Title: (SA-BIOVERSITY) Outscaling a citizen science approach to test climate adaptation options on farms

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2018	F2	Bonilla, Osana <o.bonilla@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral, W3	On-going	BIOVERSITY - Bioversity International - Italy	van Etten, Jacob <j.vanetten@cgiar.org>

Project is working on

Flaship(s)
F2 (before F1 - Andy): Climate-Smart Technologies and Practices

Region(s)
SAs: South Asia

Project summary

Climate adaptation in agriculture is not a one-time effort. CSA needs a quick-paced process of constant, massive discovery of locally appropriate solutions. As mobile telephone coverage expands in rural areas, simpler, more cost-efficient and information-rich ICT-based systems become possible. This project aims to outscale a novel “farmer citizen science” approach, building on successful pilots by Bioversity and partners. In this approach, each farmer tries and ranks a small number of technologies, characterizes local conditions with cheap, reliable weather sensors, and shares information by mobile phone. The resulting information serves to create empirical, location-specific advice on climate-smart practices for farmers, helping them to constantly adapt to shifting climatic and social conditions. Activities include: (i) training organizations in its implementation, (ii) embedding the approach in extension services and agro-dealer networks (iii) improving and expanding the methodology using ICT-based solutions.

2. Partners

Partner #1 (Leader)

Institution: BIOVERSITY - Bioversity International

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	van Etten, Jacob <j.vanetten@cgiar.org>	Activity 2014-58 *Leader*. Activity 2014-59 *Leader*. Activity 2014-81 *Leader*.	HQ
Partner	Kumar, Nallur <k.kumar@cgiar.org>	Activity 2014-68 *Leader*. Activity 2014-248 *Leader*.	HQ
Partner	Fadda, Carlo <c.fadda@cgiar.org>	Activity 2014-66 *Leader*.	HQ
Partner	Padulosi, Stefano <s.padulosi@cgiar.org>	Activity 2014-360 *Leader*.	HQ

Partner #2

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Eitzinger, Anton <a.eitzinger@cgiar.org>	Online mapping and data visualization/analysis tools Activity 2014-57 *Leader*. Cancelled for 2016.	HQ

Partner #3

Institution: Penn State - Pennsylvania State University

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Zimmerer, Karl <ksz2@psu.edu>	Activity 2014-58 *Partner*.	HQ

Partner #4

Institution: CATIE - Centro Agronómico Tropical de Investigación y Enseñanza

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mercado, Leida <lmercado@catie.ac.cr>	Activity 2014-59 *Partner*. Activity 2014-81 *Partner*.	HQ

Partner #5

Institution: Escuela Agricola Panamericana Zamorano-Honduras

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Rosas, Juan Carlos <jcrosas@zamorano.edu>	Activity 2014-59 *Partner*. Activity 2014-81 *Partner*.	HQ

Partner #6

Institution: Mekelle University-Ethiopia

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Kassahun, Dejene <dejenekmh@gmail.com>	Activity 2014-66 *Partner*. The partner used a citizen science approach for variety released and pioneered crowdsourcing in Tigray region. They helped reaching out to other boundary partners, such as the bureau of agriculture and the Tigray Agricultural Research Institute. Additionally, they used citizen science approach in one of their own funded PhD program.	HQ

Partner #7

Institution: SARC - Sirinka Agricultural Research Centre

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Kidane, Yosef <coolyosef@yahoo.com>	Activity 2014-66 *Partner*. The partner used a citizen science approach for variety released and pioneered crowdsourcing in Amhara region. They helped reaching out to other boundary partners, such as the bureau of agriculture. This partner was very active in understanding and monitoring farmers' perception of the	HQ

Partner #8

Institution: Scuola Superiore S. Anna-Italy

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Pe, Enrico <m.pe@sssup.it>	Activity 2014-66 *Partner*. This partner was leading the molecular part of the work and helped with field trials. It has a unique role as it provides PhD funding through the international agrobiodiversity PhD program. So far 5 PhD students have been attached to the larger seeds for needs program in Ethiopia. THey have been involved in all project activities.	HQ

Partner #9

Institution: IBC - Institute for Biodiversity Conservation

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Fantahun, Basazen <basofaddis@yahoo.com>	Activity 2014-66 *Partner*. The partner used a citizen science approach for variety released and pioneered crowdsourcing in Tigray region. They helped reaching out to other boundary partners, such as the bureau of agriculture and the Tigray Agricultural Research Institute.	HQ

Partner #10

Institution: Hivos-Netherlands

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Douma, Willy <wdouma@hivos.org>	Activity 2014-66 *Partner*. With a mandate on conservation and use of plant genetic resources, this partner was providing all planting material used in the project and pioneered crowdsourcing in Oromiya region. They helped reaching out to other boundary partners, such as the minister of agriculture and they included the seeds for needs approach in the newly released national biodiversity strategy and actin plan.	HQ

Partner #11

Institution: ERMCSD - Environmental Resource Management Center for sustainable development

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mmboyi, Felix <director@cerdsconsult.com>	Activity 2014-66 *Partner*. The partner will be involved in the project as of 2016 due to late beginning of a bilateral benefit sharing grant	HQ

Partner #12

Institution: ICAR - Indian Council of Agricultural Research

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Gogoi, A.K <icarzcu3@gmail.com>	Activity 2014-68 *Partner*.	HQ
Partner	Ayyappan, S. <dg.icar@nic.in>	Activity 2014-248 *Partner*.	HQ

Partner #13

Institution: PPV&FRA - Protection of Plant Varieties and Farmers' Rights Authority

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Hanchinal, R.R <chairperson-ppvfra@nic.in>	Activity 2014-68 *Partner*. Activity 2014-248 *Partner*.	HQ

Partner #14

Institution: GC - Gene Campaign

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Kumar, Nallur <k.kumar@cgiar.org>	Implementing the approach in the field	HQ

Partner #15

Institution: Humana People to People India-India

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Moeller, Anne Marie <annemariemoeller@gmail.com>	Implementing the approach in the field.	HQ

Partner #16

Institution: NBPGR - National Bureau of Plant Genetic Resources

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Bansal, K.C. <director@nbpgr.ernet.in>	Activity 2014-68 *Partner*. Activity 2014-248 *Partner*.	HQ

Partner #17

Institution: IARI - Indian Agricultural Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Prabhu, K.V. <jd_research@iari.res.in>	Activity 2014-68 *Partner*. Activity 2014-248 *Partner*.	HQ

Partner #18

Institution: CAZRI - Central Arid Zone Research Insitute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Roy, M.M <director@cazri.res.in>	Activity 2014-68 *Partner*.	HQ

Partner #19

Institution: VPKAS - Vivekananda parvatiya krishi anusandhan sansthan

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Bhatt, J.C <vpkas@nic.in>	Activity 2014-68 *Partner*.	HQ

Partner #20

Institution: CRIDA - Central Research Institute for Dryland Agriculture

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Rao, Srinivasa <director@crida.in>	Activity 2014-68 *Partner*.	HQ

Partner #21

Institution: RVSKVV - Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Singh, A.K <vcrvskvvgwl@gmail.com>	Activity 2014-68 *Partner*.	HQ

Partner #22

Institution: IGKVV - Indira Gandhi Krishi Vishwavidyalaya University

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Patil, S.K <vcigkv@gmail.com>	Activity 2014-68 *Partner*.	HQ

Partner #23

Institution: ASA - Action for Social Advancement

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mondal, Ashish <ashis@asabhopal.org>	Activity 2014-68 *Partner*. Activity 2014-248 *Partner*. Activity 2014-360 *Partner*.	HQ

Partner #24

Institution: LCM - Lok Chetna Manch

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Bisht, Jogendra <jogendrabisht@yahoo.co.in>	Activity 2014-68 *Partner*.	HQ

Partner #25

Institution: HRG - Himalayan Research Group

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Singh, Lal <lalhrg@gmail.com>	Activity 2014-68 *Partner*.	HQ

Partner #26

Institution: BHALEI Society - Bhartiya Health, Horticuture, Agriculture, Animal Husbandry, Literacy, Environment Incorporation

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mandla, J.C <jcmandla@gmail.com>	Activity 2014-68 *Partner*.	HQ

Partner #27

Institution: INHERE - Institute of Himalayan Environmental Research and Education

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Maheshwari, Manoj <Inhere.masi@rediffmail.com>	Activity 2014-68 *Partner*.	HQ

Partner #28

Institution: FDI - Foundation for Development Integration

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Sarma, Rajib <RAJIBSARMA.ASSAM@GMAIL.COM>	Activity 2014-68 *Partner*.	HQ

Partner #29

Institution: MVDA - Mount Valley Development Association

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Singh Negi, Avtar <mvda_tehri@yahoo.co.in>	Activity 2014-68 *Partner*.	HQ

Partner #30

Institution: GRAVIS - Gramin Vikas Vigyan Samiti

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Tyagi, Dr. Prakash <prakash@gravis.org.in>	Activity 2014-68 *Partner*. Activity 2014-248 *Partner*.	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	We have realized Bioversity needs to create more internal clarity regarding its own scaling strategy. We are achieving this via an internal "business model development" exercise. This is gradually leading to a clearer model, which should guide engagement in the future.

Partnerships overall over the last reporting period:

Partnerships have been crucial for success over the reporting period and partners have performed as expected.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Province	14.4526	-89.3804	Trifinio
Province	13.2793	-85.5351	NicaCentral
Country			Ethiopia
Country			Kenya
Country			India
Province	14.4738	-89.3804	Trifinio
Province	13.4717	-85.5681	NicaCentral

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:
In 2019, 11 initiatives will be using the CSA citizen science platform ClimMob, delivering information resulting from CSA citizen science experiments to at least 500,000 households annually. 9 of these initiatives/organizations have been identified in 2014. Two additional organizations/initiatives will be identified in 2016 and will be using the approach in 2018. - In India, ICAR will be adopting the approach to promote crop and varietal diversity as part of a wider policy effort to use diversity to increase resilience of smallholder agriculture, collaborating with other organizations in 5 state-level initiatives (of Rajasthan, Uttrakhand, Madhya Pradesh, Bihar, and Assam) will be mainstreaming the CSA citizen science approach across four agroclimatic zones. - In Central America, the government of Guatemala (MAGA/ICTA) will be using the approach, e.g. 1 major initiative. - In Ethiopia, 3 major initiatives in Amhara, Oromiya and Tigray will promote, test and disseminate CSA practices.

Annual progress towards outcome (end of 2016*): - In India: engagement with government of Bihar to mainstream the CSA citizen science approach in its agricultural support programme. - In Central America: strategy to mainstream the CSA citizen science approach in Guatemala; started the conversation with MAGFOR/INTA in Nicaragua. - In Ethiopia, 3 institutions will use citizen science approach in their research outreach strategy. - Positive user feedback on the ICT products/course materials developed in 2015. - At least 2 additional high-potential users of the CSA citizen science approach identified.

Annual progress towards project outcome in the current reporting cycle (2016*): In India, we have engaged with a number of government institutions, NGOs and seed businesses in order to draw up a plan to scale the approach. This plan has taken a different track than approaching state governments, as we planned to. In Central America, we have trained 79 professionals of 33 organizations. In Guatemala, ICTA has adopted the approach and trained a large number of researchers. In Nicaragua, our approach to INTA was limited due to pre-election bans on communication. In Honduras, however, the approach was received with enthusiasm and may result in trials in 2017. In Ethiopia, we have 3 institutions working with the approach thanks to a GIZ funded project. We held a training course within this context. User feedback has improved over the last year to 69 on the SUS scale (=good).
How communication and engagement activities have contributed to achieving your Project outcomes:* - Communication with ICAR, - Our long-term engagement with the Collaborative Programme on Participatory Plant Breeding in Mesoamerica has resulted in a highly efficiently co-funded effort (Asocuch leveraging funds of the ITPGRFA) to deliver the series of courses (see attached doc for evidence in the form of a project report to FAO). - Our specific visits to ICTA (NARS of Guatemala) helped to raise awareness about this course resulting in good participation from ICTA.
Evidence documents of progress towards outcomes:* https://marlo.cgiar.org/data/ccafs/projects//43/projectOutcome/Informe%20W2B-PR-11-Guatemala-First.pdf

Annual progress towards outcome (end of 2015): - In India: we will engage with state government of Bihar to mainstream the CSA citizen science approach in its agricultural support programme. We will involve 15,000 households directly in the CSA citizen science experiments. - In Central America: we will engage with MAGA/ICTA to mainstream the CSA citizen science approach in the extension programme. We will train CATIE and partners in Guatemala and Nicaragua and involve 2,000 households in CSA citizen science experiments. - In Ethiopia, we will involve and train 3 bureaus of agriculture in Amhara, Tigray, and Oromiya in using the CSA citizen science approach.

Annual progress towards outcome (end of 2017): - At least 2 additional high-potential users of the CSA citizen science approach fully engaged and trained to use the approach.

Annual progress towards outcome (end of 2018): - At least 2 additional high-potential users have implemented the CSA citizen science approach successfully.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* Current adoption of the approach by NARS is making good progress, strengthening our evidence on that front. However, for full scaling, we are still actively planning and exploring options to finance this (leveraging bilateral projects to finance scoping studies, workshops, etc.), looking more actively at the private sector (Central America), seed aid (Ethiopia), and private sector and alternative government funding from an agrobiodiversity perspective (India).

4.2 CCAFS Outcomes

RP EA Outcome 2019: National Agricultural Research Institutions (KARI, NARO, ARI, EIAR), IARCs, and Ministries of Agriculture are developing and packaging appropriate CSA technologies and practices to increase agricultural productivity, enhance food security, incomes and mitigation, and build resilience; Agro-advisory services are testing and using new delivery mechanisms for CSA adoption.

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
Target value: 3
Cumulative target to date: 53
Target narrative: In Ethiopia, at least 3 initiatives use a CSA citizen science approach in Amhara, Oromiya and Tigray to promote, test and disseminate CSA practices. About 150,000 households will benefit from participating in the CSA experiments or receiving information resulting from these experiments. In Amhara: collaboration between ARARI, Amhara Bureau of Agriculture, and farmers' cooperatives. In Tigray: TARI, Tigray Bureau of Agriculture, Mekelle University and farmers' cooperatives. In Oromiya, ORARI, Oromiya Bureau of Agriculture, farmers cooperatives. At the federal level in Ethiopia: federal EBI, EIAR, Ethiopian seed enterprises, ATA.
The expected annual gender and social inclusion contribution to this CCAFS outcome: The citizen science platform will deliver gender-disaggregated information for decision-making.

2015
Target value: 0
Cumulative target to date: 14
Target narrative: In Ethiopia, we will involve and train 3 bureaus of agriculture in Amhara, Tigray, and Oromiya in using the CSA citizen science approach.
The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016
Target value: 3
Cumulative target to date: 44
Target achieved: 3.0
Target narrative: In Ethiopia, Mekelle University, Ethiopian Institute of Biodiversity and Sirinka Agricultural Research Centre will use citizen science approach in their research outreach strategy.
Narrative for your achieved targets, including evidence: These targets have been achieved. See the outcome case study for further evidence.
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Gender-disaggregated data were collected in all cases. Discussions are underway to include crops that are more frequently grown by women than by men.
The expected annual gender and social inclusion contribution to this CCAFS outcome: The citizen science platform will deliver gender-disaggregated information for decision-making.

Major Output groups:

● F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

● F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

● F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

RP LAM Outcome 2019: LAM's producers associations are choosing and promoting CSA context-specific practices through strengthened extension services rescuing ancient and traditional knowledge. Local governments develop equitable local agricultural development plans using CSA context-specific portfolios assessed economically to plan and prioritize their investments focusing on climate variability challenges. NARS develop demand-driven outputs with sufficient technological capacity to address agricultural sector needs to face climate challenges. Private sector works with producer's associations, local and national governments to implement and scale out CSA involving agricultural market agents through innovative approaches (incentives along value chain to access to certification schemes). National governments scale up CSA approach based on successful experiences developed at local level.

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
Target value: 1 **Cumulative target to date:** 53 **Target narrative:** The CSA Citizen Science approach will be used by the extension service of Guatemala. About 50,000 households will benefit from participating in the CSA experiments or receiving information resulting from these experiments. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** The citizen science platform will deliver gender-disaggregated information for decision-making.

2015
Target value: 2 **Cumulative target to date:** 14 **Target narrative:** The CSA citizen science approach will be used by the CATIE MAP project (CATIE and subnational partners) in Guatemala and Nicaragua. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2016
Target value: 2
Cumulative target to date: 44
Target achieved: 2.0
Target narrative: 2 initiatives use the citizen science approach: the CIMMYT Buena Milpa project in Guatemala and the regional Collaborative Participatory Plant Breeding Programme (led by Asocuch Guatemala with participation from across Central America).
Narrative for your achieved targets, including evidence: The Collaborative PPB Programme is actively using the approach in its ongoing project (see Outcome Case Study for Central America). We actively engaged with the CIMMYT Buena Milpa project and they have indicated they will incorporate the approach in their project in 2017.
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Information is gender-disaggregated, facilitating analysis of gender-specific varietal preferences.
The expected annual gender and social inclusion contribution to this CCAFS outcome: The citizen science platform will deliver gender-disaggregated information for decision-making.

Major Output groups:

● F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

● F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

● F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

RP SAs Outcome 2019: Governments, private sector and farmer organizations increase their investments and develop incentive mechanisms to promote wide scale adoption of improved climate-smart practices and technologies

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
Target value: 5 **Cumulative target to date:** 53 **Target narrative:** In India, we aim for ICAR adopting a citizen science approach to promote crop and varietal diversity as part of a wider policy effort to use diversity to increase resilience of smallholder agriculture and will engage with 5 state-level initiatives of Rajasthan, Uttrakhand, Madhya Pradesh, Bihar, and Assam to mainstream the CSA citizen science approach across four agroclimatic zones. About 250,000 households will benefit from participating in the CSA experiments or receiving information resulting from these experiments. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** The citizen science platform will deliver gender-disaggregated information for decision-making.

