

# R4 Rural Resilience Initiative

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# Acronyms

CNAAS	<i>Compagnie Nationale d'Assurance Agricole du Sénégal</i>
EVI	Enhanced Vegetation Index
FFA	Food Assistance for Assets
HARITA	Horn of Africa Risk Transfer for Adaptation
IFA	insurance for assets
IFAD	International Fund for Agricultural Development
IRI	International Research Institute for Climate and Society
MACF	Margaret A. Cargill Foundation
M&E	monitoring and evaluation
NGO	non-governmental organization
P4P	Purchase for Progress
OA	Oxfam America
REST	Relief Society of Tigray
SDC	Swiss Agency for Development and Cooperation
SfC	Saving for Change
SNIID	Social Network for Index Insurance Design
TOC	Theory of Change
USAID	United States Agency for International Development
WII	Weather Index Insurance
WFP	World Food Programme
WRMF	Weather Risk Management Facility

# Executive Summary

In 2014, the R4 Rural Resilience Initiative (R4) reached over 26,000 farmers, helping them to improve the way they manage risks to their livelihoods and food security. Building on a foundation of concrete disaster risk reduction activities, R4 extended drought insurance to 24,143 farmers in Ethiopia and 1,989 farmers in Senegal. At the end of the 2014 agricultural season, farmers in Ethiopia and Senegal received payouts of \$38,116 (\$34,187 in Ethiopia and \$3,929 in Senegal). The year 2014 also marked the launch of the initiative in Malawi and Zambia with financial support from the Swiss Agency for Development and Cooperation (SDC).

One of the most significant results from 2014 was the finalization of the first impact evaluation of the first 4 years

of implementation of the Horn of Africa Risk Transfer for Adaptation (HARITA) project, the initial pilot that catalyzed the R4 Rural Resilience Initiative. Adding to the evidence produced through this evaluation, a number of studies including a process evaluation of Senegal's risk reduction component, the baseline surveys in the expansion zones in Ethiopia, and an assessment of gender mainstreaming in R4 Senegal added to the growing evidence base on the impact of R4.

R4's learning agenda will remain a central priority in 2015, when an impact evaluation for R4 Senegal and baselines for Malawi and Zambia will be conducted. The R4 team will also develop new learning tools, such as the R4 implementation guidelines, a study on basis risk, and a cost-benefit analysis of R4's effectiveness.

**FIGURE 1. R4 progress**

Payouts	\$ 17,000	\$ 320,000	\$ 24,000	\$ 38,000
Value of premiums	\$ 2,500	\$ 27,000	\$ 215,000	\$ 275,000
Total sum insured	\$ 10,200	\$ 73,000	\$ 940,000	\$ 1,3m
Farmers insured	200	1,300	13,000	18,000
	2009	2010	2011	2012
Countries	Ethiopia	Ethiopia	Ethiopia	Ethiopia Senegal
	2013	2014		Ethiopia Senegal

# Foreword by Richard Choularton

Since its inception the R4 Rural Resilience Initiative has been about trying to help food insecure farmers improve their capacity to manage risk so that ultimately they can become food secure and thrive. The challenge is enormous. Nearly 1.4 billion people live on less than \$1.25 a day. Seventy per cent of these people live in rural areas where they depend on agriculture and where they face increasing exposure to disaster risk exacerbated by price volatility, population growth, land degradation, climate change and other drivers of risk. More than \$141 billion have been lost in damages from natural disasters per year on average for the last decade.

This is nearly double the average of the previous decade (CRED/EM-DAT). In 2013, over 90 percent of natural disasters were climate related, primarily floods, storms and droughts. Under climate change, the frequency and intensity of climate-related disasters such as droughts and floods are expected to increase.

This challenge was at the center of discussion at the 3rd World Conference on Disaster Risk Reduction (WCDRR) held in March 2015 in Sendai, Japan where representatives from 187 United Nations Member States adopted a new global framework on disaster risk reduction carrying forward the achievements of the Hyogo Framework for Action.

This framework is the first major component of the post-2015 development framework, which will include the Sustainable Development Goals and the climate change agreement. The agreement finalized in Sendai is expected to be endorsed at the 2015 United Nations General Assembly.

The Sendai Framework for Disaster Risk Reduction 2015-2030 recognizes the importance of addressing food insecurity and undernutrition to reduce vulnerability and build resilience. It emphasizes the importance of anticipating long-term risks, taking action to avoid exposure to new risks and reducing existing risk levels. It highlights the contribution of climate change to increasing risks to food systems posed by higher temperatures, drought, flooding and irregular rainfall.

The Sendai Framework also recognizes the need to move beyond the solid progress in establishing the institutional frameworks for managing disaster risks that has been made over the last decade. It recognizes the need to generate large scale action at community level.

R4 is an excellent example of the kind of integrated programming that empowers communities and households to take concrete action to manage and reduce risk. It also demonstrates how safety nets can be used to both protect the most vulnerable people as well as to help them prevent the impacts of disasters and build resilient livelihoods.

We see the preliminary impact evaluation results highlighted in this report as proof that that putting money into disaster resilience is “a safe investment with excellent returns” as Switzerland’s Minister of Foreign Affairs, Didier Burkhalter argued in Sendai.

One of our main challenges going forward will be to maintain the political momentum generated in Sendai. WFP and Oxfam are both focused on how we can help implement the priorities set out in the Sendai Framework. This means sustained innovation, investment and efforts to scale up initiatives like R4.



Gebru Kahsay and his grandson inspect a field of teff in Adi Ha, Ethiopia.  
Eva Lotta Jansson / Oxfam America

# The R4 Rural Resilience Initiative

## Background

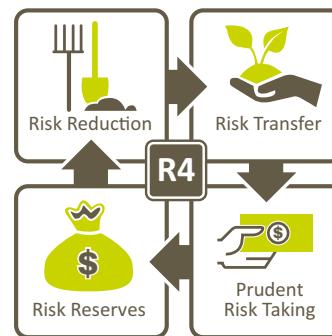
There are 805 million hungry people in the world. The large majority live in rural villages of Asia and Africa and depend on agriculture for their livelihoods living in degraded, fragile, and shock-prone environments, with an alarming low asset-base.

Rural communities are faced with an increasingly complex food security risk environment. Environmental degradation, resource scarcity, climate change and price volatility, together with other risk drivers, exacerbate the challenges to achieving food and nutrition security, especially in these most deprived and vulnerable areas, where WFP and Oxfam America operate.

With climate change impacts having an increasing relevance in this equation, especially in terms of the frequency and intensity of shocks, the challenges faced by food insecure farmers have also increased and need a more comprehensive response. Strategies for reducing and mitigating risks are therefore essential to overcoming hunger, achieving food security and enhancing resilience.

## R4

- 4 COUNTRIES: ETHIOPIA, SENEGAL, MALAWI, ZAMBIA
- 26,000 PARTICIPANTS
- 4 INTEGRATED RISK MANAGEMENT STRATEGIES



## The R4 model

The R4 Rural Resilience Initiative (R4) is a strategic partnership between the UN World Food Programme (WFP) and Oxfam America (OA). Building on the Horn of Africa Risk Transfer for Adaptation (HARITA) initiative, started in 2009 by Oxfam America and the non-governmental organization Relief Society of Tigray (REST) in Ethiopia, R4 improves the resilience and food security of vulnerable rural households in the face of increasing climate risks. Launched in 2011, R4 operates in Ethiopia and Senegal, and has started operations in Malawi and Zambia. The initiative currently reaches more than 26,000 farmers with four integrated risk management strategies: risk transfer, risk reduction, prudent risk taking, and risk reserves.



### R1. Risk Transfer

R4 enables the poorest farmers to purchase agricultural insurance: one of the insurance products tested is weather index insurance (WII), a financial product based on an index highly correlated to local yields. WII covers

specific perils or events – drought in the case of R4 – and payouts are triggered by pre-specified patterns of the index rather than actual yields, eliminating the need for in-field assessment.

Compensation for weather-related losses enables farmers to avoid selling productive assets and facilitates faster recovery. Predictable income can reduce negative coping strategies and encourage rural households to invest in activities and technologies with higher rates of return. Insurance can also serve as collateral to obtain credit at better rates.



### R2. Risk Reduction

Farmers have the option to pay insurance premiums either in cash or through the insurance for assets (IFA) scheme that engage them in risk reduction activities. IFA schemes are built into government safety net programs or WFP food assistance for assets (FFA) initiatives.

#### Food assistance for assets

FFA programs are the cornerstone of WFP's resilience building efforts. FFA plays a double role: as a safety net it provides food and/or cash transfers to meet the immediate food needs of the most vulnerable households; and as a tool for disaster risk reduction, natural resource rehabilitation and agricultural development, it builds assets that reduce the impacts of climate shocks, restore ecosystems and enhance agricultural production.

Farmers contribute their labor to risk reduction activities identified through participatory assessment and planning. In Ethiopia and Senegal, IFA activities have contributed to natural resource rehabilitation and agricultural development.



### R3. Prudent Risk Taking

Microfinance institutions are often reluctant to offer credit to farmers because of the perceived high risk of default in bad seasons. With increased food security and a stronger asset base, R4 farmers can increase their savings and stocks, using them along with insurance as collateral to obtain credit for investing in productive assets such as seeds, fertilizers and new technologies that increase productivity. Moreover, insured farmers are more confident to take out loans and invest in productive inputs, knowing that the risk of drought is covered.



### R4. Risk Reserves

Through individual or group savings, farmers can build a financial base for investing in their livelihoods. Savings can also provide a buffer for short-term needs, increasing a household's ability to cope with shocks.

Group savings can be loaned to individual members with particular needs, providing a self-insurance mechanism for the community.



Female participant in CBPP workshop, Balaka, Malawi.  
Rachael Wilson / World Food Programme

## Project status

In 2014, R4 reached over 26,000 farmers in Ethiopia and Senegal. In Ethiopia, where it reaches 24,143 participants, the initiative builds on the Ethiopian Government Productive Safety Net (PSNP). In Senegal, R4 insured 1,989 farmers out of the 6,740 participants who accessed the FFA and/or savings components. A total payout of \$38,116 has been distributed at the end of the 2014 agricultural season, of which \$34,187 in Ethiopia and \$3,929 in Senegal. In 2014, R4 also started the incubation of the initiative in Malawi and Zambia, where the initiative aims to reach 4,000 participants by 2017.

