SSU video episodes and implementation of CSA technology packages in key value chains communications campaign (D24513)

Report

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Communication and dissemination of CSA technology packages
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Contents

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1. Background

Farmers, agribusiness agencies, experts, scientists, climate forecasters and policy makers engage in climate and agri-business knowledge co-production, building on both scientific and local/traditional knowledge, to co-produce and disseminate CSA technology scaling interventions (Tall et al., 2014).

To meet the needs of intermediaries and users, climate interventions and dissemination channels must be tailored to specific personas, users of climate information:

(i) individuals or groups of farmers and agri-business agents using climate data and information to plan and manage risks;
(ii) intermediaries and boundary organizations as knowledge brokers create an informed demand for climate information and facilitate its delivery.
(iii) people translating information on climate variability and change and its impacts to inform higher level decision making, for example, policymakers.

To scale up climate delivery systems, different platforms (mobile phones, internet, radio, TV) must be integrated, exploiting their benefits, and compensating for limitations" (Singh, 2016).

The study by Clarkson et al (2021) highlights the demand for climate information and advice in Zambia, on a range of weather variables for both long-term planning and immediate decisions. High in use were radio, famer cooperatives, lead farmers, and extension services. TV and phone-based programs seemed to reach fewer farmers. Fewer women farmers (<70%) in the Eastern region owned a basic phone.

AICCRA Zambia employed a range of advisory, communication and dissemination innovations, ultimately to improve farm level decision making in adaptation to climate change.

- The **Ag-Data Hub"** is a platform, hosted by the government of Zambia, Smart Zambia Institute, that integrates climate and agricultural knowledge and data to support farmer decision making effectively. The design of the platform engages government and private sector to define the needs for information, skills and capacity required to make use of climate information and related services.
- The **ISAT tool** is being tested and advanced in several agroecological zones in Zambia, to improve context and crop and livestock specific planning and management decisions. Agricultural extension services and researchers engage in context specific interpretation of short-term forecasts, to develop and disseminate advisories for farm level decision making.
- **Multiple communication channels**, across national to sub-national and community level, to mobilize actors at the specific level to reach out, and ultimately disseminate climate and agribusiness relevant information to agri-business entrepreneurs and extension services, and smallholder farmer communities to understand and manage climate risks.

A stakeholder network assessment helped us to critically look at the different levels of actors that can be mobilized to supply climate information and advisory services to farmers and other users (Homann - Kee Tui et al., 2022). Critical stakeholders in the Zambia agri-business ecosystem were identified that media should be engaging with in their outreach efforts. Catalyzing networks through media would help to impact on rural livelihoods more effectively and sustainably.

2 CSA technology scaling interventions

Climate interventions and dissemination channels engaged actors at multiple levels to stimulate relationships and networks and feedback across these linkages, to deepen and expand delivery with AICCRA partners (Figure 1).