2015
Target value: 12 **Cumulative target to date:** 14 **Target narrative:** <Not Defined> **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2016
Target value: 25
Cumulative target to date: 44
Target achieved: 5.0
Target narrative: KVKs in India will be using the CSA citizen science approach.
Narrative for your achieved targets, including evidence: In 2016, we worked directly with 5 KVKs in India, working with 15,435 farmers. Evidence: details are provided in the India outcome case study for this project.
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: The information is gender-disaggregated and analyses will analyzed differences between men and women. Also, the efforts have included Nutritional Kitchen Gardens, which are often women's spaces.
The expected annual gender and social inclusion contribution to this CCAFS outcome: The citizen science platform will deliver gender-disaggregated information for decision-making.

Major Output groups:

● F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

● F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

● F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

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Collaborating with other CRPs

Roots, Tubers and Bananas
Description of collaboration: Crowdsourcing will be used for banana variety evaluation.

Water, Land and Ecosystems
Description of collaboration: A watershed level project funded by WLE is using results and from this project to inform the productivity component of the project

4.4 Case Studies

Case Study #67

Title: Adoption of citizen science methodology shapes new linkages between researchers and farmers for climate adaptation

Year: 2016

Project(s): P43

Outcome Statement: Through broad platforms including the Collaborative Programme on Participatory Plant Breeding of Mesoamerica, the McKnight Foundation Collaborative Crop Research Program (CCRP), and the Indian Council of Agricultural Research, more than 20 different organizations have used the tricot citizen science methodology, reaching ~50,000 farmers with seeds of stress-tolerant varieties of common bean, bread wheat, rice, durum wheat, and tepary bean.

Research Outputs: We have produced a large number of materials to support training on the tricot crowdsourcing methodology, including a manual and a series of 7 professionally produced videos. Both were published in English and Spanish. We also made a significant effort to write blog posts and tweet about our work. To provide rigorous documentation of our design choices in developing the tricot methodology and to summarize work that was published as "gray" literature (reports and MSc theses) we wrote a peer-reviewed article for Experimental Agriculture (online). Also, we wrote a couple of more quantitative articles about statistical methods and data quality which are both advanced in the review process (February 2017).

Research Partners: Feedback on the platform has been given by professionals from over 40 organizations who have participated in courses and used the platform. Many of these professionals and their organizations are member of / associated with one of the following platforms: - Collaborative Programme on Participatory Plant Breeding of Mesoamerica - McKnight Foundation Collaborative Crop Research Program (CCRP) - Indian Council of Agricultural Research Another important partner in Central America was CATIE.

Activities: Design of the ClimMob.net platform, tutorials, videos (see under outputs) disseminated via the web. Continuous methodological support to implementing organizations. A large number of courses, reaching more than 154 professionals in the agricultural sector: 1. Course in April 2016, in the PCCMCA 2016 in San José, Costa Rica, reaching x professionals from all over Latin America who are active in the agricultural sector 2. A series of courses to the members of the Collaborative Programme on Participatory Plant Breeding of Mesoamerica and other organizations, reaching 33 organizations and 77 professionals from Nicaragua, Honduras and Guatemala. 3. Course for Bioversity research partners in Ethiopia, April 2016 4. Course for Bioversity research partners in India, May 2016

Non-Research Partneres: Most research partners are also "non-research partners" in the sense that they have extension / technology transfer roles. For example, the KVKs in India, CATIE in Central America, have both research and extension roles. The tricot methodology bridges between research / technology transfer and agricultural extension. Other non-research partners are farmer associations (several cooperatives in Guatemala) and NGOs.

Output Users: Members of the consortia mentioned above include national agricultural research institutes, universities, NGOs and farmer associations.

Evidence Outcome: Feedback about the quality of the ClimMob.net platform - System Usability Scale (SUS) average score of 69, (="good") Collaborative Programme on Participatory Plant Breeding of Mesoamerica implements several trials in Central America not financed by Bioversity (report attached, in Spanish) Data on use extracted from the ClimMob.net platform database

Output Used: The tricot methodology is used to scale on-farm testing. This has several benefits: -more farmers are reached as on-farm testing equals direct dissemination of CSA technologies/practices, -environmental adaptation can be assessed quicker by assessing performance across gradients with environmental data -cost reduction due to simple formats and digital support.

References Case: ClimMob.net platform: experimental design, data collection and analysis (www.climmob.net) Steinke, J. and van Etten, J. 2016. Farmer experimentation for climate adaptation with triadic comparisons of technologies (tricot). A methodological guide. Rome, Bioversity International.
http://www.bioversityinternational.org/index.php?id=244&tx_news_pi1%5Bnews%5D=8453&cHash=d1172463f3bc6d14989d52c966fb702b Same item in Spanish:
http://www.bioversityinternational.org/index.php?id=244&tx_news_pi1%5Bnews%5D=8476&cHash=52cf32a6c2355cc6138cb3c895a12c8f Tricot methodology and ClimMob. (Series of 7 professionally produced instructional videos in English and Spanish.)
https://www.youtube.com/watch?v=Fk3Le-iG8Fc&list=PL-sGSYV1hj3Si7WjXeCuhMscuRlbY4n3n
https://www.youtube.com/watch?v=Cx19oK7LmXg&list=PL-sGSYV1hj3TleLxtcDGs_lH8-dCu36w9 van Etten, J., E. Beza, L. Calderer, K van Duijvendijk, C. Fadda, B. Fantahun, Y.G. Kidane, J. van de Gevel, A. Gupta, D.K. Mengistu, D. Kiambi, P. Mathur, L. Mercado, S. Mittra, M. Mollel, J.C. Rosas, J. Steinke, J.G. Suchini, K. Zimmerer. First experiences with a novel farmer citizen science approach: Crowdsourcing participatory variety selection through on-farm triadic comparisons of technologies (tricot). Experimental Agriculture, online. Blog "Central American professionals learn about farmer citizen science for climate adaptation"
http://www.bioversityinternational.org/news/detail/central-american-professionals-learn-about-farmer-citizen-science-for-climate-adaptation/ Blog "ClimMob, a software for crowdsourcing climate-smart agriculture"
http://www.bioversityinternational.org/news/detail/climmob-a-software-for-crowdsourcing-climate-smart-agriculture/

Primary 2019 outcome indicator(s):
● # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools
● # of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets that explicitly promote climate smart approaches along the value chain, using CCAFS science

Link between outcome story and and the FP Outcome(s): -

Annex uploaded:
https://marlo.cgiar.org/data/ccafs/projects//43/caseStudy/Informe%20W2B-PR-11-Guatemala-First.pdf

Case Study #68

Title: Tricot crowdsourcing methodology facilitates scaling of farmer-participatory trials in India

Year: 2016

Project(s): P43

Outcome Statement: In the period between 2012-2016, 46,641 Indian farmers conducted simple trials on their own fields with three varieties of the following crops: wheat, rice, mustard, pigeonpea, chickpea, green gram, red gram, sesame, and different species of vegetables. Reaching this number of farmers was facilitated by the novel tricot crowdsourcing method. Continuous availability of seeds of preferred varieties is ensured by the establishment of ten Community Seed Banks (with innovative seed conservation methods) benefitting approx. 8,000 farmers across 100 villages.

Research Outputs: Vernooy, R., Sthapit, B., Otieno, G., Shrestha, P. and Gupta, A. The roles of community seed banks in climate change adaption. Development in Agriculture. (Accepted Nov 2016) van Etten, J., Beza, E., Calderer, L., van Duijvendijk, K., Fadda, C., Fantahun, B., Kidane, Y.G., van de Gevel, J., Gupta, A. and Mengistu, D.K., 2016. First experiences with a novel farmer citizen science approach. Experimental Agriculture, early online. Malavika Dadlani, Prem Mathur and Arnab Gupta (2016): Community Seed Banks: A sustainable response to small and marginal farming against climate change hurdles. Agriculture World. Vol II. Issue 1. January 2016. Sharma N , Mathur P N , Gupta A , Dadlani M , van Etten J, Kumar N K K (2017). Seeds for Needs: Revival of Traditional Varieties and Landraces for Climate-Resilient Agriculture. International Conference on Climate Change 2017". Colombo- 16-17 February, 2017

Research Partners: ICAR-NBPGR

Activities: Extensive liaising with the Indian Council of Agricultural Research took place to ensure partnership with KVKs and access to seeds.

Non-Research Partneres: We list the collaborating institutions of the last 3 growing seasons. KVKs are in charge of technology transfer. Deendayal Research Institute (DRI), Chitrakoot: Mr Atul Jain, Mr Abhay Mahajan, Dr Anil Jaiswal DRI-Krishi Vigyan Kendra, Satna: Dr R S Negi DRI- Krishi Vigyan Kendra, Chitrakoot: Dr Narendra Singh DRI-Krishi Vigyan Kendra, Gonda: Dr Upendra Singh and Ramkrishna Tiwari Krishi Vigyan Kendra, Raisen : Dr Swapnil Dubey Sher-e-Kashmir University for Agriculture and Technology-Kashmir: Dr G A Parray

Output Users: - Direct institutional users of the trial outputs are the ten Community Seed Banks who stock identified varieties. - KVKs use the tricot crowdsourcing methodology. - 96% of farmers saved seeds from their experiments to continue growing the varieties they preferred (impact study with n=250).

Evidence Outcome: - Datasets of tricot trials - Studies done by Bioversity (see uploaded report)

Output Used: The Community Seed Banks now hold 492 different varieties and landraces and serve 8,000 farmers at present. KVKs have used the tricot methodology to reach more farmers than usual using other on-farm experimentation approaches. Farmers have increased their use of newer, more stress tolerant, varieties.

References Case:
http://www.bioversityinternational.org/news/detail/opening-the-doors-to-indias-first-low-energy-genebank/ http://www.iivr.org.in/first-low-energy-seed-gene-bank-inaugurated-icar-iivr-varanasi.html

Primary 2019 outcome indicator(s):
● # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

Link between outcome story and and the FP Outcome(s): The outcome makes a substantial contribution to progress on the number of farmers reached with CSA technologies, which is why the flagship leader encouraged us to submit this as an outcome case study.

Annex uploaded:
https://marlo.cgiar.org/data/ccafs/projects//43/caseStudy/CCAFS%20REPORT%20INDIA%202016-17.docx

Case Study #69

Title: Tricot crowdsourcing evidence stimulates government seed multiplication efforts in Ethiopia

Year: 2016

Project(s): P43

Outcome Statement: The Bioversity tricot crowdsourcing approach has been used in our "Seeds for Needs" research and has proven that (i) selected landraces yield more and are more stable in marginal, climatically-variable conditions than improved/introduced varieties and (ii) these superior landraces are preferred by the farmers over conventionally-bred varieties. As a result, the federal government and Amhara government of Ethiopia are supporting the Seeds for Needs approach in promoting the use of landraces at regional and national levels financing massive seed multiplication.

Research Outputs: During 2016 two papers were published on the performance of the varieties tested and the molecular characterization showing the potential of Ethiopian durum wheat farmers' varieties. In 2016, F7 seeds of 1200 lines were characterized using molecular and morphological traits. In addition, 3 of these varieties have been proposed for release, which would confirm the superiority of farmers' varieties under marginal conditions. A final decision will be taken in April. In parallel, we completed pre-breeding work crossing 50 farmers' varieties and an improved one using a Nested Association Mapping Approach. Through this we managed to develop over 6,000 Recombinant Inbred Lines (RILs). This is a very innovative, unique breeding program for durum wheat as it has been used only for maize and bread wheat globally. Data analysis is yet to be completed, but the approach will allow to easily use marker assisted breeding for future breeding work in Ethiopia.

Research Partners: Amhara Region Agricultural Research Institute (ARARI), Ethiopian Biodiversity Institute (EBI), Mekelle University (MU), Scuola Superiore S. Anna (SSSUP)

Activities: We organized a field day with the attendance of the Head of Bureau of Agriculture at the end of 2015. The Head was impressed by the enthusiasm of the farmers who were very supportive. We conducted an additional workshop in early June 2016, in which it was agreed that the Bureau will promote these varieties through the NARS, will support seed multiplication and further characterization of the pre-breeding materials. This support has fully materialized. In 2016 we organized a field visit for the DG of the Ethiopian Institute of Agricultural Research who was impressed by the role that farmers' varieties can have in higher, stable yields. He pledged support and after a series of meetings, the Bioversity Seeds for Needs approach was included in the newly released national Biodiversity Strategy and Action Plan (NBSAP) a CSA manual chapter on using genetic diversity to enhance productivity and adapt to climate change.

Non-Research Partneres: National extension system of Ethiopia, various local farmer groups engaged by Bioversity.

Output Users: The federal government and regional Amhara government of Ethiopia have used the empirical evidence to prioritize seed dissemination/multiplication. Ethiopian Biodiversity Institute uses the outputs to inform its national plan (NBSAP). The WB Sustainable Land Management Project will use it to pilot the CSA manual in 20 watersheds starting from 2017.

Evidence Outcome: Letter of agreement between Bureau of Agriculture and ARARI to support Bioversity's activity (attached: NBSAP 2015-2020). The CSA manual cannot yet be shared since it is still in its confidential form, but it received no objection from the World Bank.

Output Used: The output was used as evidence for policy making by the mentioned government institutions and projects. Especially the field visits and the support of large groups of farmers (10,000 farmers reached) was important in convincing relevant policy and decision makers.

References Case: Mengistu D.' Kidane Y', Catellani M', Frascaroli E', Fadda C., Pe'E., Dell 'acqua M., 2016. High-density molecular characterization and association mapping in Ethiopian durum wheat landraces reveals high diversity and potential for wheat breeding. Plant Biotechnology Journal. Pp 1-13. http://dx.doi.org/10.1111/pbi.12538. D.K. Mengistu, Y.G. Kidane, C. Fadda, M.E. Pè, 2016. Genetic diversity in Ethiopian Durum Wheat (Triticum turgidum var durum) inferred from phenotypic variations. Plant Genetic Resources. https://doi.org/10.1017/S1479262116000393

Primary 2019 outcome indicator(s):
● # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

Link between outcome story and and the FP Outcome(s): <Not Defined>

Annex uploaded:
https://marlo.cgiar.org/data/ccafs/projects//43/caseStudy/SupportingDocumentEthiopiaOutcome.docx

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2019 contribution towards the selected MOG:** In 2019, ClimMob will function as an important knowledge management platform that enhances 2-way sharing of CSA information and testing CSA options. **Brief`2019 plan of the gender and social inclusion dimension of the expected annual output:** Data collection is gender-disaggregated by default. New features and support materials are tested for gender and social inclusion.
F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2019 contribution towards the selected MOG:** In 2019, ClimMob will contain information about a large number of CSA options, empirically tested on farms. Also for a number of areas, we will have quantification of the contribution of these options to the goals of this MOG. **Brief`2019 plan of the gender and social inclusion dimension of the expected annual output:** Gender and social inclusion will be assessed usingsimple indicators for gender control, asset ownership and decision-making, as well as poverty, using RHoMIS.
F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2019 contribution towards the selected MOG:** RHoMIS analyses combined with citizen science results in a number of areas. **Brief`2019 plan of the gender and social inclusion dimension of the expected annual output:** Trafe-offs between gender/social inclusion and other indicators will be assessed with RHoMIS.

Major Output groups - 2016

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: In 2016 we will launch ClimMob.net, a two-sided platform for crowdsourcing climate-smart agriculture.

Brief summary of your actual 2016 contribution towards the selected MOG: We have launched the platform.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: Data collection is gender-disaggregated by default. New features and support materials are tested for gender and social inclusion. For 2016, this includes a pilot with interactive voice response as to collect data from participants in the trials.

Summary of the gender and social inclusion dimension of the 2016 outputs: We have not been able to pilot IVR beyond prototyping exercises. Piloting is our next step.

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: - Crop varieties and other options identified according to performance in farmers' fields and preferences of rural households - Analysis of possibilities of ex ante assessment of technology needs and preferences of rural households

Brief summary of your actual 2016 contribution towards the selected MOG: A large number of varieties have been identified that have superior performance in terms of stress tolerance. We are well underway in integrating the Rural Household Multiple Indicator Survey as a tool into our research cycle to assess ex ante technology needs. We are piloting this in East Africa.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: For both points gender is taken into account through gender-disaggregated data collection and data collection about gendered control of assets and income streams.

Summary of the gender and social inclusion dimension of the 2016 outputs: We have collected household data for over 1000 households in East Africa and Central America and we are planning to do the same in India. This is part of the RHoMIS tool mentioned above.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: In 2016, we will have intermediate data to assess these tradeoffs using RHoMIS results.

Brief summary of your actual 2016 contribution towards the selected MOG: We have collected the RHoMIS data mentioned and we have done some trade-off analysis and positive deviant analysis. This will be published over the next 1-2 years.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: RHoMIS indicators will be used to analyze tradeoffs between gender/social inclusion and other goals.

Summary of the gender and social inclusion dimension of the 2016 outputs: We have collected the data and are now analyzing them.

Major Output groups - 2015

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: In 2015, ClimMob 2.0 has been made available.

Brief summary of your actual 2015 contribution towards the selected MOG: ClimMob 2.0, an online platform for CSA citizen science, is now available online (www.climmob.net). It will be launched for the large public in April 2016.

Brief`2015 plan of the gender and social inclusion dimension of the expected annual output: Data collection is gender-disaggregated by default. New features and support materials are tested for gender and social inclusion. For 2016, this includes a pilot with interactive voice response as to collect data from participants in the trials.

Summary of the gender and social inclusion dimension of the 2015 outputs: We have done data collection in a gender-disaggregated way. We have devoted much attention to write a manual in gender-inclusive language, emphasizing the importance of participation by both women and men.

