracts to targeted individuals in Northern Kenya with possible subsidies to the public in later years. (IDOs on INCREASED INCOMES AND EMPLOYMENT 1.3, MITIGATION AND ADAPTION ACHIEVED A.1, EQUITY AND INCLUSION ACHIEVED B.1, ENABLING ENVIRONMENT IMPROVED C.1, NATIONAL PARTNER AND BENEFICARIES ENABLED D.1).

Maps of livestock routes were adopted by national governments and NARS in Ethiopia and Tanzania (ILRI 2015) and Ethiopia (CELEP 2015a, 2015b) as they provide a foundation block for raising awareness on livestock mobility, the importance for livestock production in drylands, and ways to service and protect livestock. This research initiative not only enabled the collection of highly valuable information, but it is also helping build local management capacities, reducing poverty and food insecurity, and improving the enabling environment for better policies and governance. (IDOs on MITIGATION AND ADAPTION ACHIEVED A.1, NATIONAL PARTNER AND BENEFICARIES ENABLED D.1).

C3. Progress towards impact

Measuring results and impact of systems' research is not straightforward. A key characteristic of this type of research is that it addresses complex (non-linear) dynamics of socio-ecological systems that operate at different scales of space, time and human organization. Therefore, it is necessary to build on previous research, which can often contribute to impact at systemic level. Examples of progress towards impact are: the re-greening of silvo-pastoral systems (ICRISAT 2015, HindustanTimes 2015)

and diversified agricultural value chains (The Time of India 2015, ICRISAT 2015); gender empowerment through VBSE in Afghanistan (*Saharawat* et al. 2015 flagged at CGIAR) and community- level women led interventions in India and Uzbekistan; and policy-level adoptions of new high yielding and heat tolerant wheat varieties in Nigeria (Giwzaw Assefa et al. 2015a, ICARDA 2015), Index-Based Livestock Insurance (IBLI) schemes implemented in Kenya and Ethiopia (Chelang'a et al. 2015; Jensen et al. 2015a, 2015b; Takahashi et al. 2016), the UNCCD endorsement of the systems approach to tackle the complex issue of land degradation and which will affect national policies of all UNCCD signatory countries, and the positive engagement of the private sector with the evidence presented in the Value of Land report. Early successes are encouraging. Critical mass improvements in drylands food security, livelihood equity, and resilience based on systems research need longer gestation periods, likely to be realized beyond the medium term of the program (e.g. 5 years). At this stage, an important part of the program's impact measurement will be foresight (ex-ante) assessments using (1) relevant integrated system assessment and modeling tools, and (2) criteria and indicators of system performances and ongoing monitoring and evaluation. These assessments were developed and being implemented in 2015-2016, and incorporated into Phase II CRP on Dryland Cereals & Legumes (DCL).

D. GENDER AND YOUTH RESEARCH ACHIEVEMENTS

In 2015, our gender-responsive systems research and gender mainstreaming activities enabled substantial achievements in understanding and addressing key institutional, cultural attitudes, policy gaps and local contexts that affect gender inequity in rural agricultural livelihoods in drylands.

Producing evidence through gender strategic and mainstreamed research: In five West African countries, more than 75.000 women will benefit from participation in tree value chains between 2015 and 2019 due to an up-scaling collaboration with USAID using the GSMA model. Women and youth in Central Asia and India will produce more food that is nutritious and earn additional income with selling seeds thanks to systems research on mung bean, moth bean, groundnut, pigeon pea and foxtail millet. Gender research in the Nile Delta highlighted **women's contribution to climate change adaptation** through innovations of crops and agricultural practices in Egypt, while improving income-earning options of women. A systems-perspective study on the **gender gap** in Morocco and Egypt examined the income and working conditions of female agricultural labourers and the different 'types' of women farmers in commercial and subsistence production. These insights informed the development of a gender-responsive tool by Food and Agricultural Organization (FAO) to assess decent work for women in rural areas and promote evidence-based policy dialogue.

Our research evidence in West Africa and India indicates that despite the fact that women shoulder 57% of the labour in the farm, access to information and knowledge is more critical to increasing their decision making power in the smallholder household. This actionable recommendation for empowering women with access to vital information and knowledge is strengthened by similar research findings in six studies on **gender-responsive extension services in India and in West and Eastern Africa.** Giving women proper access to information and knowledge is critical to ensuring adoption of best practices and innovations in agriculture. Moreover, these studies recommend employment of female extension officers, and the training of both male and female extension officers to provide men and women farmers equally with vital knowledge and information. We also found gender plays a key role in the perception and management of biodiversity and **on-farm decision-making associated with diverse species** because men and women benefit differently from the diverse species.

A pilot participatory youth study in the drylands of Morocco examined the perspectives of female and male young people, and sheds light on the complex web of socio-economic factors that affects their options and future choices: to endure and shape a new future at home or migrate in search of better opportunities. Final results will be published in 2016 and are already now awaited keenly by policy makers and development partners to inform interventions on agricultural livelihood opportunities, job creation, and education for the young. **Trade-offs** preventing women to invest in their agro-business have been identified in a study using a participatory systems analysis approach with women and men in agro-pastoral and smallholder vegetable growers' contexts in Eastern Africa. To grow their capital, women took an active role in forming **savings and credit groups** in East Shewa, Ethiopia. The pilot four

groups (each with 20 members) have become role models for other women in the region by saving their own capital and accessing cheap loans to intensify existing cropping systems with legumes. As a result, women and children have benefited from increased incomes, access to new food sources and better nutrition.

Capacity development highlights: A 10 days training in Cairo, Egypt to introduce approaches, methods and tools for integrated systems assessment (including modelling), targeting CGIAR and external researchers, included several gender-responsive modules for systems analysis. We disseminated the Gender Guidelines for Biophysical Researchers to mainstream gender in project cycle development and implementation.

While data in surveys and research reports are sex-disaggregated – all eight centres meet the CRP performance requirement indicators (see Annex 2), data quality and the active inclusion of women in research by biophysical scientists remains a challenge.

E. PARTNERSHIPS BUILDING ACHIEVEMENTS

In 2015, Dryland Systems relied on a diverse array of over 481 partnerships with NARS, ARIs, civil society actors, the private sector and participating centers to engage in integrated agricultural systems research and ensure its research outputs are effectively utilized in order to fulfill the program's mission.

Use of research outputs and outcomes by partners: In 2015, many of our partners (including but not limited to NARS, NGOs, ARIs, academia, private sector, national governments and other CRPs) reported evidence of direct influence of Program research outputs on improved dryland agricultural livelihoods and policies in many countries and regions, such as Mali, Mozambique, the Sahel, India, Jordan Ethiopia, Pakistan, Tunisia, Zimbabwe. Illustrative examples of the research-for-development partnerships we established this year to ensure sustainability of our interventions are: In **Central Asia**, a Water Consumer Association was established in Uzbekistan to conduct field experiments for assessing water governance on-farm level and joint action with AVRDC was taken to develop improved varieties of mung-bean under different irrigation technologies. Partnerships were also built with the Basin Irrigation System Authorities (BISA) in Uzbekistan and Tajikistan for capacity building and technology transfer activities. Our research was also aligned with the priorities of a special program by the Executive Secretariat of the International Fund for Saving Aral Sea (EC-IFAS). **In South Asia,** we utilized Innovation Platforms to bring together 5 NARS, 5 NGOs, 2 private sector companies and several line state departments to align research in Dryland Systems action sites with state and regional priorities. Joint activities were developed to enhance productivity enhancement through balanced fertilizer management; recycling of farm wastes for soil fertility improvements; mechanization; women-centred small-scale vegetable cultivation; conservation of green and blue water resources and efficient management; fodder development to strengthen livestock related activities; insurance; and capacity building. A new partnership with the Rajasthan State Seeds Corporation (RSSC) and National Seed Corporation (NSC) for community level seed production of moth bean led to the creation of a seed grower farmers group and seed banks at village level. Another important partnership was established with cattle breeding farms and Rajasthan Veterinary University for supplying superior quality breeding males of high yielding cattle to farmers in four villages on subsidised payment basis. In **East and Southern Africa**, the afforestation work in Adamitullu is a combined effort of our ICRAF researchers in the field and the Bureau of Agriculture which supplies seedlings, the Adamitullu Research Station which provides transportation of seedlings, and local farmers who have contributed labour to plant and manage the area with carefully selected tree species that provide economic and environmental benefits. In Kenya, ILRI researchers continue to develop and nurture key partnerships with the **livestock market development** community (NGOs, county governments, and the Kenya Livestock Marketing Council), which have attracted a new 8million USD grant by USAID to support livestock markets for the next three years. The new **Drylands Restoration project** funded by EC/ IFAD through ICRAF is working to coordinate actions with existing IFAD investments and several USAID and World Bank funded projects to build upon successes in drylands restoration and to ensure we meet the scaling up objectives.

Strategic partnerships with other CRPs: Dryland Systems collaborated with all CRPs except **RICE** to deliver research outputs, share knowledge and learning, and bring together a number of national research institutions, private farmers, governmental organizations and CG centers to test, implement,

and scale up innovative research solutions from an integrated systems perspective. The specific aspects of our cross-CRP collaboration are captured in Annex 5.

F. CAPACITY BUILDING

In 2015, all Dryland Systems flagships contributed to capacity development (CapDev) in different ways and far beyond the 10% budget target. CapDev is implemented through various forms and budget allocation is not always easy to track, as noted in the CGIAR AR 2014. Our CapDev Working Group members coordinated actions throughout the year to ensure stable W3/Bilateral funds, reduce risks in delivering and scaling planned outcomes and attract funding from national partners for longer term investment. The details of various capacity development outputs and outcomes are presented in Annex 4. As noted by the Consortium Office (CO) Review and by the External Evaluation. Dryland Systems was the first CRP to issue a full CapDev strategy and implementation plan (2014) which builds on in-kind/cost-sharing arrangements with partners and is fully aligned with the CapDev Elements developed by the CGIAR Community of Practice (CoP). Our strategy was successfully adopted by other CRPs (**WHEAT**, **DC** and **GL**) for Phase II Proposals, as a solid base for further research integration within the CGIAR. Moreover, the members of Dryland Systems CapDev Working Group provided recommendations to the CO on a set of suitable indicators that were incorporated into the CGIAR Phase II Guidance for proposals. In 2015, the Program validated a survey tool to assess the CapDev Elements across the CGIAR portfolio. This was an important co-learning exercise with CG Partners, non-CG Partners and CRPs (**FTA**), and additional tools were developed on its basis for Intellectual Property and Open Access (11 Modules online) and Gender[1]. In addition, the work undertaken on Governance and Innovation Platforms at different locations helped co-learning with different Commodity/Integrative CRPs (WHEAT, DC, GL, RTB, WLE, CCAFS) and allow them to incorporate/test their technologies/tools into the system at farm scale and bring those examples at policy level. In collaboration with Humitropics and WLE, we advocated for the revision of the CGIAR AR format and Table 1 indicators to reflect better outcomes-based indicators for CapDev. Our program publishes open access statistics in real time, following standards for disaggregating figures by Country, Center and Topics. All training materials (survey tools, evaluation formats, guidelines and datasets) are published open access following CO Standards, and our CapDev Indicators are aligned with Feed the Future Indicators for those programs funded by US Government and mapped into our program. In addition, the Program supports and promotes the dissemination of knowledge and publications in French, Portuguese, Arabic and Russian in order to increase individual and institutional capacities at national and regional levels where knowledge of and access to English journal articles is limited.

G. RISK MANAGEMENT

We were amongst the first CRPs to develop a full Risk Management Plan (approved in 2014) based on recommendations by the CO to map risks along the research impact pathways and ensure proper contingency and mitigation plans are in place. Our approach has been adopted by CRPs on **DC**, **GL** and **RTB** and will be used in Phase II. In countries where our research is conducted, the Program developed a set of risk assessments and contingency **options-by-context** reflected in the individual 2015 Center by Flagship annual reports on DS website. These are useful resources for future projects in specific countries with similar agro-ecologies and socio-economic contexts and Phase II CRPs.

The first and obvious risk faced in 2015 by the Program relates to the **drastic budget cut** from USD$10.5 million to USD $6.9million, which required significant effort to continually prioritize and adjust activities by revising the POWB2016 twice, consolidate and reduce research action sites. Notably, we implemented a re-organization of the CRP flagships from five geographical regions to three groups of Agricultural Livelihood Systems. We also leveraged existing and new partnerships to mobilize resources for research through W3/bilateral funds attracted by partner centers. However, dependency on W3/Bilateral funds limited the CRP ability to enforce accountability with partner centers to deliver program objectives as CO guidance and coordination on how bilateral projects fit with the overall CRP portfolio remains unclear. This in turn generates loss of program reputation with partners on the ground.

[1] Online self-test on gender concepts, and an organisation audit tool 'Is your research organisation gender-fit?'

The second risk relates to the issue of **appropriate acknowledgment and attribution of research outputs to Dryland Systems**, which is closely linked to the absence of clear CGIAR-wide guidelines on acknowledgment, and in cases when a particular research activity is funded by or mapped to several CRPs. The PMU developed and circulated detailed Acknowledgment Guidelines and Branding Guidelines with specific acknowledgment language that cover instances when: (1) Research is 100% funded by Dryland Systems; (2) Research is partially funded by Dryland Systems and other donors; (3) Research is mapped to Dryland Systems (W3/bilateral donors). We also regularly encouraged our partners to showcase cross-CRP collaboration to acknowledge all relevant CRPs on joint research activities, however partner centres will continue to play CRP favourites in the absence of clear guidance at CO level. It goes without saying that this issue has historically undermined the image, reputation and legacy of the Dryland Systems as being able to produce and deliver a high number of and quality research outputs. This in turn will continue to fuel negative perceptions by the Consortium, partners and donors, and potentially undermine efforts to attract funding for the DCL CRP proposal and other dryland-specific programmes that partners may seek to develop in the future. This risk has been contained by increasing our interaction with Advance Research Institutes and MSc/PhD students, Partnership Framework Agreements at global level, involvement of PMU staff in the review process of branded publications, and co-funded activities with other CRPs (WHEAT, DC, WLE, CCAFS, and GL). In addition, via the MEL platform, we have been able to better monitor equitable acknowledgement and attribution in 2015. We note that the attribution of results without double counting across CRPs (e.g. publications, datasets, people trained, etc.) is a key reputational risk that must be addressed in Phase II in order to avoid disenchantment, lack of transparency and accountability vis-à-vis donors and partners.

The third risk relates to non-transparent CO processes for allocating CRP budgets in accordance with planning, reporting, and performance. At CGIAR level, POWB and the Annual Reporting are two completely disconnected processes, and the criteria for applying CRP budget cuts were not communicated and applied coherently, and did not take into account CRPs performance for the entire cycle (2012-2016). This well known fact is addressed in the literature by key experts contracted by the CO, and has unfairly undermined our CRP efforts to establish a culture of results-based management with our partners. Our tools (largely the MEL platform) and experience of linking budget allocations to performance will prove instructive in Phase II for those who are willing to learn from our risk mitigation strategies.

H. LESSONS LEARNED

Our experience of implementing the result-based MEL Platform to capture and evaluate indicator results in 2015 for our program, 4 other CRPs and 2 CGIAR centres revealed important challenges and lesson learned that may be extremely useful to heed by the CO for Phase II CRPs. Our detailed observations and overall level of confidence/uncertainty in the CRP performance indicators is fully captured in Annex 6.

In a nutshell, we have learned that measuring the impact of research intervention on *ecosystem services (drylands and otherwise)* requires the development of a special set of system-performance indicators that go beyond the current set of indicators, which are best suited for mainly commodity-oriented agricultural research. For instance, the impact of Soil and Water conservation technologies such as water harvesting structures and improved seed varieties should be assessed not only by responsive crop productivity, but also soil carbon and moistures, animal production, agro-biodiversity, buffer capacity to droughts and water access equality at both on- and off-site. In 2015, Dryland Systems - in collaboration with several other CRPs - lobbied for and provided expertise to the CGIAR Monitoring and Evaluation (M&E) community of practice (CoP) to refine the current set of indicators and include better outcome-level indicators that are more appropriate for capturing the complex results of integrated systems research. This experience has served us well in introducing new modules and enhancements to our MEL Platform to accommodate demand-driven considerations by researchers, CG centers, partners and donors to capture and disseminate the results of our work in an efficient and transparent manner, and ensure proper attribution and accountability.