### Ethiopia

#### Key Achievements

- 24,143 participants purchased insurance, of these 22,861 farmers participated in natural resource management activities as part of the IFA scheme.
- Cash contribution from farmers increased from 10 percent in 2012 and 2013, to 15 percent this year, an important progress towards building a commercial insurance market in rural Ethiopia.
- 7,848 farmers in 27 villages received a share of \$34,187 in payout this year.
- In Tigray, R4 launched its Risk Taking and Risk Reserves components in three woredas that are particularly prone to basis risk.

Initially, the R4 team had planned for 22,500 farmers to be enrolled in insurance by the end of 2014. However, with the high demand for this comprehensive risk management approach, 1,643 more farmers signed-up, totaling to 24,143 farmers in 84 villages<sup>1</sup> (81 villages in Tigray and three villages in Amhara). Of these, 1,945 farmers were organized into saving groups; and 1,215 accessed loans for Income Generating Activities (IGA) through saving groups as well as through a revolving fund set up to facilitate loans through cooperatives.

This year meteorologist had forecasted El Niño conditions, indicating enhanced drought risk in Ethiopia between July and September, which meant significantly high premium rates for farmers registering for insurance after May 10th. To keep premiums at an affordable level, registration commenced and ended exceptionally early. Despite a more limited timeframe for farmers to purchase insurance, the R4 team, through its partners REST and Organization for Rehabilitation and Development in Amhara (ORDA), registered over 24,000 farmers. IRI together with the farmer design teams improved the weather index design process, and indices were restructured following the recommendations that emerged from the in-depth analysis of the performance of the 2013 indices, and based on the discussions with farmers.

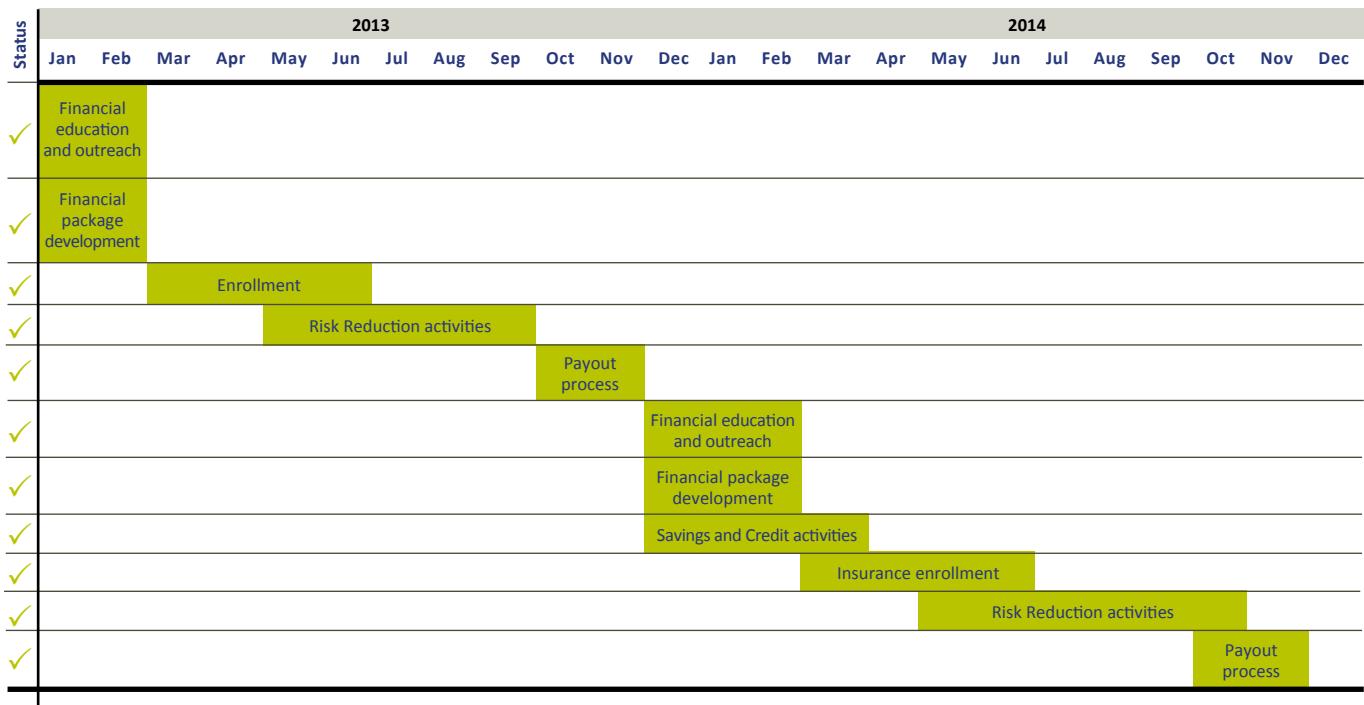
1. The word “village” refers to the Ethiopian term “tabia”, or subdistrict, the second smallest unit in the Ethiopian Government’s administrative hierarchy of region (e.g., Tigray), zone (e.g., eastern Tigray), woreda/district (e.g., Kola Tamben), tabia/subdistrict (e.g., Adi Ha) and kushet.

In the 2014 season, crop production was above average for most of the project areas with below normal rainfall in Tanqua Abergele, Raya Azebo and Alamata districts. Of the 24,143 farmers registered for insurance in 84 villages, 7,848 farmers in 27 villages received a share of \$34,187 in payouts. Technical improvements are being considered for the 2015 indices covering villages in the eastern zone where farmers experienced some production loss but the index did not trigger a payout. For more details on the lessons learnt on the issue of basis risk and actions taken so far to address this issue, see section “Evaluation and Learning”.

### Basis risk

Basis risk is the potential mismatch between the index-triggered payouts and the actual losses suffered by policy holders. It is an inherent problem to index insurance because of the diverse microclimates found within relatively small geographic areas.

**FIGURE 2. Ethiopia timeline**

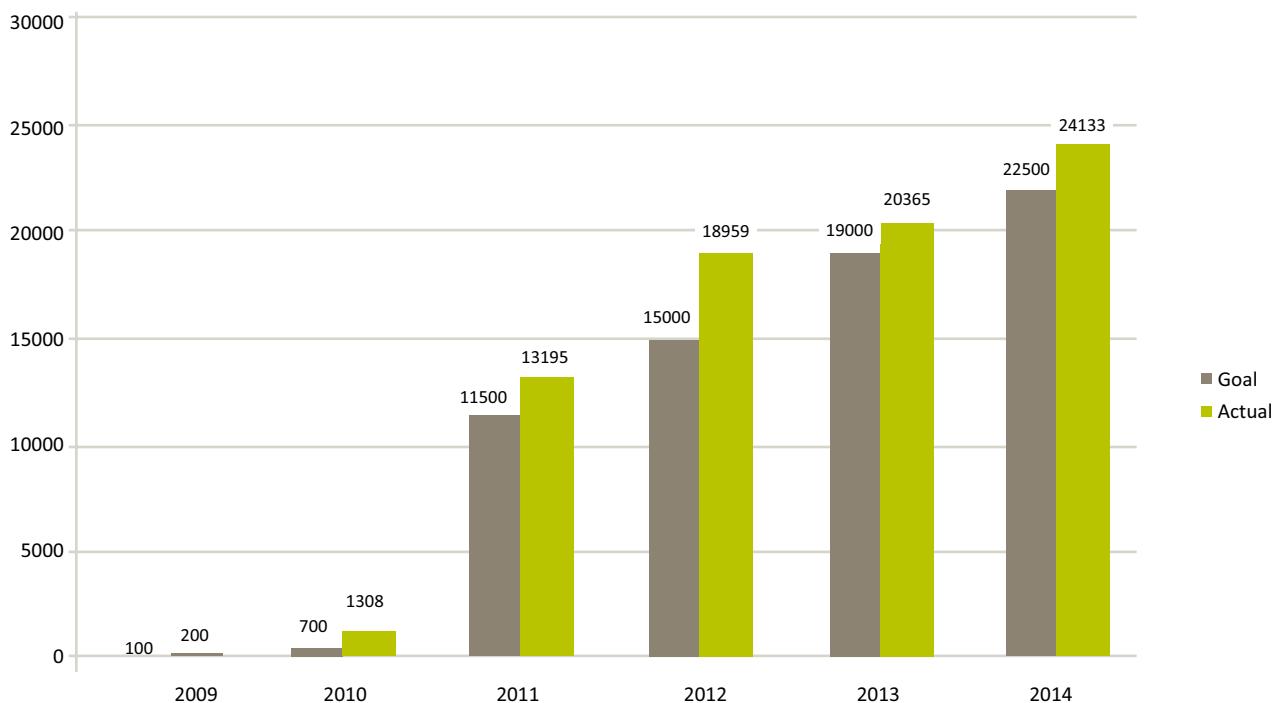


### 2014 Enrollment

The IFA component of R4 allows farmers participating in the government run Productive Safety Net Programme (PSNP) to pay for the weather index insurance with their labor. Farmers in Tigray chose products that covered long cycle crops (maize, wheat, and

sorghum); in Amhara, farmers chose options to cover long cycle crops, such as wheat and maize, as well as teff, which is a short cycle crop. On average, farmers paid a 19 percent premium of the total sum insured, while the overall premium across all villages ranged between 13 and 26 percent.

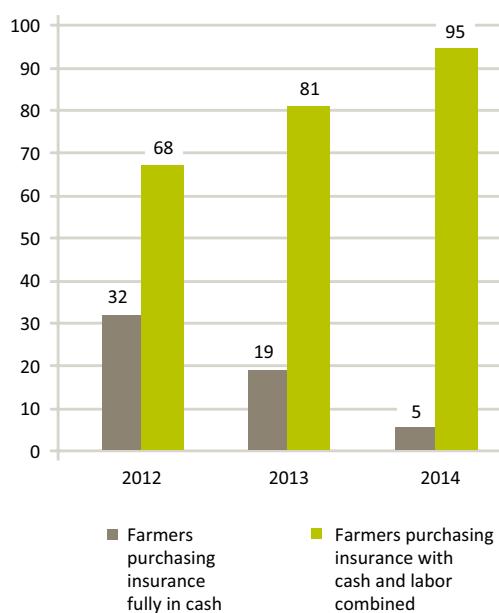
**FIGURE 3. R4 Scale-up: Goal vs. actual households covered**



In the last three years, the percentage of farmers purchasing insurance fully in cash has gradually decreased while the percentage of farmers purchasing partially with cash and the remaining amount with labor has increased over time.