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: -

Brief summary of your actual 2015 contribution towards the selected MOG: We have started the testing of a large set of beans, including drought-tolerant, locally adapted varieties. Results will be available in 2016.

Brief`2015 plan of the gender and social inclusion dimension of the expected annual output: -

Summary of the gender and social inclusion dimension of the 2015 outputs: We have done data collection in a gender-disaggregated way. A refined gender analysis will become available in 2016.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: -

Brief summary of your actual 2015 contribution towards the selected MOG: We have collected extensive data using the RHoMIS format, which will facilitate this analysis.

Brief`2015 plan of the gender and social inclusion dimension of the expected annual output: -

Summary of the gender and social inclusion dimension of the 2015 outputs: Rural Household Multiple Indicator Survey (RHoMIS) data are collected in a gender-disaggregated way and include an indicator on gender-specific control of livelihood activities / income streams.

Major Output groups - 2014

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief`2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief`2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief`2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D2913 - Farmer experimentation for climate adaptation with triadic comparisons of technologies (tricot): a methodological guide

Main Information

Type: Training materials

Subtype: Guidebook/Handbook/Good Practice Note

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Collection of sex-disaggregated data
- Diagnostics/analysis to understand gender issues
- Development of innovations/ interventions/ policies with explicit gender targeting
- Analysis of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: https://cgspace.cgiar.org/handle/10568/78782

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Farmer experimentation for climate adaptation with triadic comparisons of technologies (tricot): a methodological guide

Description / Abstract: Triadic Comparisons of Technologies (tricot), is a new approach to test crop varieties and other technologies on-farm, under realistic conditions. Through simple and hands-on experimentation, the participating farmers identify innovations that will be of real benefit to them. Tricot is a ready-made methodology, serving both research, and the dissemination of varieties and other technologies and practices in highly variable areas. Through geographically distributed testing, tricot is able to provide information about geographic patterns in climate adaptation and help to speed up the identification of locally suitable technologies to respond to climate change. It provides a means to linktechnology development of research institutes to real-life experiences of farmers. It is supported by a digital platform that can be found at www.climmob.net. This publication provides a description of the methodology with guidelines for its implementation in the field.

Publication / Creation date: 2017-01-01

Language: en

Country: Costa Rica
Keywords: CLIMATE CHANGE,FARMERS,ADAPTATION,INNOVATION,EXPERIMENTATION
Citation: Steinke, J.; van Etten, J. (2016) Farmer experimentation for climate adaptation with triadic comparisons of technologies (tricot): a methodological guide. 40 p.
Handle: http://hdl.handle.net/10568/78782
DOI: <Not Defined>
Creator / Authors:
- Steinke, - J.<orcid.org/0000-0001-5742-702X>
- van Etten - Jacob<orcid.org/0000-0001-7554-2558>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	van Etten, Jacob <j.vanetten@cgiar.org>	Responsible

D435 - Crowdsourcing training in Ethiopia

Main Information

Type: Training materials

Subtype: Lecture/Training Course Material

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No
Open access: No
Open access restriction: <Not Defined>
License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>
Description / Abstract: <Not Defined>
Publication / Creation date: <Not Defined>
Language: <Not Defined>
Country: <Not Defined>
Keywords: <Not Defined>
Citation: <Not Defined>
Handle: <Not Defined>
DOI: <Not Defined>
Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Deliverable Data sharing

Deliverable files:
<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Fadda, Carlo <c.fadda@cgiar.org>	Responsible

D759 - Crowdsourcing training in East Africa

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: 2017

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: https://www.youtube.com/watch?v=Fk3Le-iG8Fc&list=PL-sGSYV1hj3Si7WjXeCuhMscuRlbY4n3n

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Tricot methodology and ClimMob
Description / Abstract: Series of 7 videos used for training professionals
Publication / Creation date: 2016-08-01
Language: English
Country: -
Keywords: tricot, crop trials, participation
Citation: -
Handle: -
DOI: -
Creator / Authors:

- Steinke - Jonathan<orcid.org/0000-0001-5742-702X>
- van Etten - Jacob<orcid.org/0000-0001-7554-2558>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Fadda, Carlo <c.fadda@cgiar.org>	Responsible

D90 - Learning on design of crowdsourcing experiments

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: 2017

Cross-cutting dimension:

- Gender

Gender level(s):

- Collection of sex-disaggregated data
- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: https://cgspace.cgiar.org/handle/10568/78570

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: First experiences with a novel farmer citizen science approach: crowdsourcing participatory variety selection through on-farm triadic comparisons of technologies (TRICOT)

Description / Abstract: Rapid climatic and socio-economic changes challenge current agricultural R&D capacity. The necessary quantum leap in knowledge generation should build on the innovation capacity of farmers themselves. A novel citizen science methodology, triadic comparisons of technologies or tricot, was implemented in pilot studies in India, East Africa, and Central America. The methodology involves distributing a pool of agricultural technologies in different combinations of three to individual farmers who observe these technologies under farm conditions and compare their performance. Since the combinations of three technologies overlap, statistical methods can piece together the overall performance ranking of the complete pool of technologies. The tricot approach affords wide scaling, as the distribution of trial packages and instruction sessions is relatively easy to execute, farmers do not need to be organized in collaborative groups, and feedback is easy to collect, even by phone. The tricot approach provides interpretable, meaningful results and was widely accepted by farmers. The methodology underwent improvement in data input formats. A number of methodological issues remain: integrating environmental analysis, capturing gender-specific differences, stimulating farmers' motivation, and supporting implementation with an integrated digital platform. Future studies should apply the tricot approach to a wider range of technologies, quantify its potential contribution to climate adaptation, and embed the approach in appropriate institutions and business models, empowering participants and democratizing science.

Publication / Creation date: 2016-12-01

Language: English
Country: -
Keywords: FARMERS; COMMUNITY INVOLVMENT; TECHNOLOGY; TECHNOLOGY ASSESSMENT; METHODOLOGY
Citation: Van Etten, J.; Beza, E.; Calderer, L.; Van Duijvebdijk, K.; Fadda, C.; Fantahun, B.; Kidane, Y.G.; Van de Gevel, J.; Gupta, A.; Mengistu, D.K.; Kiambi, D.; Mathur, P.N.; Mercado, L.; Mittra, S.; Mollel, M.J.; Rosas, J.C.; Steinke, J.; Suchini, J.G.; Zimmerer, K.S. (2016) First experiences with a novel farmer citizen science approach: crowdsourcing participatory variety selection through on-farm triadic comparisons of technologies (TRICOT). Experimental Agriculture, Online first paper (21DEC16). ISSN: 0014-4797
Handle: http://hdl.handle.net/10568/78570
DOI: https://dx.doi.org/10.1017/S0014479716000739
Creator / Authors:
● van Etten - Jacob<orcid.org/0000-0001-7554-2558>
● Beza - Eskender<orcid.org/0000-0002-4306-7956>
● van Duijvendijk - Kees
● Fadda - Carlo<orcid.org/0000-0003-3075-6207>
● Fantahun - Basazen
● Kidane - Yosef G.
● Van de Gevel - Jeske
● Gupta - Arnab
● Mengistu - Dejene<orcid.org/0000-0002-5771-6048>
● Kiambi - Dan
● Mathur - Prem Narain
● Mercado - Leida<orcid.org/0000-0003-2446-1656>
● Mittra - Sarika
● Mollel - Margaret J.
● Rosas - Juan Carlos
● Steinke - Jonathan<orcid.org/0000-0001-5742-702X>
● Suchini - José Gabriel
● Zimmerer - Karl S.<orcid.org/0000-0002-3616-4862>

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Experimental Agriculture
Indicators for journal articles: ● This journal article is an ISI publication
● This article have a co-author from a developing country National Agricultural Research System (NARS)
● This article have a co-author based in an Earth System Science-related academic department
Publication acknowledge: Yes
Flagships contribution: ● CCAFS - F2 (BEFORE F1 - ANDY)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	van Etten, Jacob <j.vanetten@cgiar.org>	Responsible

D2940 - High-density molecular characterization and association mapping in Ethiopian durum wheat landraces reveals high diversity and-potential-for-wheat-breeding

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: https://www.ncbi.nlm.nih.gov/pubmed/26853077

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: High-density molecular characterisation and association mapping in Ethiopian durum wheat landraces reveals high diversity and potential for wheat breeding
Description / Abstract: <Not Defined>
Publication / Creation date: 2016-12-01
Language: en
Country: ETHIOPIA
Keywords: TRITICUM DURUM,LAND RACES,PLANT BREEDING,GENOTYPES,QUANTITATIVE TRAIT LOCI
Citation: Mengistu, D.K.; Kidane, Y.G.; Catellani, M.; Frascaroli, E.; Fadda, C.; Pe, M.E.; Dell'Acqua, M.(2016) High-density molecular characterisation and association mapping in Ethiopian durum wheat landraces reveals high diversity and potential for wheat breeding.Plant Biotechnol J. 14(9):1800-12. doi: 10.1111/pbi.12538.
Handle: http://hdl.handle.net/10568/78100
DOI: 10.1111/pbi.12538
Creator / Authors:

- Mengistu, - D.K.
- Kidane, - Y.G.
- Catellani, - M.
- Frascaroli, - E.
- Fadda, - C.
- Pe, - M.E.

Publication Metadata

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Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Fadda, Carlo <c.fadda@cgiar.org>	Responsible

D2941 - Genetic diversity in Ethiopian Durum Wheat (Triticum turgidum var durum) inferred from phenotypic variations.

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

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Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No
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Deliverable Metadata

Disseminated title: Genetic diversity in Ethiopian Durum Wheat (Triticum turgidum var durum) inferred from phenotypic variations
Description / Abstract: The valorization of genetic diversities of major crops like wheat may help substantially to feed the world Population. Durum wheat genotypes consisting of 265 farmers' varieties (FVs), which have been cultivated for many centuries in Ethiopia, as well as 24 improved varieties (IMVs) have been recently evaluated in northern Ethiopia. The evaluation has been carried out at two different locations for 2 consecutive years to verify the inherited diversity in FVs for important phenological and agronomic traits; with the intention to provide refined information to breeders and genebank managers. As a result of a careful evaluation, a very significant variation was observed between the FVs and IMVs. A large number of the former have demonstrated superior performance to the latter in terms of mean values of the major traits within the stipulated years and locations. The best performing FV has shown a gain of 20% grain yield over the best IMV. Multivariate analyses revealed that FVs displayed larger genetic diversity than in those IMVs. FVs could therefore be used as donor of useful alleles in durum wheat breeding for improvement of yield per se and other traits of agronomic and phenological importance. The identified stable superior FVs include: 8208, 226834A, 238567, 222426, 226282 could be best candidates for farmers in marginal environments. Genotypes that have shown stable performance for spatial variation such as 204493A, 214357 and 238567; and temporal variation such as 8208, 208479, 214357 and 226834A could be the best candidates for exploitation in future breeding programs.
Publication / Creation date: 2016-12-01
Language: English
Country: Ethiopia
Keywords: germplasm characterization, plant breeding, phenotyping
Citation: Mengistu, D.K., Kidane, Y.G., Fadda, C. and Pè, M.E., 2016. Genetic diversity in Ethiopian

Durum Wheat (Triticum turgidum var durum) inferred from phenotypic variations. Plant Genetic Resources, pp.1-11.
Handle: <Not Defined>
DOI: https://doi.org/10.1017/S1479262116000393
Creator / Authors:
- Mengistu - D.K
- Fadda - Carlo<orcid.org/0000-0003-3075-6207>
- Kidane - Y.G.
- Pe' - Mario Enrico<orcid.org/0000-0001-6197-2282>

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Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Fadda, Carlo <c.fadda@cgiar.org>	Responsible

5.3 Project Highlights

No project highlights added

6. Activities

A58 - Citizen science platform: methodology, training materials, capacity building, and sustainability plan

Description: The activity exists of the following components: - Improvement of tools to create citizen science experiments based on farmer ranking of CSA options. We will improve an existing tool, ClimMob, a user-friendly tool to design experiments and analyzed the results. - Creation of training materials to make it easy to adopt the methodology in NARS, universities, etc. These training materials form the basis for courses to be taught online or in blended formats. - Capacity building to involve a large number of professionals and train them to use the methodology. We will teach the methodology to NARS researchers, university professors / researchers, and NGO technical personnel. - Procure the incorporation of the approach into major initiatives through active engagement. - Creating a consortium to maintain a platform to exchange experiences and coordinate continued training efforts and maintain software

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: BIOVERSITY - Bioversity International van Etten, Jacob <j.vanetten@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: In 2016, we have launched version 2 of ClimMob.net and started working on version 3. We have published a large amount of training materials (videos and manuals in two languages). Also, we have documented the approach in a peer-reviewed article in Experimental Agriculture. We have taught a large number of courses around the world. This has been documented in an Outcome Case Study.

Deliverables in this activity:

- D293: Learning on design of crowdsourcing experiments -- outscaling model
- D72: ClimMob 2.0 - tool to design and analyze citizen science trials (triadic ranking)
- D2153: Draft article with quantitative research findings
- D298: Establishment of global or regional consortium/platform for Citizen Science for CSA
- D312: Data collection app
- D313: Database for CSA Citizen Science data using appropriate data standards
- D288: Training course in Citizen Science for CSA

A59 - Implementation in Central America

Description: In this activity, we will implement the approach in Central America, create policy evidence about its effectiveness and engage extension services to adopt the approach. To create policy evidence the project will use a randomized control trial design and focus on the MAPNoruega areas of CATIE, which include the CCAFS sites for Central America. Also, we will engage with ministries of agriculture and NARS to have the approach adopted in existing extension systems.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: BIOVERSITY - Bioversity International van Etten, Jacob <j.vanetten@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: This activity is being implemented according to plan. An MSc thesis has been written on the baseline data of the RCT. We have completed several rounds of crowdsourced testing of bean varieties. Several more studies are ongoing.

Deliverables in this activity:

- D73: Crowdsourcing capacity building Central America

A66 - Implementation in East Africa

Description: Building on previous efforts under CCAFS to identify new technologies for adaptation to climate change in Ethiopia and Kenya, this activity will move to the next level in order to upscale the technologies identified as useful for increasing resilience and in support of climate change by incorporating a citizen science approach and adapting it to the local context. In East Africa we will use the citizen science approach to further disseminate the material that has been already identified. We will liaise with other organizations, including research organizations and NGO's and we will train them in further use of the technology.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: BIOVERSITY - Bioversity International Fadda, Carlo <c.fadda@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: Our progress in Ethiopia has been documented in an Outcome Case Study. Considerable progress was made on scaling the approach, gaining high-level government support in Ethiopia. We acquired two new projects in this region (funded by DfID and McKnight Foundation respectively) which will support further enhancement and scaling.

Deliverables in this activity:

- D435: Crowdsourcing training in Ethiopia

A68 - Implementation in South Asia

Description: This activity is closely aligned with the GEF project and other bilateral projects in the pipeline for India. In these projects, a Citizen Science approach will be used, training a large number of scientists and extensionists (>1000) in using the methods. We will carefully evaluate the practical aspects of implementing the approach in a range of contrasting environments across India, documenting lessons and adapting the approach based on these lessons. Through broad engagement with ICAR institutes, state universities and NGOs, we will create the capacity to implement Citizen Science approaches in India. Through policy engagement, we will attempt to create acceptance for these methods as scientifically sound and socially valid methods in the Indian context and support for the use of these methods in agricultural science and extension.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: BIOVERSITY - Bioversity International Kumar, Nallur <k.kumar@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: Much progress has been made, as the crowdsourcing work now passed the 45,000 farmer milestone in India. This has been documented in an Outcome Case Study. Also, the range of crops has increased much, now including legumes and vegetables. The GEF project mentioned in the description is coming online somewhat later than planned. We have held a workshop to explore the creation of a clear "business model" for our work in India. This should give clear guidance for the next phase of this work, which should anchor the approach much more solidly in government institutions, NGOs and businesses. This is the major challenge for the coming period.

Deliverables in this activity:

- D2154: Business model for CSA citizen science / Seeds for Needs in India

7. Leverages

No leverages added

Title: Global policy support for biologically diverse, climate resilient agriculture

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2013	Dec 2018	F1	Thornton, Philip <p.thornton@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral, W3	On-going	BIOVERSITY - Bioversity International - Italy	Halewood, Michael <m.halewood@cgiar.org>

Project is working on

Flaship(s)
F1 (before F4 - Philip): Priorities and Policies for CSA

Region(s)
Global

Project summary

The project will support implementation of international laws affecting the availability and use of genetic resources for Climate-Smart Agriculture. The project will make contributions to meetings of the Governing Body of the ITPGRFA, the CGRFA, and to the COP/CBD, and the Nagoya Protocol, and to intergovernmental and expert working groups created by those bodies to undertake intercessional work/negotiations. The project will also support implementation of those agreements in national and subnational contexts. Special emphasis will be given to i) the ITPGRFA's multilateral system of access and benefit-sharing which constitutes the global pool of plant genetic resources from the CGIAR, 134 countries and other organizations ii) creating and supporting community seed banks to conserve and use crop diversity for climate change adaption, also as part of ITPGRFA implementation.