Other lessons offered below relate to our experience of implementing and scaling up research. A unique lesson learned by Dryland Systems is that the portfolio of sustainable soil and water management (SWM) options and their adoption drivers are scale- and context- specific. Assessments of the system-

whole, context-specific and introversion-responsive performances are required to adequately capture environmental externalities (in term of soil and water resources) of agricultural productions. This builds on the principle of ***G x E x M = Yield*** to include greater, deeper social and ecological context beyond the farm scale. Thus, the options-by-context analysis structure**,** in addition to classical GxExM mindset, provides stakeholders with an effective way and comprehensive picture of all the systems elements that need to be taken into account (constraints, opportunities, who/whom, where, what and how) in order to prioritize relevant options and interventions that help increase the overall performance of agri-food systems. The livelihood context should be concurrently characterized at household-farm, village and landscape levels. The context-specific option portfolio includes technical, institutional/policy and market levers.

The importance of qualitative analyses of progress. The program benefited from cost sharing and direct involvement of local communities in developing a stronger commitment from local partners, and to secure other types of contribution from stakeholders in the form of labor, local material and financial local government support. All this, helped the Program to develop more tools, products, field test technologies, and allowed more value chains to be analyzed and more hectares to be put under improved SWM technologies or management practices than originally targeted. We note that implementing interventions through existing farmer organizations (FOs) such as multipurpose cooperatives enabled us to scale up and reach out to a larger number of target community groups, whilst enhancing the capacities of these FOs.

Communication and knowledge sharing is a critical success factor for CGIAR Research Programs and flagships to deliver their impact in accordance with the CGIAR Strategy and Results Framework. Communications contributes in two ways: (1) by enabling achievement of CRP outcomes at different scales; (2) by sharing program/flagship results to enhance visibility, ensure appropriate attribution of results and demonstrate accountability for efficient use of public funds. Communication activities can also help enable and enhance, gender, capacity development, and monitoring and evaluation activities, at all stages of the CRP impact pathway. Our Program actively engaged with the Knowledge Management and Communications for CRPs (KMC4CRPs) Community to promote learning and sharing across CRPs, with members from the CGIAR Consortium, several leading CRPs such as: CCAFS, WLE, WHEAT and MAIZE, and CG centres such as ILRI, CIAT and Bioversity. Our Program led two workshops sessions on Science Communications-4-Development and Monitoring & Evaluation of Communications during a 3-day AG-knowledge Innovation Process Share Fair and Writeshop, took part in the Communication Task Force set up by the CO in September 2015 to review the experience of CRP communications, provide recommendations for Phase II CRP Proposal Guidelines, and develop a draft Conceptual Framework for Communications outlining six areas of interventions that encompass critical aspects of communications for research delivery and impact. Going forward in Phase II, the CO and centres must support this type of grassroots efforts to bring greater coherence and coordination to the complex process of communicating CRP results to various target audiences, and help raise funding for research.

LIST OF ANNEXES

Annex 1. CRP Performance indicators with glossary and targets

Indicator	Glossary	Deviation Narrative (±10%) 2015	2015		2016
			Target	Actual	Target
1. Number of flagship "products" produced by CRP	See here for full list of flagship products.	D: +43% Stakeholders consultation provided faster pathway to deliver additional frameworks not set as target in March 2015.	28	40	11
2. % of flagship products produced that have explicit target of women farmers/NRM managers	See here for full list of flagship publications.	D: +30% Implementation of Gender Strategy and more effort from social scientists in centers increased expected target value.	50%	65%	50%
3. % of flagship products produced that have been assessed for likely gender-disaggregated impact	See here for full list of flagship products.	D: +9%	32%	35%	30%
4. Number of "tools" produced by CRP	See here for full list of tools.	D: +17% Non CG-Partners contributed more than expected and provided additional Tools.	53	62	9
5. % of tools that have an explicit target of women farmers	See here for full list of tools.	D: +30% Implementation of Gender Strategy and more effort from social scientists in centers increased expected target value.	30%	39%	30%

6. % of tools assessed for likely gender-disaggregated impact	See here for full list of tools.	D: -42% Non CG-Partners Tools were not fully embedding Gender-disaggregated impact designed as recommended. 2016 work will focus on mainstreaming approaches with them.	19%	11%	20%
7. Number of open access databases maintained by CRP	See here for full list of open access databases.	D: +267% Main efforts to collect datasets and ensure centers/partners will make them available has increased planned targets.	15	55	30
8. Total number of users of these open access databases	See here for more details.	D: +99% Increased number of datasets openly available compared with Target has obviously increased audience. It is important to note that nested datasets may have the same target users thus the number is overestimated. Centers should improve their capacity to track usage with CRP support in 2016.	15,000	29,810	25,000
9. Number of publications in ISI journals produced by CRP	See here for full list of publications.	D: +388% Target value was set for ISI papers with an Integrated Systems perspective, whereas counting also considered monodisciplinary science ISI papers as parts of Integrated Systems Research process. [Besides these 70 ISI papers, CRP advocate to consider also papers indexed in SCOPUS that was used in the CGIAR FinPlan 2015, and measure the citation index.]	17	83	25
10. Number of strategic value chains analysed by CRP	See here for full list of value chains analysed.	D: +17% Number of value chains planned was slightly increased thanks to collaboration with non-CG Partners.	18	21	4

11. Number of targeted agro-ecosystems analysed/characterised by CRP	See here for more details on agro-ecosystems analysed.	D: +183% Target value considered main CRP agro-ecosystem at global level while actual value measured the agro-ecosystem in specific country (option x context)	6	17	4
12. Estimated population of above-mentioned agro-ecosystems	See here for more details.	D: +3%	110,800,000	114,262,001	100,000,000
13. Number of trainees in short-term programs facilitated by CRP (male)	See here for more details on male trainees in short-term programs.	D: -72% The 2 severe budget cuts and 2016 budget projections drastically reduced the number of field training in favour of more stability for staff time.	238,883	66,851	3,000
14. Number of trainees in short-term programs facilitated by CRP (female)	See here for more details on female trainees in short-term programs.	D: -71% The 2 severe budget cuts and 2016 budget projections drastically reduced the number of field training in favour of more stability for staff time.	71,330	20,545	1,000
15. Number of trainees in long-term programs facilitated by CRP (male)	See here for more details on male trainees in long-term programs.	D: +91% Male PhD enrollment increased through involvement of CRP staff in supervising additional students (23 trainees enrolled in 2015 while the other continuing from previous years in bilateral projects).	32	61	46
16. Number of trainees in long-term programs facilitated by CRP (female)	See here for more details on female trainees in long-term programs.	D: -22% Female PhD enrollment decreased due to specific cases of renouncement and lack of funding from CRP to guarantee a full cycle after the confirmation of DS Closure. (1 trainee enrolled in 2015 while the other continuing from previous years in bilateral projects).	27	21	15

17. Number of multi-stakeholder R4D innovation platforms established for the targeted agro-ecosystems by the CRPs	See here for full list of innovation platforms.	D: +23% Number of innovation platforms slightly increased due to the scaling-up activities of non CG Partners.	26	32	6
18. Number of technologies/NRM practices under research in the CRP (Phase I)	See here for full list of technologies/practices under research.	D: +9%	74	81	20
19. % of technologies under research that have an explicit target of women farmers	See here for full list of technologies under research targeting women farmers.	D: +132% Implementation of Gender Strategy and more effort from Social Scientists in Centers increased expected target value.	19%	44%	20%
20. % of technologies under research that have been assessed for likely gender-disaggregated impact	See here for more details.	D: -35% Non CG-Partners Technologies were not fully embedding Gender-disaggregation as recommended. 2016 work will focus on mainstreaming approaches with them.	49%	32%	20%
21. Number of agro- ecosystems for which CRP has identified feasible approaches for improving ecosystem services and for establishing positive incentives for farmers to improve ecosystem functions as per the CRP's recommendations	See here for more details on the identified ecosystems.	D: +25% One additional agro-ecosystems piloted for identification of feasible approaches for improving ecosystem services was reached thanks to the support of non CG- Partners	4	5	1

22. Number of people who will potentially benefit from plans, once finalised, for the scaling up of strategies	See here for more details.	D: -4%	74,000,000	71,026,001	70,000,000
23. Number of technologies /NRM practices field tested (Phase II)	See here for full list of technologies/practices field tested.	D: -9%	46	42	20
24. Number of agro-ecosystems for which innovations (technologies, policies, practices, integrative approaches) and options for improvement at system level have been developed and are being field tested (Phase II)	See here for more details.	D: +1467% The related figure in POWB 2015 was indeed the three broad types of agroecosystems: agro-pastoral, rain-fed and irrigated based systems. As these three types occur in different regional and national settings, the number of benefited agro-ecological systems reported are more than 3.	3	47	14
25. % of above innovations/approaches/options that are targeted at decreasing inequality between men and women	See here for more details.	D: +500% Implementation of Gender Strategy and more effort from social scientists in centers increased expected target value.	4%	24%	20%
26. Number of published research outputs from CRP utilised in targeted agro-ecosystems	See here for more details.	D: +4%	81	84	55

27.Number of technologies/NRM practices released by public and private sector partners globally (Phase III)	See here for full list of technologies/practices released.	D: +60% Collaboration with non-CG Partners supported scaling up technologies tested in Phase II during 2014 faster than expected.	5	8	4
28. Numbers of Policies/ Regulations/ Administrative Procedures Analyzed (Stage 1)	See here for more details.	D: +80% CG Staff analyzed more policies than expected.	5	9	5
29. Number of policies/ regulations /administrative procedures drafted and presented for public/ stakeholder consultation (Stage 2)	See here for more details.	D: +200% Stakeholders consultation including innovation platform work accelerated CRP policies in Stage 2	0	2	1
30. Number of policies/ regulations/ administrative procedures presented for legislation (Stage 3)	See here for more details.	D: 0%	0	0	1
31. Number of policies / regulations / administrative procedures prepared passed/approved (Stage 4)	See here for more details.	D: +100% Engaged Policy Makers ensured policies to be passed. However, CRP Target for Stage 4 and Stage 5 are always dependant from Policy Maker thus not easy to predict.	0	1	1
32. Number of policies / regulations / administrative procedures passed for which implementation has begun (Stage 5)	See here for more details.	D: 0%	0	0	0

33. Number of hectares under improved technologies or management practices as a result of CRP research	See here for more details.	D: +2%	7,051,850	7,157,631	2,000,000
34. Number of farmers and others who have applied new technologies or management practices as a result of CRP research	See here for more details.	D: -4%	511,435	492,654	400,000

Annex 2. Performance indicators for gender mainstreaming with targets defined

PERFORMANCE INDICATOR	CRP PERFORMANCE MEETS REQUIREMENTS
1. Gender equality targets defined	• Sex-disaggregated social data collected in surveys and used to diagnose important gender-related (and partly age-related) constraints in the CRP's main target action sites (usually part of baselines, impact assessment, specific social research questions); sometimes sex-disaggregated social data part of a wider multidimensional data-set; • The CRP has defined and collected baseline data on the main dimensions of gender inequality in the CRP's main target populations relevant to its expected outcomes (IDOs): main subject areas with a contribution to achieving IDOs: access to resources (land, finance, labour) of women and youth; participation in decision making and control of resources; gender gap re wage, income and working conditions; gender-dimension of biodiversity management on farms and climate change adaptation (climate-smart crops; efficient water use); gender-responsive extension services; income generation and dietary diversity through participation of women and youth in value chains (cereals, legumes, trees); ***Challenge*:** gender-disaggregation re non-social subjects is in development – first successful pilots carried out; partly quality of data (some non-social scientists did not produce good sex- disaggregated data); partly active creative encouragement of women participation and hearing women's voices.
2. Institutional architecture for integration of gender is in place	• CRP scientists and managers with responsibility for gender in the CRP's outputs are appointed, have written TORS and funds allocated to support their interaction has been achieved; in some cases, funds allocated had to be reduced or retracted due to the cut of the CRP's finances, but developed ToRs and research concepts serve as a basis to apply for funding elsewhere; • Procedures defined to report use of available diagnostic or baseline knowledge on gender routinely for assessment of the gender equality implications of the CRP's flagship research products as per the Gender Strategy has been started in all flagships; • CRP M&E system has protocol for tracking progress on integration of gender in research (through the CRP's Monitoring & Evaluation & Learning online platform) • A CRP plan approved for capacity development in gender analysis – plan developed and implemented (mainly consisting of cost-efficient online products); • The CRP uses feedback provided by its M&E system to improve its integration of gender into research – done in 2015 with a test on the gender capacity of the CRP's scientists, and regarding gender-mainstreaming in biophysical research (not only gender strategic research); ***Challenge*:** funding cuts in the middle of program implementation stopped some gender research strategically important to achieve IDOs; while strategies have been found to do gender capacity development with the smallest of funding, the most effective direct exchange with scientists was hardly possible.

Annex 3. List of Publications 2015

In 2015, the CGIAR Research Program on Dryland Systems produced 135 journal articles (83 indexed by ISI), 8 books, 19 book chapters, several working papers (135), datasets (80) and policy and technical briefs, presenting totally 558 published knowledge and information products. A clear move toward the examination of new system approaches emerges from this body of scientific knowledge with 66 journal articles (49% of the total published journal articles) presenting multidisciplinary and/or integrated systems research. We expect the system approaches to generate greater public awareness on agricultural livelihood issues in dryland areas and to reshape traditional thinking about key performance determinants of dryland agro-ecosystems as well as relevant responses in order to meet challenges faced by rural dryland communities. The following represents an updated summary list of all 2015 publications and research outputs produced by each partner CGIAR centers and the Dryland Systems Program Management Unit (PMU).

The following codes have been used:

(S) = multidisciplinary/system research
(M) = mono-disciplinary research
[X.XXX]= ISI Impact Factor
(O) = Open Access

Table 1. Summary of all ISI publications

Center	ISI Articles	ISI Factor [range of ISI scores]	Open Access	Monodisciplinary (% of ISI articles)	Multidisciplinary/ Systems (% of ISI articles)
Bioversity	4	0.361 - 2.000	1	4	0
CIAT	1	1.897	0	0	1
CIP	1	1.215	0	1	0
ICRAF	8	0.553 - 3.402	6	3	5
IWMI	0		0	0	0
ILRI	4	1.286 - 2.902	2	1	3
ICRISAT	34	0.00 - 7.885	4	28	6
ICARDA	26	0.043 - 8.044	5	18	8
PMU	6	1.897 - 6.393	1	0	6
Total	83	0.00 - 7.885	18	54	29

Table 2. Summary of Non-ISI Publications

Center	Non-ISI Articles (systems articles)	Books	Book Chapters	Technical Reports & Working Papers	Proceedings	Datasets	Other
Bioversity	1 (1)	0	0	16	0	2	12
CIAT	0	0	0	5	2	0	9
CIP	4 (1)	0	0	6	0	2	8
ICRAF	4 (2)	0	0	27	0	5	16
IWMI	1(1)	0	1	22	1	1	0
ILRI	3 (3)	0	23	7	0	17	3

ICRISAT	15 (15)	0	8	6	14	8	18
ICARDA	23 (12)	3	10	23	32	26	25
PMU	2 (2)	5	0	5	5	19	15
Total	**52 (37)**	**8**	**19**	**135**	**61**	**80**	**120**

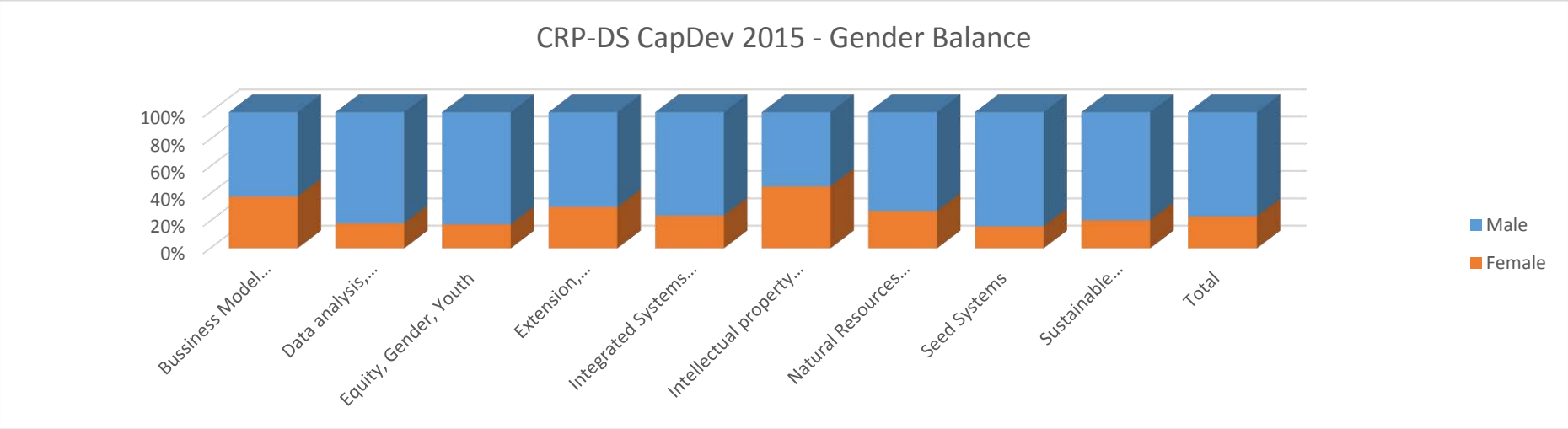
See here for the full list of CRP-DS 2015 publications.