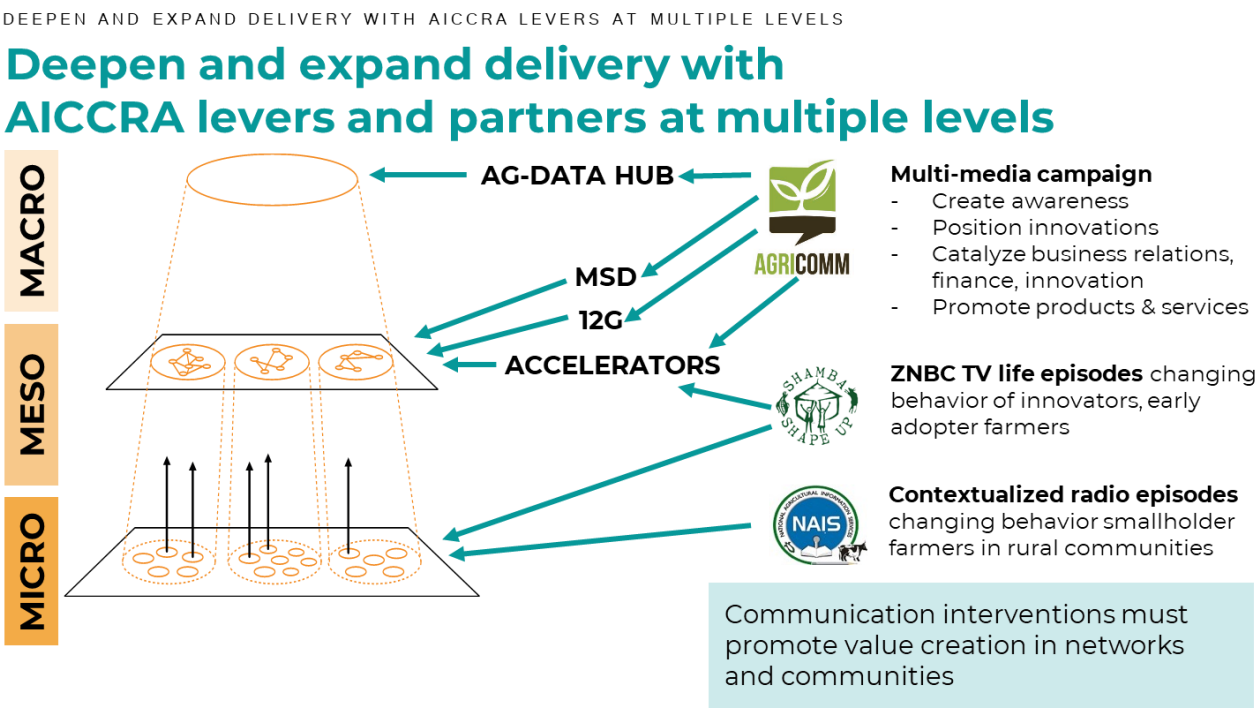


Figure 1. Multi-level approach for tailoring communication and dissemination interventions (Source: Homann – Kee Tui et al., 2022).

2.1 National decision makers (Macro-level): Multi-media campaign on climate innovations

Featuring national level engagements, investment opportunities and innovations, capacity development in diverse formats contributes to creating an awareness on what enabling conditions are being created for promoting CSA packages. Positioning climate and agribusiness innovation impacts on meso-level enterprises and support services, breaks down barriers and makes their products and services accessible to smallholder farmers. All this catalyses business relations, finance and innovation, and thereby promotes CSA packages, products and services more sustainably.

Agricomm was engaged as a Zambia-based media enterprise with competency in providing agriculture related education to help farmers making decisions. They have shown experience and skills in packaging scientific information into high quality actionable knowledge, leveraging on their relations with the existing agribusiness-ecosystem in Zambia. Following consultation with AICCRA program leads, program specific outputs were defined, and contents covered in print, audio, photo and video-based formats, event coverage and social media posts, to inform stakeholders in Zambia about ongoing activities (Table 1).

Table 1. Agricomm-led campaign to accelerate impacts of climate smart agriculture research in Zambia

AICCRA Zambia program	Multi-media contents	Key messages
Ag Data Hub	• Ag Data Hub as central platform for digitizing and integrating agricultural data collected from key institutions to improve agro-advisory services to crop, livestock and fish farmers • ISAT to generate and disseminate data-driven location-specific advisories to help farmers predict and respond to	Position and create awareness about climate and agri-business innovations Provide agribusinesses and support services with the capabilities to generate and use real time weather data

	new conditions throughout the season • CIS/CSA capacity and curricula development for digital programs • ENACT Map Room as collection of maps and other figures used to monitor climate and societal conditions • Launch of the Zambia Drought Management System (ZADMS)	and interpretations to optimize informed business decisions for sustainable agricultural growth.
Accelerator Grant	• 5 accelerator partnerships catalyze private finance into climate smart agribusinesses • Launch of the MMO TV program featuring the accelerator partners and other agri-businesses • Investor round table, to show AICCRAs vision, research driven and accelerating home-grown agribusiness solutions • Investor deal book, giving a snapshot of the agri-businesses industry and agribusiness partners' investment readiness • Zambia Impact Investment Summit as high- level profile event for AICCRA and agribusiness partners	Provide tailor made assistance, on scientific excellence and CSI strategy development Promote investment readiness (strengthen SMEs commercial and investment and finance), with open capital advisors and investors Feature CSA/CIS impacts and influence/align policy decisions pro CSA/CIS
Multi-Stakeholder Dialogue (MSD)	• Document meetings, agri-business stakeholders to identify common interests and gaps, supporting processes under way and influence policy direction • Coverage of the women in business event	Disseminate MSD key take aways to key value chain actors to catalyze climate and agribusiness innovation, and policy discussions
I2G Internship and Innovation Grant	• Launch of I2G as incubator program • Ideas jam for students to come up with and pitch solutions	Harness talent for more efficient business, and new products for markets Provide corporates access a broader pool of qualified human resources, have access to novel tech solutions, and enjoy good public relations

2.2 Intermediaries (Meso-level): TV program to mobilize climate agribusiness and early adopters

Munda Make Over was introduced as the first reality TV show of its kind in Zambia, premiered on the Zambia National Broadcast Corporation (ZNBC) targeting smallholder farmers, the early adopting farmers who are better resourced to have access to TV and try out innovations, as well as a wide range of agri-businesses, finance and development partners. The program aimed to scale out agribusiness in Zambia and thereby reach out to many farmers on the ground across the country, being their most important clients and building their capacities in climate-smart agriculture.

The contents are presented as "Edutainment," a farmer presents his/her challenges, agribusiness entrepreneurs and experts demonstrate a set of solutions, the viewers learn through entertainment. The seasonal broadcast covered topics related to climate adaptation and mitigation, gender equality and social inclusion, farm activities relevant across the country.