2. Partners

Partner #1 (Leader)

Institution: BIOVERSITY - Bioversity International

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Halewood, Michael <m.halewood@cgiar.org>	Activity 2014-46 *Leader*. Activity 2014-47 *Leader*. Activity 2014-140 *Leader*. Activity 2014-143 *Leader*. Activity 2014-144 *Leader*.	HQ

Partner #2

Institution: ONS - Oficina Nacional de Semillas

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Quiros Ortega, Walter Paulo <wquiros@ofinase.go.cr>	Activity 2014-46 *Partner*.	HQ

Partner #3

Institution: MAGA - Ministerio de Agricultura, Ganadería y Alimentación

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ajquejay, Samuel <sammyajquejay@gmail.com>	Activity 2014-46 *Partner*.	HQ

Partner #4

Institution: IICA - Instituto Interamericano de Cooperacion para la Agricultura

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Villalobos, Victor M. <iicahq@iica.ac.cr>	Activity 2014-46 *Partner*.	HQ

Partner #5

Institution: CATIE - Centro Agronómico Tropical de Investigación y Enseñanza

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Solano Sánchez, William <wsolano@catie.ac.cr>	Activity 2014-46 *Partner*. Activity 2014-47 *Partner*.	HQ

Partner #6

Institution: MAG - Ministerio de Agricultura

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Elizondo Porras, Flor Ivette <fielizondo@gmail.com>	Activity 2014-46 *Partner*.	HQ

Partner #7

Institution: IICA-Guatemala - Instituto Interamericano de Cooperacion para la Agricultura (Guatemala)

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Andrews, Dr. Keith Leslie <keith.andrews@iica.int>	Activity 2014-46 *Partner*.	HQ

Partner #8

Institution: CATIE Guatemala - Centro Agronómico Tropical de Investigación y Enseñanza

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Say Chavez, Eduardo Rolando <esay@catie.ac.cr>	Activity 2014-46 *Partner*.	Guatemala city, Guatemala

Partner #9

Institution: CBD - Convention on Biological Diversity

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Garforth, Kathryn <kathryn.garforth@cbd.int>	Activity 2014-47 *Partner*.	HQ

Partner #10

Institution: ITPGRFA - International Treaty on Plant Genetic Resources for Food and Agriculture (governing body)

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Bhatti, Shakeel <shakeel.bhatti@fao.org>	Activity 2014-47 *Partner*.	HQ

Partner #11

Institution: FAO - Food and Agriculture Organization of the United Nations

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Colette, Linda <linda.colette@fao.org>	Activity 2014-47 *Partner*.	HQ

Partner #12

Institution: CGIAR Consortium Office-France

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ellul, Philippe <p.ellul@cgiar.org>	Activity 2014-47 *Partner*.	HQ

Partner #13

Institution: COMESA - Common Market for Eastern and Southern Africa

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mukuka, John <jomukuka@comesa.int>	Activity 2014-47 *Partner*. Activity 2014-143 *Partner*.	HQ

Partner #14

Institution: EAC - East African Community

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Wafula, David <dwafula@eachq.org>	Activity 2014-47 *Partner*. Activity 2014-143 *Partner*.	HQ

Partner #15

Institution: LI-BIRD - Local Initiatives for Biodiversity, Research and Development

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Chaudhary, Pashupati <pchaudhary@libird.org>	Activity 2014-47 *Partner*.	HQ

Partner #16

Institution: GIZ - Deutsche Gesellschaft for Internationale Zusammenarbeit

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Drews, Andreas <andreas.drews@giz.de>	Activity 2014-47 *Partner*.	New Delhi, India

Partner #17

Institution: AU - African Union

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Teshome Kebede, Mahlet <MahletK@africa-union.org>	Activity 2014-47 *Partner*. Activity 2014-143 *Partner*. Activity 2014-144 *Partner*.	HQ

Partner #18

Institution: NARC - Nepal Agricultural Research Council

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Raj Bhatta, Madan <madan_bhatta86@yahoo.com>	Activity 2014-140 *Partner*.	HQ

Partner #19

Institution: National Biodiversity Centre, Ministry of Agriculture-Bhutan

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Yangzome Dorji, Tashi <yangzome2011@gmail.com>	Activity 2014-140 *Partner*.	HQ

Partner #20

Institution: RAB - Rwanda Agriculture Board

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Nyirigira, Antoine <a_nyirigira@yahoo.fr>	Activity 2014-143 *Partner*.	HQ

Partner #21

Institution: NARL - National Agricultural Research Laboratories

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mulumba Wasswa, John <curator@infocom.co.ug>	Activity 2014-143 *Partner*.	HQ

Partner #22

Institution: CNRA - Centre national de recherche agronomique

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Kouablan Koffi, Edmond <kofiedmond@yahoo.fr>	Activity 2014-144 *Partner*.	HQ

Partner #23

Institution: SP/CONAGREP - Secretariat Permanent Commission Nationale de Gestion des Ressources Phytogénétiques

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Balma, Didier <balma_didier@yahoo.fr>	Activity 2014-144 *Partner*.	HQ

Partner #24

Institution: SAGE - Service d'Appui à la Gestion de l'Environnement

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Rakotoniaina, Naritiana <naritiana.sage@blueline.mg>	The Madagascar national CBD/ABS focal point is a staff member at SAGE. As such, SAGE will be one of the two organisations co-chairing the Madagascar national project steering committee. (The other co-chairing organisation is the Ministry of Agriculture.) SAGE will ensure inclusivity of stakeholder representatives in the national steering committee. It will also jointly oversee all project activities, identify partners, approve budgets, monitor activities and co-submit progress reports.	HQ

Partner #25

Institution: MinAgri - Ministry of Agriculture Madagascar

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Andriamahazo, Michelle <michelle.andriamahazo@gmail.com>	Responsibilities: As the ITPGRFA National Focal Point is located in the Environmental Service of the Ministry of Agriculture, the Ministry will be one of the two organisations co-chairing the Madagascar national project steering committee. (The other co-chairing organisation is SAGE). As such, the Ministry of Agriculture will ensure inclusivity of stakeholder representatives in the national steering committee. It will jointly oversee all project activities, identify partners, approve budgets, monitor activities and co-submit progress reports.	HQ

Partner #26

Institution: Cesaren - ONG Cercle de Sauvegarde des Ressources Naturelles

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Bossou, Bienvenu <cesarenong@yahoo.fr>	The Benin CBD/NP National Focal Point has appointed CeSaReN as its agent for the purposes of this project (and several other functions in the country). CeSaReN will be one of two organisations responsible for co-chairing the Benin national project steering committee. (together with INRAB). CeSaReN will ensure inclusivity of stakeholder representatives in the national steering committee. It will jointly oversee all project activities, identify partners, approve budgets, monitor activities and co-submit progress reports. CeSaReN	HQ

Partner #27

Institution: INRAB - Institut National de Recherche Agricole du Benin

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Mikpon, Toussaint <owoyori@yahoo.fr>	The Benin ITPGRFA National Focal Point is located in the Institut National des Recherches Agricoles (INRAB). Consequently, the Institute will be one of the two organisations co-chairing the Benin national project steering committee (the other organisation is CeSeReN, as appointed agent for the National CBD/NP Focal Point).	HQ

Partner #28

Institution: DAFF - Department of Agriculture, Forestry and Fisheries

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Tjikana, Thabo <thabotj@daff.gov.za>	Curator of the national gene bank of South Africa and Bioversity International co-coordinator of the research on community seed banks in South Africa	HQ

Partner #29

Institution: ASU - Arizona State University

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Welch, Eric <EricWelch@asu.edu>	The Arizona State University (ASU) has considerable expertise in policy network analysis, and an interest in expanding the focus of their work beyond the USA, and in the field of genetic resources. Eric Welch, in particular, supported Bioversity and national partners to design and conduct policy network research and to analyse data and develop research papers.	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	In Benin and Madagascar, we will need to increase our support to our partners in 2017 to engage local level partners in policy development activities, building their capacity to do so. The AU Commission gave our work less attention when funds were no longer available, and we were less available to provide hands-on assistance. We will need to redouble our efforts and support for them in 2017.

Partnerships overall over the last reporting period:

National lead partners from Madagascar and Benin have been very good at coordinating activities with other government departments, research organizations, universities. They have encountered challenges moving project activities forward at community levels, given the low levels of community level infrastructure or weak links between the communities and national agricultural researchers and extension. We have benefited a lot from partnership with ABS Capacity Development Initiative given the strength of their networks with boundary partners in both countries. Partnereship with secretariats of ITPGRFA and CBD is also very valuable in terms of creating linkages to intergovernmental policy processes.

3. Locations

This project is global

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:
Global and regional intergovernmental bodies will develop international policies, laws, guidelines, practical mechanisms to promote increased availability and use of biological diversity for climate change adaptation and risk management. National governments will implement those policies and laws.

Annual progress towards outcome (end of 2016*): The WG-EFMLS created by the ITPGRFA Governing Body will recommend changes to the MLS that will increase the diversity included in the global PGR pool created by the Treaty and also increase the amount of funds that are available through the benefit sharing fund to support climate-smart agriculture. The African Union and the Tri-partite COMESA-EAC-SADC and IICA will consider options for a regional policies to facilitate exchange of genetic diversity for climate change adaption.

Annual progress towards project outcome in the current reporting cycle (2016*): The WG-EFMLS continued negotiations in 2016. To assist negotiations, the WG created 3 Friends-of-the-Chairs (FoCC) groups to deliberate on key issues, and report back to the WG on their progress. A Bioversity/CCAFS scientist was requested to lead one of these three groups, over the course of X months from 2016 to March 2017. The first report back was to the 5 meeting of the WG in [month] 2016; the second was submitted in January 2017. Bioversity/CCAFS scientists also played a lead role in developing written submissions from the CGIAR to the Chairs of the WG concerning proposed amendments to the SMTA used for transfers that would have created enormous (potentially insuperable) transaction costs for the CG centres distributing genetic resources. Those scientist have since worked with/pressured the PlantTreaty Secretariat to include the CGIAR suggestions in the text that will serve as basis of future negotiations. The WG meets next March 2017; negotiations will continue throughout the Governing Body meeting in October 2017. It is possible, but unlikely, that negotiations will conclude and a new system is adopted at that time. If not, the process will be extended another year. The Tri-partite COMESA-EAC-SADC program was unexpectedly discontinued in 2016 thereby terminating our efforts to work with them. We continued to liaise with the AU re regional policy. Due to delays in confirmation of DGIS bilaterally funded project, we could not provide financial support to AU partners in 2016, with resultant slow down in progress. Nonetheless we plan to continue working with them in 2017. Work in South Africa on community seed banks is progressing as planned with expected outcomes in 2017/18. Likewise, work in Benin & Madagascar is on track to yield policy outcomes in 2017/18.

How communication and engagement activities have contributed to achieving your Project outcomes:* Our engagement activities with respect to the re-negotiations of the multilateral system under the Plant Treaty have been very focused on the relatively small, regionally balanced, group of negotiators, mostly through targeted written technical submissions, and face-to-face expert and negotiating meetings. Early signs in 2017 are that our 2016 efforts were largely successful as reflected in the substantial inclusion of our submissions into the text that will be the basis of negotiations in 2017.

Evidence documents of progress towards outcomes:* <Not Defined>

Annual progress towards outcome (end of 2015): 8 countries will adopt policies to facilitate participation in a globally coordinated system of PGRFA pooling, sharing under the ITPGRFA for use in climate change adaptation research and development. .The CGRFA will adopts guidelines for countries to follow to integrate increased use of genetic resources in NAPs. The African Union will start to provide technical assistance to African member states to implement the ITPGRFA in harmony with the CBD/NP focusing on climate change adoption capacity strengthening.

Annual progress towards outcome (end of 2017): African Union and IICA adopts policy on facilitating access and benefit sharing for climate change adaptation. Reviews of lessons learned from national implementation experiences in previous 8 countries.

Annual progress towards outcome (end of 2018): Eight additional countries will adopt policies for the joint implementation of the ITPGRFA/MLS and the CBD/NP to increase their climate adaptation capacity. The Conference of the Parties to the CBD/NP COP endorses program of work focusing on access and using biological diversity for climate change subject to benefit sharing arrangments. UNFCCC COP acknowledges the importance of facilitated access to genetic resources for climate change responsiveness. Increased financial support from the ITPGRFA Benefit Sharing Fund for projects promoting CSA.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* We have been experiencing considerable difficulties in communications with the Tri-partite COMESA-EAC-SADC program when we learned that the program was being terminated. So this potentially interesting avenue for scaling up our climate change policy work is now foreclosed. Lack of bilateral funds also impacted on our ability to support our strategic partnership with the AU Commission. We hope that we will be able to provide them with support in 2017. Neither of these organizations seems to have energy or expertise to take the issues forward without external funding and substantial technical support. We understood that from the beginning, but perhaps not the full extent of the situation. 2016 has reinforced our conviction that sectoral boundaries between environment and agriculture are constraining the development of practical programs and supportive policies to use biological diversity for climate change adaptation.

4.2 CCAFS Outcomes

F1 (before F4 - Philip) Outcome 2019: National/sub-national jurisdictions enact equitable food system policies and increase institutional investment that take into consideration climate smart practices/strategies, better articulated among themselves and in collaboration with private sector, civil society and researchers informed by CCAFS decision support tools

Indicator #1: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

2019
Target value: 6
Cumulative target to date: 11
Target narrative: Three countries will adopt two policy measures to implement the ITPGRFA/MLS in harmony with the CBD/Nagoya Protocol from the following list: Ministerial decrees confirming national crop diversity included in multilateral system of access and benefit sharing under the ITPGRFA; New/revised national decrees/regulations/legislation on access and benefit sharing under the CBD/Nagoya Protocol to make space of the operation of the ITPGRFA; New/revised national decrees/regulations/legislation empowering actors to share materials under the ITPGRFA; National multi-stakeholder platforms established for coordinated ABS policy development and capacity building; Guidelines issued by competent authorities on how to operate the ITPGRFA and NP for climate change adaptation.
The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2015
Target value: 4
Cumulative target to date: 4
Target narrative: <Not Defined>
The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016
Target value: 1
Cumulative target to date: 5
Target achieved: 1.0
Target narrative: Adopt policy to create community seed banks as part of sustainable use and climate change adaptation strategy
Narrative for your achieved targets, including evidence: The government of South Africa is currently revising/updating a number of agriculture related policies. It is expected that the role of community seed banks in climate change adaptation will be recognized in the revisions/updates. The results of the pilot phase of establishing and supporting community seed banks in the country have been documented and disseminated in the form of a book chapter, a journal article and a number of reports and briefs published by the Department of Agriclture, Forestry and Fisheries and Bioversity International.
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: The key role of women as seed custodians and active members of community seed banks was recognized, documented and highlighted in a number of research outputs published in 2016. Gender analysis was integrated in the various modules of the community seed banks facilitator's manual currently being developed.
The expected annual gender and social inclusion contribution to this CCAFS outcome: N/A

2017
Target value: 0
Cumulative target to date: 5
Target narrative: <Not Defined>
The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

Major Output groups:

- F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

F1 (before F4 - Philip) Outcome 2019: Appropriately directed institutional investment of regional/global organisations and processes (e.g. IFAD, WB, FAO, UNFCCC) based on national/regional engagement to learn about local climate smart food system priorities

Indicator #1: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

2019

Target value: 3

Cumulative target to date: 5

Target narrative: Revision of the terms and conditions of the multilateral system of access and benefit sharing created by ITPGRFA to enhance the amount of genetic diversity and information that is included in the common pool and available for climate smart research and development, and the quantum of financial resources that are directed by users to the international benefit sharing fund. International funding sources directed to support climate smart agricultural practices linked to development and exploitation of ABS policy CBD/NP COP endorses program of work focussing on mainstreaming biological diversity into sustainable, climate smart, agriculture

The expected annual gender and social inclusion contribution to this CCAFS outcome: -

2015

Target value: 1

Cumulative target to date: 1

Target narrative: CGRFA adopts guidelines for countries to follow to integrate increased use of genetic resources in NAPs.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 1

Cumulative target to date: 2

Target achieved: 0.0

Target narrative: The tripartite COMESA-EAC-SADC climate change program endorses a strategy for facilitated exchanges of crop and tree genetic diversity

Narrative for your achieved targets, including evidence: The tripartite COMESA-EAC-SADC climate change program was unexpectedly discontinued.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: N/A due to discontinuation of the program.

The expected annual gender and social inclusion contribution to this CCAFS outcome: -

2017
Target value: 0
Cumulative target to date: 2
Target narrative: <Not Defined>
The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

Major Output groups:

- F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:
Activity 2014-46: This links to existing activities in flagship 1 related to participatory evaluation of crop diversity sourced from genebanks, farmers, breeders, companies in South Asia, South east Asia, East Africa, LAM

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

Case Study #66

Title: Co-Chairs of international negotiations reflect CCAFS science in negotiating text (emerging outcome)

Year: 2016

Project(s): P66

Outcome Statement: The Co-Chairs of an ongoing international negotiation of the multilateral system of access and benefit-sharing under the Plant Treaty introduced content into the text that will be used as the basis of negotiations in 217 based on submissions from CCAFS in 2016

Research Outputs: Reports from the Friends of the Co-Chairs Group on a Termination Clause Comments from the CGIAR regarding the Treaty Secretariats Proposed Technical Amendments to the SMTA

Research Partners: Article 15 Executive, Consortium Office, CLIPNet

Activities: CCAFS scientists participated in the ongoing negotiations since 2015, working closely with representatives of the CO/SMO), the Article 15 group of CGIAR genebank manager and the CGIAR Legal and Intellectual Property Network (CLIPNet). Over that time, they made many technical contributions, including (in earlier years) a research paper on global movements of germplasm and (in 2016) short technical papers on key negotiation issues. In addition to submitting the papers, the CCAFS scientists arranged for meetings with each of the the regional groups during the negotiating session in July 2016 in Geneva to share our views, and followed-up activity with the Plant Treaty Secretariat and Co-Chairs from July to December 2016. Furthermore on CCAFS Scientist was asked to faciliate a Friends of Co-Chairs (FoCC) group of experts to focus on one particlar issue. He wrote and submitted reports to the WG-EFMLS based on the FoCC Group's deliberations.

Non-Research Partneres: Director General of CGIAR Centres who approved 'Comments from the CGIAR' report. Individual experts who served as members of FoCC group facilitated by CCAFS scientist.