Annex 4. Capacity Development in numbers

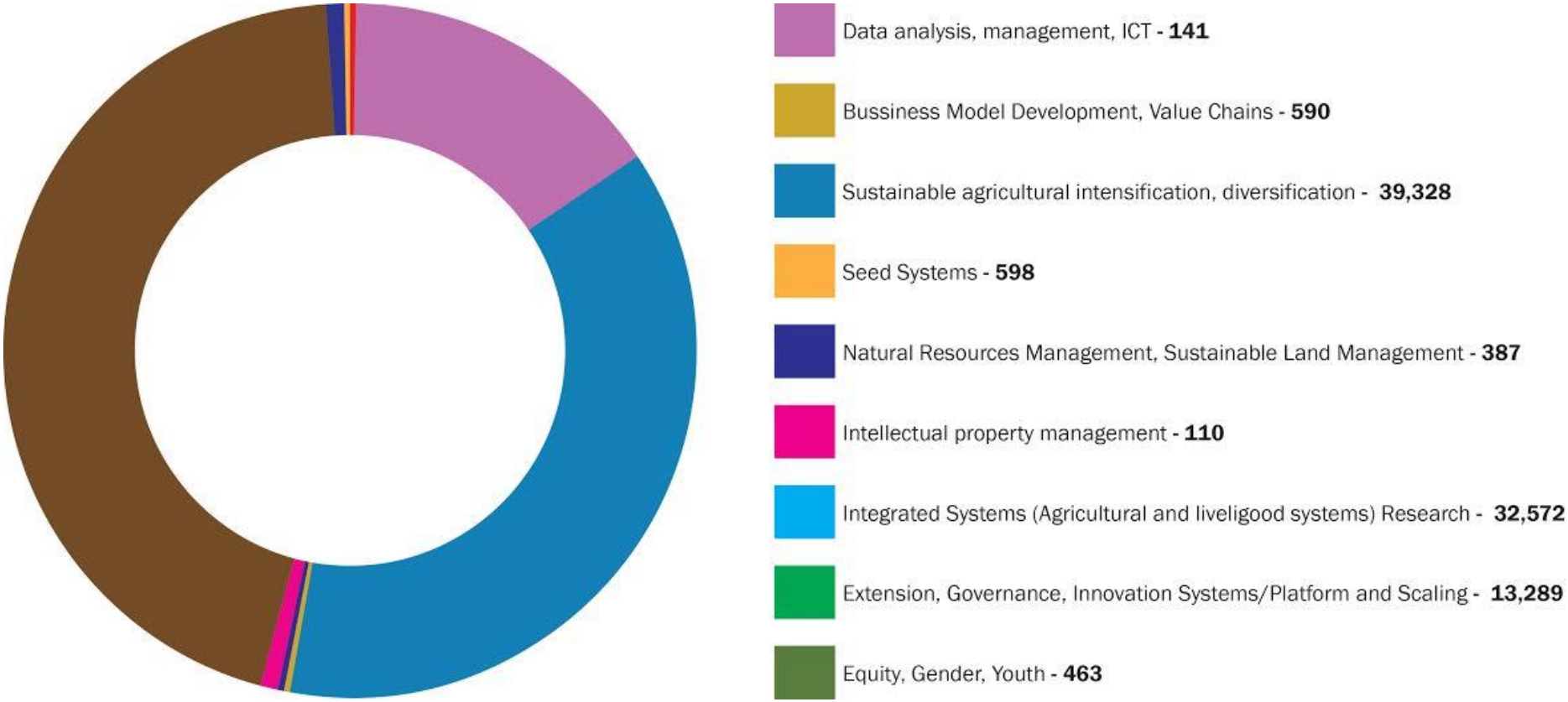
Topic	Individual Degree						Field Training				Other Training				Totals			Countries
	PhD		MSc/ MA		BSc/ BA		Field Days		Farmers Field Schools		Training Courses		Workshops/ Seminars					
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M+F	
Business Model Development, Value Chains	6	-	-	-	-	-	-	-	-	-	309	203	50	22	365	225	590	Nigeria, Ethiopia, India, Tunisia, Morocco, Pakistan, Egypt, Iraq, Jordan, Lebanon, Palestine, Syria, Yemen
Data analysis, management, ICT	-	-	-	-	-	-	-	-	-	-	115	26	-	-	115	26	141	Burkina Faso, Ghana, Mali, Niger, Nigeria, Malawi, Ethiopia, Uzbekistan, Egypt, Eritrea, Iraq, Jordan, Pakistan
Equity, Gender, Youth	-	1	4	-	-	-	55	53	-	-	46	7	276	21	381	82	463	Niger, Nigeria, Mali, Mauritania, Egypt, Morocco, Lebanon, India, Uzbekistan, Eritrea, Ethiopia, Kenya, Yemen, Sudan
Extension, Governance, Innovation Systems/ Platform and Scaling	-	-	-	-	-	-	-	-	8,100	3,375	917	587	247	63	9,264	4,025	13,289	Burkina Faso, Ghana, Mali, Niger, Nigeria, Egypt, Tunisia, Malawi, Mozambique, Zambia, Ethiopia, India, Pakistan, Iran, Sudan, Kenya, Eritrea, Iraq, Jordan
Integrated Systems (Agricultural and livelihood	-	-	2	1	-	-	60	40	9,000	1,000	15,617	6,774	54	24	24,733	7,839	32,572	Burkina Faso, Ghana, Mali, Egypt, Ethiopia, Kenya, Malawi, India, Iraq,

systems) Research																		Jordan, Lebanon, Palestine, Syria, Yemen, Morocco, Tunisia, Sudan, Pakistan, Niger, Tanzania, Eritrea, Pakistan
Intellectual property management	-	-	-	-	-	-	-	-	-	-	-	-	60	50	60	50	110	Centers Staff
Natural Resources Management, Sustainable Land Management	2	-	3	1	-	-	10	-	40	53	226	52	-	-	281	106	387	Niger, Mali, Tunisia, Malawi, Jordan, Yemen, Pakistan, Ethiopia, Sudan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Algeria, Libya, Morocco, Oman, Saudi Arabia, Syria, Palestine
Seed Systems	8	3	9	2	-	-	111	9	11	1	286	58	76	24	501	97	598	Niger, Nigeria, Ethiopia, Pakistan, Uzbekistan, Morocco, Tunisia, Sudan, Tajikistan, Zambia
Sustainable agricultural intensification, diversification	12	8	13	5	2	-	916	237	4,087	1,180	25,582	6,467	600	219	31,212	8,116	39,328	Burkina Faso, Ghana, Mali, Niger, Morocco, Egypt, Tunisia, Ethiopia, Malawi, India, Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Algeria, Jordan, Yemen,

																		Palestine, Syria, Sudan, Iran, Kenya, Zimbabwe, Zambia, Eritrea, Iraq
Total	28	12	31	9	2	-	1,152	339	21,238	5,609	43,098	14,174	1,363	423	66,912	20,566	87,478	



CRP-DS CapDev 2015 – Number of Trainees by Cluster sectors

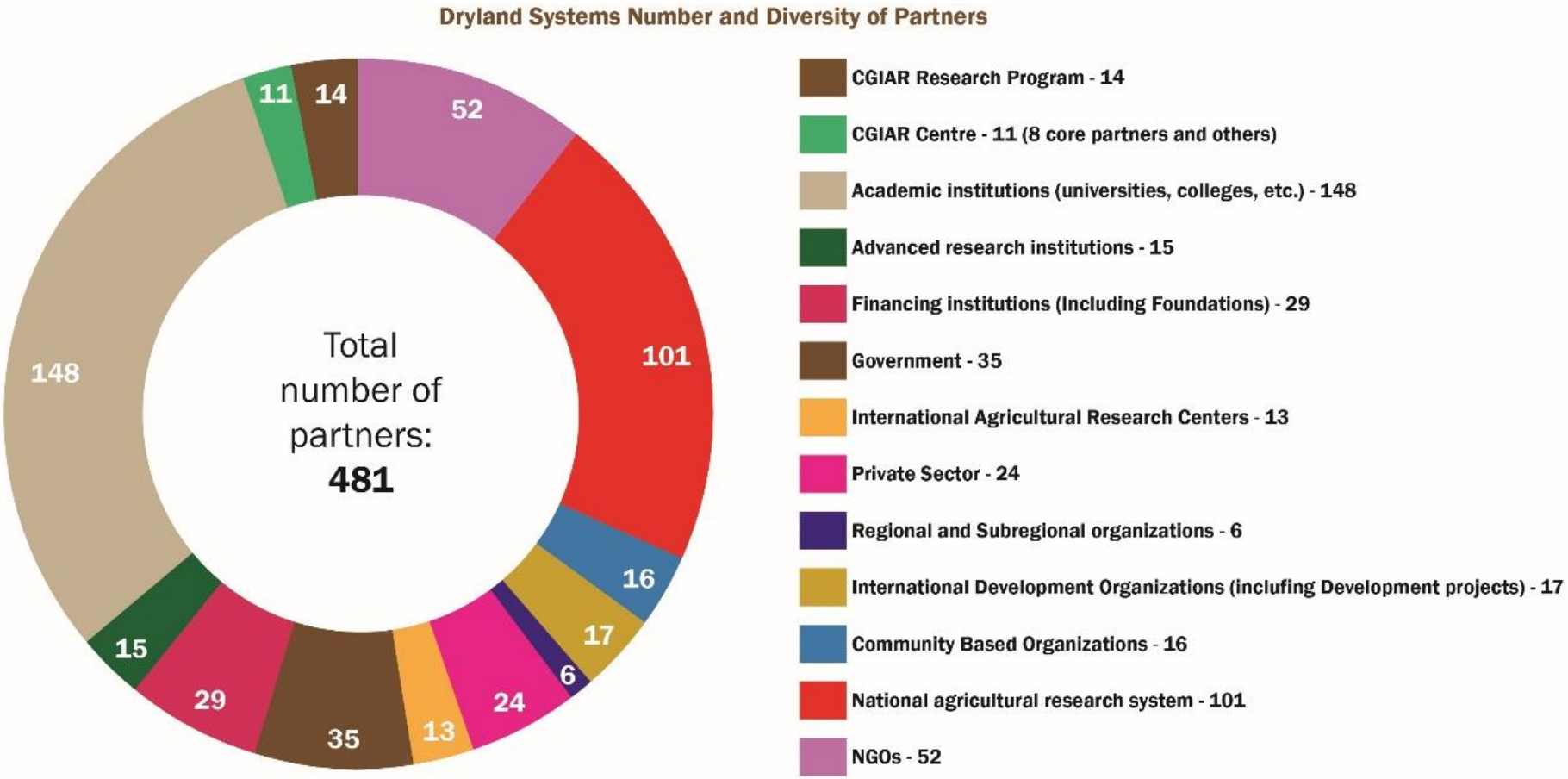


Annex 5. Partnerships: Dryland Systems Cross-CRP Collaboration

Name of CRP	Cross-CRP collaboration activity	Role of Dryland Systems
A4NH	Joint Gender-responsive research on Nutrition	Mainstreaming women farmers is a big challenge due to lack of land rights. Our partners (ICRISAT and Bioiversity International) mitigated these constrains using participatory research at DS sites showing that through promotion of kitchen garden scale fruit-vegetable cultivation, women can be empowered to improve family nutrition as well improve income through sale of additional produce. The related research and training activities helped include women in fodder production augmentation through common lands and small ruminant marketing and strength research collaboration with **A4NH** and **AVRDC**.
AAS & Humidtropics	Promotion of systems research approaches at CGIAR level and with partners	Co-organizer of the International Systems Conference
CCAFS	Sharing of systems research approaches, knowledge and experience	Seminar on Cluster of Integrated Systems Analysis and Modeling in Hanoi, Vietnam with the active participations of CCFAS South East Asia Office, CCAFS members from CIAT, ILRI in Asia;
	Climate Smart Farmer Managed Natural Regeneration Method	Joint funding CCAFS/FTA/DS for the implementing Centers (ICRAF, ICRISAT) to generate evidence, in West Africa DS Field Sites, on methodologies and influence stakeholders for broader scaling up.
CCAFS/FTA	Joint Gender-responsive research	Contributed to research on gender aspects of climate-smart crops and techniques in Egypt.
Dryland Cereals	Joint Gender-responsive research	Contributed to research on gender norms in different dryland agricultural livelihoods
FTA	Monitoring Evaluation and Learning	Joint design and piloting of online CapDev module to adopt CGIAR CapDev Elements and Indicators
Grain Legumes	Gender Roles and constraints in GL Crops.Rehabilitation of food legumes	Joint funding with GL for the implementing Centers (ICRISAT, ICARDA) to field test (West and North Africa) and generate evidence, on methodologies and influence stakeholders for broader scaling up.

Humidtropics		
Livestock & Fish	Research and policy recommendations on Index-Based Livestock Products	Persuading pastoralists to take control over their own livelihoods by embracing Index-Based Livestock Products (IBLI) was a key activity pursued by program partner ILRI in coordination with **L&F**. The IBLI Unit within ILRI designed a set of classroom training materials, which are currently being used to train government extension workers and sales agents across northern Kenya and in the Borana region of Ethiopia. The development of eLearning modules covering the same content has also been commissioned.
PIM	Joint research on Economics of Land Degradation	Lead author in one chapter and Co-author in two other chapters
Maize	Assessment of dual purpose maize, maize silage technologies and SLM practices to increase Maize	Joint funding of common partner (CIAT, ICRISAT) for field-testing and knowledge generation to influence stakeholders.
RTB	Joint research on climate-smart agriculture	Our partners CIAT and CIP strengthened research collaboration with **RTB** and local university, LUANAR to introduce orange-fleshed sweet potatoes as a mitigating strategy against drought and other external risks. Farmers benefitted from better yields and stored seeds for future use. This research area will be expanded further with collaboration with both **RTB** and **CCAFS**.
WLE	Joint gender-responsive research	Contributed to gender and agricultural extension services in Malawi as part of research on irrigation and gender-responsive extension services supported by WLE.
	Innovation Platforms	Systems research aimed at all round improvements in both productivity and sustainability requires active participation of several stakeholders. DS faced constraints in delivery system outputs and focuses 2015 research in foster Innovation Platforms (IPs) that were found to be the best means to facilitate the involvement of all stakeholders while improving Extension Services as demonstrated by the joint work with WLE.
WLE	Water management	Managing rainwater efficiently is a challenging task and managing both green and blue water resources in an integrated manner to use it efficiently for high value crops is the need of the day. DS overcame this challenge integrating, in partnership with **WLE**, water conservation at micro-watershed in individual farm scale along with looking at bigger catchment, which bring command to smallholders to use water as per their demands. Rainwater harvesting needs to be further promoted at farm-scale as a drought proofing strategy through low-cost farm-ponds which can kick-start the stagnant growth of agriculture and make it sustainable thereafter. This opens interesting collaboration with WLE and **CCAFS** through ICRISAT work.