It is worth noting that in 2012 and 2013, 33 and 37 villages respectively did not have the option of purchasing insurance with labor, whereas in 2014 all villages had this option available to them. If given the option, farmers tend to purchase insurance with labor instead of cash. The reduced registration timeframe also explains this reduction, since farmers buying insurance fully in cash usually need more time and marketing efforts. However, in Tigray, for farmers who purchased insurance partially with cash and the remaining amount with labor, the amount of cash contribution increased from 10 percent in 2012 and 2013, to 15 percent this year. This represents an important progress towards building a commercial insurance market in rural Ethiopia and towards long-term sustainability. As the program expands in additional regions, R4 seeks to gradually increase farmers' cash contribution.

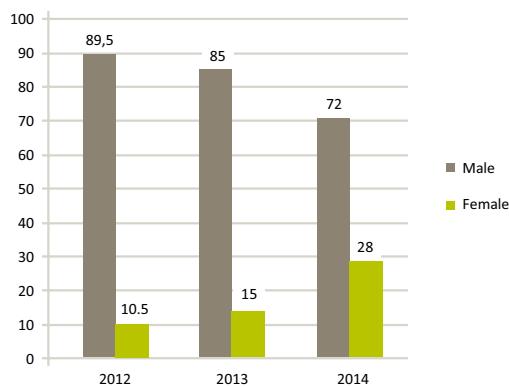
**FIGURE 4. Percentage of farmers purchasing insurance fully in cash vs. cash and labor combined**



While overall the percentage of farmers paying fully in cash had decreased in the last three years, this year there has been a significant increase in the number of women who purchased insurance fully with cash (28 percent), compared to 15 percent in 2013 and 10.5 percent in 2012.

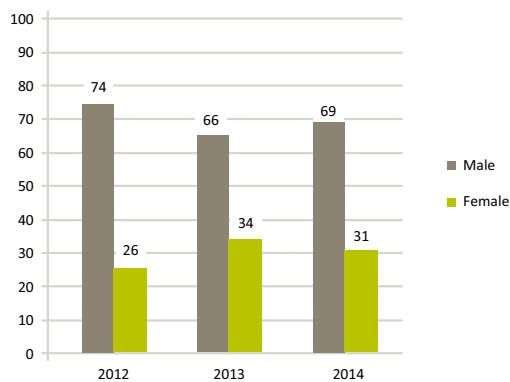
In 2015, R4 will reach over 24,000 farmers in Ethiopia in the existing R4 villages in Tigray and Amhara. To increase the reach

**FIGURE 5. Percentage of female vs. male farmers who purchased insurance with cash**



and commercial viability of the weather index insurance market in Ethiopia, joint work has been initiated with the Disaster Risk Management and Food Security Sector (DRMFSS) of the Ministry of Agriculture. The purpose of this joint work is to explore the possibility of integrating the R4 model into the Ethiopian government's PSNP. For more details see section "R4 Policy Engagement".

**FIGURE 6. Percentage of female vs. male farmers who purchased insurance with cash and labor combined**



#### Story from the field: Assets built through R4 risk reduction activities promote resilience

The R4 community disaster risk reduction activities focus on restoring the fertility and resilience of degraded soil. In Ethiopia, these activities are designed to be complementary to those of the PSNP public works, and are identified and planned in coordination with the PSNP programme at the district and village levels. R4 communities are closely engaged in choosing projects and setting priorities through participatory village-level vulnerability and capacity assessments (PVCAs).

Farmers who access insurance through the IFA scheme engage in a variety of natural resource management activities. Many more farmers want to buy insurance through the IFA option than the program budget allows. As indicated in the first major impact evaluation of the program conducted from 2009 to 2012, R4 farmers save more than twice than those without any insurance, and they invest more in seeds, fertilizer and productive assets, such as plough oxen. Women, who often head the poorest households achieved the largest gains in productivity, through investing in labor and improved tools for planting.

*Embaresu Hagos is one of those women. At the age of 42, she heads a family of 6. She is a resident of Hadush Adi village in the Saes-Tsaeidaemba district. Before she joined the R4 program, she owned half a hectare of land that she used to 'sharecrop out'<sup>2</sup> to a male-headed household for cultivation. 2012 was a drought year. Embafresu did not have sufficient food to feed her family and was afraid of not being able to purchase agricultural inputs for the next season.*

*Fortunately, that year she had purchased insurance for her crops through the IFA scheme offered by R4. She received a payout of \$400 (ETB 800) which she used to purchase a sheep. She prepared compost as part of the IFA activities and developed her backyard plot that yielded 5 quintal of cabbage. Sale of the produce, after saving some for her household consumption, earned her \$100 (ETB 2,000).*

*Since that year, Embafresu has been paying for insurance year after year with her labor. Today Embafresu owns three sheep and cultivates her own land without sharecropping it out. She says with confidence, "the IFA works implemented are helping us to rehabilitate our environment. Every farmer in our village needs to continue buying insurance and increase the total sum insured."*

2. 'Sharecropping out' means that the farmer owns the land but gives it to someone else to cultivate in exchange for a portion of the yields, usually one third to half of the total yield. Sharecropping out land is more common among female-headed households because they are more likely to lack oxen and the labor needed to cultivate their own land.

## Senegal

### Key Achievements

- 6,740 participants were reached in 2014 in 15 rural communities, of which 1,989 covered by insurance.
- 299 farmers in the village of Koundiaw Souare received a total payout of \$3,929 as compensation for late onset of rains.
- The success of the pilot *warrantage* scheme of Kouthiacoto encouraged R4 to replicate this approach with other four village cereal banks.

R4 was initiated in Senegal in 2012, building on WFP's food assistance for assets (FFA) and Oxfam America's Saving for Change (SfC) programs. In 2013, R4 conducted a dry run testing with 500 households in the rural community de Koussanar, Tambacounda. In 2014, the initiative was implemented in 15 rural communities in Tambacounda and Kolda regions, reaching 6,740 farmers with one or more R4 components. Of these, 1,989 participants, of which more than half are women, bought insurance through the IFA scheme, working on community and household-based risk reduction activities. In the project area, the beginning of the season was slightly dry. As a result, in one cluster, Koundiaw Souare, 299 farmers received a share of \$3,929 in payouts.

Farmers who implement risk reduction activities receive food assistance, either in food or food coupons through WFP's FFA mechanism in exchange for their labor. By working additional days, they can access insurance through the same mechanism. Food assistance supports communities during the lean season, when the food gap is most severe (in Senegal usually during July-August). Assets built under the risk reduction interventions increase communities' resilience by improving the productivity of rain-fed rice and starting up vegetable food production for self-consumption. Insurance complements the risk reduction strategy, by protecting farmers' investments. Risk reduction activities performed in 2014 under the FFA and IFA schemes included:

- Preventing soil erosion by building stone bunds, dredging and removing sand;
- Preserving natural resources e.g. through reforestation;

- Improving water management by building small dikes, and embankments;
- Diversifying livelihoods by initiating communal gardening activities;
- Creation and maintenance of nurseries for vetiver plants, compost pit making, and creation of vegetable gardens.

In Senegal, the risk reserves component of the initiative builds on the Saving for Change program which supports local savings and credit activities through group participation and leadership. SfC groups – both men's and women's groups, strengthen their members' ability to save and access credit promoting income generating activities. Beyond SfC, the prudent risk taking component of the program is implemented by connecting village-level cereal banks to inventory credit schemes and local microfinance institutions (MFIs). This system, called warrantage, enables farmers to take out low interest rate loans using their cereal stocks as collateral.

SfC is an innovative savings group program designed by Oxfam America, Freedom from Hunger, and the Strømme Foundation that provides access to a safe place to save and easy access to affordable credit. Several evaluations have shown that SfC increases the resilience and financial assets of women and strengthens their empowerment.

By using savings and surplus cereal production as collateral, households can invest in remunerative enterprises, including improved seeds and fertilizers, to increase their agricultural productivity. Going forward, it is also expected that insurance will facilitate access to credit at better rates.

Under the prudent risk taking and risk reserves components, at the end of 2014, a total 6,740 farmers, with a majority of women (5,602), participated in SfC groups in the Tambacounda and Kolda regions. The groups saved \$22,000 cumulatively. The warrantage system piloted in the village of Kouthiacoto also gave promising results: while it involved only 14 participants, all of them reimbursed their credit releasing their cereal stock. Based on these encouraging results, four more cereal banks were rehabilitated and will start the warrantage scheme by mid-2015.