Output Users: The outputs have been used by the Treaty Secretariat, the Co-Chairs of the WG-EFMLS, and the delegates from 7 UN regions plus observers that constitute the WG-EFMLS.

Evidence Outcome: The revised negotiating text of the standard material transfer agreement included on the Plant Treaty website, and explanatory notes that will be posted in March 2017. We will interview the Treaty Secretary and the Co-Chairs of the WG-EFMLS when the negotiations are finished and the outcome is (hopefully) fully realized.

Output Used: The outputs were submitted to the WG-EFMLS, Co-Chairs and Treaty Secretariat. CCAFS scientists follow up explaining why the suggesed revisions are critically important for the future functioning of the MLS. They will be cited by the Co-chairs to justify the relevant revised sections of the text.

References Case: none at this stage of emerging outcome

Primary 2019 outcome indicator(s):
● # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Link between outcome story and and the FP Outcome(s): <Not Defined>

Annex uploaded:

Case Study #99

Title: Draft laws developed and subject to national consultations in Madagascar and Benin (emerging outcome)

Year: 2016

Project(s): P66

Outcome Statement: In Benin and Madagascar, national teams, which included competent national authorities for the implementation of the ITPGRFA and the Nagoya Protocol, drafted laws for national implementation of both instruments. Their work was based on CCAFS' science: 1) demonstrating how to identify and access potentially adapted genetic materials of local food security crops negatively affected by climate change using the ITPGRFA and 2) analyzing options for national and community level implementation of the ITPGRFA and Nagoya Protocol.

Research Outputs: Baseline studies for each country that include information about the state of biological diversity conservation and potential interventions to safeguard threatened diversity; past genetic resources collecting and ABS agreements; existing laws and policies affecting ABS; areas where high levels of biodiversity coincide with high levels of rural poverty; and areas under stress where introduction of genetic diversity from elsewhere could address communities' vulnerabilities. Two policy briefs related to policy options and processes that need to be followed to put systems in place in each country. A white Paper outlining the plan for developing necessary policy instruments to implement both agreements in both countries. Draft laws to implement both agreements in both countries (a unified single law in Benin; two separate laws in Madagascar). A Website containing information about the different workshops, trainings and other events conducted throughout the implementation of the project.

Research Partners: The ABS Capacity Development Initiative, and the two lead agencies in both countries (Service d'Appui à la Gestion de l'Environnement (SAGE) and the Ministry of Agriculture (MinAgri) in Madagascar, and the CRASud/INRAB/Ministry of Agriculture and the ONG Cercle de Sauvegarde des Ressources Naturelles, in Benin).

Activities: Participatory workshops in the four case study communities, involving representatives from national agricultural research organizations and the National Focal Points of the ITPGRFA and Nagoya Protocol to document the impacts of climate change on local crops and options for locating potentially adapted materials in national and international collections. Participatory workshops for the communities concerning awareness raising about the two agreements and options for developing community biodiversity registries and ABS protocols. National level awareness-raising workshops in both countries to boost awareness about the utility of the ITPGRFA and Nagoya Protocol to adapt to climate change, promote community rights, technology transfer, information sharing and capacity building. National partners received technical support from the ABS Capacity Initiative and Bioversity for developing the White paper. The ABS Capacity Initiative, Bioversity, FAO Legal Department and the ITPGRFA Secretariat reviewed and commented drafts of national laws. Local and national level consultation meetings regarding draft laws developed.

Non-Research Partneres: The secretariats of the CBD and of the ITPGRFA, African Union Commission, Natural Justice.

Output Users: Participants in the national consultations including ministry representatives, NAROs, farmers, CSOs, municipal governments, tribal leaders, women's groups. National legal experts, who developed the draft laws and who were given technical support during the development of the interim measures. Competent authorities in both countries who organized subsequent consultation meetings.

Evidence Outcome: Draft laws. Reports documenting the awareness raising workshops and the minutes of the consultation meetings. Revised draft laws. We hope the laws will be approved by 2018. We will have an external review of the project in 2018-19; we can ask the external reviewers to write a piece for publication.

Output Used: The information gathered and documents developed were used in the awareness raising workshops and during the consultation workshops on the draft laws. The baseline studies and workshops allowed developing the roadmap, which in turn facilitated the development of the draft laws. These were subject of consultations and revised by experts.

References Case: Baseline study Benin: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Baseline_study_year1_Benin.pdf Baseline study Madagascar: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Baseline_study_year1_Madagascar.pdf Policy Brief Benin: http://hdl.handle.net/10568/75771 Policy Brief Madagascar: http://hdl.handle.net/10568/75772 White paper in English: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Roadmap_EN.pdf White paper in French: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Roadmap_FR.pdf Project Website: http://bit.ly/DarwinInitiative

Primary 2019 outcome indicator(s):

- # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

Link between outcome story and and the FP Outcome(s): As this is an emerging outcome, we don't yet have an outcome case study

Annex uploaded:

Case Study #127

Title: Community seed banks begin to contribute to climate change adaptation in South Africa (emerging outcome)

Year: 2016

Project(s): P66

Outcome Statement: The government of South Africa recognizes and supports the multiple roles of community seed banks South Africa's Department of Agriculture, Forestry and Fisheries (DAFF), with technical support from Bioversity International, has initiated the implementation of a national strategy to establish and support community seed banks that revive and improve their traditional seed saving practices and contribute to food security and adaptation to climate change. DAFF is using the achievements of the pilot phase to contribute to new agricultural policy development.

Research Outputs: Vernooy, R.; Sthapit, B.; Tjikana, T.; Dibiloane, A.; Maluleke, N.; Moila, P.; Phora, G. (2016) Mobilizing diversity: establishment of the first two community seedbanks in South Africa's smallholder farming areas. Bioversity International; DAFF, Pretoria. , T.; Malueke, N.; Mokoena, M.; Vernooy, R.; Sthapit, B. (2016) Community seed banks: farmers' platform for crop conservation and improvement. GRAAN/GRAIN SA Gómez César, M.; Sthapit, B.; Vernooy, R. (2016) Safeguarding local crop knowledge: the use of community biodiversity registers. Rome (Italy): Bioversity International; South Africa: DAFF Tjikana, T.; Dibiloane, A.; Maluleke, N.; Moila, P.; Phora, G.; Sthapit, B.; Vernooy, R. (2016) Sharing diversity: establishing and supporting community seedbanks in South Africa (pilot phase 2013-2015). Bioversity International; South Africa: DAFF

Research Partners: Department of Agriculture, Forestry and Fisheries, South Africa

Activities: Between 2013 and 2015 a methodological process of participatory research and learning by doing capacity development was followed leading to the establishment of two pilot community seed banks in two farmer smallholder areas was started: Gumbu village in Mutale municipality in Limpopo province and Sterkspruit town of Joe Ngcabi municipality in Eastern Cape province. Steps included an in-depth community assessment of trends in agricultural biodiversity conservation and use, analysis of the existing household and community practices of seed saving and storage and identification of their strengths, weaknesses and opportunities for improvement, discussions with and capacity development of farmers about how to organize an effective and sustainable community seedbank, celebration of local crop diversity through the organization of a seed and food fair, capacity development of DAFF and agricultural extension staff, regular participatory monitoring and feedback activities, and the production and dissemination of outputs.

Non-Research Partneres: Agricultural extension bureaus in Eastern Cape and Limpopo

Output Users: Direct users include the various directorates of the Department of Agriculture, Forestry and Fisheries and the National Plant Genetic Resources Centre (NPGRC, housing the national gene bank), South Africa, and agricultural extension bureaus in Eastern Cape and Limpopo. Other users are university staff and non-government organizations in the country.

Evidence Outcome: DAFF staff inputs have been considered by relevant policy committees in charge of drafting new policies. Actual documents are not yet available for the public at large. The National Plan for Conservation and Sustainable Use for Plant Genetic Resources for Food and Agriculture is not yet published and publicly available.

Output Used: Outputs were used by staff of the Department of Agriculture, Forestry and Fisheries to generate lessons learned from the pilot phase and contribute to new agricultural policy development in the country.

References Case: See above.

Primary 2019 outcome indicator(s):
● # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Link between outcome story and and the FP Outcome(s): DAFF is using achievements and lessons learned to contribute to new agricultural policy development including the country's plans for climate change adaptation. It is also exploring to increase institutional investment in community seed banks that takes into consideration the roles they can play in climate smart agriculture.

Annex uploaded:
https://marlo.cgiar.org/data/ccafs/projects//66/caseStudy/CCAFS%20Outcome%20Case%20Study%20P%2066%20Ronnie%20Vernooy%202.docx

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief`2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief`2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: National partners engage in policy analysis and development, most of which to be finished in 2017 and 2018

Brief summary of your actual 2016 contribution towards the selected MOG: In Benin, Bhutan, Burkina Faso, Costa Rica, Cote d'Ivoire, Madagascar, Nepal and Uganda national partners continued engagement in processes of policy and legal analysis and development (formulation, adjustment, implementation) related to the conservation and sustainable management of plant genetic resources and agricultural biodiversity.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: State recognition of local community rights to participate in decision making regarding the conservation and exploitation of genetic resources. Local community develop access and benefit sharing protocols. Women included in local community committees to consider access applications.

Summary of the gender and social inclusion dimension of the 2016 outputs: In the countries listed national partners created more awareness about the roles and rights of local communities, while in some countries these roles and rights were formally recognized in policy and law. Local communities in Benin, Madagascar and Nepal work on ABS protocols with the inclusion of women.

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: AU Commission works with Bioversity on guidelines on implementing ABS laws to support climate change adaptation based on consultations with national and local actors.

Brief summary of your actual 2016 contribution towards the selected MOG: Work with the AU Commission slowed down (but did not stop entirely) because of a gap in bilateral funding which was intended to support their continued engagement. That said, we supported the e Commission partner's attendance at relevant meetings to boost capacity and promote AU level outcomes in 2017/18.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: The guidelines will encourage African AU member states to put systems in place reflecting recognition of the right of local communities -- and wormen within those communities -- to participate in decision making concerning access to and management of genetic diversity and sharing benefits associated with their use by others.

Summary of the gender and social inclusion dimension of the 2016 outputs: The guidelines will encourage African AU member states to put systems in place reflecting recognition of the right of local communities -- and wormen within those communities -- to participate in decision making concerning access to and management of genetic diversity and sharing benefits associated with their use by others.

Major Output groups - 2015

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Eight countries have made substantial progress on MLS implementation through analysis of the legal space for MLS implementation, identification of options for the revision of relevant policies and laws and development of amendments to the relevant instruments. National policy actor and network analysis was used to strengthen stakeholder engagement.

Brief`2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Perspectives, interests and needs of various social actors in relation to the ITPGRFA/MLS and related policies and laws were identified and the degree of direct and active involvement of women/men farmers in national policy processes assesed. National decision makers made some efforts to take differences into consideration in policy/law formulation.

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: We sponsored/organized interactions between African Union Commission and key national level actors (engaged, cumulatively, in climate change adaptation, genetic resource conservation and sustainable use, and domestication of multilateral environmental agreements) from a number of African countries. This culminated in a decision that AU Commission/CCAFS will develop policy/guidelines in 2016/17.

Brief`2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: The policy/guidelines will, when drafted, highlight the importance of social inclusion and provide examples for how national programs can put inclusive systems in place to allow women and men, and socially marginalized people within countries, to take advantage of the ITPGRFA for climate change adaptation.

Major Output groups - 2014

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief`2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief`2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

Major Output groups - 2013
F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora **Brief bullet points of your expected annual 2013 contribution towards the selected MOG:** <Not Defined> **Brief summary of your actual 2013 contribution towards the selected MOG:** <Not Defined> **Brief`2013 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined> **Summary of the gender and social inclusion dimension of the 2013 outputs:** <Not Defined>
F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues **Brief bullet points of your expected annual 2013 contribution towards the selected MOG:** <Not Defined> **Brief summary of your actual 2013 contribution towards the selected MOG:** <Not Defined> **Brief`2013 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined> **Summary of the gender and social inclusion dimension of the 2013 outputs:** <Not Defined>

5.2 Deliverables

D2531 - Policy Brief on Adoption of climate smart technologies in Uganda and Tanzania

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/71145

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Adoption of climate smart technologies in East Africa: Findings from two surveys and participatory exercises with farmers and local experts

Description / Abstract: As part of the "Policy Action for Climate Change Adaptation" (PACCA) project this info note summarizes findings of a project activity entitled "Influencing and linking policies and institutions from national to local level for the development and adoption of climate?resilient food systems in East Africa" undertaken by researchers from Bioversity International and Arizona State University. By conducting a network analysis and participatory exercises with district officials and farmers, the study assesses the extent to which farmers are adopting agricultural practices and correlates the findings about the size and "make up" of the networks in which the farmers are embedded.

Publication / Creation date: 2016-02-01

Language: en

Country: Uganda and Tanzania

Keywords: CLIMATE CHANGE,FOOD SECURITY,AGRICULTURE,CLIMATE-SMART AGRICULTURE

Citation: Bedmar Villanueva A, Jha Y, Ogwal-Omara R, Welch E, Sayoum Wedajoo A, Halewood M. 2016. Adoption of climate smart technologies in East Africa: Findings from two surveys and participatory exercises with farmers and local experts. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: http://hdl.handle.net/10568/71145

DOI: <Not Defined>

Creator / Authors:

- Bedmar Villanueva, - A.

- Jha Y, -
- Ogwal-Omara R, -
- Welch, - E.
- Seyoum Wedajoo A, -
- Halewood, - Michael

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
ASU - Arizona State University	Welch, Eric<EricWelch@asu.edu>	Other

D2533 - Influence of social networks on the adoption of climate smart technologies in Uganda and Tanzania

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/71146

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Influence of social networks on the adoption of climate smart technologies in East Africa: Findings from two surveys and participatory exercises with farmers and local experts

Description / Abstract: As part of the Policy Action for Climate Change Adaptation (PACCA) project, this info note summarizes findings of a project activity entitled “Influencing and linking policies and institutions from national to local level for the development and adoption of climate?resilient food systems in East Africa” undertaken by researchers from Bioversity International and Arizona State University. By conducting a network analysis and participatory exercises with district officials and farmers in Lushoto (Tanzania) and Rakai (Uganda), the study assesses the extent to which farmers are adopting agricultural practices and correlates the findings about the size and “make up” of the networks in which the farmers are embedded.

Publication / Creation date: 2016-02-01

Language: en

Country: Uganda and Tanzania

Keywords: CLIMATE CHANGE,AGRICULTURE,CLIMATE-SMART AGRICULTURE,FOOD SECURITY

Citation: Bedmar Villanueva A, Jha Y, Ogwal-Omara R, Welch E, Sayoum Wedajoo A, Halewood M. 2016. Influence of social networks on the adoption of climate smart technologies in East Africa: Findings from two surveys and participatory exercises with farmers and local experts. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: http://hdl.handle.net/10568/71146

DOI: <Not Defined>

Creator / Authors:

- Bedmar Villanueva, - A.

- Jha Y, -
- Ogwal-Omara R, -
- Welch, - E.
- Seyoum Wedajoo A, -
- Halewood, - Michael

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
ASU - Arizona State University	Welch, Eric<EricWelch@asu.edu>	Other

D2726 - Bancos comunitarios de semillas: origines, evolucion y perspectivas

Main Information

Type: Articles and Books

Subtype: Book (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues
- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.bioversityinternational.org/e-library/publications/detail/bancos-comunitarios-de-semillas-origenes-evolucion-y-perspectivas/

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: Bancos communitarios de semillas: origines, evolucion y perspectivas
Description / Abstract: <Not Defined>
Publication / Creation date: 2016-12-01
Language: Spanish
Country: Global
Keywords: bancos communitarios de semillas; sostenibilidad; conservacion; acceso y beneficios; organizacion campesina
Citation: Vernooy, R., Shrestha P., Sthapit, B. Ramírez, M. Ed. 2016. Bancos Comunitarios de Semillas: Orígenes, Evolución y Perspectivas. Bioversity International, Lima, Perú. 1ª. ed.
Handle: <Not Defined>
DOI: <Not Defined>
Creator / Authors:

- Vernooy - Ronnie
- Sthapit - Bhuwon
- Shrestha - Pitambar

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Bioversity International
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: Yes
Flagships contribution: ● POLICIES, INSTITUTIONS AND MARKETS

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2537 - Policy Brief on Bioversity International's contributions to the implementation of Article 6 of the ITPGRFA

Main Information

Type: Reports and other publications
Subtype: Policy brief/policy note/briefing paper
Status: Complete
Year of expected completion: 2016
New expected year: <Not Defined>
Cross-cutting dimension:
- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes
Dissemination Channel: CGSpace
Dissemination URL: http://hdl.handle.net/10568/79768
Open access: Yes
License adopted: No

Deliverable Metadata

Disseminated title: Bioversity International's contributions to the implementation of article 6 of the International Treaty on Plant Genetic Resources for Food and Agriculture
Description / Abstract: In the last 20 years, Bioversity International has coordinated or has been involved in a number of initiatives, projects and activities that contribute to the implementation of Article 6 of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). In this note, we summarize how Bioversity International's work has contributed to each of the measures indicated in Article 6.2 from a) to g) and present examples of projects that are aligned with these measures. This summary was prepared as a contribution to the Third Meeting of the Ad Hoc Technical Committee on Sustainable Use of Plant Genetic Resources, Vienna, October 2016.
Publication / Creation date: 2017-02-01
Language: en
Country: <Not Defined>
Keywords: INTERNATIONAL AGREEMENTS,PLANT GENETIC RESOURCES
Citation: Lopez Noriega, I.; Bedmar Villanueva, A. (2016) Bioversity International's contributions to the implementation of article 6 of the International Treaty on Plant Genetic Resources for Food and Agriculture. Bioversity International, Rome (Italy), 8 p.
Handle: http://hdl.handle.net/10568/79768
DOI: <Not Defined>
Creator / Authors:
- Lopez Noriega, - I.
- Bedmar Villanueva, - A.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2473 - Mainstreaming agricultural biological diversity across sectors through NBSAPs

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/78323

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Mainstreaming agricultural biological diversity across sectors through NBSAPs: Missing Links to Climate Change Adaptation, Dietary Diversity and the Plant Treaty

Description / Abstract: Summary of analysis of 119 national biodiversity strategies and action plans submitted to the Conference of the Parties to the Convention on Biological Diversity. Focus of analysis is on the extent to which national plans link use of agricultural biological diversity to climate change adaptation and human dietary diversity

Publication / Creation date: 2016-12-01

Language: English

Country: global

Keywords: climate change adaptation, biological diveristy, NBSAP

Citation: Lapena, I.; Halewood, M.; Hunter, D. (2016) Mainstreaming agricultural biological diversity across sectors through NBSAPs. CCAFS Info Note,

Handle: http://hdl.handle.net/10568/78323

DOI: <Not Defined>

Creator / Authors:

- Lapena, - I.
- Halewood, - M.
- Hunter, - D.
- Lapena, - I.
- Halewood, - M.
- Hunter, - D.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2743 - Mutually supportive implementation of the Plant Treaty and the Nagoya Protocol

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/78757

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Embedding mutually supportive implementation of the Plant Treaty and the Nagoya Protocol in the context of broader national policy goals: A Workshop for National Teams of Policy Actors, 16th – 20th November 2015

Description / Abstract: This report provides highlights from a workshop entitled "Embedding mutually supportive implementation of the Plant Treaty and the Nagoya Protocol in the context of broader national policy goals. A workshop for national teams of policy actors". The workshop brought together eleven national teams comprised of National Focal Points for the Nagoya Protocol, the Plant Treaty and the GEF and representatives of lead national agencies dealing with climate change adaptation and agriculture and national finance and planning authorities. As the title of the workshop suggests, the participants examined options to embed the implementation of the Nagoya Protocol and the Plant Treaty in national programmess and strategies to promote climate change adaptation, poverty alleviation, food security and conservation. It was organized by the ABS Capacity Development Initiative and Bioversity International in cooperation with the African Union Commission and the Secretariats of the Convention on Biological Diversity and the International Treaty on Plant Genetic Resources for Food and Agriculture, held at the International Livestock Research Institute, Addis Ababa, Ethiopia, 16th – 20th November 2015.