Wheat	Shared experiences on Innovation Platforms, Integrated Systems Approach to Sustainable Intensification	Contributed to WHEAT's Innovation Systems Workshop, and WriteShop for the FP4 (Sustainable Intensification) of WHEAT Phase II.
Genebanks	Ex-situ and In-Situ agrobiodiversity conservation	Support community level seed and gene banks conservation with the participation of Centers involved in CRP Genebanks (ICRISAT, ICARDA, CIAT).
Humidtropics, WHEAT and WLE	Monitoring, Evaluation and Learning	Promoted use of SDGs indicators and improved CapDev indicators at CGIAR level.
RTB-DC-GL	Monitoring, Evaluation and Learning	Develop a common Monitoring, Evaluation and Learning (MEL Platform) harmonizing terminologies, indicators, planning and reporting mechanisms for RBM.
CO	Monitoring, Evaluation and Learning	Supported the CGIAR COP for the conceptualization and operationalization of the CGIAR RBM through participation in the CGIAR Community of Practices for Evaluation (ECOP / IEA), the Monitoring, Evaluation and Learning (MELCOP / CO) and co-chairing key working groups for improving the functioning of the Consortium (e.g. Sub-IDOs indicators development, MEL strategic initiative, online collaboration tools).


Dryland Systems Number and Diversity of Partners
Total number of partners: 481
11
14
52
101
148
16
15
17
29
6
35
13
24
CGIAR Research Program - 14
CGIAR Centre - 11 (8 core partners and others)
Academic institutions (universities, colleges, etc.) - 148
Advanced research institutions - 15
Financing institutions (Including Foundations) - 29
Government - 35
International Agricultural Research Centers - 13
Private Sector - 24
Regional and Subregional organizations - 6
International Development Organizations (inclufing Development projects) - 17
Community Based Organizations - 16
National agricultural research system - 101
NGOs - 52

Annex 6. Lessons Learned

Dryland Systems, in collaboration with other CRPs suggested a review of Table of Indicators in Annex 1 and offered its support to include better systems and outcome-related indicators. Our comprehensive result-based management MEL Platform, the first of its kind to be developed by a CRP, enabled us to effectively track and analyze indicator results and identify issues for improvement, which continue to be implemented by the PMU. This is being done in accordance with Open Aid policies of several donors promoted by OECD-DAC and considerations for better integration with SDG indicators, which were discussed during the Enhancing the Evaluability of SDG2 Seminar promoted by IEA, where Dryland Systems and other CRPs provided technical expertise and working experience. Our indicators have been further disaggregated by Country, Gender (where relevant), and contribution to results by Center/CG Partners.

1. In 2015 and following its review of 2014 Annual Reports by CRPs, the CO noted the need to identify the complete list of papers and links, however this needs to be clearly reflected as a reporting requirement in the CO Annual Report Template for CRPs. Following our last year's example, Dryland Systems has produced a complete list of publications together with an analysis for impact factor and relevance to systems thinking. Our analysis of how publications are reported by centers reveal serious issues with double/multiple reporting of the same publication to several CRPs, and in many cases lack of appropriate acknowledgement for research and papers produced with funding from our CRP. This will create huge credibility issues in terms of transparency of reporting that avoids double counting when the CO presents a sum of all Papers at portfolio level.
2. Our program has now established a clear process and tools to track papers that are funded by more than one CRP, and ensure appropriate acknowledgement. Overall, we recommend that indicators related to publications and datasets must be clearly linked with an open access repository that the CRP establishes and maintains harvesting papers/datasets from its partners in order to retain a copy of deliverables funded by its donors. This can be achieved by promoting the CO Open Access Metadata Schema across all CRPs and centres. Dryland Systems has applied this schema consistently on more than 1,200 information products and datasets.
3. The indicators 15 and 16 glossary should be more specific since now CRPs report "currently enrolled people" thus repeating the same PhD/MSc for 2-3 years without being able to track the number of new ones, or the drop rate from year to year.
4. We recommend that indicators about Policies (28-32) should not be applied to all CRPs but PIM should be the leader in implementing the policy indicators as integrative CRP in order to ensure better partnerships across the portfolio.
5. Indicator 34 should be divided into 2 distinct ones in order to have a consistent format that allows better result comparisons across CRPs, as noted in the CO presentation to the MEL COP meeting in Paris. This issue is evident in the high difference of results among CRPs or the exact result repeated for the same CRP from one year to the other, which does not provide confidence that the indicator can be consistently to be used at CGIAR level or even summed/aggregated across CRPs.
6. In 2015, the CO decided to change the evaluation criteria for distributing the reduced budget from horizontal cut for all CRPs to a selective choice using three indicators. The horizontal approach was consistently used for the period 2012-2015 as per PIA agreements, however CRPs experience this shift only for the closure year of Phase I/Extension CRPs (2016). Unfortunately the criteria/indicators for reduced budget allocations did not reflect CRP performance according to annual report indicators, but were based on the (1) the list of publications from start until December 2013 as identified by Elsevier which pointed out all limitations using their study, (2) annual reports evaluation by the CO Science Team where there were several inconsistencies in the aggregated scores

and not having a transparent view of all 2013/2014 annual reports by CRPs, and (3) extension proposals evaluation where a 10 page document was requested but not appropriate for a USD 200million yearly/investment. This has been demonstrated by the exhaustive request for the 2nd Phase, which has the same yearly investment figure. Moreover, the complete and transparent list of publications by CRPs needs to be reflected as a clear reporting requirement in the current annual report template.

7. The Table of Gender Indicators (Annex 2) should be expanded to include the 'big questions' regarding gender equality: Currently, these indicators allow only for an evaluation of regular data collection and capacity building and on gender. Additionally, indicators should be formulated, which measure progress on pivotal questions such as equality in access to resources such as land, innovative technologies and decision making, e.g. on crops, biodiversity and general farm management.

Lessons learned from research avenues that did not produce expected results, and actions taken by the CRP

1. Severe drought in Malawi affected the planned activities and commitment from farmers. Dryland Systems core partners - CIAT and CIP - strengthened partnership with **RTB** and local university, LUANAR, introducing orange fleshed sweet potatoes to buffer this external natural risk. Farmers benefitted from better yield and store seeds for future use. This research area will be further expanded with collaboration with **RTB** and **CCAFS**. It is known that local stakeholder and partners are the key to out-scale technologies in the long-run. Involving them and managing their interests are thus crucial. Since the CRP funding projection was limited, Dryland Systems ensured national partners to be fully engaged through involving them in bilateral projects. However, these are mostly short lived and it is difficult to maintain longer-term strategic partnerships with these resources unless a dedicated function promotes constant project proposals to maintain the engagement.
2. Systems research aimed at all round improvement in both productivity and sustainability requires active participation of several stakeholders. Dryland Systems faced constraints in delivery system outputs and focused 2015 research on fostering Innovation Platforms (IPs). IPs were found to be the best means to facilitate the involvement of all stakeholders while improving Extension Services as demonstrated by the joint work with WLE.
3. Managing rainwater efficiently is a challenging task and managing both green and blue water resources in an integrated manner for efficient use for high value crops is an urgent priority. Dryland Systems overcame this challenge in partnership with **WLE** by integrating water conservation at micro-watershed at individual farm scale with looking at the bigger catchment area, which allows smallholders to use water for their demands. Rainwater harvesting needs to be further promoted at farm-scale as a drought proofing strategy through low-cost farm-ponds which can kick-start the stagnant growth of agriculture and make it sustainable thereafter. This opened up potential future collaboration with WLE and **CCAFS** through ICRISAT work.
4. Supporting women farmer activities is a big challenge due to a lack of land rights. Dryland Systems core partners ICRISAT and Bioversity mitigated this constraint by using a participatory research at our action sites, demonstrating that by promoting kitchen garden scale fruit-vegetable cultivation, women can be empowered to improve family nutrition as well increase income through sale of additional produce. Encouraging self-organization, training, involving them in fodder production augmentation through common lands and small ruminant marketing is an effective ways to empower women-farmers and provide opportunity to strength collaboration with **AVRDC** and **A4NH**.
5. Persuading pastoralists to take control over their own livelihoods by embracing Index-Based Livestock Products (IBLI) is the challenge that the Program through ILRI and the Government of Kenya faced. Research on micro-insurance indicates that the primary issue is one of trust. Building trust in an index-based insurance product is a challenge

exacerbated by the basis risk inherent in any product, which uses an index to predict loss. Prospective customers, who are poor, often illiterate, and usually not familiar with the concepts of insurance, need to be educated to have a deep understanding of the product. If not, unrealistic expectations resulting from an imperfect understanding of the contract may result in disappointment when a premium is not refunded in a year where drought is not experienced, or when a loss of livestock due to disease or predation is not indemnified. The ultimate result is poor sales and even poorer levels of renewals. Faced with this challenge, the IBLI Unit within ILRI has designed a set of classroom training materials, which are currently being used to train government extension workers and sales agents across northern Kenya and in the Borana region of Ethiopia. IBLI recognises that not everyone will have the opportunity to attend classroom training and have also commissioned the development of eLearning modules covering the same content. DS findings will be enhanced with a joint work with **L&F**.

Lessons learned by the CRP from its monitoring of indicators and from qualitative analyses of progress.

1. The changes that came mid-year with the new SRF (adopted in May 2015) and related Outcomes. Target and Indicators, the shift to CRP level indicators by country made for a very challenging transition from the CRP indicators used in Phase I, requiring significant time and effort to discuss and explain the new changes and requirements with scientists on harmonization, data collection and reliance on national statistics.
2. The main limitation of implementing the new SRF and targets relates to the bilateral portfolio harmonization, since major donors (FAO, USAID, IFAD, BMGF, EU) have already frameworks and indicators in place. The application of an additional layer (SRF) with similar but not equal structure raised concerns from scientists regarding additional workload, time taken out from research and decreased participatory interaction with Partners, who are already comfortable using other Donors indicator frameworks. The CRP staff mitigated the workload from scientists by trying to re-map existing indicators and establish collaborations with other CRPs (**RTB, DC, GL**). This process will take the entire 2016 to draw main conclusions.
3. The key lesson learned was the acute need to build capacity of scientists on results-based frameworks and indicators, and raise their awareness and more awareness in terms of the differentiation of Research Outcomes (CRP accountability) and Development Outcomes (achieved through partners but not directly contributed as per our business model). Another critical lesson is that having indicators uniquely for the CGIAR, does not measure and evaluate consistently and translate to the donor results in a language that is understood by donors.
4. Together with Humitropics, WHEAT and WLE, Dryland Systems had advocated through the MEL COP the use of SDGs indicators since they are based on the country ownership and there is more scope to work closely with National Stakeholders, thus increasing their capacity to define, measure and use indicators.
5. Our monitoring of the bilateral portfolio indicates that communication of bilateral project results makes little reference to the CRP at the local and global levels, leaving stakeholders, donors and evaluators without reference to the CRP, thus generating negative funding pathways. Moreover, the high share of bilateral projects that are mapped to CRPs by centers makes it difficult to enforce reporting, accountability and demand for results by the PMU. The only leverage the CRP has is to inform the partner CG center to un-map a project that is not performing or provides low value for money. This aspect could be addressed by the CO in Phase II to design a smaller number of research programs that are funded by W1/W2 only.
6. We have also learned that when a partner center subcontracts another CG center in a bilateral project, both Centres will map the same funds and report the same results

separately. This is seriously troubling in terms of double mapping funds and double counting results across the CRP portfolio. The CO must issue specific guidelines for mapping bilateral projects. This was advised by the Audit and the CO was supposed to deliver the document by 30th June 2015, which never happened. Dryland Systems developed specific guidelines for mapping bilateral project to help address this issues, and these can be useful to the CO for developing guidelines at CGIAR level.

Annex 7. Dryland Systems Research Staff

Table 1. Dryland Systems Research Staff and Budget Coverage

Position	ALL	Female	Male	Other CRPs sharing time allocation	Staff involved in DS only	Staff involved in more than one CRP	Staff with less than 50% time covered	Staff with more than 50% time covered by W1/W2	Share of Staff with more than 50% time covered by W1/W2	FTE Covered with W1/W2	FTE Covered with W3/Bil	FTE Total
Director, Flagship Leaders & Centre Coordinators	14	1	13	AAS, FTA, WLE, PIM, CCAFS, RTB, L&F	4	10	11	3	21%	4.68	0.69	5.37
Principal Investigators & Senior Scientists	54	6	48	AAS, FTA, PIM, WLE, DC, GL, CCAFS, HT, WHEAT, L&F	27	27	49	5	9%	8.74	10.83	19.57
Scientists	78	22	56	FTA, WLE, PIM, GL, CCAFS, WHEAT, L&F, A4NH	39	39	66	12	15%	14.03	22.24	36.27
Post-doc/Research Fellows	5	1	4	DC, GL, L&F, WHEAT	2	3	3	2	40%	0.57	0.97	1.54
Other research support staff (incl. consultants)	58	6	52	FTA, WLE, PIM, DC, GL, CCAFS, HT, WHEAT, L&F	49	9	49	9	16%	15.26	29.18	44.44
ALL	**209**	**36**	**173**		**121**	**88**	**178**	**31**	**15%**	**43.28**	**63.91**	**107**

Note: Nominally, Dryland Systems had 193 staff funded by W1/W2 and W3/Bilateral mapped to the program in 2015. Only 26 of these had more than 50% of their time covered by W1/W2 funding from Dryland Systems. The real FTE funded are only 116.3 staff, including research support staff.