**FIGURE 7. Senegal timeline**

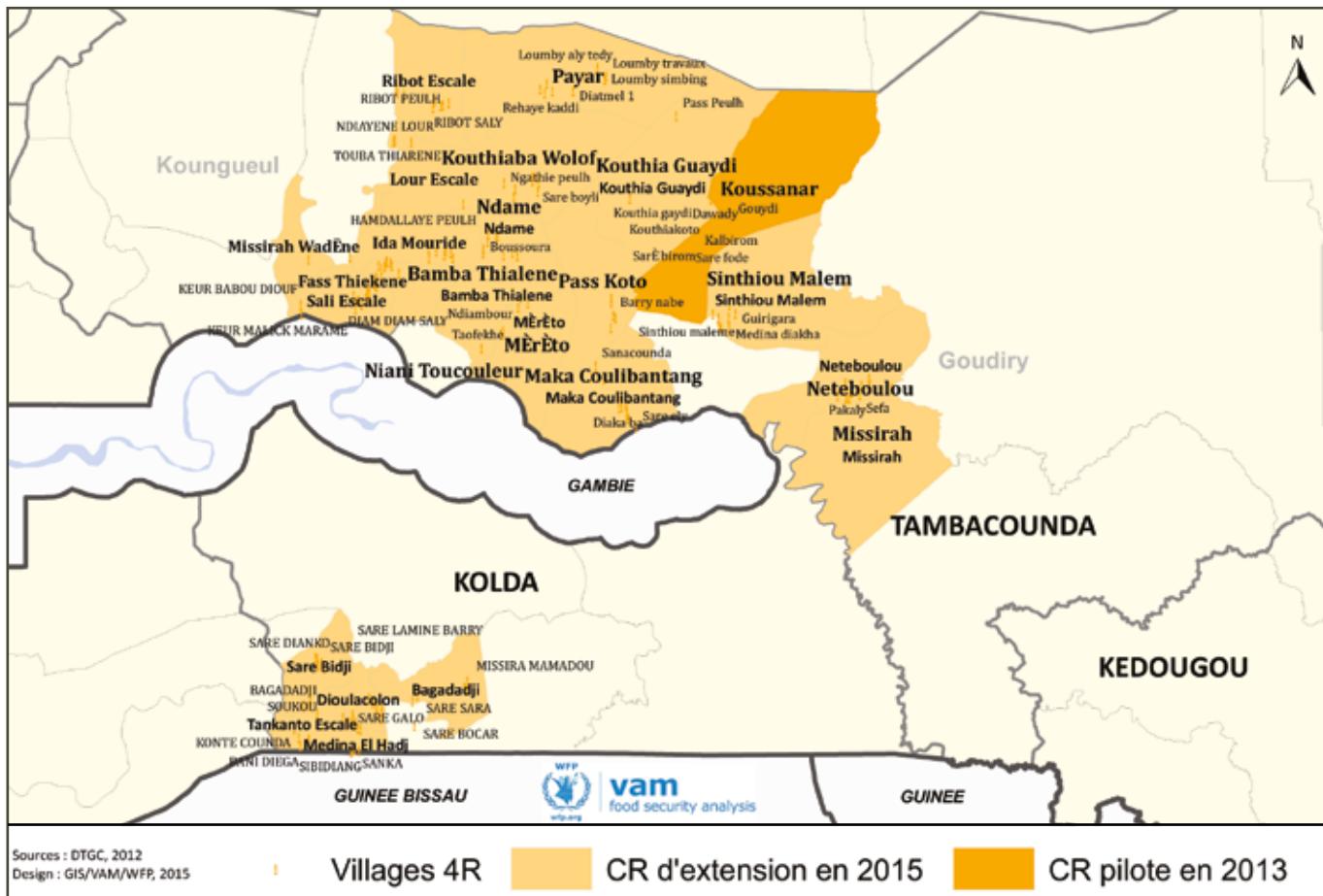
Status	2013												2014												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
✓	Local context analysis and planning																								
✓	Design Risk Reduction component																								
✓	Risk assessment																								
✓		Risk Reduction activities																							
✓		Insurance demand study & product design																							
✓		Creation & training of SFC groups																							
✓		Conception of warrante																							
✓		Process evaluation																							
✓		Insurance dry-run tested																							
✓		Local context analysis and planning																							
✓		Risk Reduction activities																							
✓		Financial education																							
✓		Savings and Credit activities																							
✓		Insurance enrollment																							
✓		Credit reimbursement																							
✓		Financial education																							
✓		Harvest and storage for cereal bank																							
✓		Payout process																							

### Insurance scale-up plan

In 2015, R4 will reach 12,000 participants: 5,000 in Tambacounda, 2,000 in Kolda and 5,000 in the new expansion region of Kaffrine. Among the 12,000 participants, in Tambacounda 4,850 will be offered insurance through the IFA scheme, while 1,200 will be offered commercial insurance (index, property and livestock) to be paid in cash. In Kolda, 750 participants will be offered commercial insurance (weather index, property and livestock). This figure includes farmers currently reached by the USAID-funded Economic Growth Project (PCE), as planned under the

grant awarded to R4 by USAID/DIV. Based on IRI's end of season assessment, the 2015 index will follow the design of the previous year, which features two fixed-date windows to capture rainfall deficits at the beginning of the season and at the end of the season. The only improvement will concern the level of rainfall cap, which will be adapted to better account for dry spells. The rainfall cap indicates the maximum amount of rainfall that is counted for each ten-day period. The cap allows to detect dry spells more accurately by taking into consideration runoff water from heavy rainfall.

**FIGURE 8. R4 Senegal scale-up areas**



## Malawi

### Key Achievements

- Balaka district selected for piloting R4. Food for assets activities started in Balaka in December 2014. District and community planning activities were conducted in 2014.
- Balaka District Council, Concern Universal (CU) and Concern Universal Microfinance Organization (CUMO) identified as key partners in the implementation of the program.
- Plan and implementation timeline for the risk transfer component is in place and data collection has started.

R4 started operations in Malawi in August 2014. R4 complements the existing resilience portfolio, which includes on-going activities by the Global Framework for Climate Services (GFCS) and WFP, such as the 3-Pronged Approach to Resilience Programming (3PA) and the food assistance for assets (FFA) Program.

The 3PA process has been undertaken at all levels with the goal to inform resilience activities by WFP, government, and partner NGOs. The outcomes of this process are informing the planning for R4 and other resilience activities.

In Balaka District, FFA activities started in December 2014. R4 will capitalize on the existing structures and mechanisms to pilot the program. As such, the cornerstone of R4 programming will be WFP's FFA program into which improved disaster risk reduction, IFA, savings and credit will be integrated. During the pilot phase, R4 will help assess ways in which these tools can be mainstreamed into the national programs that are being developed.

Until March 2015, R4 will concentrate in setting up and consolidating the program team, R4 component design, basic programmatic instruments, partnerships, and planning for implementation. A partnership has been established with

Concern Universal (CU) and their micro-finance partner, CUMO Microfinance Organization, as key R4 implementation partners in the district. Furthermore, a plan and implementation timeline for the development of the risk transfer component is in place, including for the design of the weather index insurance prototype and product, as well as, for the IFA component.

Program design and testing will conclude by April 2015 giving way to the one year pilot implementation phase. In 2015, DRR, risk reserve, and risk transfer components will be conducted including 1,000 households. In 2016, risk taking will be explored and incorporated.

## Zambia

### Key Achievements

- Pemba district, in Southern Province, identified for the implementation of the pilot program.
- WFP's planning tools for resilience programming have been rolled out to assess local context and identify programming entry points and complementarities.
- Broad analysis of stakeholders at national and local levels carried out.
- Draft M&E tools are in place and the system is being set up.

WFP started preparations for R4 implementation in Zambia in August 2014. During the inception phase, R4 focused on identifying and assessing potential partners, recruitment, and establishing an M&E framework.

Context and programming assessments took place from October to December to support the definition of R4 activities. This process included a training-of-trainers for the Country Seasonal Livelihood Programming (SLP) Team, as well as representatives from the government, civil society, and international agencies. The team was responsible for conducting the local level planning using the SLP and Community-Based Participatory Planning (CBPP) tools. Additional CBPP processes will be conducted in 2015.

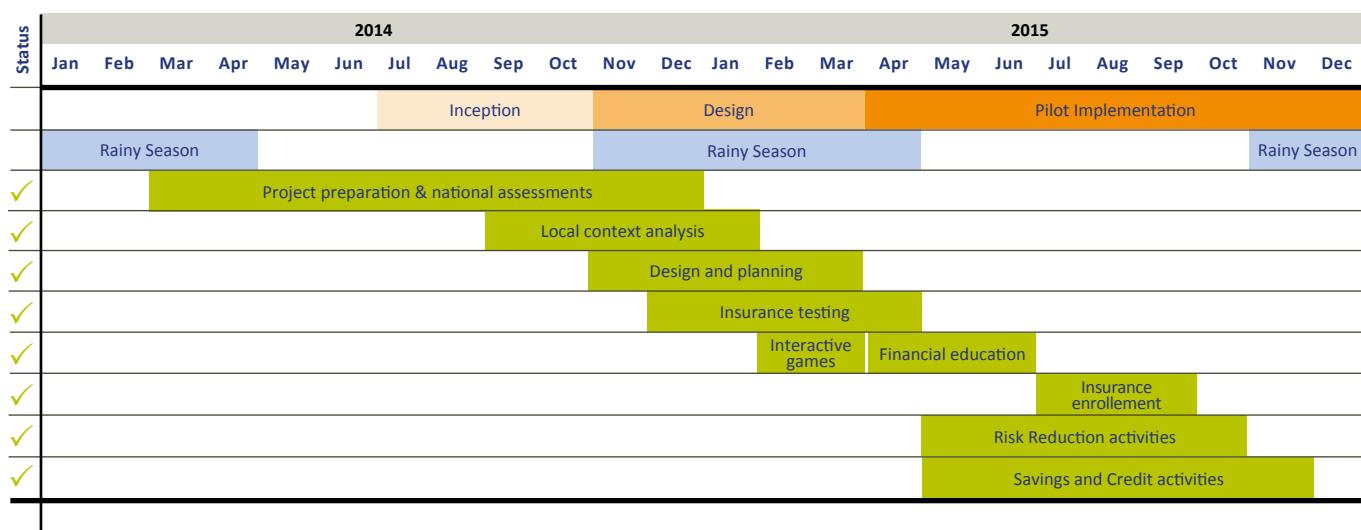
The analysis and planning for the design of the weather index insurance product concluded earlier in 2015 and now the insurance prototype is being developed to be tested prior to implementation.

Pilot implementation will run during the 2015-16 agricultural season in the agricultural camp of Kanchomba South within the Pemba District. The location was identified through a general context analysis on the agro-ecological, food security and livelihood conditions and based on the presence of local partners.

Through R4, farmers participating in disaster risk reduction activities will have access to a package of risk management services such as insurance, credit and savings for improved agricultural productivity and the improvement of linkages to markets and climate information services.

Refinement of the R4 components and implementation at bigger scale is scheduled after March 2016.