Publication / Creation date: 2017-01-01

Language: en

Country: <Not Defined>

Keywords: INTERNATIONAL AGREEMENTS,POLICIES,PLANT GENETIC RESOURCES,NATIONAL PLANNING

Citation: ABS Capacity Development Initiative; Bioversity International (2016) Embedding mutually supportive implementation of the Plant Treaty and the Nagoya Protocol in the context of broader national policy goals: A Workshop for National Teams of Policy Actors, 16th – 20th November 2015 .

52 p.
Handle: http://hdl.handle.net/10568/78757
DOI: <Not Defined>
Creator / Authors:
- ABS Capacity Development Initiative, -
- Bioversity International, -

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
GIZ - Deutsche Gesellschaft for Internationale Zusammenarbeit	Drews, Andreas<andreas.drews@giz.de>	Other

D2488 - White Paper outlining policy instruments for ITPGRFA and Nagoya Protocol implementation in Benin and Madagascar

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Roadmap_EN.pdf

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: White Paper: Road map for policy instruments to be developed for mutually supportive implementation of the Plant Treaty and the Nagoya Protocol in Benin and Madagascar

Description / Abstract: This document summarizes the project partners? recommendations concerning what juridical instruments need to be developed in their respective countries; it sets the stage for subsequent work that will carried out, developing those instruments, over the course of the next years. It is important to underscore that while these recommendations do not have any official status of their own. It is possible that over the course of the next years, national policy makers will decide that other instruments, or additional instruments, need to be developed as part of national implementation efforts. Nonetheless, the recommendations set out here provide the basis for follow-up work in the next stage of the project.

Publication / Creation date: 2016-04-01

Language: English

Country: Benin and Madagascar

Keywords: Plant Treaty, Nagoya Protocol, mutually supportive implementation, Benin, Madagascar, policies

Citation: White Paper: Road map for policy instruments to be developed for mutually supportive implementation of the Plant Treaty and the Nagoya Protocol in Benin and Madagascar. April, 2016

Handle: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Roadmap_EN.pdf

DOI: <Not Defined>

Creator / Authors:

- Mikpon - Toussaint<CRASud/INRAB/Ministry of Agriculture Benin>
- Andriamahazo - Michelle<Ministry of Agriculture (MinAgri) Madagascar>
- Rakotoniaina - Naritiana<Service d'Appui à la Gestion de l'Environnement (SAGE) Madagascar>
- Bossou - Bienvenu<ONG Cercle de Sauvegarde des Ressources Naturelles (CeSaReN) Benin>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
Cesaren - ONG Cercle de Sauvegarde des Ressources Naturelles	Bossou, Bienvenu<cesarenong@yahoo.fr>	Other
INRAB - Institut National de Recherche Agricole du Benin	Mikpon, Toussaint<owoyori@yahoo.fr>	Other
SAGE - Service d'Appui à la Gestion de l'Environnement	Rakotoniaina, Naritiana<naritiana.sage@blueline.mg>	Other
MinAgri - Ministry of Agriculture Madagascar	Andriamahazo, Michelle<michelle.andriamahazo@gmail.com>	Other

D958 - National policies proposed and possibly adopted re: creating space for operation of the MLS

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.nbc.gov.bt/wp-content/uploads/2016/03/Draft-Biodiversity-Bill-2016.pdf

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Bioversity Act of the Kingdom of Bhutan, 2016
Description / Abstract: Bioversity Act of the Kingdom of Bhutan, 2016, is the updated and revised Bioversity Act of 2003. The Act was updated and revised to take full account of Bhutan's obligations derived from becoming a signatory of the ITPGRFA and the Nagoya Protocol. The 2016 Act has eight chapters. It will be submitted for government approval in 2016.
Publication / Creation date: 2016-12-01
Language: English
Country: Bhutan
Keywords: biodiversity; Bhutan
Citation: Bioversity Act of the Kingdom of Bhutan, 2016
Handle: <Not Defined>
DOI: <Not Defined>
Creator / Authors:

- Bhutan - Government of

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type

BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
National Biodiversity Centre, Ministry of Agriculture	Yangzome Dorji, Tashi<yangzome2011@gmail.com>	Other

D960 - 2 policy briefs - countries' current/future dependence on foreign germplasm to adapt to climate changes

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: https://cgspace.cgiar.org/handle/10568/71224

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: The importance of international exchanges of plant genetic resources for national crop improvement in Guatemala

Description / Abstract: An analysis of food crop germplasm flows into and out of Bhutan was carried out to determine the extent of reliance of Bhutanese agriculture on introduced germplasm. Methods used included literature review, key informant interviews, field visits and crop pedigree analysis. Bhutan has been introducing foreign germplasm since the 1960s. By December 2015, a total of about 300 varieties of 46 food crops including several non-traditional crops were introduced. Germplasm sources include CGIAR centres such as IRRI, CIMMYT and ICARDA, AVRDC, and countries such as Bangladesh, India, Japan, Korea, Nepal and Thailand. Pedigree analysis of rice varieties indicated that 74% of the released varieties originate in other countries. Bhutan has also contributed germplasm to several genebanks and countries. For example, IRRI has distributed about 3800 Bhutanese rice seed samples globally. Using imported germplasm, Bhutan has formally released over 180 varieties of cereals, fruit and vegetables. Prior to Convention on Biological Diversity, the outflow was largely unregulated, but the country is now developing formal exchange mechanisms with the creation of the National Biodiversity Centre in 1995. Bhutan?s reliance on external germplasm is rated high, a reality not well known by many Bhutanese people.

Publication / Creation date: 2016-02-01

Language: English

Country: GUATEMALA

Keywords: AGRICULTURE,CLIMATE CHANGE,FOOD SECURITY,GENETIC RESOURCES

Citation: Mendez W, Galluzzi G, Say E. 2015. The importance of international exchanges of plant genetic resources for national crop improvement in Guatemala. CCAFS Working Paper no. 154.

Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
Handle: http://hdl.handle.net/10568/71224
DOI: <Not Defined>
Creator / Authors:
- Mendez W, -
- Galluzzi G, -
- Say E, -

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D961 - 2 policy briefs - countries' current/future dependence on foreign germplasm to adapt to climate changes

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: https://cgspace.cgiar.org/handle/10568/71222

Open access: Yes

License adopted: CC_BY_ND

Deliverable Metadata

Disseminated title: The importance of international exchanges of plant genetic resources for national crop improvement in Burkina Faso

Description / Abstract: To effectively implement the multilateral system of access and benefit sharing (MLS) and facilitate exchange of genetic materials it is important to generate empirical evidence of the extent to which Bhutan is dependent on foreign-sourced plant genetic resources for food and agriculture for its agricultural research and development (including breeding) and ultimately to food security. It is also important to examine how the flow of plant genetic resources takes place, how the resources are used for agricultural research and development, and what the pedigree of varieties important for food security looks like. It is also important to understand the gap in understanding of stakeholders on constraints and opportunities of exchange of plant genetic resources through MLS. This chapter thus presents the patterns of germplasm flows and their contribution to crop breeding for developing modern varieties; analyzes pedigree of modern varieties of selected crops that are important for national food security; identifies the origins of ancestors of these modern varieties and documents key stakeholders' perceptions on the pros and cons of exchange of plant genetic resources through MLS in order to give policy feedback to improve policymakers' understanding of the subject.

Publication / Creation date: 2015-07-01

Language: English

Country: Burkina Faso

Keywords: interdependence; plant genetic resources; mulilateral system of access and benefit sharing

Citation: Bougma A, Galluzzi G, Sawadogo M. 2015. The importance of international exchanges of plant genetic resources for national crop improvement in Burkina Faso. CCAFS Working Paper no. 152.

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Available online at: www.ccafs.cgiar.org
Handle: http://hdl.handle.net/10568/79766
DOI: <Not Defined>
Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2500 - Linking farmers to the multilateral system to increase the exchange of plant genetic resources.

Main Information

Type: Articles and Books

Subtype: Book chapter (non-peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/79744

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Linking farmers to the multilateral system to increase the exchange of plant genetic resources

Description / Abstract: In Nepal, farmers? groups that manage the more than 100 CSBs are becoming empowered and increasingly self-sustaining in maintaining, supplying, and conserving important genetic materials within certain geographic regions. However, in the changing national and international policy contexts, there is still lack of clarity regarding the roles CSBs can play, how they can function most effectively, and what policy support is needed and from whom (scientists, extension workers, civil society organizations, and policymakers). There are no clear-cut policies or guidelines to aid and strengthen links between CSBs and the national gene bank, the Seed Quality Control Centre (SQCC), and other government bodies performing similar roles, nor with relevant international agencies.

Publication / Creation date: 2017-02-01

Language: en

Country: Nepal

Keywords: FARMERS,PLANT GENETIC RESOURCES

Citation: Chaudhary, P.; Joshi, B.K.; Shrestha, P.; Devkota, R.; Upadhya, D.; Vernooy, R. (2016) Linking farmers to the multilateral system to increase the exchange of plant genetic resources. In: Joshi, B.K.; Chaudhary, P.; Upadhya, D.; Vernooy, R. (eds.) Implementing the International Treaty on Plant Genetic Resources for Food and Agriculture in Nepal: Achievements and challenges. Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy, p.99-107. ISBN: 978-9937-0-1304-8

Handle: http://hdl.handle.net/10568/79744

DOI: <Not Defined>
Creator / Authors:
- Chaudhary, - P.
- Joshi, - B.K.
- Devkota, - R.
- Upadhya, - D.
- Chaudhary, - P.
- Joshi, - B.K.
- Devkota, - R.
- Upadhya, - D.

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
LI-BIRD - Local Initiatives for Biodiversity, Research and Development	Chaudhary, Pashupati<pchaudhary@libird.org>	Other

D2503 - Policy brief: Implementing the ITPGRFA and the Nagoya Protocol in Benin

Main Information

Type: Reports and other publications
Subtype: Policy brief/policy note/briefing paper
Status: Complete
Year of expected completion: 2016
New expected year: <Not Defined>

Cross-cutting dimension:
- Gender
- Capacity Development

Gender level(s):
- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes
Dissemination Channel: CGSpace
Dissemination URL: https://cgspace.cgiar.org/handle/10568/75771
Open access: Yes
License adopted: CC_BY

Deliverable Metadata

Disseminated title: Policy brief: Implementing the ITPGRFA and the Nagoya Protocol in Benin
Description / Abstract: Policy brief setting out the advantages to Benin of having access to genetic diversity of plants for climate change adaptation, and highlighting the steps that need to be taken in each country to develop the requisite supportive policies.
Publication / Creation date: 2016-04-01
Language: French
Country: Benin
Keywords: Climate change, access and benefit sharing, national implementation
Citation: Mikpon T, Bossou B. 2016. Mise en oeuvre mutuelle du Trait? International sur les Ressources Phytoge?n?tiques pour l'Alimentation et l'Agriculture et le Protocole de Nagoya sur l'APA au Be?nin. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
Handle: http://hdl.handle.net/10568/75771
DOI: <Not Defined>
Creator / Authors:
- Toussaint - Mikpon
- Mikpon T, -
- Bossou B, -

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
Cesaren - ONG Cercle de Sauvegarde des Ressources Naturelles	Bossou, Bienvenu<cesarenong@yahoo.fr>	Other
INRAB - Institut National de Recherche Agricole du Benin	Mikpon, Toussaint<owoyori@yahoo.fr>	Other

D2440 - Policy brief: Implementing the ITPGRFA and the Nagoya Protocol in Madagascar

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/75772

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Mise en oeuvre mutuelle du Traité International sur les Ressources Phytogénétiques pour l'Alimentation et l'Agriculture et le Protocole de Nagoya sur l'APA au Bénin; Mise en oeuvre mutuelle du Traité International sur les Ressources Phytogénétiques pour l'Alimentation et l'Agriculture et le Protocole de Nagoya sur l'accès aux ressources génétiques et au partage des avantages découlant de leur utilisation à Madagascar

Description / Abstract: Policy brief setting out the advantages to Madagascar of having access to genetic diversity of plants for climate change adaptation, and highlighting the steps that need to be taken in each country to develop the requisite supportive policies.

Publication / Creation date: 2016-04-01

Language: French

Country: Madagascar

Keywords: climate change, access and benefit sharing, national implementation

Citation: Rakotoniaina N, Andriamahazo M. 2016. Mise en oeuvre mutuelle du Traité International sur les Ressources Phytogénétiques pour l'Alimentation et l'Agriculture et le Protocole de Nagoya sur l'accès aux ressources génétiques et au partage des avantages découlant de leur utilisation à Madagascar. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: http://hdl.handle.net/10568/75772

DOI: <Not Defined>

Creator / Authors:

- Rakotoniaina N, -
- Andriamahazo M, -

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
MinAgri - Ministry of Agriculture Madagascar	Andriamahazo, Michelle<michelle.andriamahazo@gmail.com>	Other
SAGE - Service d'Appui à la Gestion de l'Environnement	Rakotoniaina, Naritiana<naritiana.sage@blueline.mg>	Other

D2505 - Baseline survey in Madagascar

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Baseline_study_year1_Madagascar.pdf

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: Rapport d'etudes sur les enquete de base du project: Madagascar
Description / Abstract: Baseline survey for Madagascar including information on climate change impacts on local crops, crops being grown by local communities, applicable laws and policies related to conservation, sharing and sustainable use; policy gaps.
Publication / Creation date: 2016-04-01
Language: French
Country: Madagascar
Keywords: Climate change, access and benefit sharing, national implementation
Citation: "Rapport d'etudes sur les enquete de base du project 'Mise en oeuvre mutuellement soutenue du Protocole de Nagoya et de Trait International sur les Ressources Phytogntiques pour l?Alimentation et l?Agriculture: Madagascar": Ministre de l'Agriculture de Madagascar, Service d'Appui la Gestion de l'Environnement, Avril, 2016.
Handle:
http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Baseline_study_year1_Madagascar.pdf
DOI: <Not Defined>
Creator / Authors:

- Andriamahazo - Michelle
- Rakotoniaina - Naritiana

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
MinAgri - Ministry of Agriculture Madagascar	Andriamahazo, Michelle<michelle.andriamahazo@gmail.com>	Other
SAGE - Service d'Appui à la Gestion de l'Environnement	Rakotoniaina, Naritiana<naritiana.sage@blueline.mg>	Other

D2633 - Post-disaster revival of the local seed system and climate change adaptation: ..... Nepal

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/78509

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Post-disaster revival of the local seed system and climate change adaptation: a case study of earthquake affected mountain regions of Nepal
Description / Abstract: <Not Defined>
Publication / Creation date: 2016-12-01
Language: en
Country: NEPAL
Keywords: SEEDS,CLIMATE CHANGE,DISASTER REHABILITATION,EARTHQUAKES
Citation: Gauchan; D.; Joshi, B.K.; Sthapit, S.; Ghimire, K.; Gautam, S.; Poudel, K.; Sapkota, S.; Neupane, S.; Sthapit, B.; Vernooy, R. (2016) Post-disaster revival of the local seed system and climate change adaptation: a case study of earthquake affected mountain regions of Nepal. Indian Journal of Plant Genetic Resources 29(3) p. 348-350 ISSN: 0971-8184
Handle: http://hdl.handle.net/10568/78509
DOI: https://dx.doi.org/10.5958/0976-1926.2016.00065.6
Creator / Authors:

- Gauchan, - D.
- Joshi, - B.K.
- Sthapit, - S.
- Ghimire, - K.
- Sthapit, - B.
- Vernooy, - R.