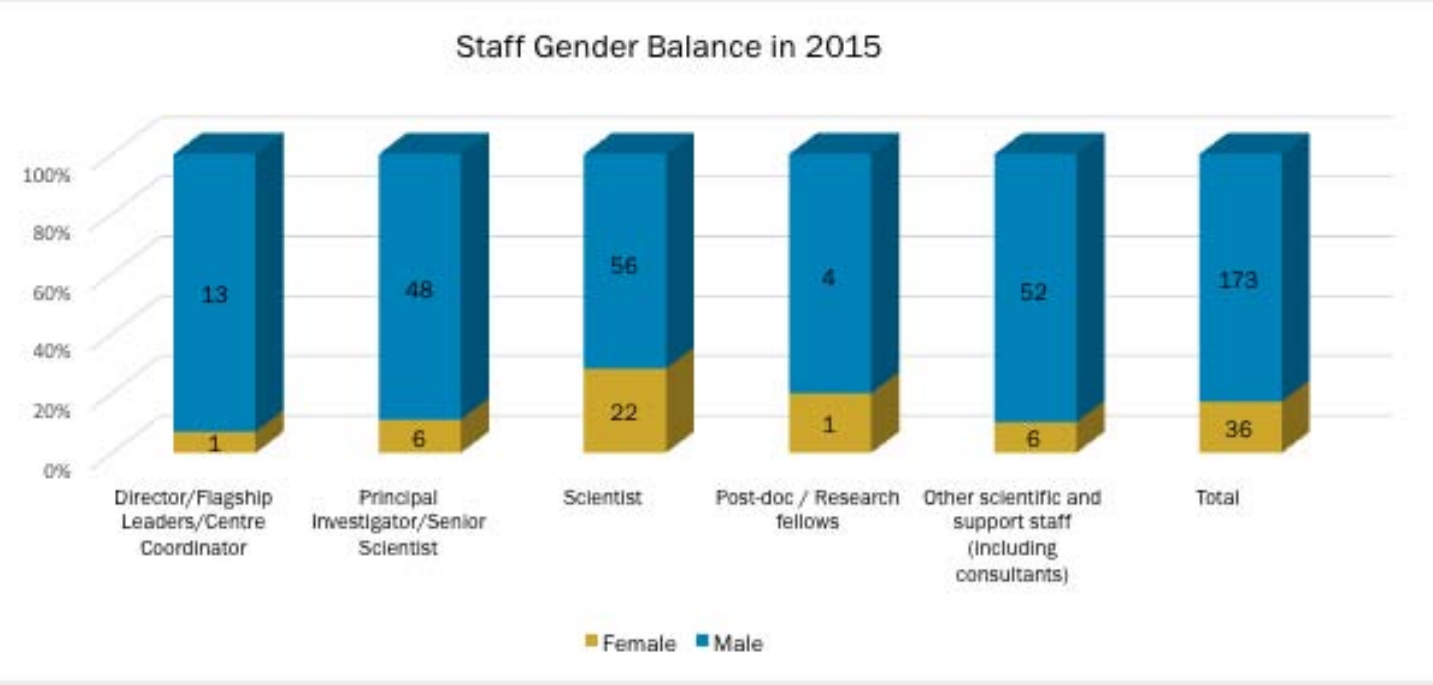
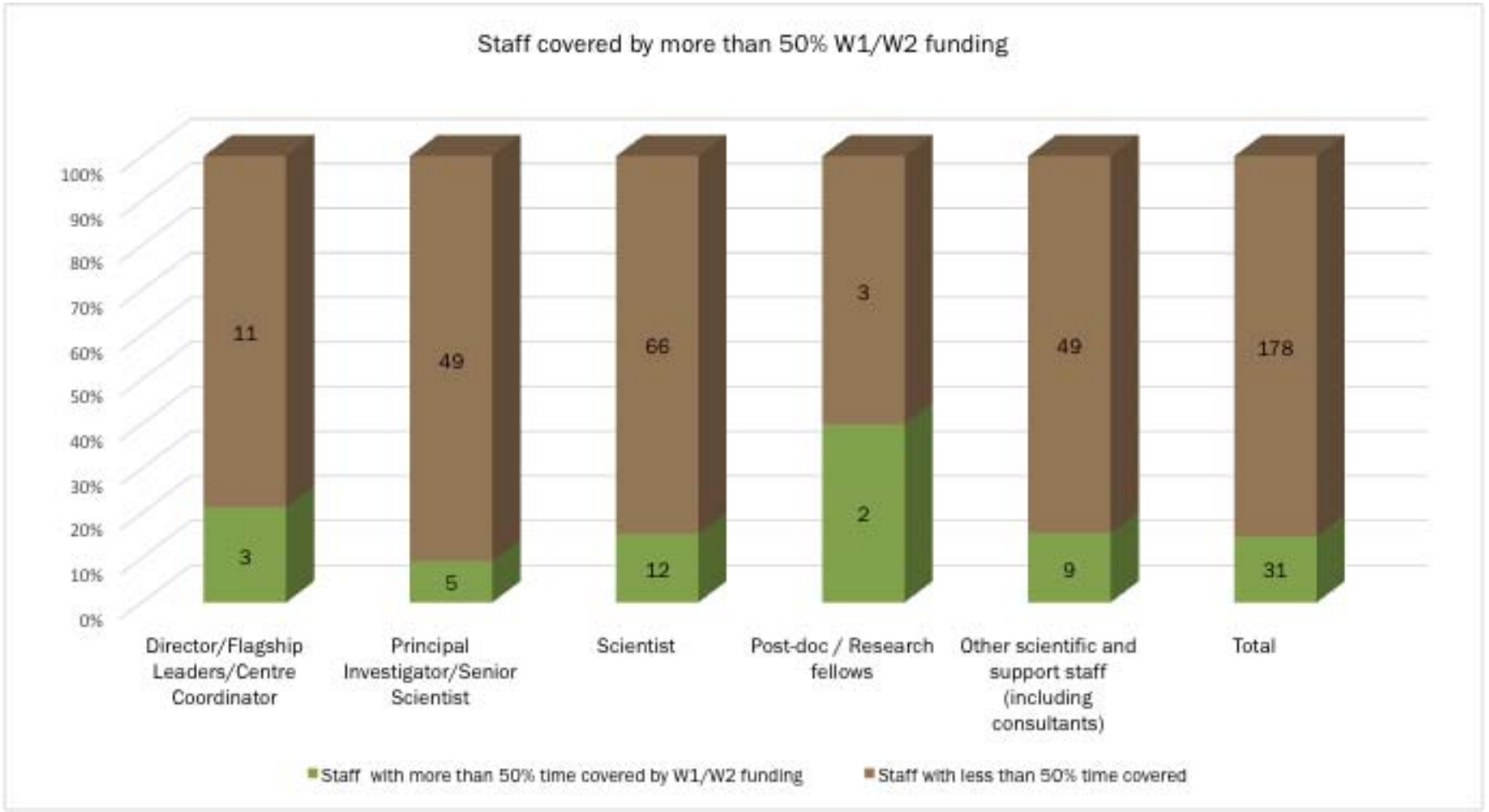
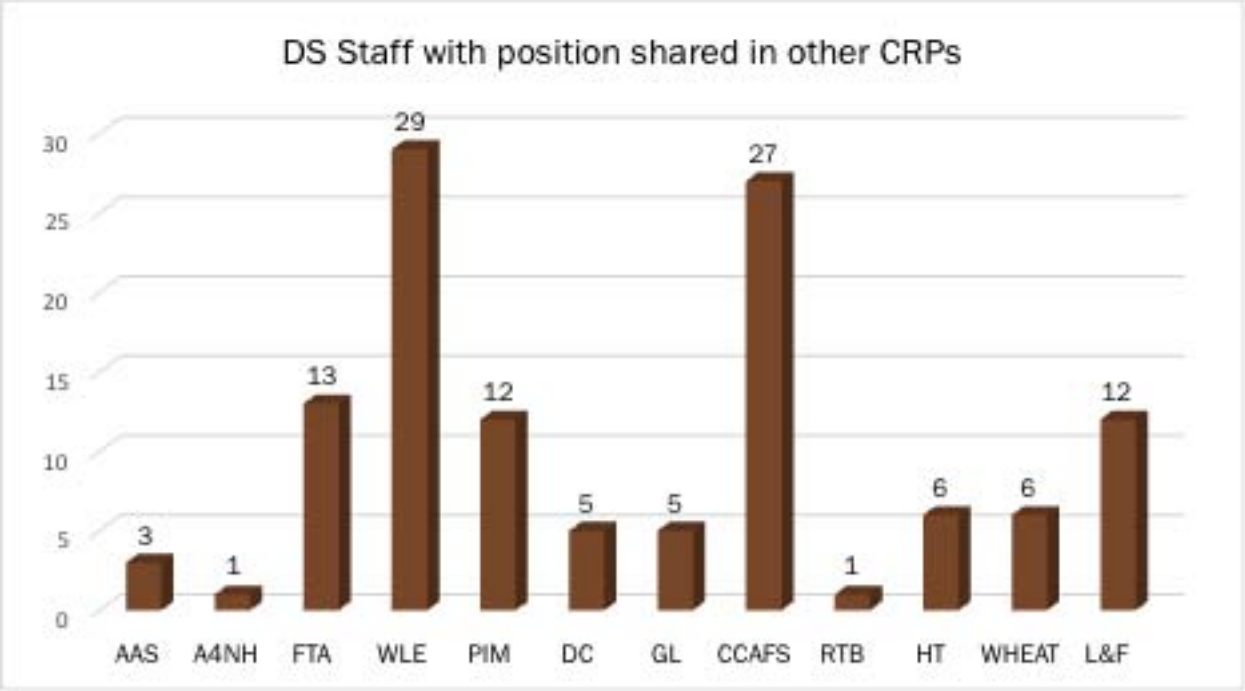


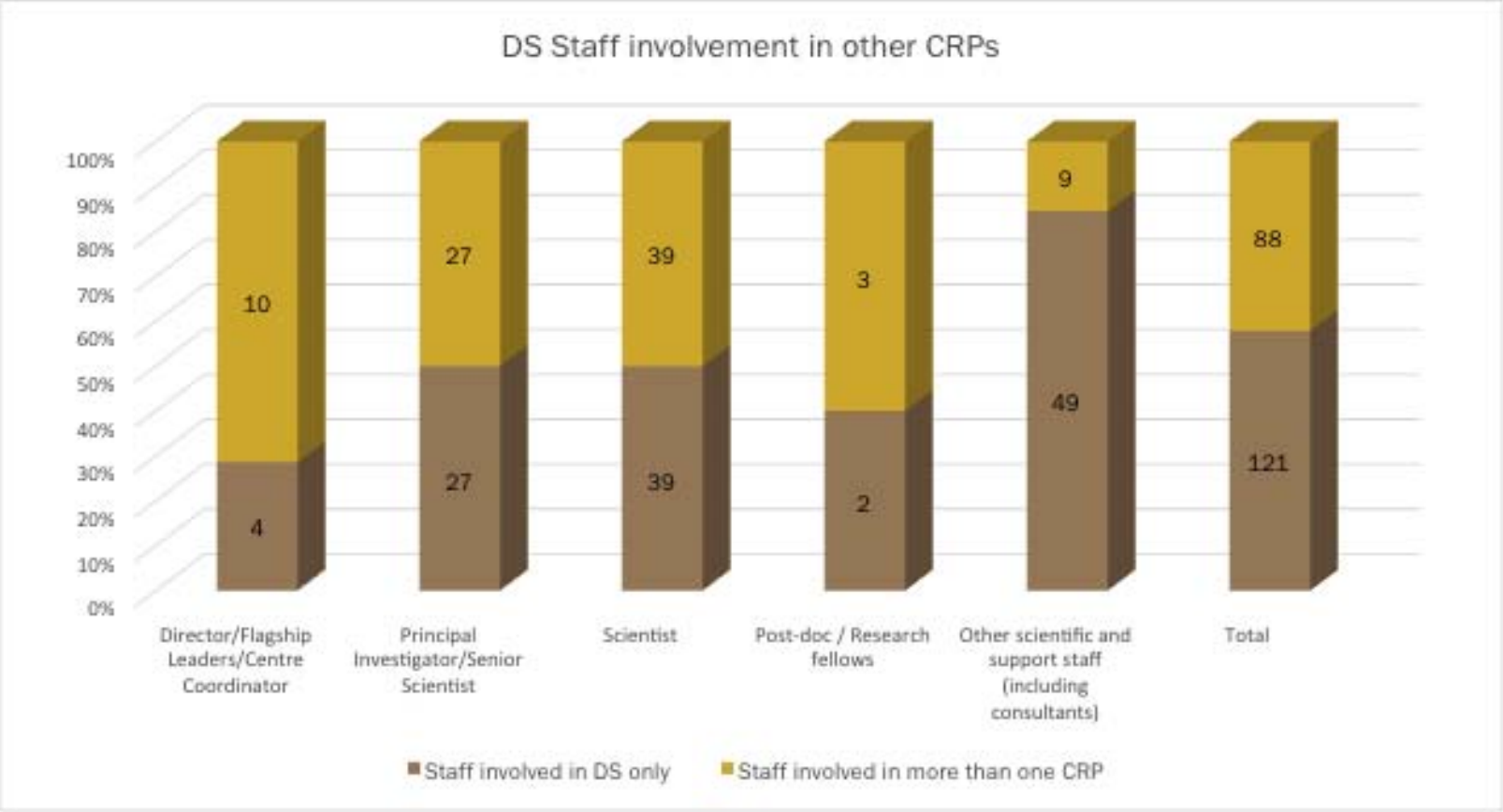
Table 2. Staff shared with other CRPs

Position	Total	AAS	A4NH	FTA	WLE	PIM	DC	GL	CCAFS	RTB	HT	WHEAT	L&F
Total	**120**	3	1	13	29	12	5	5	27	1	6	6	12
Director, Flagship Leaders & Centre Coordinators	**17**	2	0	1	7	2	0	0	3	1	0	0	1
Principal Investigators & Senior Scientists	**36**	1	0	3	8	5	1	2	5	0	2	4	5
Scientists	**53**	0	1	5	11	5	3	2	18	0	3	1	4
Post-doc/Research Fellows	**4**	0	0	0	0	0	1	1	0	0	0	1	1
Other research support staff (incl. consultants)	**10**	0	0	4	3	0	0	0	1	0	1	0	1


Staff covered by more than 50% W1/W2 funding
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
11
3
49
5
66
12
3
2
49
9
178
31
Director/Flagship Leaders/Centre Coordinator
Principal Investigator/Senior Scientist
Scientist
Post-doc / Research fellows
Other scientific and support staff (including consultants)
Total
Staff with more than 50% time covered by W1/W2 funding
Staff with less than 50% time covered



Note: 79 staff of the 193 had a joint assignment with at least another CRPs. 49 of all staff had more than one assignment (i.e. DS, + 2 up to 6). This has obvious positive consequences (collaborations), but also negative ones (less focus on DS research, double reporting of results and publications, double mapping of projects, and sometime no acknowledgment for Dryland Systems in favor of more "popular" CRPs, etc).



Note: DS Staff is involved in most of the CRP with the top ones: CCAFS, WLE, FTA. The chart counts the position, thus the same staff member can be represented in more than one bar.

Annex 8. List and links to Partner Centre Reports

Bioversity International - 2015 Annual Performance Report to Dryland Systems

CIAT - 2015 Annual Performance Report to Dryland Systems

CIP - 2015 Annual Performance Report to Dryland Systems

ICARDA - 2015 Annual Performance Report to Dryland Systems

ICRAF - 2015 Annual Performance Report to Dryland Systems

ICRISAT - 2015 Annual Performance Report to Dryland Systems

ILRI - 2015 Annual Performance Report to Dryland Systems

IMWI - 2015 Annual Performance Report to Dryland Systems

Annex 9. CRP Financial Report L-Series Financial Tables

L 101 - CUMULATIVE FINANCIAL SUMMARY

Name of Report:	CUMULATIVE FINANCIAL SUMMARY (Amounts in USD (000's)				
Frequency/Period:	Annual				
Deadline:	Every April 15th				
Summary Report - by CG Partners	(A) TOTAL POWB BUDGET SINCE INCEPTION				
	Windows 1 & 2	Window 3	Bilateral Funding	Center funds	Total Funding
BIOVERSITY	1,286		281	913	2,480
CIAT	891	184	611		1,686
CIP	974		110		1,084
ICARDA	13,241	13,751	25,822		52,814
ICRAF	1,736	10,317	6,734		18,787
ICRISAT	6,218	3,176	11,443		20,837
ILRI	2,700	2,843	7,519		13,062
IWMI	1,291	134	728		2,153
Total for CRP	**28,337**	**30,405**	**53,248**	**913**	**112,903**
	25%	**27%**	**47%**	**1%**	**100%**
Summary Report - by CG Partners	(b) Actual cumulative Expenses				
	Windows 1 & 2	Window 3	Bilateral Funding	Center funds	Total Funding
BIOVERSITY	1,286		281	785	2,352
CIAT	891		698		1,589
CIP	974		110		1,084

Name of Report:	CUMULATIVE FINANCIAL SUMMARY (Amounts in USD (000's)				
ICARDA	12,600	12,634	23,635		48,869
ICRAF	1,785	10,234	4,988		17,007
ICRISAT	6,217	2,839	10,544		19,600
ILRI	2,700	2,869	9,037		14,606
IWMI	1,325		770		2,095
Total for CRP	**27,778**	**28,576**	**50,063**	**785**	**107,202**
	26%	**27%**	**47%**	**1%**	**100%**
Summary Report - by CG Partners	**(c) Variance / Balance**				
	Windows 1 & 2	**Window 3**	**Bilateral Funding**	**Center funds**	**Total Funding**
BIOVERSITY	-	-	-	128	128
CIAT	-	184	(87)	-	97
CIP	-	-	-	-	-
ICARDA	641	1,117	2,187	-	3,945
ICRAF	(49)	83	1,746	-	1,780
ICRISAT	1	337	899	-	1,237
ILRI	-	(26)	(1,518)	-	(1,544)
IWMI	(34)	134	(42)	-	58
Total for CRP	**559**	**1,829**	**3,185**	**128**	**5,701**
	10%	**32%**	**56%**	**2%**	**100%**

L 106 - ANNUAL FUNDING SUMMARY

Name of Report:		**ANNUAL FUNDING SUMMARY** (Amounts in USD (000's)			
Frequency/Period: Annual					
Deadline	Every April 15th				
PART 1 - Annual FINANCE PLAN (Totals for Windows 1 and 2 combined)					
Approved Level for Year - Initial Approval (as per PIA)					
Approved Level for Year - Final Amount					
PART 2 - Funding Summary for Year					
		2015 Actual Funding			
		Windows 1&2	**Window 3**	**Bilateral Funding**	**Total Funding**
1	CGIAR Fund	6,890	1,034		7,924
2	Russia				-
3	BMGF				-
4	IFAD		1,861	524	2,385
5	ACIAR		1,460	66	1,526
6	USAID		3,277	294	3,571
7	ICAR				-
8	MADR				-
9	NORAD				-
10	AgMIP				-
11	USAID				-
12	KU				-
13	ACIAR				-
14	Netherlands		8,570	193	8,763
15	GIZ			376	376
16	FAO			319	319