**FIGURE 9. R4 Malawi and Zambia timeline**





An animatrice performs insurance games in the village of Kouthiakoto, Senegal.  
Azzurra Massimino / World Food Programme

## Evaluation and Learning

R4 is an innovative approach to resilience building, providing several opportunities for learning, building feedback mechanisms and benefiting from the system's flexibility to better customize it to each specific context. This is why R4 places a strong emphasis on evaluation and learning, through an approach that is (a) operational such that the results of the analysis performed feed directly into R4's strategic planning; and (b) independent, with outcomes and impacts evaluated by external stakeholders. In this report, we highlight three studies that have been conducted in 2014:

- Process evaluation conducted on R4 Senegal's risk reduction component;
- Baseline survey conducted in Amhara, Ethiopia;
- Gender analysis conducted in Senegal.

We then outline some interesting lessons learnt and challenges that have emerged during implementation in 2014.

### Process evaluation conducted on R4 Senegal's risk reduction component

In 2014, the annual process evaluation focused on the risk reduction component of R4 Senegal, taking a closer look at some key aspects including the conception and design of the intervention, the quality and completion of the assets, the coordination with other initiatives, and the assets' long-term sustainability in terms of maintenance by local communities. An external consultant was hired to conduct the evaluation. The mission visited 18 sites in the two regions where the program is operational, Tambacounda and Kolda.

The main outcomes of the evaluation, and concrete follow up actions are:

- **Conception and design.** Community-based Participatory Planning (CBPP) has been conducted in each of the clusters visited, however more emphasis should be placed on location-specific constraints and opportunities.

**Action:** Sub-Offices' deeper involvement into CBPP exercises.

- **Quality and level of completion of the assets.** Most of the assets assessed were completed with mixed quality levels, due to either a late start or inadequate allocation of financial and human resources by the partner.  
**Action:** The implementing partner in Tambacounda, where most of the issues were found, has been replaced.
- **Partners' coordination.** There are several opportunities to integrate R4 risk reduction interventions within the broader rural development initiatives that are active in the two regions.  
**Action:** Discussion with other UN agencies and programs started at the local and national level to integrate interventions.
- **Village level management structures.** At the cluster/village level, management structures need to be improved to ensure that assets are maintained over time.  
**Action:** Training opportunities will be improved both for participants and implementing partners. Village level key figures namely *animateurs* and *relais* will be strengthened.

#### **Baselines survey conducted in Amhara, Ethiopia**

The R4 Initiative was expanded to the Amhara region of Ethiopia in September 2012 with a pilot in Michael Debir village of Libokmkem district. In 2013 agricultural season, the weather index insurance was offered for the first time in this village. In 2014 the program was expanded to two additional villages in Libokmkem district- Sheoch Tehara and Birkute.

As the program further expands in Amhara, and in order to be able to measure its impact, a study was commissioned by ORDA to collect gender-sensitive baseline data on key impact, outcome and output indicators of the project against which changes can be measured over time.

The baseline data was collected from a representative sample of 100 households who participated in the R4 program, and 100 households who did not participate in the R4 intervention in the three project villages. Of these, between 50 and 60 percent of the households in each group are participants of the Productive Safety Net Programme (PSNP).

The study focused on documenting the existing food security situation and livelihood options; weather index crop insurance coverage; the type of risk reduction activities implemented by the farmers; farmers' involvement in high risk high return activities such as: farm input use of improved seed, fertilizer, improved technologies; small-scale saving schemes and accessing credit; and gender dynamics in participation of men and women in different activities, including access to and control over resources in the households.

The results of this baseline study will be used in the follow-up survey which is scheduled to be conducted at the end of 2016.

#### **Gender analysis conducted in Senegal**

In rural Senegal women perform all domestic work, including household chores and taking care of the family, and are substantially involved in economic activities including cropping, livestock keeping, harvesting and processing of forest products and petty trade. Their contribution to the household's budget is therefore considerable. However, women have limited access to resources and productive assets such as land, water and equipment. Compared to the ones reserved to men, their activities, such as rice cultivation, vegetable gardens, petty trade, usually do not produce substantial income. Combined with limited financial knowledge and credit history this context often excludes women from accessing credit.

According to a study conducted by the Institute of Development Studies (IDS), R4 contributes to women empowerment in a number of ways. Women claimed that, in addition to having increased access to land, seeds and water for irrigation and drinking, they benefited from training in numeracy, literacy and business. Having more food and water available also means that they no longer have to travel far from home to fetch water, with consequent gains in terms of time to dedicate to their children or small business. The study found a reduction in stress as women are more confident about their ability to feed their children, as well as pay school fees and other expenses through small financial gains from selling their surplus crops.

The IDS study and a subsequent analysis performed by Oxfam America suggest that some of the best practices developed through the R4 initiative include:

- Equal participation of men and women in Community-based Participatory Planning (CBPP) processes and management committees at the village level, leading to better targeting and more accurate identification of needs. The division of labor is made on a consensual basis, with men devoted to tasks that require more physical strength.
- Inclusion of activities which explicitly target women to improve their economic opportunities, such as the development of vegetable gardens, the expansion and improvement of rice cultivation, and the creation of savings groups.
- Inclusion of men in activities traditionally reserved to women such as the savings groups, which allowed to increase and stabilize household's resources.

Amidst these encouraging results, the two studies identified remaining constraints:

- The lack of recognition of the unpaid care work performed by women (98 percent of household chores being done by women and girls), which competes with economic activities;

- Time constraints, lower mobility and higher illiteracy rates limit women's ability to access more profitable income generation opportunities;
- Limited access to productive resources, with the exception of river beds where women grow rice;
- Fewer solutions to cope with climate variability and vulnerability to climate change: Women and youth are physically more vulnerable from a nutrition standpoint, having fewer options to cope with the impacts of climate shocks due to their limited mobility and lack of access to resources.

## Lessons Learnt and Challenges from the field

**Addressing basis risk** requires a fundamental rethinking of how the insurance windows are structured and the set-up of mechanisms such as farmer saving programs or a basis risk fund to protect farmers during basis risk events. Scientifically-based design and optimization procedures have been implemented since the beginning of the project for index design, validation and improvement. The index has been found to perform favorably based on industry standards aligning payouts to drought seasons and farmer reported bad years. However, the diagnosis and technical assessments of the 2013 season highlighted the importance of making further technical improvements to the index. Based on this assessment conducted by the IRI team, technical improvements are being made to the index design process. For example, a 'dry-run' was conducted in Ethiopia this year to test the performance and reliability of the MODIS (Moderate Resolution Imaging Spectroradiometer) Enhanced Vegetation Index (EVI)<sup>3</sup> in addressing basis risk challenges. The analysis showed that by adding MODIS EVI to the current ARC2 satellite rainfall estimate, the index would be able to trigger payouts for most of the loss years, including 2013 when a basis risk event was observed in some areas of Ethiopia. The proposed product based on EVI will be integrated into the late season index and packaged with the current late window contract.

### The risk reserves and prudent risk taking component of R4

**Senegal are showing great traction.** Over 90 percent of savings accumulated through SfC groups was loaned, which shows that there is a strong demand for credit not currently satisfied by the groups themselves. Going forward it is crucial to further link up SfC groups to MFIs and more formal financial institutions. A key component of SfC is training. Farmers understand the added value of SfC methodology on oral accounting, loans and interest schemes, and often decide to switch from traditional tontines system to R4's SfC method. Farmers typically use savings to purchase agricultural equipment (especially men savings groups) or as the initial investment for petty trade (particularly women), but also to purchase seeds and fertilizers. Starting in 2015 farmers will be able to purchase quality seeds on a layaway savings system

in Koussanar, thanks to a partnership with MyAgro, a seeds and inputs provider. Farmers can save up to the end of March 2015 through savings groups, and purchase seeds to be delivered in June.

### R4 needs to improve in measuring retention rates across years.

Registration in Ethiopia is performed using a paper-based system. Once information (farmer names, insured land size, insured crops, insured values, etc.) is collected, it is manually entered into Excel. This process is prone to human error, but there are a number of other factors that further complicate this issue. First, translating names from Amharic to English can result in a variety of different spellings leading to a discrepancy in the number of farmers actually enrolled. Similarly, farmers often enroll under the names of different household members in different years, meaning retention is not captured, even if it is in fact occurring. The team is currently exploring possible ICT based tools, which could include assigning unique individual and household identifiers, to improve the registration and retention tracking processes.

There is a **need to improve the insurance roll-out process and DRR activity schedule** to allow more time for farmers to make timely decisions on insurance. This year, the accelerated and shortened insurance registration period in Ethiopia, prompted by climate forecasts and the anticipated rise in premium rates, contributed to a reduction in the number of farmers willing to purchase insurance for cash as there was not enough time to conduct adequate marketing/socialization activities. In 2015, the project aims to roll out the product earlier in the season in both Ethiopia and Senegal to expand the period of marketing, refining indexes and organizing the IFA scheme early in the season, as well as allowing more time for insurance delivery in areas where there is potential for farmers to purchase insurance with cash.

## Going forward

To improve implementation and measure success, in 2015, the R4 team is developing four additional learning tools:

- The R4 implementation guidelines will provide a practical methodology for developing a R4 project, from inception to M&E. The guidelines will also facilitate knowledge management by collecting literature produced by the R4 team and external stakeholders.
- A basis risk study will address the most significant challenges to R4's index insurance.
- A cost-benefit analysis will assess the comparative effectiveness of R4 in preventing or reducing the need for humanitarian responses in areas exposed to climate shocks.
- In Senegal, the R4 team is currently working with Dalberg Global Development Advisors to carry out an impact evaluation. The final results of this evaluation will be available in mid-2016.

3. EVI provides a measure of "greenness" or chlorophyll density. This is useful in monitoring the conditions of vegetation, particularly in rangelands for livestock insurance.

# R4 Policy and Advocacy

2015 holds enormous potential for climate change and disaster risk reduction efforts. In March, global leaders gathered to develop a new framework for disaster risk reduction and to agree on a deal to tackle climate change and its impacts. This presents a unique opportunity to offer the R4 model to the world as an innovative approach to building the long-term resilience and food security of the rural poor.

In addition to engaging in the global policy discussions (as outlined in the foreword), R4 partners are working to create a supportive legal and regulatory environment for index insurance and the R4 initiative in implementation countries.