Publication Metadata

Volume: 29
Issue: 3
Pages: 348-350
Journal/Publisher name: Indian Journal of Plant Genetic Resources
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
LI-BIRD - Local Initiatives for Biodiversity, Research and Development	Chaudhary, Pashupati <pchaudhary@libird.org>	Responsible

D2506 - Implementing the ITPGRFA in Nepal: Achievements and challenges

Main Information

Type: Articles and Books

Subtype: Book (non-peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: https://cgspace.cgiar.org/handle/10568/78421

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Implementing the International Treaty on Plant Genetic Resources for Food and Agriculture in Nepal: Achievements and challenges

Description / Abstract: This book documents the results of the research and capacity development efforts to implement the ITPGRFA in Nepal. Its chapters cover five main interrelated themes: national-level multi-lateral system policy development; policy actors and networks; germplasm flows and interdependence; farmers' involvement; and technology transfer. ITPGRFA implementation in Nepal has made considerable progress, but the policy environment in Nepal could be further improved. A positive development is the drafting of new policy and legal instruments, such as the agro-biodiversity conservation and utilization act and regulations. Note: Citation: Joshi BK, P Chaudhary, D Upadhya and R Vernooy (editors). 2016. Implementing the International Treaty on Plant Genetic Resources for Food and Agriculture in Nepal: Achievements and Challenges. Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy.

Publication / Creation date: 2016-12-01

Language: en

Country: NEPAL

Keywords: INTERNATIONAL AGREEMENTS,POLICIES,DEVELOPMENT POLICIES

Citation: Joshi, B.K.; Chaudhary, P.; Upadhya, D.; Vernooy, R. (eds.) (2016) Implementing the International Treaty on Plant Genetic Resources for Food and Agriculture in Nepal: Achievements and challenges. Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy 194 p. ISBN: 978-9937-0-1304-8

Handle: http://hdl.handle.net/10568/78421

DOI: <Not Defined>

Creator / Authors:
- Joshi, - B.K.
- Chaudhary, - P.
- Upadhya, - D.
- Vernooy, - R.

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: Yes
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
LI-BIRD - Local Initiatives for Biodiversity, Research and Development	Chaudhary, Pashupati <pchaudhary@libird.org>	Responsible

D2507 - Community seed banks: farmers platform for crop conservation and improvement

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/79179

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Community seed banks: farmers' platform for crop conservation and improvement

Description / Abstract: In South Africa, as elsewhere, the community systems that have maintained agrobiodiversity are increasingly coming under pressure from factors such as drought, crop failure and difficult storage conditions. As a result, the quantity of seed and number of plant varieties available to farmers for planting becomes negatively affected. With agricultural modernization, farmers are increasingly purchasing more of their seed requirements rendering local seed conservation less important. As commercial varieties replace older local varieties, the older varieties become increasingly unavailable in many communities. The Directorate Genetic Resources of the Department of Agriculture, Forestry and Fisheries, Bioversity International, and the Departments of Agriculture in Limpopo and Eastern Cape Provinces are working together to set up pilot community seed banks in Mutale and Joe Gcabi Municipalities respectively to guide the development of a national plan aimed to reverse the trend of biodiversity loss.

Publication / Creation date: 2017-01-01

Language: en

Country: SOUTH AFRICA

Keywords: COMMUNITY SEED BANK,NATIONAL PLANNING,BIODIVERSITY CONSERVATION,POLICIES

Citation: Tjikana, T.; Malueke, N.; Mokoena, M.; Vernooy, R.; Sthapit, B. (2016) Community seed banks: farmers' platform for crop conservation and improvement. GRAIN SA, 1 p.

Handle: http://hdl.handle.net/10568/79179

DOI: <Not Defined>
Creator / Authors:
- Tjikana, - T.
- Malueke, - N.
- Mokoena, - M.
- Vernooy, - R.
- Sthapit, - B.
- Tjikana, - T.
- Malueke, - N.
- Mokoena, - M.
- Vernooy, - R.
- Sthapit, - B.

Publication Metadata

Volume: 2016
Issue: 1
Pages: Online
Journal/Publisher name: SA GRAAN/GRAIN
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
DAFF - Department of Agriculture, Forestry and Fisheries	Tjikana, Thabo <thabotj@daff.gov.za>	Responsible

D2635 - A resource manual for resilient seed systems.

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues
- Development of innovations/ interventions/ policies with explicit gender targeting
- Collection of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.iac2016.in/images/IJPGR%20Special%20Issue.pdf

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: A resource manual for resilient seed systems

Description / Abstract: This article presents the main elements of a new research and capacity development strategy for the strengthening of seed systems in the context of climate change elaborated by a group of multi-disciplinary researchers of Bioversity International. The strategy was developed between 2013 and 2015 and included a series of national training workshops held in 16 countries with the participation of 200 partner researchers (breeders, gene bank managers, GIS specialists). To disseminate the strategy more widely, two learning resources were developed: an interactive website and a handbook.

Publication / Creation date: 2016-12-01

Language: en

Country: Global

Keywords: SEEDS,FARMING SYSTEMS

Citation: Vernooy, R. (2016) A resource manual for resilient seed systems. Indian Journal of Plant Genetic Resources 29(3) p. 442-444 ISSN: 0971-8184

Handle: http://hdl.handle.net/10568/78507

DOI: https://dx.doi.org/10.5958/0976-1926.2016.00096.6

Creator / Authors:

● Vernooy - Ronnie

Publication Metadata

Volume: 29
Issue: 3
Pages: 442-444
Journal/Publisher name: Indian Journal of Plant Genetic Resources
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D1484 - Baseline survey in Benin

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.bioversityinternational.org/fileadmin/user_upload/campaigns/Darwin/Baseline_study_year1_Benin.pdf

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: Rapport d'etudes sur les enquete de base du project: Benin

Description / Abstract: Baseline survey for Benin including information on climate change impacts on local crops, crops being grown by local communities, applicable laws and policies related to conservation, sharing and sustainable use; policy gaps.

Publication / Creation date: 2016-04-01

Language: French

Country: Benin

Keywords: climate change, access and benefit sharing, national implementation

Citation: "Rapport d'etudes sur les enquete de base du project 'Mise en oeuvre mutuellement soutenue du Protocole de Nagoya et de Trait International sur les ressources Phytogntiques pour l'alimentation et l'agriculture: Institut National des Recherches Agricoles du Benin. Rpublique du Benin'. Avril, 2016.

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
INRAB - Institut National de Recherche Agricole du Benin	Mikpon, Toussaint<owoyori@yahoo.fr>	Other
Cesaren - ONG Cercle de Sauvegarde des Ressources Naturelles	Bossou, Bienvenu<cesarenong@yahoo.fr>	Other

D2508 - Implementing access and benefit sharing in eight countries

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/73343

Open access: Yes

License adopted: CC_BY_SA

Deliverable Metadata

Disseminated title: Implementing access and benefit sharing in eight countries

Description / Abstract: Since 2012, national teams in eight countries in Asia, Africa and Latin America have been identifying options for policy, legal and administrative mechanisms for the implementation of the multilateral system of access and benefit sharing (MLS) for plant genetic resources. This article summarises if and how access and benefit sharing has been strengthened in the eight countries, and to what extent this has benefited family farmers.

Publication / Creation date: 2016-05-01

Language: en

Country: BHUTAN,BURKINA FASO,COSTA RICA,COTE D'IVOIRE,GUATEMALA,NEPAL,RWANDA,UGANDA

Keywords: FARMERS,PLANT GENETIC RESOURCES,INTERNATIONAL AGREEMENTS,POLICIES,NATIONAL PLANNING,GENE BANKS,COMMUNITY INVOLVEMENT

Citation: Vernooy, R.; Halewood, M.; Lopez Noriega, I.; Otieno, G.; Lapena, I.; Vodohue, R.; Bessette, G. (2016) Implementing access and benefit sharing in eight countries. Farming Matters. Special Issue, April 2016. p. 38-42 ISSN: 2210-6499

Handle: http://hdl.handle.net/10568/73343

DOI: <Not Defined>

Creator / Authors:

- Vernooy, - Ronnie
- Halewood, - Michael
- Lopez Noriega, - I.
- Otieno, - G.
- Vodohue, - R.
- Vernooy, - Ronnie

- Halewood, - Michael
- Lopez Noriega, - I.
- Otieno, - G.
- Vodohue, - R.

Publication Metadata

Volume: 2016
Issue: April
Pages: 38-42
Journal/Publisher name: ILEIA
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D1485 - Input to the negotiations for the enhancement of the MLS (1)

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.fao.org/3/a-bp083e.pdf

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Report from the Friends of the Co-Chairs Group on a Termination Clause
Description / Abstract: Summary of deliberations of a group of experts, appointed by the Co-Chairs of the Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-sharing,
Publication / Creation date: 2016-06-01
Language: English, French, Spanish, Arabic
Country: Italy
Keywords: access and benefit sharing, genetic resources, international negotiations,
Citation: Report from the Friends of the Co-Chairs Group on a Termination Clause, Fifth Meeting of the Ad Hoc Open-Ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-Sharing, Geneva, Switzerland, 12-14 July 2016, IT/OWG-EFMLS-5/16/Inf.6
Handle: <Not Defined>
DOI: <Not Defined>
Creator / Authors:

- Halewood - Michael

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type

BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2509 - Resource box for resilient seed systems: handbook

Main Information

Type: Articles and Books

Subtype: Book (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Collection of sex-disaggregated data
- Development of innovations/ interventions/ policies with explicit gender targeting
- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/73256

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: Resource box for resilient seed systems: handbook

Description / Abstract: The resource box for resilient seed systems, developed by a multidisciplinary team of Bioversity International researchers, is a tool that supports research and capacity building on resilient seed systems in the context of adaptation to climate change. The eight modules of the box represent eight steps of a participatory research cycle from situational analysis to knowledge sharing and communication. The handbook complements the online version which can be found at: http://www.seedsresourcebox.org

Publication / Creation date: 2016-05-01

Language: en

Country: Global

Keywords: RESEARCH,SEEDS,ADAPTATION,CLIMATE CHANGE,PARTICIPATORY APPROACH

Citation: Vernooy, R.; Bessette, G.; Rudebjer, P.; Otieno, G. (eds.) (2016) Resource box for resilient seed systems: handbook. Bioversity International. 128 p. ISBN 978-92-9255-035-6

Handle: http://hdl.handle.net/10568/73256

DOI: <Not Defined>

Creator / Authors:

- Vernooy, - Ronnie
- Bessette, - G.

- Rudebjer, - P.
- Otieno - Gloria
- Vernooy, - Ronnie
- Bessette, - G.
- Rudebjer, - P.

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Bioversity International
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: Yes
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2637 - Twenty-five years of international exchanges of plant genetic resources facilitated by CGIAR genebanks

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/75693

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Twenty-five years of international exchanges of plant genetic resources facilitated by the CGIAR genebanks: a case study on international interdependence.

Description / Abstract: This article analyses 25 years of data about international movements of plant genetic resources for food and agriculture (PGRFA), facilitated by the gene banks hosted by seven centres of the Consultative Group on International Agricultural Research. It identifies trends in the movements of PGRFA for use in research and development, and describes the diversity of those resources transferred over time. The paper also presents data on the number of countries involved in the global exchanges, analyses their development status and describes their role as providers and/or recipients, providing a picture of the breadth of these global exchanges. We highlight that it is primarily developing and transition economies that have participated in the flows, and that the transferred germplasm has been largely used within their public agricultural research and development programmes. We conclude that, when provided the opportunity of facilitated access, countries will use a wide diversity of germplasm from many other countries, sub-regions and continents as inputs into their agricultural research and development programmes. We highlight the importance of enabling the continuation of the non-monetary benefits from international access to germplasm. We discuss the implications for the process of development and reform of the multilateral system of access and benefit sharing under International Treaty on Plant Genetic Resources for Food and Agriculture.

Publication / Creation date: 2016-04-01

Language: English

Country: Italy

Keywords: Plant genetic resources, Interdependence, Internationa Treaty on Plant Genetic Resources for Food and Agriculture, Multilateral system, Conservation, Breeding

Citation: Galluzzi, G., Halewood, M., Noriega, I.L. & Vernooy, R. 2016. Twenty-five years of international exchanges of plant genetic resources facilitated by the CGIAR genebanks: a case study on international interdependence. Biodiversity and Conservation, 25(8), 1421-1446, DOI: 10.1007/s10531-016-1109-7
Handle: http://hdl.handle.net/10568/75693
DOI: 10.1007/s10531-016-1109-7
Creator / Authors:
- Halewood - Michael
- Galluzzi - Gea
- Lopez Noriega - Isabel
- Vernooy - Ronnie

Publication Metadata

Volume: 25
Issue: 8
Pages: 1-26
Journal/Publisher name: Springer
Indicators for journal articles: ● This journal article is an ISI publication

Publication acknowledge: Yes
Flagships contribution: ● POLICIES, INSTITUTIONS AND MARKETS

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2446 - Input to the negotiations for the enhancement of the MLS (2)

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: http://www.fao.org/plant-treaty/meetings/meetings-detail/en/c/414992/%20[By%20late%20February]

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Comments regarding the Treaty Secretariats Proposed Technical Amendments to the SMTA

Description / Abstract: Written submission to the Secretariat regarding proposed changes to terms and conditions of access and benefit sharing. The submission included suggested changes to the text that will be the basis of negotiations by the WG-EFMLS from 2017 onwards.

Publication / Creation date: 2016-08-01

Language: English

Country: Italy

Keywords: access and benefit sharing, genetic resources, international negotiations,

Citation: Comments regarding the Treaty Secretariats Proposed Technical Amendments to the SMTA, Sixth meeting of the Ad Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-sharing [Doc number still to be assigned]

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2448 - Access and benefit sharing policies for climate resilient seed systems

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/79167

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Access and benefit sharing policies for climate resilient seed systems: matching global commitments with national realities

Description / Abstract: Paper summarizing results of four national case studies on climate change impacts on local food security crops, sources of potentially adapted germplasm, and policy interventions to support availability and use of that germplasm

Publication / Creation date: 2016-09-01

Language: English

Country: Uganda, Rwanda, Zambia, Zimbabwe

Keywords: climate change adaptation, genetic resources, access and benefit sharing

Citation: Halewood, M., Otieno, G.; Nkhoma, C.; Kasasa, P.; Wasswa Mulumba, J.; Gapusi, J.; de Jonge, B. (2016) Access and benefit sharing policies for climate resilient seed systems: matching global commitments with national realities. ISSD Africa Synthesis Paper. ISSD, 19 p.; http://hdl.handle.net/10568/79167.

Handle: http://hdl.handle.net/10568/79167

DOI: <Not Defined>

Creator / Authors:

- Halewood, - M.
- Otieno, - G.
- Nkhoma, - C.
- Kasasa, - P.
- Wasswa Mulumba, - J.
- De Jonge, - B.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2449 - Farmers' crop varieties and farmers' rights: challenges in taxonomy and law

Main Information

Type: Articles and Books
Subtype: Book (peer reviewed)
Status: Complete
Year of expected completion: 2016
New expected year: <Not Defined>
Cross-cutting dimension:
- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes
Dissemination Channel: CGSpace
Dissemination URL: http://hdl.handle.net/10568/73262
Open access: Yes
License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: Farmers' CropVarieties and Farmers' Rights: Challenges in Taxonomy and Law
Description / Abstract: Book about factors affecting the evolution and maintenance and threats to farmers varieties, the utility of farmers varieties and policies to support the continued evolution, conservation and sustainable use of those varieties
Publication / Creation date: 2016-03-01
Language: English
Country: UK
Keywords: farmers rights, farmer varieties, genetic diversity, policies, laws
Citation: Halewood, M. (ed.) (2016) Farmers? crop varieties and farmers? rights: challenges in taxonomy and law. London: Routledge, 406 p. ISBN: 9781844078912; http://hdl.handle.net/10568/73252.
Handle: http://hdl.handle.net/10568/73262
DOI: <Not Defined>
Creator / Authors:
- Halewood, - Michael
- Lapena, - I.

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Routledge
Indicators for journal articles: ● This article have a co-author from a developing country National

Agricultural Research System (NARS)

Publication acknowledge: Yes
Flagships contribution: ● POLICIES, INSTITUTIONS AND MARKETS
● CCAFS - F1 (BEFORE F4 - PHILIP)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2450 - Access and benefit sharing of genetic resources. Making it work for family farmers.

Main Information

Type: Articles and Books

Subtype: Special issue

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/73345

Open access: Yes

License adopted: CC_BY_SA

Deliverable Metadata

Disseminated title: Access and benefit sharing of genetic resources. Making it work for family farmers.

Description / Abstract: Access and benefit sharing of plant genetic resources is a crucial but very complex, political and legalistic matter. Does the formal system work for family farmers? It poses many challenges. At the same time, farmers around the world are leading successful initiatives for access and benefit sharing. This issue of Farming Matters presents cases that demonstrate the limited extent to which family farmers have been able to benefit from the 'formal' ABS process. It also uncovers some of the effective principles and mechanisms for access and benefit sharing that are part and parcel of farmers' everyday practices, such as community seed banks, and successful collaborations between researchers and farmers. Some of these arrangements have links with the formal system.

Publication / Creation date: 2016-04-01

Language: English

Country: Netherlands

Keywords: access and benefit sharing

Citation: Pistorius, R.; Bruil, J.; Vernooy, R. (eds.) (2016) Access and benefit sharing of genetic resources. Making it work for family farmers. Farming Matters. Special Issue, April 2016. 70 p. ISSN: 2210-6499.

Handle: http://hdl.handle.net/10568/73345

DOI: <Not Defined>

Creator / Authors:

- Pistorius - Robin
- Bruil - Janneke
- Vernooy - Ronnie

Publication Metadata

Volume: April 2016
Issue: Special issue
Pages: 72
Journal/Publisher name: ILEIA
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2517 - Interdependence on plant genetic resources in light of climate change.