Name of Report:		ANNUAL FUNDING SUMMARY (Amounts in USD (000's)			
17	EC			128	128
18	FIND				-
19	IRLD				-
20	PWCS				-
21	University of Nebraska				-
22	IRRI				-
23	ADB			163	163
24	ICRISAT			319	319
25	The Global Crop Diversity				-
26	CIAT				-
27	Env. C.				-
28	ILC				-
29	CONL				-
30	ICRAF			152	152
31	NOR				-
32	Germany				-
33	CRS			261	261
34	Bioforsk				-
35	AusAID				-
36	IDRC				-
37	IWMI				-
38	CORAF				-
39	CIMMYT			1,123	1,123
40	USI				-
41	SNV				-
42	WBA				-
43	FARA				-
44	ILRI		197	388	585

Name of Report:		ANNUAL FUNDING SUMMARY (Amounts in USD (000's)			
45	SDC				-
46	DFID			1,928	1,928
47	MSU				-
48	EMU				-
49	IFPRI				-
50	India		422	1,081	1,503
51	Mcknight			37	37
52	Sehghal Family Foundation				-
53	Zimbabwe			160	160
54	Finland			1,101	1,101
55	Philipines			47	47
56	EU-IFAD		885		885
57	IITA				-
58	ADA		63	231	294
59	Janan				-
60	Bill and Melinda Gates Foundation thru Bioversity				-
61	Egypt - ARC			112	112
62	Iran		74	122	196
63	Japan				-
64	CFC				-
65	AFESD			214	214
66	CIRAD				-
67	USDA			888	888
68	ISDB				-
69	Kuwait Fund			117	117
70	OFID			56	56
71	European Commission		274	65	339
72	AfDB through IITA			2,082	2,082

Name of Report:		ANNUAL FUNDING SUMMARY (Amounts in USD (000's)			
73	CGIAR				-
74	Germany (GIZ)			7	7
75	OCP			612	612
76	INRA			70	70
77	CARE			94	94
78	JICA				-
79	China				-
80	Morocco		27		27
81	Russian Funding		920		920
82	MICHIGAN STATE UNIVERSITY			60	60
83	University of Saskatchewan, Canada			44	44
84	AGRA			131	131
85	University of Twente, Netherlands (Bill and Melinda Gates Foundation funded project)			800	800
86	University of Sidney			55	55
87	Resource Conflict Institute			70	70
88	The Regents of the University of California			144	144
89	International Land Coalition			12	12
90	Japan External Trade Organisation			91	91
91	Cornell University			78	78
92	Republic of South Africa		72		72
93	THE TRUSTEES OF COLUMBIA UNIVERSITY			46	46
Total for CRP 1.1 - Dryland Systems		**6,890**	**19,136**	**14,861**	**40,887**

L 111 – ANNUAL FINANCIAL SUMMARY BY CENTRES

Name of Report:	ANNUAL FINANCIAL SUMMARY BY CENTRES (Amounts in USD 000's)				
Frequency/Period:	Annual				
Deadline:	Every April 15th				
Summary Report - by CG Partners	(A) CRP 2015 POWB APPROVED BUDGET				
	Windows 1 & 2	Window 3	Bilateral Funding	Center funds	Total Funding
BIOVERSITY	198	60	-	553	811
CIAT	114	-	414	-	528
CIP	107	44	-	-	151
ICARDA	4,304	6,328	8,064	-	18,696
ICRAF	682	10,317	3,533	-	14,532
ICRISAT	962	2,454	4,039	808	8,263
ILRI	807	1,356	2,198	-	4,361
IWMI	275	-	7	-	282
Total for CRP	**7,449**	**20,559**	**18,255**	**1,361**	**47,624**
	16%	**43%**	**38%**	**3%**	**100%**
Summary Report - by CG Partners	(B) CRP 2015 EXPENDITURE				
	Windows 1 & 2	Window 3	Bilateral Funding	Center funds	Total Funding
BIOVERSITY	198	150	-	425	773
CIAT	114	-	334	4	452

Name of Report:	ANNUAL FINANCIAL SUMMARY BY CENTRES (Amounts in USD 000's)				
CIP	107	42	-	-	149
ICARDA	3,663	5,211	5,877	-	14,751
ICRAF	731	10,234	1,787	-	12,752
ICRISAT	961	2,117	3,140	809	7,027
ILRI	807	1,382	3,716	74	5,979
IWMI	309	-	7		316
Total for CRP	**6,890**	**19,136**	**14,861**	**1,312**	**42,200**
	16%	**45%**	**35%**	**3%**	**100%**

Summary Report - by CG Partners	(C) VARIANCE THIS YEAR				
	Windows 1 & 2	**Window 3**	**Bilateral Funding**	**Center funds**	**Total Funding**
BIOVERSITY	-	(90)	-	128	38
CIAT	-	-	80	(4)	76
CIP	-	2	-	-	2
ICARDA	641	1,117	2,187	-	3,945
ICRAF	(49)	83	1,746	-	1,780
ICRISAT	1	337	899	(1)	1,236
ILRI	-	(26)	(1,518)	(74)	(1,618)
IWMI	(34)	-	-	-	(34)
Total for CRP	**559**	**1,423**	**3,394**	**49**	**5,424**
	10%	**26%**	**63%**	**1%**	**100%**

L 121 – FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Frequency/Period:	Annual				
Deadline:	Every April 15th				
	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding
Total CRP 1.1	POWB Approved Budget				
Personnel	3,227	4,553	4,062	915	12,757
Collaborators Costs - CGIAR Centers	55	933	-	-	988
Collaborator Costs - Partners	562	8,194	4,292	-	13,048
Supplies and services	1,634	3,179	5,531	248	10,592
Operational Travel	626	811	994	-	2,431
Depreciation	244	527	983	-	1,754
Sub-total of Direct Costs	**6,348**	**18,197**	**15,862**	**1,163**	**41,570**
Indirect Costs	1,101	2,362	2,393	198	6,054
Total - All Costs	7,449	20,559	18,255	1,361	47,624
LESS Coll Costs CGIAR Centers	**(55)**	**(933)**	**-**	-	**(988)**
Total Net Costs	7,394	19,626	18,255	1,361	46,636
BIOVERSITY	POWB Approved Budget				
Personnel	87	-	-	286	373
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	52	-	-	52
Supplies and services	67	-	-	179	246
Operational Travel	12	-	-	-	12
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	**166**	**52**	**-**	**465**	**683**
Indirect Costs	32	8	-	88	128

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**198**	**60**	**-**	**553**	**811**
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	**198**	**60**	**-**	**553**	**811**
CIAT	**POWB Approved Budget**				
Personnel	81	-	236	-	317
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	-	-	-	-
Supplies and services	15	-	95	-	110
Operational Travel	5	-	47	-	52
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	**101**	**-**	**378**	**-**	**479**
Indirect Costs	13	-	36	-	49
Total - All Costs	**114**	**-**	**414**	**-**	**528**
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	**114**	**-**	**414**	**-**	**528**
CIP	**POWB Approved Budget**				
Personnel	63	18			81
Collaborators Costs - CGIAR Centers					-
Collaborator Costs - Partners					-
Supplies and services	22	13			35
Operational Travel	8				8
Depreciation		7			7
Sub-total of Direct Costs	**93**	**38**	**-**	**-**	**131**
Indirect Costs	14	6			20

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**107**	**44**	**-**	**-**	**151**
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	**107**	**44**	**-**	**-**	**151**
ICARDA	**POWB Approved Budget**				
Personnel	925	1,746	1,150		3,821
Collaborators Costs - CGIAR Centers		83	-		83
Collaborator Costs - Partners	265	1,214	1,885		3,364
Supplies and services	171	1,851	2,582		4,604
Operational Travel	112	451	459		1,022
Depreciation	197	378	906		1,481
Sub-total of Direct Costs	**1,670**	**5,723**	**6,982**	**-**	**14,375**
Indirect Costs	277	605	1,082		1,964
Total - All Costs	**1,947**	**6,328**	**8,064**	**-**	**16,339**
LESS Coll Costs CGIAR Centers	-	**(83)**	**-**	**-**	**(83)**
Total Net Costs	**1,947**	**6,245**	**8,064**	**-**	**16,256**
ICRISAT	**POWB Approved Budget**				
Personnel	335	526	1,018	629	2,508
Collaborators Costs - CGIAR Centers	37	457	-	-	494
Collaborator Costs - Partners	189	561	769	-	1,519
Supplies and services	174	648	1,482	69	2,373
Operational Travel	78	25	225	-	328
Depreciation	19	-	2	-	21
Sub-total of Direct Costs	**832**	**2,217**	**3,496**	**698**	**7,243**
Indirect Costs	130	237	543	110	1,020

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**962**	**2,454**	**4,039**	**808**	**8,263**
LESS Coll Costs CGIAR Centers	(37)	**(457)**	-	-	**(494)**
Total Net Costs	**925**	**1,997**	**4,039**	**808**	**7,769**
ILRI	**POWB Approved Budget**				
Personnel	444	418	1,028		1,890
Collaborators Costs - CGIAR Centers	-	393	-		393
Collaborator Costs - Partners	7	182	140		329
Supplies and services	199	176	741		1,116
Operational Travel	39	27	19		85
Depreciation	-	-	-		-
Sub-total of Direct Costs	**689**	**1,196**	**1,928**	**-**	**3,813**
Indirect Costs	118	160	270		548
Total - All Costs	**807**	**1,356**	**2,198**	**-**	**4,361**
LESS Coll Costs CGIAR Centers	-	**(393)**	**-**	**-**	**(393)**
Total Net Costs	**807**	**963**	**2,198**	**-**	**3,968**
IWMI	**POWB Approved Budget**				
Personnel	144		-		144
Collaborators Costs - CGIAR Centers	-		-		-
Collaborator Costs - Partners	-		-		-
Supplies and services	85		4		89
Operational Travel	16		2		18
Depreciation	-		-		-
Sub-total of Direct Costs	**245**	**-**	**6**	**-**	**251**
Indirect Costs	30		1		31

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**275**	**-**	**7**	**-**	**282**
					-
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	**275**	**-**	**7**	**-**	**282**
WORLD AGROFORESTRY	**POWB Approved Budget**				
Personnel	429	1,845	630		2,904
Collaborators Costs - CGIAR Centers	12				12
Collaborator Costs - Partners	20	6,185	1,498		7,703
Supplies and services	76	491	627		1,194
Operational Travel	54	308	242		604
Depreciation	2	142	75		219
Sub-total of Direct Costs	**593**	**8,971**	**3,072**	**-**	**12,636**
Indirect Costs	89	1,346	461		1,896
Total - All Costs	**682**	**10,317**	**3,533**	**-**	**14,532**
LESS Coll Costs CGIAR Centers	(12)	-	-	-	**(12)**
Total Net Costs	**670**	**10,317**	**3,533**	**-**	**14,520**
PMU	**POWB Approved Budget**				
Personnel	719				719
Collaborators Costs - CGIAR Centers	6				6
Collaborator Costs - Partners	81				81
Supplies and services	825				825
Operational Travel	302				302
Depreciation	26				26
Sub-total of Direct Costs	**1,959**	**-**	**-**	**-**	**1,959**

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Indirect Costs	398				398
Total - All Costs	**2,357**	-	-	-	**2,357**
LESS Coll Costs CGIAR Centers	(6)	-	-	-	**(6)**
Total Net Costs	**2,351**	-	-	-	**2,351**

	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding
Total CRP 1.1	Actual				
Personnel	3,217	3,562	4,457	869	12,105
Collaborators Costs - CGIAR Centers	43	691	159	-	893
Collaborator Costs - Partners	576	9,215	2,435	-	12,226
Supplies and services	1,343	3,023	4,361	251	8,978
Operational Travel	565	801	1,325	13	2,704
Depreciation	222	280	664	-	1,166
Sub-total of Direct Costs	**5,966**	**17,572**	**13,401**	**1,133**	**38,072**
Indirect Costs	924	1,564	1,460	179	4,127
Total - All Costs	6,890	19,136	14,861	1,312	42,200
LESS Coll Costs CGIAR Centers	(43)	(691)	(159)	-	**(893)**
Total Net Costs	6,847	18,445	14,702	1,312	41,307
BIOVERSITY	Actual				
Personnel	62	5	-	218	285
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	12	-	-	-	12
Supplies and services	81	124	-	138	343
Operational Travel	11	-	-	1	12
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	**166**	**129**	**-**	**357**	**652**

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Indirect Costs	32	21	-	68	121
Total - All Costs	**198**	**150**	**-**	**425**	**773**
LESS Coll Costs CGIAR Centers	**-**	**-**	**-**	**-**	**-**
Total Net Costs	**198**	**150**	**-**	**425**	**773**
CIAT	**Actual**				
Personnel	56	-	180	-	236
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	-	-	-	-
Supplies and services	38	-	103	4	145
Operational Travel	3	-	27	-	30
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	**97**	**-**	**310**	**4**	**411**
Indirect Costs	17	-	24	0	41
Total - All Costs	**114**	**-**	**334**	**4**	**452**
LESS Coll Costs CGIAR Centers	**-**	**-**	**-**	**-**	**-**
Total Net Costs	**114**	**-**	**334**	**4**	**452**
CIP	**Actual**				
Personnel	52	25			77
Collaborators Costs - CGIAR Centers					-
Collaborator Costs - Partners					-
Supplies and services	33	11			44
Operational Travel	8	0			8
Depreciation					-
Sub-total of Direct Costs	**93**	**36**	**-**	**-**	**129**
Indirect Costs	14	6			20

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**107**	**42**	**-**	**-**	**149**
LESS Coll Costs CGIAR Centers	**-**	**-**	**-**	**-**	**-**
Total Net Costs	**107**	**42**	**-**	**-**	**149**
ICARDA	**Actual**				
Personnel	920	1,508	1,007		3,435
Collaborators Costs - CGIAR Centers	-	83	-		83
Collaborator Costs - Partners	264	1,024	1,701		2,989
Supplies and services	148	1,563	1,944		3,655
Operational Travel	112	367	344		823
Depreciation	187	121	550		858
Sub-total of Direct Costs	**1,631**	**4,666**	**5,546**	**-**	**11,843**
Indirect Costs	269	545	331		1,145
Total - All Costs	**1,900**	**5,211**	**5,877**	**-**	**12,988**
LESS Coll Costs CGIAR Centers		**(83)**	**-**	**-**	**(83)**
Total Net Costs	**1,900**	**5,128**	**5,877**	**-**	**12,905**
ICRISAT	**Actual**				
Personnel	335	410	936	629	2,310
Collaborators Costs - CGIAR Centers	37	464	-	-	501
Collaborator Costs - Partners	189	545	484	-	1,218
Supplies and services	169	359	824	69	1,421
Operational Travel	83	87	314	-	484
Depreciation	19	73	114	-	206
Sub-total of Direct Costs	**832**	**1,938**	**2,672**	**698**	**6,140**
Indirect Costs	129	179	468	111	887

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**961**	**2,117**	**3,140**	**809**	**7,027**
LESS Coll Costs CGIAR Centers	**(37)**	**(464)**	**-**	**-**	**(501)**
Total Net Costs	**924**	**1,653**	**3,140**	**809**	**6,526**
ILRI	**Actual**				
Personnel	478	415	1,408	22	2,323
Collaborators Costs - CGIAR Centers	-	144	159	-	303
Collaborator Costs - Partners	22	550	248	-	820
Supplies and services	157	209	1,156	40	1,562
Operational Travel	30	106	335	12	483
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	**687**	**1,424**	**3,306**	**74**	**5,491**
Indirect Costs	120	(42)	410	-	488
Total - All Costs	**807**	**1,382**	**3,716**	**74**	**5,979**
LESS Coll Costs CGIAR Centers	**-**	**(144)**	**(159)**	**-**	**(303)**
Total Net Costs	**807**	**1,238**	**3,557**	**74**	**5,676**
IWMI	**Actual**				
Personnel	156	-	0		156
Collaborators Costs - CGIAR Centers	-	-	-		-
Collaborator Costs - Partners	-	-	-		-
Supplies and services	95	-	4		99
Operational Travel	16	-	2		18
Depreciation	-	-	-		-
Sub-total of Direct Costs	**267**	**-**	**6**	**-**	**273**
Indirect Costs	42		1		43