For example, in order to scale-up R4 in Ethiopia and integrate it into the Government PSNP, Oxfam America and WFP entered into a Memorandum of Understanding (MoU) with the Ethiopian government (Disaster Risk Management and Food Security Sector DRMFSS of the Ministry of Agriculture). A Steering Committee was established, chaired by the head of the DRMFSS, with representatives from a range of organizations including Oxfam, WFP, International Labor Organization (ILO), Early Warning and Response Directorate, REST, and ORDA. The timing for this integration is opportune. As a result of these efforts, the *Productive Safety Net Programme 4 Design* document officially recognizes weather index insurance as a potential tool to support the graduation of PSNP participants. It states that, “*Safety net and graduating households will be referred/linked to appropriate insurance products where available (e.g. weather indexed crop/livestock insurance as well as credit life insurance).*”

R4 is highlighted in the Ethiopia Social Protection Strategy draft referring to the positive productive effects of the program on farmers. The report calls for a nation-wide feasibility of weather index insurance taking into account the results of R4 and other such pilots.

In line with these developments, the R4 team together with ILO held three rounds of consultative meetings with insurance service providers, development partners, and government bodies to initiate the process of setting up a national index insurance working group (IIWG). The objective of the IIWG is to facilitate experience sharing among existing agricultural insurance pilots, support national capacity building and create a platform for advocacy, for the inclusion of agricultural insurance in national policies and development strategies.

## Citizens' jury and community budget advocacy in Senegal

*“I didn't even know that I had the right to ask for a copy of the budget”* said a participant.

In Senegal, R4 organized an introductory budget advocacy training for members of the Tambacounda-based citizens' jury which represents nine communes. The training covered a number of budget advocacy topics including an overview of the budget cycle, entry points for citizen engagement, budget analysis and strategies, tools and tactics for effective budget advocacy. The Director of the Regional Development Agency (regional development arm of the Ministry of Internal Affairs) provided an overview of the budget development phase at the national, regional and local levels and provided an introduction to budget development principles.

The citizens' jury was developed in 2013 as part of the R4 Rural Resilience Initiative. The objective of the citizens' jury is to voice the concerns and priorities of communities to local and national government bodies in R4 intervention zones and to ensure ownership over R4 activities at the community-level.



Planting seedlings on bunds in Libokemkem, Ethiopia.  
*Asmamawu Mihret / REST*

# Conclusion

## Funding progress

In 2014, R4 has raised over \$12 million of additional funding (out of the total \$26 million raised) allowing the program to grow in Ethiopia and Senegal, while starting expansion to Malawi and Zambia. By reaching four countries by 2014, R4 has accomplished the geographical expansion objectives set out in 2011 when the program started.

The success of the 2014 resource mobilization round shows how the R4 model attracts substantial interest from donors in both the private sector and governments.

However funding opportunities remain open to for donors whose interest matches the following objectives:

- R4's scale up and mainstream in Ethiopia to 100,000 farmers by 2020.
- R4's growth in Senegal to reach 25,000 farmers by 2020.
- R4's consolidation in Southern Africa, reaching over 40,000 farmers by 2022.
- R4 integration with WFP's access to market program, Purchase for Progress in Ethiopia to provide risk transfer instruments to surplus selling smallholders.
- R4 expansion into pastoralist areas in Ethiopia.

Figure 10 shows the contributions of R4's current donors and technical partners.

**FIGURE 10. Donor contributions to R4**

Donor	Recipient	Total contribution (USD)	Countries	Funding period
Swiss Re	Oxfam America	1 250 000	Ethiopia, Senegal	(2012–2016)
United States Agency for International Development - USAID	WFP	7 958 453	Senegal	(2012–2015)
USAID - iDIV Award	WFP	500 000	Senegal	(2014–2015)
Norway	WFP	2 700 000	Ethiopia, Malawi, Senegal, Zambia	(2013–2014)
Rockefeller Foundation	Oxfam America	599 000	Senegal	(2012–2013)
Oxfam America	Oxfam America	1 100 000	Ethiopia	(2010–2013)
Swiss Agency for Development and Cooperation - SDC	WFP	6 579 000	Malawi, Zambia	(2014–2017)
Margaret A. Cargill Foundation	Oxfam America	5 000 000	Ethiopia, Senegal	(2015–2016)
FAHU Foundation	Oxfam America	60 000	Ethiopia	2016
<b>TOTAL</b>	<b>WFP/OA</b>	<b>25 746 453</b>	All	

## Looking ahead

WFP and Oxfam America launched the R4 Rural Resilience Initiative in 2011. The strategic partnership between OA and WFP builds on the success of OA's Horn of Africa Risk Transfer for Adaptation (HARITA) project and leverages each other's strengths, networks, and institutional opportunities to test and scale up a comprehensive risk management approach to help communities be more resilient to climate variability and shock.

The end of 2014 marked the expansion of R4 to over 26,000 farmers in Ethiopia and Senegal. In 2015, R4 is working to reach new farmers and communities in Ethiopia and Senegal, while kick-starting operations in Malawi and Zambia and exploring new potential countries such as Kenya and Bangladesh.

The R4 Global Retreat in March 2015 offered a timely avenue for the R4 Team to take stock of the progress achieved and way forward. As we approach the end of the R4 5-year Strategic Partnership (2011–2016) between WFP and OA, two concrete next steps were set to prepare the design of the new phase:

1. Consolidate the results and learning from Phase 1, including the development of critical tools such as R4 operational guidelines and the cost-benefit analysis, as well as documenting lessons and generating evidence;

2. Develop a new strategy and business plan, including an OA/WFP's strategy for resource mobilization, as well as the conceptualization and implementation of an expansion and sustainability model.

A central objective of the program is to test the effectiveness and scalability of the R4 integrated approach. As such, the program itself represents a critical learning opportunity to develop the next generation of climate risk management, adaptation, and safety net approaches across different locations and contexts.

TOTAL  
16536  
CEREAL

NUMBER OF PARTICIPANTS

Fetou	Nde
Sinadio	B&
Bouyou	B&
Oumar	B&
Amadou	50W
Mamoudou Youne	50W
Amadou Thione	B&
Moussa	B&
Abedoulaye	50W
Lomé	B&L
Nassirou	B&
Dicula	yoh
Somaito	Helye
Oumar	B&L
Nomade Sogoba Sone	
souleymane	B&

A Village Cereal Bank implementing the warrantage scheme in Tambacounda, Senegal.  
Azzurra Massimino / World Food Programme

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A community shows the result of a CBPP exercise in Malawi.  
Rachael Wilson / World Food Programme

# Annex I: R4 partners and institutional roles

## Our local/national partners in Ethiopia

- **Africa Insurance Company:** Private insurer in Ethiopia operating in the Tigray, Amhara, and Oromiya regions.
- **Dedebit Credit and Savings Institution (DECSI):** Second-largest microfinance institution (MFI) in Ethiopia with nearly comprehensive coverage of Tigray. Named by Forbes magazine as one of the top 50 MFIs in the world.
- **Ethiopian farmers' cooperative:** Primary organizing body for farmers in the community
- **Ethiopian National Meteorological Agency (NMA):** Agency offering technical support in weather and climate data analysis.
- **Institute for Sustainable Development (ISD):** Research organization dedicated to sustainable farming practices.
- **Mekelle University:** Member of National Agricultural Research System providing agronomic expertise and research.
- **Nyala Insurance Share Company:** Private insurer in Ethiopia with a strong track record of interest in agricultural insurance.
- **Organization for Rehabilitation and Development in Amhara (ORDA):** Established in 1984 with a focus on natural resource management, food security and agricultural development in Amhara.
- **Relief Society of Tigray (REST):** Local project manager for HARITA, responsible for operating the Productive Safety Net Program (PSNP) in six districts of Tigray and overseeing all regional coordination. Established in 1978. Working with Oxfam since 1984 on development issues. Largest nongovernmental organization in Ethiopia (and one of the largest in Africa).
- **Tigray Regional Food Security Coordination Office:** Office with oversight of the PSNP in the pilot area.
- **Tigray Cooperative Promotion Office:** Office responsible for helping organize farmers at the village level.

## Our local/national partners in Senegal

- **Agence Nationale de Conseil Agricole et Rural (ANCAR)**  
- National Agency for Rural and Agricultural Assistance. Technical agency affiliated with the Ministry of Agriculture. In Koussanar, it is responsible for leading community awareness and mobilization activities, and providing seeds as well as technical advice to farmers. Like PAPIL and INP (listed below), ANCAR is a key partner for the Risk Reduction component.
- **Agence Nationale pour l'Aviation Civile et de la Météorologie (ANACIM)** - National Meteorological and Civil Aviation Agency. ANACIM helps with the design of insurance product(s) by providing historical and current climate data, and installing and maintaining weather stations.
- **BAMTAARE.** Technical agency affiliated with the Ministry of Agriculture, in charge of lowland rehabilitation and rice production activities in Tambacounda.
- **Caritas Kolda.** Religious organization carrying out DRR projects on access to water and sanitation, production and processing, and migration management, and leading voucher distribution in Kolda.
- **Centre d'Appui au Développement Local (CADL) - Support Center for Local Development.** A body of the Ministry of Regional Development and of local government, it is responsible for coordinating rural development projects in each Communauté Rurale. It chairs the R4 Local Technical Committee in Koussanar, and is responsible for the coordination between the various local partners and for the overall coordination of all R4 components on the ground.
- **Compagnie Nationale d'Assurance Agricole du Sénégal (CNAAS)**  
- National Agricultural Insurance Company of Senegal. Senegal's only agricultural insurance company (public-private company founded in 2008 by the government). It is the insurance provider for the product(s) offered under the Risk Transfer component.
- **Crédit Mutuel du Sénégal (CMS) – Mutual Credit of Senegal.** A microfinance institution with an important national coverage, including in the Tambacounda region. In Koussanar, it is the implementation partner for the Risk Taking (credit) component.