Main Information

Type: Articles and Books
Subtype: Book chapter (non-peer reviewed)
Status: Complete
Year of expected completion: 2016
New expected year: <Not Defined>
Cross-cutting dimension:
<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: Yes
Dissemination Channel: CGSpace
Dissemination URL:
http://hdl.handle.net/10568/79367
Open access: Yes
License adopted: No

Deliverable Metadata

Disseminated title: Interdependence on plant genetic resources in light of climate change
Description / Abstract: <Not Defined>
Publication / Creation date: 2017-01-01
Language: en
Country: <Not Defined>
Keywords: PLANT GENETIC RESOURCES,CLIMATE CHANGE
Citation: Chaudhary, P.; Joshi, B.K.; Thapa, K.; Devkota, R.; Ghimire, K.H.; Khadka, K.; Upadhya, D.; Vernooy, R. (2016) Interdependence on plant genetic resources in light of climate change. In: Joshi, B.K.; Chaudhary, P.; Upadhya, D.; Vernooy, R. (eds.) (2016) Implementing the International Treaty on Plant Genetic Resources for Food and Agriculture in Nepal: Achievements and challenges. Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy, p. 65-80. ISBN: 978-9937-0-1304-8
Handle: http://hdl.handle.net/10568/79367
DOI: <Not Defined>
Creator / Authors:
- Chaudhary, - P.
- Joshi, - B.K.
- Thapa, - K.
- Devkota, - R.
- Ghimire, - K.H.
- Upadhya, - D.

Publication Metadata

Volume:
Issue:
Pages:
Journal/Publisher name: Local Initiatives for Biodiversity
Indicators for journal articles: ● This article have a co-author from a developing country National Agricultural Research System (NARS)

Publication acknowledge: No
Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2519 - Policy brief on meso-level expert organizations in Rakai (Uganda) and Lushoto (Tanzania)

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/79794

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: How are the meso-level expert organizations connected to farmers and among themselves? Comparing Rakai (Uganda) and Lushoto (Tanzania)

Description / Abstract: Key messages: Network analysis provides a mechanism to both understand how information and communication structures vary across sites, and to identify opportunities for intervening in ways that may improve communication flows. Farmer-expert network structures differ between Lushoto and Rakai. Farmers and expert organizations are more directly connected in Lushoto than in Rakai. This may mean that Lushoto farmers have more immediate access to climate smart technologies and information. District level expert organizations are more interconnected in Rakai compared to Lushoto. However, local level expert organizations are more connected in Lushoto. These findings may indicate opportunities for improved connections at the local and district levels in Rakai and Lushoto, respectively. This comparative analysis shows that Rakai communication networks could be improved through better connections among local experts and between experts and farmers.

Publication / Creation date: 2017-02-01

Language: en

Country: TANZANIA,UGANDA

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY,NETWORK ANALYSIS,EAST AFRICA

Citation: Jha Y, Welch E, Ogwal-Omara R, Halewood M. 2016. How are the meso-level expert organizations connected to farmers and among themselves? Comparing Rakai (Uganda) and Lushoto (Tanzania). CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: http://hdl.handle.net/10568/79794

DOI: <Not Defined>

Creator / Authors:

- Jha, - Yamini
- Welch, - Eric
- Ogwal-Omara, - Richard
- Halewood, - Michael

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
ASU - Arizona State University	Welch, Eric<EricWelch@asu.edu>	Other

D985 - Journal article - Analysis of ITPGRFA member states' interdepence on PGRFA

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/75693

Open access: Yes

License adopted: CC_BY_ND

Deliverable Metadata

Disseminated title: Twenty-five years of international exchanges of plant genetic resources facilitated by the CGIAR genebanks: a case study on global interdependence

Description / Abstract: This article analyses 25 years of data about international movements of plant genetic resources for food and agriculture (PGRFA), facilitated by the gene banks hosted by seven centres of the Consultative Group on International Agricultural Research. It identifies trends in the movements of PGRFA for use in research and development, and describes the diversity of those resources transferred over time. The paper also presents data on the number of countries involved in the global exchanges, analyses their development status and describes their role as providers and/or recipients, providing a picture of the breadth of these global exchanges. We highlight that it is primarily developing and transition economies that have participated in the flows, and that the transferred germplasm has been largely used within their public agricultural research and development programmes. We conclude that, when provided the opportunity of facilitated access, countries will use a wide diversity of germplasm from many other countries, sub-regions and continents as inputs into their agricultural research and development programmes. We highlight the importance of enabling the continuation of the non-monetary benefits from international access to germplasm. We discuss the implications for the process of development and reform of the multilateral system of access and benefit sharing under International Treaty on Plant Genetic Resources for Food and Agriculture.

Publication / Creation date: 2016

Language: en

Country: Global

Keywords: plant genetic resources; interdependence; International Treaty on Plant Genetic Resources for Food and Agriculture; breeding; multilateral system of access and benefit sharing

Citation: G. Galluzzi, M. Halewood, I. Lopez Noriega, R. Vernooy 2016. Twenty-five years of

international exchanges of plant genetic resources facilitated by the CGIAR genebanks: a case study on global interdependence. Biodivers Conserv (2016) 25:1421?1446. DOI 10.1007/s10531-016-1109-7
Handle: http://hdl.handle.net/10568/75693
DOI: DOI 10.1007/s10531-016-1109-7
Creator / Authors:
- Galluzzi, - G.
- Halewood, - Michael
- López Noriega, - I.
- Vernooy, - Ronnie
- Galluzzi, - G.
- Halewood, - Michael
- López Noriega, - I.
- Vernooy, - Ronnie

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Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

D2521 - Sharing diversity: establishing and supporting community seedbanks in South Africa (pilot phase 2013-2015)

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:
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Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

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License adopted: No

Deliverable Metadata

Disseminated title: Sharing diversity: establishing and supporting community seedbanks in South Africa (pilot phase 2013-2015)

Description / Abstract: A promising start has been made: the two new community seedbanks of Gumbu and Sterkspruit and complementary technical support provided by the government will allow farmers to improve seed conservation technologies, increase access to crop diversity, apply crop improvement practices and explore seed production and marketing opportunities. The Gumbu community seedbank in particular illustrates the key role of women farmers in local conservation efforts and how these efforts in turn have the potential to change the local agro-ecological and socio-economic landscape. Future work will continue to pay attention to the successes and challenges of such farmers' efforts and continue to draw more attention and support to: encourage the safeguarding and improvement of local plant species and varieties maintained by smallholder farmers and their communities recognizing the central role of women; value and reward farmers' collective efforts to safeguard and improve agricultural biodiversity and associated cultural values and knowledge; and support farmers technically and financially to organize themselves, and strengthen their organizational capacity taking into consideration the leadership role of women.

Publication / Creation date: 2017-01-01

Language: en

Country: <Not Defined>

Keywords: GENE BANKS,COMMUNITY INVOLVEMENT,CONSERVATION

Citation: Tjikana, T.; Dibiloane, A.; Maluleke, N.; Moila, P.; Phora, G.; Sthapit, B.; Vernooy, R. (2016) Sharing diversity: establishing and supporting community seedbanks in South Africa (pilot phase 2013-2015). 4 p.

Handle: http://hdl.handle.net/10568/78666

DOI: <Not Defined>
Creator / Authors:
- Tjikana, - T.
- Dibiloane, - A.
- Maluleke, - N.
- Moila, - P.
- Phora, - G.
- Sthapit, - B.
- Vernooy, - R.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
DAFF - Department of Agriculture, Forestry and Fisheries	Tjikana, Thabo <thabotj@daff.gov.za>	Responsible

D2522 - Safeguarding local crop knowledge: the use of community biodiversity registers

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/78415

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Safeguarding local crop knowledge: the use of community biodiversity registers
Description / Abstract: This brief presents suggestions for the design and use of a community biodiversity register as a practical tool for communities to: (i) establish an inventory to allow monitoring of crop diversity and to document its associated farmer (traditional) knowledge, (ii) generate a collective sense of community empowerment and ownership of genetic resources as a way to decentralize their management and conservation, and (iii) provide a record of the knowledge and uses of local biodiversity that can prevent biopiracy and enable the equitable sharing of benefits arising from the use of genetic resources. Examples from Nepal and South Africa are given.
Publication / Creation date: 2016-12-01
Language: en
Country: <Not Defined>
Keywords: BIODIVERSITY,COMMUNITY SEED BANK,KNOWLEDGE MANAGEMENT,DESIGNATION OF ORIGIN
Citation: Gómez César, M.; Sthapit, B.; Vernooy, R. (2016) Safeguarding local crop knowledge: the use of community biodiversity registers. Rome (Italy): Bioversity International; South Africa: Department of Agriculture, Forestry and Fisheries 8 p.
Handle: http://hdl.handle.net/10568/78415
DOI: <Not Defined>
Creator / Authors:

- Gómez César, - M.
- Sthapit, - B.
- Vernooy, - R.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible
DAFF - Department of Agriculture, Forestry and Fisheries	Tjikana, Thabo<thabotj@daff.gov.za>	Other

D2525 - Mobilizing diversity: establishment of the first two community seedbanks in South Africa's smallholder farming areas

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/73242

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Mobilizing diversity: establishment of the first two community seedbanks in South Africa's smallholder farming areas

Description / Abstract: This report presents the findings of the 2015 field missions to Limpopo and Eastern Cape provinces of the Republic of South Africa. The missions aimed to build the technical and organizational capacity of the farmers to be able to manage the community seedbanks independently, with minimum support from Bioversity International and the NPGRC. Physical buildings were built or prepared and farmers in the two project sites contributed seeds for the very first collections of their community seedbanks. Contributing farmers have agreed on the functions and governance and management structures of the community seedbanks, and have learned about seed registration, and seed selection, treatment, storage and maintenance.

Publication / Creation date: 2016-05-01

Language: en

Country: SOUTH AFRICA

Keywords: FARMERS,GENE BANKS,MANAGEMENT TECHNIQUES,TRAINING

Citation: Vernooy, R.; Sthapit, B.; Tjikana, T.; Dibiloane, A.; Maluleke, N.; Moila, P.; Phora, G. (2016) Mobilizing diversity: establishment of the first two community seedbanks in South Africa's smallholder farming areas. Bioversity International; Department of Agriculture, Forestry and Fisheries, Pretoria. 17 p. ISBN: 978-92-9255-044-8

Handle: http://hdl.handle.net/10568/73242

DOI: <Not Defined>

Creator / Authors:

- Vernooy, - Ronnie

- Sthapit, - B.
- Tjikana, - T.
- Dibiloane, - A.
- Maluleke, - N.
- Moila, - P.
- Phora, - G.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
DAFF - Department of Agriculture, Forestry and Fisheries	Tjikana, Thabo <thabotj@daff.gov.za>	Responsible

D2528 - Seeds of resilience: novel strategies for using crop diversity in climate change adaptation

Main Information

Type: Reports and other publications

Subtype: Conference paper / Seminar paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL: http://hdl.handle.net/10568/78539

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Seeds of resilience: novel strategies for using crop diversity in climate change adaptation

Description / Abstract: Findings from the field point to a decline in diversity of local varieties in many countries. Future impacts of climate change are expected to become more pronounced in many parts of the world forcing farmers to change their practices and find crops and varieties better adapted to new weather dynamics. Providing farmers with better access to crop and varietal diversity can strengthen their capacity to adapt to climate change. Under supportive policy and socioeconomic conditions, such strengthened capacity could contribute to greater food availability throughout the year, the production of more nutritious and healthy crops, and income generation. Bioversity International and national research partners are implementing a comprehensive seed resilience strategy allowing farmers to access and use plant genetic diversity more effectively in the context of climate change adaptation. The strategy combines the use of climate and crop modelling tools and participatory research methods. Countries where the strategy has been piloted include Benin, Bhutan, Burkina Faso, Costa Rica, Cte d?Ivoire, Guatemala, India, Madagascar, Nepal, Rwanda, South Africa and Uganda.

Publication / Creation date: 2016-12-01

Language: en

Country: Global; Uganda

Keywords: CLIMATIC CHANGE,ADAPTATION,SEEDS,RESILIENCE,STRATEGIES

Citation: Vernooy, R.; Kiwuka, C.(2016) Seeds of resilience: novel strategies for using crop diversity in

climate change adaptation. Presented at: Tropentag 2016: Solidarity in a competing world ? fair use of resources. Vienna (Austria) Sep 18-21. 5 p.
Handle: http://hdl.handle.net/10568/78539
DOI: <Not Defined>
Creator / Authors:
- Vernooy, - R.
- Kiwuka, - C.

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	Halewood, Michael <m.halewood@cgiar.org>	Responsible

5.3 Project Highlights

No project highlights added

6. Activities

A47 - Global policy development

Description: Develop targeted interventions for international (regional and global) policy-making meetings related to availability and use of biological resources for agriculture research and development for climate change adaptation.

Start date: Jan 2013 **End date:** Dec 2019

Activity leader: BIOVERSITY - Bioversity International Halewood, Michael <m.halewood@cgiar.org>
Status: Complete

Overall activity or progress made during this cycle: <Not Defined>

Deliverables in this activity:

<Not defined>

A551 - National policy implementation to increase access and use of diverse biological resources for ClimateChangeAdaptation

Description: The project will work with a range of partners in Madagascar and Benin to a) understand the extent to which those countries are becoming dependent on genetic resources from other countries to adapt to climate change and b) develop appropriate policies, laws and guidelines to implement/use the MLS and Nagoya Protocol to be able to access and/or provide adapted germplasm and associated information both domestically and from other countries.

Start date: Jan 2015 **End date:** Dec 2019

Activity leader: BIOVERSITY - Bioversity International Halewood, Michael <m.halewood@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: As described in emerging outcome story number XXX, in 2016, the research partners in Madagascar and Benin completed baseline surveys covering a range of important issues to set the stage for subsequent decision-making, a white paper setting out the strategy for policy development over the life of the project, first drafts of national laws, and an initial set of national consultuations on the first drafts of those laws. In addition, the project partners coordinated participatory workshops in 4 case study communities to: document climate changes on food security crops, identify potentially well adapted local varieties, identify potentially adapted germplasm from foreign sources, adopt tools and methods to conduct community biodiversity assessments and registries and develop related community-level access and benefit sharing protocols.

Deliverables in this activity:

- D1484: Baseline survey in Benin
- D1489: Policy options for the integrated implementation of the NP and ITPGRFA in Benin
- D2440: Policy brief: Implementing the ITPGRFA and the Nagoya Protocol in Madagascar
- D1490: Policy options for the integrated implementation of the NP and ITPGRFA in Madagascar
- D2488: White Paper outlining policy instruments for ITPGRFA and Nagoya Protocol implementation in Benin and Madagascar
- D2506: Implementing the ITPGRFA in Nepal: Achievements and challenges
- D1678: A resource box for resilient seed sytems: on-line learning modules
- D2508: Implementing access and benefit sharing in eight countries
- D2509: Resource box for resilient seed systems: handbook
- D2505: Baseline survey in Madagascar
- D2503: Policy brief: Implementing the ITPGRFA and the Nagoya Protocol in Benin

A552 - Developing policy for creating/supporting community seed banks to enhance community climate change resilience

Description: Working with communities and national governments to develop a strategy for integrating community seed banks into national policies to strengthen community's capacities to adapt to climate change (South Africa and other countries)

Start date: Jan 2015 **End date:** Dec 2017

Activity leader: BIOVERSITY - Bioversity International Halewood, Michael <m.halewood@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: This work is in progress in a number of countries including Nepal, Uganda and South Africa.

Deliverables in this activity:

- D1482: Inputs for the development of a national policy on community seedbanks in South Africa
- D1780: The roles of community seed banks in climate change adaption
- D2449: Farmers' crop varieties and farmers' rights: challenges in taxonomy and law
- D2507: Community seed banks: farmers platform for crop conservation and improvement

A735 - Supporting farmer innovations and farmers' rights for climate change resilience

Description: Working with international and national partners to strengthen the resilience of farmers communities and create a more enabling policy and legal environment

Start date: Jan 2016 **End date:** Feb 2017

Activity leader: BIOVERSITY - Bioversity International Halewood, Michael <m.halewood@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: Based on field research experiences from around the world a number of publications were finalized and disseminated with a focus on the implementation of farmers' rights and improving the access to and benefit sharing of plant genetic resources in benefit of smallholder farmers.

Deliverables in this activity:

- D2450: Access and benefit sharing of genetic resources. Making it work for family farmers.
- D2449: Farmers' crop varieties and farmers' rights: challenges in taxonomy and law
- D2500: Linking farmers to the multilateral system to increase the exchange of plant genetic resources.
- D2537: Policy Brief on Bioversity International's contributions to the implementation of Article 6 of the ITPGRFA
- D2637: Twenty-five years of international exchanges of plant genetic resources facilitated by CGIAR genebanks

A740 - Continuing work in East Africa on network for climate smart agriculture

Description: While this work was no longer supported under the CCAFS EA regional project, in 2016 we continued to develop some knowledge products based on our work there. NB since we continue to send these outputs to the EA project coordinator, it is possible they may also be reported also as part of the EA project.

Start date: Jan 2016 **End date:** Dec 2017

Activity leader: BIOVERSITY - Bioversity International Halewood, Michael <m.halewood@cgiar.org>
Status: On-going

Overall activity or progress made during this cycle: Several outputs were produced and disseminated.

Deliverables in this activity:

- D2519: Policy brief on meso-level expert organizations in Rakai (Uganda) and Lushoto (Tanzania)
- D2531: Policy Brief on Adoption of climate smart technologies in Uganda and Tanzania
- D2533: Influence of social networks on the adoption of climate smart technologies in Uganda and Tanzania

7. Leverages

No leverages added