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**309**	**-**	**7**	**-**	**316**
	-	-	-		-
LESS Coll Costs CGIAR Centers	**-**	**-**	**-**	**-**	**316**
Total Net Costs	**309**	**-**	**7**	**-**	**316**
WORLD AGROFORESTRY	**Actual**				
Personnel	478	1,199	926		2,603
Collaborators Costs - CGIAR Centers					-
Collaborator Costs - Partners	8	7,096	2		7,106
Supplies and services	66	757	330		1,153
Operational Travel	84	241	303		628
Depreciation		86			86
Sub-total of Direct Costs	**636**	**9,379**	**1,561**	**-**	**11,576**
Indirect Costs	95	855	226		1,176
Total - All Costs	**731**	**10,234**	**1,787**	**-**	**12,752**
LESS Coll Costs CGIAR Centers	**-**	**-**	**-**	**-**	**-**
Total Net Costs	**731**	**10,234**	**1,787**	**-**	**12,752**
PMU	**Actual**				
Personnel	680				680
Collaborators Costs - CGIAR Centers	6				6
Collaborator Costs - Partners	81				81
Supplies and services	556				556
Operational Travel	218				218
Depreciation	16				16
Sub-total of Direct Costs	**1,557**	**-**	**-**	**-**	**1,557**
Indirect Costs	206				206

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
Total - All Costs	**1,763**	**-**	**-**	**-**	**1,763**
LESS Coll Costs CGIAR Centers	**(6)**	**-**	**-**	**-**	**(6)**
Total Net Costs	**1,757**	**-**	**-**	**-**	**1,757**

Total CRP 1.1	Unspent/Variance				
Personnel	10	991	(395)	46	652
Collaborators Costs - CGIAR Centers	12	242	(159)	-	95
Collaborator Costs - Partners	(14)	(1,021)	1,857	-	822
Supplies and services	291	156	1,170	(3)	1,614
Operational Travel	61	10	(331)	(13)	(273)
Depreciation	22	247	319	-	588
Sub-total of Direct Costs	**382**	**625**	**2,461**	**30**	**3,498**
Indirect Costs	177	798	933	19	1,927
Total - All Costs	559	1,423	3,394	49	5,424
LESS Coll Costs CGIAR Centers	**(12)**	**(242)**	**159**	**-**	**(95)**
Total Net Costs	547	1,181	3,553	49	5,329

BIOVERSITY	Unspent/Variance				
Personnel	25	(5)	-	68	88
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	(12)	52	-	-	40
Supplies and services	(14)	(124)	-	41	(97)
Operational Travel	1	-	-	(1)	-
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	**-**	**(77)**	**-**	**108**	**31**
Indirect Costs	-	(13)	-	20	7
Total - All Costs	**-**	**(90)**	**-**	**128**	**38**

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	-	(90)	-	128	38
CIAT	Unspent/Variance				
Personnel	25	-	56	-	81
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	-	-	-	-
Supplies and services	(23)	-	(8)	(4)	(35)
Operational Travel	2	-	20	-	22
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	4	-	68	(4)	68
Indirect Costs	(4)	-	12	(0)	8
Total - All Costs	-	-	80	(4)	76
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	-	-	80	(4)	76
CIP	Unspent/Variance				
Personnel	11	(7)	-	-	4
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	-	-	-	-
Supplies and services	(11)	2	-	-	(9)
Operational Travel	-	(0)	-	-	(0)
Depreciation	-	7	-	-	7
Sub-total of Direct Costs	-	2	-	-	2
Indirect Costs	-	-	-	-	-
Total - All Costs	-	2	-	-	2

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	-	2	-	-	2
ICARDA	**Unspent/Variance**				
Personnel	5	238	143	-	386
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	1	190	184	-	375
Supplies and services	23	288	638	-	949
Operational Travel	-	84	115	-	199
Depreciation	10	257	356	-	623
Sub-total of Direct Costs	**39**	**1,057**	**1,436**	**-**	**2,532**
Indirect Costs	8	60	751	-	819
Total - All Costs	**47**	**1,117**	**2,187**	**-**	**3,351**
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	**47**	**1,117**	**2,187**	**-**	**3,351**
ICRISAT	**Unspent/Variance**				
Personnel	-	116	82	-	198
Collaborators Costs - CGIAR Centers	-	(7)	-	-	(7)
Collaborator Costs - Partners	-	16	285	-	301
Supplies and services	5	289	658	-	952
Operational Travel	(5)	(62)	(89)	-	(156)
Depreciation	-	(73)	(112)	-	(185)
Sub-total of Direct Costs	**-**	**279**	**824**	**-**	**1,103**
Indirect Costs	1	58	75	(1)	133
Total - All Costs	**1**	**337**	**899**	**(1)**	**1,236**

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
LESS Coll Costs CGIAR Centers	-	7	-	-	7
Total Net Costs	1	344	899	(1)	1,243
ILRI	Unspent/Variance				
Personnel	(34)	3	(380)	(22)	(433)
Collaborators Costs - CGIAR Centers	-	249	(159)	-	90
Collaborator Costs - Partners	(15)	(368)	(108)	-	(491)
Supplies and services	42	(33)	(415)	(40)	(446)
Operational Travel	9	(79)	(316)	(12)	(398)
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	2	(228)	(1,378)	(74)	(1,678)
Indirect Costs	(2)	202	(140)	-	60
Total - All Costs	-	(26)	(1,518)	(74)	(1,618)
LESS Coll Costs CGIAR Centers	-	(249)	159	-	(90)
Total Net Costs	-	(275)	(1,359)	(74)	(1,708)
IWMI	Unspent/Variance				
Personnel	(12)	-	(0)	-	(12)
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	-	-	-	-
Supplies and services	(10)	-	-	-	(10)
Operational Travel	-	-	-	-	-
Depreciation	-	-	-	-	-
Sub-total of Direct Costs	(22)	-	(0)	-	(22)
Indirect Costs	(12)	-	-	-	(12)
Total - All Costs	(34)	-	(0)	-	(34)

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	**(34)**	**-**	**(0)**	**-**	**(34)**
WORLD AGROFORESTRY	**Unspent/Variance**				
Personnel	(49)	646	(296)	-	301
Collaborators Costs - CGIAR Centers	12	-	-	-	12
Collaborator Costs - Partners	12	(911)	1,496	-	597
Supplies and services	10	(266)	297	-	41
Operational Travel	(30)	67	(61)	-	(24)
Depreciation	2	56	75	-	133
Sub-total of Direct Costs	**(43)**	**(408)**	**1,511**	**-**	**1,060**
Indirect Costs	(6)	491	235	-	720
Total - All Costs	**(49)**	**83**	**1,746**	**-**	**1,780**
LESS Coll Costs CGIAR Centers	**(12)**	**-**	**-**	**-**	**(12)**
Total Net Costs	**(61)**	**83**	**1,746**	**-**	**1,768**
PMU	**Unspent/Variance**				
Personnel	39	-	-	-	39
Collaborators Costs - CGIAR Centers	-	-	-	-	-
Collaborator Costs - Partners	-	-	-	-	-
Supplies and services	269	-	-	-	269
Operational Travel	84	-	-	-	84
Depreciation	10	-	-	-	10
Sub-total of Direct Costs	**402**	**-**	**-**	**-**	**402**
Indirect Costs	192	-	-	-	192
Total - All Costs	**594**	**-**	**-**	**-**	**594**

Name of Report:	FINANCIAL SUMMARY BY NATURAL CLASSIFICATION LINES (Amounts in USD 000's)				
LESS Coll Costs CGIAR Centers	-	-	-	-	-
Total Net Costs	594	-	-	-	594

L131. EXPENDITURE BY THEME/FLAGSHIP PROJECT AND BY CLUSTERS OF ACTIVITIES

Name of Report:	EXPENDITURE BY THEME/FLAGSHIP PROJECT AND BY CLUSTERS OF ACTIVITIES		
Frequency/Period:	Annual		
Deadline:	Every April 15th		
	POWB Approved	Current Year Actual Expenditures	Unspent Budget
Summary Report - by Flagship Project			
NAWA	6,063	5,022	1,041
CA	2,311	1,765	546
WAS	20,500	16,388	4,112
ESA	11,273	12,633	(1,361)
SA	3,133	2,685	448
CRP Management/Coordination	4,289	3,676	613
Total - All Costs	**47,569**	**42,169**	**5,400**
BIOVERSITY			
NAWA			-
CA	47	50	(3)
WAS	258	233	25
ESA	254	152	102
SA	114	189	(75)
CRP Management/Coordination	138	149	(11)
Total - All Costs	811	773	38
CIAT			
NAWA			-
CA			-
WAS	495	418	77

Name of Report:	EXPENDITURE BY THEME/FLAGSHIP PROJECT AND BY CLUSTERS OF ACTIVITIES		
ESA			-
SA			-
CRP Management/Coordination	33	34	(1)
Total - All Costs	528	452	76
CIP			
NAWA			-
CA			-
WAS			-
ESA			-
SA	143	141	2
CRP Management/Coordination	8	8	-
Total - All Costs	151	149	2
ICARDA			
NAWA	6,043	5,002	1,041
CA	2,192	1,629	563
WAS	5,369	4,164	1,205
ESA	588	325	263
SA	1,417	1,175	242
CRP Management/Coordination	3,032	2,426	606
Total - All Costs	18,641	14,721	3,920
ICRISAT			
NAWA			-
CA			-
WAS	5,012	4,186	826
ESA	1,342	1,220	122

Name of Report:	EXPENDITURE BY THEME/FLAGSHIP PROJECT AND BY CLUSTERS OF ACTIVITIES		
SA	1,404	1,116	288
CRP Management/Coordination	505	505	-
Total - All Costs	8,263	7,027	1,236
ILRI			
NAWA			-
CA			-
WAS	108	110	(2)
ESA	4,043	5,654	(1,611)
SA	25	27	(2)
CRP Management/Coordination	185	188	(3)
Total - All Costs	4,361	5,979	(1,618)
IWMI			
NAWA	20	20	-
CA	72	86	(14)
WAS			-
ESA	80	93	(13)
SA	30	37	(7)
CRP Management/Coordination	80	80	-
Total - All Costs	282	316	(34)
WORLD AGROFORESTRY CENTRE (ICRAF)			
NAWA			-
CA			-
WAS	9,258	7,277	1,981
ESA	4,966	5,189	(224)
SA			-

Name of Report:	EXPENDITURE BY THEME/FLAGSHIP PROJECT AND BY CLUSTERS OF ACTIVITIES		
CRP Management/Coordination	308	286	22
Total - All Costs	14,532	12,752	1,780

L 136 - EXPENDITURE ON GENDER RESEARCH BY THEME/ FLAGSHIP PROJECTS AND BY CLUSTER OF ACTIVITIES

Name of Report:	EXPENDITURE ON GENDER RESEARCH BY THEME/ FLAGSHIP PROJECTS AND BY CLUSTER OF ACTIVITIES (amounts in USD 000's)		
Frequency/Period:	Annual		
Deadline:	Every April 15th		
	POWB Approved	Current Year Actual Expenditures	Unspent Budget
Summary Gender Report - by Flagship Project			
NAWA	75	50	25
CA	20	20	-
WAS	35	34	1
ESA	46	45	1
SA	55	55	-
Total - All Costs	231	204	27
BIOVERSITY			
NAWA			-
CA			-
WAS			-
ESA			-
SA			-
Total - All Costs	-	-	-
CIAT			
NAWA			-
CA			-
WAS	25	25	-
ESA			-
SA			-

Name of Report:	EXPENDITURE ON GENDER RESEARCH BY THEME/ FLAGSHIP PROJECTS AND BY CLUSTER OF ACTIVITIES (amounts in USD 000's)		
Total - All Costs	25	25	-
CIP			
NAWA			-
CA			-
WAS			-
ESA			-
SA			-
Total - All Costs	-	-	-
ICARDA			
NAWA	55	30	25.00
CA			-
WAS			-
ESA			-
SA			-
Total - All Costs	55	30	25.00
ICRISAT			
NAWA			-
CA			-
WAS			-
ESA			-
SA	35	35	-
Total - All Costs	35	35	-
ILRI			
NAWA			-

Name of Report:	EXPENDITURE ON GENDER RESEARCH BY THEME/ FLAGSHIP PROJECTS AND BY CLUSTER OF ACTIVITIES (amounts in USD 000's)		
CA			-
WAS			-
ESA	16	16	-
SA			-
Total - All Costs	16	16	-
IRRI			
NAWA			-
CA			-
WAS			-
ESA			-
SA			-
Total - All Costs	-	-	-
IWMI			
NAWA	20	20	-
CA	20	20	-
WAS			-
ESA	20	20	-
SA	20	20	-
Total - All Costs	80	80	-
WORLD AGROFORESTRY CENTRE (ICRAF)			
NAWA			-
CA			-
WAS	10	9	1.00
ESA	10	9	1.00
SA			-

Name of Report:	EXPENDITURE ON GENDER RESEARCH BY THEME/ FLAGSHIP PROJECTS AND BY CLUSTER OF ACTIVITIES (amounts in USD 000's)		
Total - All Costs	20	18	2.00

L 211 - PARTNERSHIPS REPORT

Name of Report:		PARTNERSHIPS REPORT						
Frequency/Period:		Annual						
Deadline:		Every April 15th						
TOTAL FOR CRP 1.1		ACTUAL EXPENSES - THIS YEAR						
Item	Institute Acronym	Institute Name	Country	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
1		Uzbek Research Institute of Plant Industry	Uzbekistan	12	-	-	-	**12**
2	NCARE	NATIONAL CENTER FOR AGRICULTURAL RESEARCH AND EXTENSION	Jordan		90	90		**180**
3		Desert Net	Jordan		41			**41**
4	ARC	Agricultural Reseach Center- Egypt (ARC)	Egypt	22	100	100		**222**
5	NWRC	National Agricultural Reseach Center- Egypt (NWRC)	Egypt		80	75		**155**
6		COLLEGE OF AGRICULTURE, UNIVERSITY OF ZAGAZIG, Egypt	Egypt			70		**70**
7	ARARI	THE AMHARA REGIONAL AGRICULTURAL RESEARCH INSTITUTE (ARARI)	Ethiopia		40			**40**
8		National Rural Support Programme, Pakistan	Pakistan	54		370		**424**
9		National Centre of Excellence in Gelogy, University of Peshawar, Pakistan	Pakistan			190		**190**
10	ICAR	Indian Council of Agricultural Research (ICAR)	India		100	106		**206**
11	CAZRI	Central Arid Zone Research Institute (CAZRI)	India			150		**150**
12	INRA	INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE OF MOROCCO	Morocco	40	101	140		**281**
13		SOCIETE AGROPHARMA, Morocco	Morocco			200		**200**
14	ZILOLA	ZILOLA	Uzbekistan		140			**140**
15	KRASS	KHOREZM RURAL ADVISORY SUPPORT SERVICE (KRASS)	Uzbekistan	30	80			**110**

Name of Report:		PARTNERSHIPS REPORT						
16	SIC-ICWC	SCIENTIFIC-INFORMATION CENTER OF THE INTERSTATE COORDINATION WATER COMMISSION OF THE CENTRAL ASIA (SIC ICWC)	Uzbekistan	33	50			**83**
17		Tajik Academy of Agricultural scienses, Tajikistan	Tajikistan		20	70		**90**
18		STATE RESEARCH INSTITUTE OF SOIL SCIENCE AND AGROCHEMISTRY (UZBEKISTAN)	Uzbekistan		30	70		**100**
19		Uzbek corn scientific research station, Uzbekistan	Uzbekistan		40			**40**
20		INSTITUTE DE LA RESERCHE AGRONOMIQUE, Tunisia	Tunisia		60			**60**
21	ITGC	ITGC	Algeria		30			**30**
22	EIAR	EIAR, Ethiopia	Ethiopia		22	40		**62**
23	IWMI	IWMI	Egypt		83			**83**
24	HAFL	HAFL		38				**38**
25	Al Amal	Al Amal Association	Morocco	5				**5**
26		Institut des Regions Arides (IRA)	Tunisia	35		30		**65**
27		BARI Pakistan	Pakistan	7				**7**
28	SAHEL ECO	SAHEL ECO	Mali		1,080			**1,080**
29	Other partners, 10000			8	4	2		**14**
30	AKF	AGHA KHAN Foundation	Mali		152			**152**
31	CRS	Catholic Relief Services	Mali		290			**290**
32	ICCO	the Interchurch Organization for Development Cooperation	Mali		128			**128**
33	MBSA	The Mali Biocarburant	Mali		144			**144**
34	World Vision	World Vision- Mali	Mali		195			**195**
35	World Vision	World Vision- Kenya	Kenya		1,470			**1,470**
36	World Vision	World Vision- Ethiopia	Ethiopia		1,720			**1,720**
37	Reseau Marp	Reseau Marp	Burkina Faso		824			**824**
38	Care Niger	Care Niger	Niger		1,089			**1,089**
39	CDR-BOKU	Centre for Development Research	Austria	-	-	41	-	**41**
40	UCL	Universite Catholique de Louvain (UCL), Belgium	Belgium	-	-	102	-	**102**
41	UDES	Universite de Sherbrooke (UdS), Canada	Canada	-	-	30	-	**30**