- **Institut National de Pédologie (INP)** - National Institute for Pedology. Technical agency affiliated with the Ministry of Agriculture, in charge of soil conservation and restoration projects, including building stone bunds and check dams, and composting.
- **La Lumière**. A grass-root Senegalese NGO which provides financial services to low-income rural households. It is the current implementation partner for Oxfam's Saving for Change program in Senegal, and the implementation partner for the Risk Reserves component.
- **PASA**. Technical agency affiliated with the Ministry of Agriculture, in charge of lowland rehabilitation and rice production activities in Kongehuel.
- **Projet d'Appui à la Petite Irrigation Locale (PAPIL) - Project to Support Small Local Irrigation**. Technical agency affiliated with the Ministry of Agriculture, in charge of lowland rehabilitation and rice production activities in Kolda.
- **PlaNet Gurantee**. Insurance broker specializing in micro-insurance for development and poverty reduction. In Koussanar, it helps CNAAS commercialize R4's insurance product(s) by conducting awareness-raising and marketing activities among clients.
- **Regional Research Centre for the Improvement of Drought Adaptation (CERAAS)**. CERAAS helps with the design of insurance product(s) by helping create the rainfall index (including by contributing to studies on the use of remote sensing tools), and by carrying out crop monitoring.
- **Université Gaston Berger de Saint Louis (UGB)**. The second university established in Senegal, specialized in Social Sciences, Economics and Business Management, Political Science and Applied Science. UGB provides the enumerators for FERDI's Risk Transfer studies.

## Our global partners

- **Fondation pour les Etudes et la Recherche sur le Développement International (FERDI)**. The Foundation for International Development Study and Research was created in 2003 on the initiative of CERDI- the Centre d'Etudes et de Recherches sur le Développement International (Université d'Auvergne, France) to support research in the field of international economic development.
- **Goulston & Storrs, and Weil, Gotshal & Manges**. Law firms providing pro bono legal expertise.
- **Index Insurance Innovation Initiative (I4) at University of California, Davis (UC Davis)**. Research partnership on index insurance between academia and development organizations, with UC Davis, the Food & Agriculture Organization, International Labour Organization, and the US Agency for International Development.
- **Swiss Re**. Global reinsurer and leader on climate change advocacy with funding and technical expertise.
- **The International Fund for Agricultural Development (IFAD)**. A specialized agency of the UN focused on rural poverty reduction, hunger and malnutrition.
- **The International Research Institute for Climate and Society (IRI)**. Member of Columbia University's Earth Institute offering research and technical expertise in climate data and weather index design for rural farmers.

# Annex 2: Metrics from the field

## ETHIOPIA



### Risk Reduction

- A cross-regional exposure visit focusing on land degradation management in Southern Nations, Nationalities and Peoples Region (SNNPR) was conducted for 35 DRR experts.
- The following DRR activities in soil and water conservation were carried out in Tigray:
  - To treat the catchment areas, almost 26 m<sup>3</sup> of deep trenches were excavated in degraded communal catchments, 28 percolation ponds were created by excavating 2,231 m<sup>3</sup> of soil, and 150,000 multipurpose trees were planted.
  - 6 km of gully were rehabilitated by constructing 2,082 m<sup>3</sup> of rock check dams and planting 95,882 cuttings of elephant grass and populous in 34 villages.
  - 22 km of spate irrigation structures were constructed by excavating 12,539 m<sup>3</sup> of soil.
  - 1,000 women-headed households prepared small micro-garden plots across 11 villages.
  - 2,176 compost pits were prepared, which allowed for the production of 2,176 m<sup>3</sup> of compost. This amount of compost would be sufficient to fertilize 87 ha of land. 1,089 farmers were trained on composting practices.
  - 150,000 cactus pads were distributed to 4,600 farmers to be planted on the boundaries of their farmlands and backyards, as well as on communal land.
- In Amhara, soil and water conservation efforts included:
  - Constructing the following to cover 175 ha of land:
    - 23 m<sup>3</sup> of gabion check dam and 23 km of hillside terraces.
    - 21.5 km of stone faced soil bunds.
    - 12 km of soil bunds.
    - 516 water percolation trenches, 20 eyebrow basins.
    - 14,035 planting pits for seedlings.
  - Planting 69,705 tree seedlings from Tree Lucerne, Cupressus Lusitanica and Eucalyptus.
  - Distributing 1,000 apple seedlings to 54 households.
  - Distributing 200 quintals of improved, disease-resistant potato seeds to 417 households (73 FHHs) in Michael Debir.
  - Training 91 households on composting practices to increase availability of micro nutrients for the nutritional uptake of plants. After the training, participants were able to prepare 844 m<sup>3</sup> of compost.



### Risk Transfer

- Insurance indices for 2014 season were restructured following the challenges faced in 2013 and discussions with farmers in Amhara and Tigray.
- Insurance was purchased by 23,001 farmers in Tigray and 1,142 farmers in Amhara.
- A total of 1,282 farmers paid the full premium required in cash, while the rest of the farmers contributed 15 percent of the premium in cash and paid the remaining in labor.
- The total sum insured was \$1,348,732 (ETB 26,085) while the premiums paid amounted to \$269,963 (ETB 5,105.248).
- A total of 81 village-level design teams in Tigray and 3 design teams in Amhara were trained to strengthen their knowledge on index design and risk management; village-level design teams were established in the two new villages in Amhara - Berkutae and Shehoch Tehera.



### Prudent Risk Taking and Risk Reserves

- In Amhara, at total of 1,585 farmers including the 1,142 farmers who purchased insurance were organized into 80 Village Savings and Loan Groups (VSLG); the groups have saved approximately \$7,200 (ETB 140,020) in total.
- The average monthly saving amount in the savings groups exceeded from ETB 10 per household in 2013 to ETB 13.5 in 2014 in Amhara; a total of \$14,828 (ETB 296,556) has been loaned to 967 VSLG members (including 231 women).
- A revolving fund of \$22,950 (ETB 459,000) was set up and agreements were signed with the local cooperative and RIB Union in Amhara to facilitate loans of approximately \$100-200 (ETB 2,000-4,000) for R4 participants.
- In 2014 in Tigray, R4 launched its Risk Taking and Risk Reserves components in three woredas that are particularly prone to basis risk; a total of 360 (142 FHHs) insured farmers were selected to receive IGA loans (priority was given to insured, female-headed households).

# SENEGAL



## Risk Reduction

### Tambacounda

#### Low-land agricultural development

- 148 ha of lowland developed and sown with rice, of which 60 ha in Koussanar. 6,240 kg of rice seeds and 2,250 kg of fertilizer distributed to participants farmers.
- In Koussanar, the 60 ha produced on average 2.5 ton of rice per hectare. There was a poor harvest in almost all the new 2014 sites due to poor rainfall and long dry spells. Premature cessation of rains slowed down the building of the internal secondary developments in some sites.

#### Water management structures

- 2 new dams in Sinthiou Maleme and Missirah were completed with irrigation canal and water retention.
- 23,353 ml out of an initial target of 31,590 ml of small dykes separating rice plots and encircling the perimeter of the rice plots were built. The difference is due in part to the instability of rains and low rainfall this year with several dry spells during which work was not possible because of the soil drying up.

#### Soil restoration and protection of lowland from silting

- 20 bunds with frames (diguettes en cadre) completed; 7,595 ML of stone bunds built and reinforced with vetivers (2 sites); 5,400 cubic meters of sand removed in 18 ha in 4 valleys; 3,600 ml reforestation.

#### Trainings

- A total of 2,978 farmers were trained of which 1,687 women. Trainings included:
  - Valorization and sowing techniques: 486 farmers trained (319 women and 167 men).
  - Harvesting techniques and storage (rice): 350 farmers attended (245 women and 105 men).
  - Vegetable production techniques: 923 attended (635 women and 288 men).

- DSR- stone bunds building techniques: 308 farmers trained (179 women and 129 men).

- DRS- bunds with frames (diguettes en cadre) and dredging: 240 farmers trained (40 women and 200 men).
- Small dykes: 671 farmers trained (269 women and 402 men).

#### Food assistance

- 3,601 participants reached (1,505 in Tambacounda and 2,096 in Kountentoum).
- 308 MT of food in 3 distributions (Tambacounda, Kountentoum and Missirah).
- \$86,568 (52,374,000 FCFA) worth of food vouchers corresponding to 2,181 coupons.

#### Horticulture

- 4 ha of multipurpose gardens consolidated and seeds distributed.

### Kolda

#### Lowland agricultural development

- 115 ha of rice were planned to be developed: 120 ha of rice has been realized with lack of water as the main constraint. 5,750 kg of rice seeds were distributed to project participants.
- To estimate agricultural (rice) production, performance squares have been set up in the valleys. Five performance square were placed at each site. The average yield is around 2.16 ton per ha leading to a total production of 276 MT compared to the 345 MT planned.

#### Water management structures

- 20,420 lm out of an initial target of 18,000 lm of small dykes separating rice plots and encircling the perimeter of the rice plots were built. The surplus is explained by the strong, voluntary participation of the non-project participants to the works.

#### **Soil restoration and protection of lowland from silting**

- 2,450 lm of stone bunds built out of 6,815 foreseen (difference due to a tardive start of the works); 12,000 metric cube of sand excavated during the re-profiling of two ponds in Dioulacolon and Ndorna.

#### **Trainings**

- Rice sowing techniques: 306 farmers trained (248 women and 58 men).
- Vegetable production techniques: 194 trained (172 women and 22 men).
- Small dykes building: 2,000 farmers trained ( 1,400 women and 600 men).

#### **Food assistance**

- 2,000 participants and 18,000 beneficiaries reached.
- 288 MT of food in two distributions.
- \$22,739 (13,757,600 FCFA) worth of food vouchers corresponding to 1,055 coupons.

#### **Horticulture**

- Planting covers 13 hectares with 72 kg of seeds distributed (Tomato, Pepper, Okra, Watermelon, Onion and cabbage); 5 trainings sessions (out of 6) on market gardening techniques were conducted with 194 farmers trained (172 women and 22 men).



#### **Risk Transfer**

- 1,989 people insured (53 percent women) in 7 clusters (31 villages).
- Total sum insured : \$200,776 (121,470,000 FCFA).
- Total premium : \$29,823 (18,043,394 FCFA).
- Number of people receiving payout: 299.
- Total amount of payout \$3,929 (2,244,302 FCFA) with a loss ratio of 16.88 percent.



#### **Risk Reserves**

- 395 savings groups currently involved under the component.
- 9,084 members of savings groups (7,182 women and 1,902 men) in Tambacounda and Kolda regions.
- The savings mobilized by these groups since the implementation started in the field in these two regions amount to \$35,804 (21,661,855 FCFA).



#### **Prudent Risk Taking**

- 3,225 loans amounting to \$32,304 (19,544,200 FCFA) have been taken out by the savings group members.
- Under the *warrantage*, 14 households accessed to credit amounting to \$1,495 (905,000 FCFA) using their 5.1 tons of cereal stock (rice, maize, sorghum and millet) as collateral.



DRR irrigation project, WFP resilience programming, Zomba, Malawi.  
*Bridget Reihardt / World Food Programme*

# Annex 3: Media citations and resources

Through targeted policy and advocacy efforts, WFP and Oxfam seek to inform and advance the rural resilience agenda by leveraging the R4 experience to engage in high-profile global discussions on resilience-related themes. Highlights from 2014 include:

- WFP and Oxfam America staff members presented on the R4 experience at the [Climate Risk Forum: Building Innovative And Sustainable Index Insurance Markets](#) during the 2014 Climate Week in NYC.
- Within the broader discussion on climate change, WFP discussed the issue of food security and climate resilience in a number of formal and informal fora during the 2014 United Nations Climate Change Conference.
- The R4 Rural Resilience Initiative was featured at the “2014 Social Innovation Summit” where innovative thinkers at the nexus of technology, investment, philanthropy, international development, and business gathered to investigate solutions and catalyze inspired partnerships.
- During the “Adaptation Futures 2014: Third International Climate Change Adaptation Conference”, Oxfam America shared insights into the challenges and opportunities that adaptation presents at the international and local scale.
- R4 was recently recognized as one of five case studies by CGIAR’s Climate Change, Agriculture and Food Security Research Program in a publication entitled [“Scaling up index insurance for smallholder farmers: Recent evidence and insights”](#).

# Annex 4: Rural Resilience Event Series

Event Name	R4 role	Organizer	Focus	Expert Panel/Speakers/Attendants	Event Date & Location
Disaster Risk Management Training for Government.	Ezgimelese Tecleab (WFP), Presenter.	WFP	To build the capacity of Government staff and WFP field staff on DRM policy, priority areas and current projects/activities.	Government institutions and WFP sub-office staff.	Bahirdar, Ethiopia, December 10 - 12, 2014.
Climate Change Negotiations (COP 20).	Richard Choularton (WFP), Presenter.	United Nations Framework Convention on Climate Change.	Within the broader discussion on climate change, WFP discussed the issue of food security and climate resilience in a number of formal and informal forums.	Governments, NGOs, International organizations, civil society representatives.	Lima, Peru, December 1-12, 2014.
Evaluation committee WRMF, Remote Sensing Methodologies.	William Dick (WFP), Presenter, Mathieu Dubreuil, member of evaluation committee.	IFAD / WRMF	To assess the 2 first campaigns that were covered by the RSS study, give feedback on the outcomes of each methodology.	IFAD, VITO, CIRAD, ISRA (SN), CSE (SN), Swiss Re, GIFF.	Rome, December 1-2, 2014.
Agricultural Insurance Conference: How can we make it work to contribute to food security?	William Dick (WFP) Panellist.	German Ministry for Economic Cooperation and Development (BMZ), IFC Global Index Insurance Facility (GII), and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.	To explore the nexus between agricultural insurance and food security and the ways in which they are linked; To present the opportunities and challenges in mainstreaming agricultural insurance into agricultural and rural development policies, as well as food security.	Representatives from the agriculture insurance and reinsurance industry, donors and international development organisations.	Berlin, November 27-28, 2014.
Workshop "Strengthening coherence between agriculture and social protection".	Mouhamadou Moustapha Fall (CNAAS) Panelist.	FAO, UNICEF, the African Institute for Health and Development (AHD), the Africa Platform for Social Protection (APSP), the African Union (AU), and New Partnership for African Development (NEPAD), WFP, and the World Bank.	The relationship between social protection and agriculture including potential synergies and trade-offs in reducing poverty and food insecurity, context specific challenges.	Ministries of agriculture, social welfare and finance from African countries, representatives of civil society, development agencies and subject experts.	Cape Town, November 24-26, 2014.
Policy Forum on Integrating Agriculture and Food Risk Management and Innovative Financial Services.	Muna Tesfaye (OA), Teshome Erkinneh WFP, Presenters.	The Government of Ethiopia, The NEPAD Agency and AFRACA.	A policy forum on integrated risk management with a special focus on innovative financial tools.	Key Government institutions and parastatal/public enterprise; development partners and NGOs; NEPAD, COMESA, CIRAD, IFAD, FAO, WFP, Academia.	Addis Ababa, November 11-13, 2014.
Promoting climate resilient development within SDC programs in East and Southern Africa.	Fabio Bedini (WFP), Presenter.	Swiss Agency for Development and Cooperation (SDC).	To analyse the implication of climate change for development cooperation and humanitarian aid, with a focus on East and Southern Africa, and propose how to mainstream climate change and DRR into project and programs.	SDC representatives and project implementing partners.	Nairobi, September 8-12, 2014.
Capacity Development to support National Drought Management Policy, Eastern and Southern Africa Region.	Ezgimeles e Tecleab (WFP), Munaye Testfaye (OA), Presenters.	UN Water, WMO, FAO, UNCCD, the secretariat of the Convention on Biological Diversity (CBD).	To develop capacities of stakeholders on national drought management policies.	Participants from 10 African countries including NGOs; policy makers, and experts in agriculture, water, environment, biodiversity and meteorological services.	Addis Ababa, August 5-8, 2014.
Alternative Financing Sources for Climate Change Adaptation.	Munaye Testfaye (OA), Presenter.	UNEP	To promote constructive dialogue to foster collaboration between public and private institutions, as well as international development organisations on alternative financing for climate change adaptation.	Public and private organizations, multilateral banks, cooperation agencies and NGOs.	Lima, August 28-29, 2014.

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Event Name	R4 role	Organizer	Focus	Expert Panel/Speakers/Attendants	Event Date & Location
Social Innovation Summit 2014.	Richard Choularton (WFP), Presenter.	United Nations	The Social Innovation Summit gathering innovative thinkers who play at the nexus of technology, investment, philanthropy, international development, and business to investigate solutions and catalyze inspired partnerships.	Public and private organizations, multilateral banks, cooperation agencies and NGOs.	New York, May 29, 2014.
MCI/GIZ Workshop on “Innovative Insurance Solutions for Climate Change in a Comprehensive Risk Management Approach - Developing a Toolkit”.	Azzura Massimino (WFP), Presenter.	Munich Climate Insurance Initiative (MCI).	To inform the policy discussion on comprehensive risk management approaches and to support climate negotiators in their short and long-term strategies to address loss and damage.	Public and private organizations, multilateral banks, cooperation agencies and NGOs.	Bonn, May 12-13, 2014.
Adaptation Futures 2014: Third International Climate Change Adaptation Conference.	Mansi Anand (OA). Presenter.	Earth System Science Center of the National Institute for Space Studies, Brazil and UNEP.	To share insights into the challenges and opportunities that adaptation presents, and strategies for decision making from the international to the local scale.	Over 300 participants from 50 countries including researchers, policy makers and practitioners from developed and developing countries.	Fortaleza, May 12-16, 2014.
“Harnessing Community Savings Groups for Integrated Risk Management” as part of the “Webinar Series: Taking Savings Groups on the Road”.	Tenin Fatima Dicko (OA), Fabio Bedini (WFP), Presenters.	Oxfam America, SEEP Network, Carsey Institute.	To discuss the role of saving groups in expanding financial inclusion and development.	Saving group practitioners and development community in general.	Remotely via WebEx, April 12-13, 2014.
ODI Shockwatch Social Protection Workshop “Responding to a crisis: The design and delivery of social protection”.	Cecilia Costella (WFP), Presenter.	Overseas Development Institute (ODI).	To discuss the policy design and implementation features that facilitate timely and adequate social protection response in the event of a covariate shock and the financing and planning mechanisms that help secure shock response preparedness.	Social protection specialists and humanitarian emergency response experts from the UN, the World Bank and other NGOs and think tanks.	London, April 12, 2014.
Market Based Solutions: From Concept to Evidence Based strand at The 7th International AfrEA conference.	Asmelash Hailé Tsegay (Independent Consultant for Oxfam America, HARITA), Presenter; Retta Guidis (Monitoring, Evaluation & Learning Coordinator, Horn of Africa Regional Office- Oxfam America), Moderator.	African Evaluation Association & Rockefeller Foundation with Oxfam.	Market Based Solutions Methodology Panel: To assess the strengths, challenges and impacts of market based solutions to development and to share the various approaches in selecting an appropriate methodology.	Market Based Solutions strand: JPAL, CARE, FH 360 AfrEA conference 600-700 global participants and African policymakers.	Yaounde, Cameroon March 3-7, 2014. Proposal accepted.
International Congress on Insurance and Reinsurance of Agricultural Risks.	Cecilia Costella (WFP), Presenter.	The African Centre for Catastrophe Risks, ACCR, supported by the African Insurance Organisation, AIO, in collaboration with the Société Centrale de Réassurance, SCR, Maroc and The World Bank.	To highlight significant risks that threaten the agriculture sector, and discuss this issue in the presence of experts and speakers in the field.	Representatives from the agriculture insurance and reinsurance industry.	Marrakech, January 29-31, 2014.



Market in Monze, Southern Province, Zambia.  
Nick Ophoff / World Food Programme



# Collaboration

The R4 Rural Resilience Initiative is a strategic collaboration between the World Food Programme and Oxfam America, with no commingling of funds. Each partner has its own sponsors as listed. R4 is inviting donors to support expansion.



The World Food Programme is the world's largest humanitarian agency fighting hunger worldwide.

Each year, WFP assists some 80 million people in around 75 countries.

[www.wfp.org/disaster-risk-reduction](http://www.wfp.org/disaster-risk-reduction)

*With support from*



Oxfam America is an international relief and development organization that creates lasting solutions to poverty, hunger, and injustice, working with individuals and local groups in more than 90 countries. Oxfam America does not receive funding from the US government.

[www.oxfamamerica.org/r4](http://www.oxfamamerica.org/r4)

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