Name of Report:		PARTNERSHIPS REPORT						
42	RSDS	Rural Studies and Developmental Society	India	5	-	-	-	**5**
43	CORUS	Community Organising for Rural Upliftment Society (CORUS)	India	6	-	-	-	**6**
44	SBMMAS	Shri Banashankari Mahila Mattu Makkala Abhivruddhi Samsthe	India	10	-	-	-	**10**
45	AFEC	Accion Fraterna Ecology Centre (AFEC)	India	14	-	-	-	**14**
46	GRAVIS	Gravis Vikas Vigyan Samiti (GRAVIS)	India	94	-	-	-	**94**
47	IIT	Indian Institute of Karagpur	India	-	-	4	-	**4**
48	ILRI	Internatinal Live Stock Research Insitute	Kenya	-	78	-	-	**78**
49	ICRAF	International Center for Research in Agroforestry	Kenya	-	381	-	-	**381**
50	IER	Institute D'Economie Rurale	Mali	23	-	-	-	**23**
51	CAAD	Centre D'Appui A L'Autopromotion Poul Le Developpement	Mali	-	8	-	-	**8**
52	GRADECOM	Group De Recherche Action Et Assistance Pour Le Development Communautaire	Mali	-	8	-	-	**8**
53	MOBIOM	Mouvement Biologique au Mali	Mali	-	15	-	-	**15**
54	AMASSA	The Association Malienne Pour La Securite Et La Souverainete Alimentaire	Mali	-	19	-	-	**19**
55	IER	Institute D'Economie Rurale	Mali	-	52	-	-	**52**
56	MALI METEO	Agence Nationale de la Meteorologie	Mali	-	59	-	-	**59**
57	AMEDD	Association Malienne D'Eveil Au Developpement Durable	Mali	-	76	-	-	**76**
58	AKF	Aga Khan Foundation	Mali	-	114	-	-	**114**
59	NARSDA	National Space Research and Development Agency (NASRDA)	Mali	-	-	24	-	**24**
60	BUK	Bayero University, Kano	Mali	-	-	32	-	**32**
61	IER	Institute D'Economie Rurale	Mali	-	-	52	-	**52**
62	AMEDD	Association Malienne D'Eveil Au Developpement Durable	Mali	-	-	57	-	**57**
63	MANOBI SENEGAL	MANOBI S.A. (private partner), Senegal	Mali	-	-	96	-	**96**
64	IIAM	Instituto de Investigacao Agraria de Mozambique	Mozambique	-	-	11	-	**11**

Name of Report:		PARTNERSHIPS REPORT						
65	WUR	Wageningen University	Netherlands	-	4	35	-	**39**
66	IWMI	The International Water Management Institute	Srilanka	38	-	-		**38**
67	WV	World Vision	US	-	195	-	-	**195**
68	UOF	University of Florida	USA	36	-	-		**36**
69	Cornell	Cornell University	United States	-	126	208		**334**
70	ICRISAT	International Crop Research Institute for Semi- Arid Tropics	Zimbabwe	-	(16)	-		**(16)**
71	ICARDA	International Center for Agricultural Research in the Dry Areas	Lebanon	-	-	159		**159**
72	NARC	National Agricultural Research Centre	Pakistan	-	-	35		**35**
73	CWM	College of Will and Mary	United States	-	30	-		**30**
74	CAD	Cluster Agricultural Development Services	Zimbabwe	-	20	-		**20**
75	CSIRO	Common Wealth Scientific and Industrial Research Organization	Australia	-	74	-		**74**
76	CTO	Community Technology Organization		-	20	-		**20**
77	CIMMYT	International Maize and Wheat Improvement Center	Mexico	-	23	-		**23**
78	UQ	University Of Queensland	Australia	-	47	-		**47**
79	INRAN	Institute National Research Agronomique du Niger	Niger	9	-	-		**9**
80	HU	Hawassa university	Ethiopia	13	-	-		**13**
81	CSU	Colorado State University	United States	-	70	-		**70**
82	IFPRI	International Food Policy Research Institute	United States	-	137	-		**137**
83	NDMI	National Disaster Management Authority	India	-	16	-		**16**
84	ODI	Overseas Development Institute	United Kingdom	-	81	-		**81**
85	TANGO	Tango International	United States	-	66	-		**66**
86	UAF	University of Agriculture	Pakistan	-	-	5		**5**
87		Al Amal Association	Morocco	6				**6**

Name of Report:		PARTNERSHIPS REPORT						
88	HAFL	BERN UNIVERSITY OF APPLIED SCIENCES SCHOOL FOR AGRICULTURAL FOREST AND FOOD SCIENCES		81				81
Total for CRP				619	9,906	2,594	-	13,119
BIOVERSITY				Actual Expenses - This Year				
Item	Institute Acronym	Institute Name	Country	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
1		Uzbek Research Institute of Plant Industry	Uzbekistan	12	-	-	-	12
								-
								-
								-
								-
Total for CRP				12	-	-	-	12
CIAT				Actual Expenses - This Year				
Item	Institute Acronym	Institute Name	Country	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
1								-
2								-
Total for CRP				-	-	-	-	-
CIP				Actual Expenses - This Year				

Name of Report:		PARTNERSHIPS REPORT						
Item	Institute Acronym	Institute Name	Country	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
1								-
Total for CRP				-	-	-	-	-
ICARDA				Actual Expenses - This Year				
Item	Institute Acronym	Institute Name	Country	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
1	NCARE	NATIONAL CENTER FOR AGRICULTURAL RESEARCH AND EXTENSION	Jordan		90	90		180
2		Desert Net	Jordan		41			41
3	ARC	Agricultural Reseach Center- Egypt (ARC)	Egypt	22	100	100		222
4	NWRC	National Agricultural Reseach Center- Egypt (NWRC)	Egypt		80	75		155
5		COLLEGE OF AGRICULTURE, UNIVERSITY OF ZAGAZIG, Egypt	Egypt			70		70
6	ARARI	THE AMHARA REGIONAL AGRICULTURAL RESEARCH INSTITUTE (ARARI)	Ethiopia		40			40
7		National Rural Support Programme, Pakistan	Pakistan	54		370		424
8		National Centre of Excellence in Gelogy, University of Peshawar, Pakistan	Pakistan			190		190
9	ICAR	Indian Council of Agricultural Research (ICAR)	India		100	106		206
10	CAZRI	Central Arid Zone Research Institute (CAZRI)	India			150		150
11	INRA	INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE OF MOROCCO	Morocco	40	101	140		281
12		SOCIETE AGROPHARMA, Morocco	Morocco			200		200
13	ZILOLA	ZILOLA	Uzbekistan		140			140

Name of Report:		PARTNERSHIPS REPORT						
14	KRASS	KHOREZM RURAL ADVISORY SUPPORT SERVICE (KRASS)	Uzbekistan	30	80			110
15	SIC-ICWC	SCIENTIFIC-INFORMATION CENTER OF THE INTERSTATE COORDINATION WATER COMMISSION OF THE CENTRAL ASIA (SIC ICWC)	Uzbekistan	33	50			83
16		Tajik Academy of Agricultural scienses, Tajikistan	Tajikistan		20	70		90
17		STATE RESEARCH INSTITUTE OF SOIL SCIENCE AND AGROCHEMISTRY (UZBEKISTAN)	Uzbekistan		30	70		100
18		Uzbek corn scientific research station, Uzbekistan	Uzbekistan		40			40
19								-
20		INSTITUTE DE LA RESERCHE AGRONOMIQUE, Tunisia	Tunisia		60			60
21	ITGC	ITGC	Algeria		30			30
22	EIAR	EIAR, Ethiopia	Ethiopia		22	40		62
	IWMI	IWMI	Egypt		83			83
	HAFL	HAFL		38				38
	Al Amal	Al Amal Association	Morocco	5				5
23		Institut des Regions Arides (IRA)	Tunisia	35		30		65
		BARI Pakistan	Pakistan	7				7
Total for CRP				264	1,107	1,701	-	3,072
ICRAF				Actual Expenses - This Year				
Item	Institute Acronym	Institute Name	Country	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
1	SAHEL ECO	SAHEL ECO	Mali		1,080			1,080
2	Other partners, 10000			8	4	2		14
3	AKF	AGHA KHAN Foundation	Mali		152			152
4	CRS	Catholic Relief Services	Mali		290			290

Name of Report:		PARTNERSHIPS REPORT						
5	ICCO	the Interchurch Organization for Development Cooperation	Mali		128			**128**
6	MBSA	The Mali Biocarburant	Mali		144			**144**
7	World Visio n	World Vision- Mali	Mali		195			**195**
8	World Visio n	World Vision- Kenya	Kenya		1,470			**1,470**
9	World Visio n	World Vision- Ethiopia	Ethiopia		1,720			**1,720**
10	Rese au Marp	Reseau Marp	Burkina Faso		824			**824**
11	Care Niger	Care Niger	Niger		1,089			**1,089**
Total for CRP				**8**	**7,096**	**2**	**-**	**6,026**
ICRISAT				**Actual Expenses - This Year**				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1 & 2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1	CDR-BOKU	Centre for Development Research	Austria	-	-	41	-	**41**
2	UCL	Universite Catholique de Louvain (UCL), Belgium	Belgium	-	-	102	-	**102**
3	UDES	Universite de Sherbrooke (UdS), Canada	Canada	-	-	30	-	**30**
4	RSDS	Rural Studies and Developmental Society	India	5	-	-	-	**5**
5	CORUS	Community Organising for Rural Upliftment Society (CORUS)	India	6	-	-	-	**6**
6	SBMMAS	Shri Banashankari Mahila Mattu Makkala Abhivruddhi Samsthe	India	10	-	-	-	**10**

Name of Report:		PARTNERSHIPS REPORT						
7	AFEC	Accion Fraterna Ecology Centre (AFEC)	India	14	-	-	-	**14**
8	GRAVIS	Gravis Vikas Vigyan Samiti (GRAVIS)	India	94	-	-	-	**94**
9	IIT	Indian Institute of Karagpur	India	-	-	4	-	**4**
10	ILRI	Internatinal Live Stock Research Insitute	Kenya	-	78	-	-	**78**
11	ICRAF	International Center for Research in Agroforestry	Kenya	-	381	-	-	**381**
12	IER	Institute D'Economie Rurale	Mali	23	-	-	-	**23**
13	CAAD	Centre D'Appui A L'Autopromotion Poul Le Developpement	Mali	-	8	-	-	**8**
1	GRADECOM	Group De Recherche Action Et Assistance Pour Le Development Communautaire	Mali	-	8	-	-	**8**
2	MOBIOM	Mouvement Biologique au Mali	Mali	-	15	-	-	**15**
3	AMASSA	The Association Malienne Pour La Securite Et La Souverainete Alimentaire	Mali	-	19	-	-	**19**
4	IER	Institute D'Economie Rurale	Mali	-	52	-	-	**52**
5	MALIMETEO	Agence Nationale de la Meteorologie	Mali	-	59	-	-	**59**
6	AMEDD	Association Malienne D'Eveil Au Developpement Durable	Mali	-	76	-	-	**76**
7	AKF	Aga Khan Foundation	Mali	-	114	-	-	**114**
8	NARSDA	National Space Research and Development Agency (NASRDA)	Mali	-	-	24	-	**24**
9	BUK	Bayero University, Kano	Mali	-	-	32	-	**32**
10	IER	Institute D'Economie Rurale	Mali	-	-	52	-	**52**
11	AMEDD	Association Malienne D'Eveil Au Developpement Durable	Mali	-	-	57	-	**57**
13	MANOBISENEGAL	MANOBI S.A. (private partner), Senegal	Mali	-	-	96	-	**96**

Name of Report:		PARTNERSHIPS REPORT						
14	IIAM	Instituto de Investigacao Agraria de Mozambique	Mozambique	-	-	11	-	**11**
15	WUR	Wageningen University	Netherlands	-	4	35	-	**39**
16	IWMI	The International Water Management Institute	Srilanka	38	-	-		**38**
17	WV	World Vision	US	-	195	-	-	**195**
18	UOF	University of Florida	USA	36	-	-		**36**
Total for CRP				**226**	**1,009**	**484**	**-**	**1,719**
ILRI				**Actual Expenses - This Year**				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1 & 2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1	Cornell	Cornell University	United States	-	126	208		**334**
2	ICRISAT	International Crop Research Institute for Semi- Arid Tropics	Zimbabwe	-	(16)	-		**(16)**
3	ICARDA	International Center for Agricultural Research in the Dry Areas	Lebanon	-	-	159		**159**
4	NARC	National Agricultural Research Centre	Pakistan	-	-	35		**35**
5	CWM	College of Will and Mary	United States	-	30	-		**30**
6	CAD	Cluster Agricultural Development Services	Zimbabwe	-	20	-		**20**
7	CSIRO	Common Wealth Scientific and Industrial Research Organization	Australia	-	74	-		**74**
8	CTO	Community Technology Organization		-	20	-		**20**
9	CIMMYT	International Maize and Wheat Improvement Center	Mexico	-	23	-		**23**
10	UQ	University Of Queensland	Australia	-	47	-		**47**
11	INRAN	Institute National Research Agronomique du Niger	Niger	9	-	-		**9**
12	HU	Hawassa university	Ethiopia	13	-	-		**13**

Name of Report:		PARTNERSHIPS REPORT						
13	CSU	Colorado State University	United States	-	70	-		70
14	IFPRI	International Food Policy Research Institute	United States	-	137	-		137
15	NDMI	National Disaster Management Authority	India	-	16	-		16
16	ODI	Overseas Development Institute	United Kingdom	-	81	-		81
17	TANGO	Tango International	United States	-	66	-		66
18	UAF	University of Agriculture	Pakistan	-	-	5		5
Total for CRP				**22**	**694**	**407**	**-**	**1,123**
IWMI				**Actual Expenses - This Year**				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1 & 2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1								-
Total for CRP				**-**	**-**	**-**	**-**	**-**
PMU				**Actual Expenses - This Year**				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1 & 2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1		Al Amal Association	Morocco	6				6
2	HAFL	BERN UNIVERSITY OF APPLIED SCIENCES SCHOOL FOR AGRICULTURAL FOREST AND FOOD SCIENCES		81				81

Name of Report:	PARTNERSHIPS REPORT				
Total for CRP	87	-	-	-	87
TOTAL FOR CRP 1.1	Actual Expenses - This Year				
	Windows 1 & 2	Window 3	Bilateral	Center Funds	TOTAL
BIOVERSITY	12	-	-	-	12
CIAT	-	-	-	-	-
CIP					-
ICARDA	351	1,107	1,701	-	3,159
ICRAF	8	7,096	2	-	7,106
ICRISAT	226	1,009	484	-	1,719
ILRI	22	694	407	-	1,123
IWMI	-	-	-	-	-
Total for CRP	619	9,906	2,594	-	13,119

CGIAR

RESEARCH PROGRAM ON
Dryland Systems

The CGIAR Research Program on Dryland Systems aims to improve the lives of 1.6 billion people and mitigate land and resource degradation in 3 billion hectares covering the world's dry areas.

Dryland Systems engages in integrated agricultural systems research to address key socioeconomic and biophysical constraints that affect food security, equitable and sustainable land and natural resource management, and the livelihoods of poor and marginalized dryland communities. The program unifies eight CGIAR Centers and uses unique partnership platforms to bind together scientific research results with the skills and capacities of national agricultural research systems (NARS), advanced research institutes (ARIs), non-governmental and civil society organizations, the private sector, and other actors to test and develop practical innovative solutions for rural dryland communities.

The program is led by the International Center for Agricultural Research in the Dry Areas (ICARDA), a member of the CGIAR Consortium. CGIAR is a global agriculture research partnership for a food secure future.

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CIAT

CENTRO INTERNACIONAL DE LA PAPA
CIP

World Agroforestry Centre

ILRI
INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

IWMI
International Water Management Institute