The TV program of 20 episodes was aired weekly from January to April 2023, in English language (Table 2). The prime airing time was chosen as Sunday afternoons, convenient for women and men to watch TV.

In total, the program featured 30 private sector and development enterprises, showcasing innovations in the fields of cropping, livestock and aquaculture production, soil health, seed quality, mechanization, irrigation, working as cooperatives, marketing, financial literacy and food preparation.

Table 2. Munda Make Over episodes, contents and companies featured.

Title and link	Contents	Companies featured
1. Farmer's Group, Conservation Agriculture,Compost manure & Agroforestry https://www.youtube.com/watch?v=0Qca_aM1Izs	1. Farmers group and it's benefits 2. Conservation Agriculture 3. How to make a Compost manure 4. Agro-Forestry: Gliricidia tree to farming and it is benefits	U2, COMACO
2. Mulching, Mixed livestock & legume, Seeds & working in a Cooperatives https://www.youtube.com/watch?v=vpmNQ9rEnh0	1. Mulching and soil Health 2. Mixed livestock and legumes 3. Seed quality and Storage. 4. Working in a Cooperative	U2, COMACO
3. Climate smart seed, Fertiliser additive, Market and input deliveries https://www.youtube.com/watch?v=nj_c1wF9Lf0	1. Maize: • Climate smart seed • Fertiliser additive 2. Market Access. 3. Input Deliveries.	Corteva, Plant Catalyst, iDE, Agova
4. Climate Seed, Crop Boost, Dairy and Insurance https://www.youtube.com/watch?v=tk6X53Ho-FE	1. Climate Seed Resilience. 2. Fertiliser: Crop boost. 3. Dairy Feed. 4. Insurance.	Corteva, Plant Catalyst, Farm Feed, U2
5. Groundnut production, Bee Keeping, Agro-Forestry & Financial Literacy https://www.youtube.com/watch?v=mta7g6_jly8	1. Groundnut production. 2. Bee Keeping. 3. Agro-Forestry: Gliricidia. 4. Financial Literacy	COMACO, U2
6. Conservation Agriculture, Working in a COOP, Market and Mechanisation https://www.youtube.com/watch?v=1ycujIaLhlg	1. Conservation Agriculture. 2. Working with Cooperatives. 3. Marketing Crops. 4. Mechanization and Planting.	U2, FAO
7. Agronomic Practices, Fertiliser, Day old chicks and Pigs https://www.youtube.com/watch?v=HfZDpoWYFVM	1. Good Agronomic Practices. 2. Fertilizer: Do a soil test to find out what fertilizers to use. 3. How to keep chickens as a business. 4. How to get new born piglets	Yara, Better World, Hybrid Poultry Farm, Farm Feed

	to market weight – in just 3 months!	
8. Value Addition, Climate smart seed, Financial Literacy and Fertilizer https://www.youtube.com/watch?v=DpVSjKk0l4k	1. How value addition improves Shelf life and market value for your produce. 2. Climate smart seed help farmer adapt to climate change. 3. How the right fertilizer can help you improve your crops. 4. How to improve your farming through Financial literacy.	Better World, Yara, U2
9. Maize, Beef, Legumes and Record Keeping https://www.youtube.com/watch?v=gouplDoQL_0	1. Crop variety can help farmers adapt to climate change. 2. How to expand markets for your produce. 3. How legume farmers are being helped in finding markets. 4. We shed light on the management of risk	Self Help Africa, U2
10. Climate Smart,Agronomy practices, Electric Pressure Cooker&Fertiliser https://www.youtube.com/watch?v=IUFsdDiVbQg	1. Crop variety can help farmers adapt to climate change. 2. How to expand markets for your produce. 3. How legume farmers are being helped in finding markets. 4. We shed light on the management of risk	Better World, MECS, Yara
11. Fingerlings, Fish feeds, Table size fish and Off takers https://www.youtube.com/watch?v=0FJvj1AuNzo	1. Where to get our fingerlings from 2. How to provide them with nutrition 3. Table sized fish and the market 4. The benefits that off takers provide for fish farmers	Hopeways, ADSEK, EUNIMOS
12. Fish farming, Integration, Finance & Electric Pressure Cooker https://www.youtube.com/watch?v=h6q-l-7zUTI	1. Climate change and its effects on fish farming 2. How integration is crucial to a farmer's survival. 3. Accessing capital to grow your farming business 4. The wide variety of smart cooking devices available on	Kasakalabwe, MECS

	the market.	
13. Climate smart crop, Aggregation, Nutrition, Biosecurity & Green fuel https://www.youtube.com/watch?v=JPOhwm83PkM	1. How technology and a green fuel stack are making cooking cheaper and save you more time. 2. How climate resilient seed will enable you the farmer to have a bumper harvest that is also a healthy one. 3. Aggregation and how it gives you more power to negotiate. 4. Biosecurity, the key to your flock's health and performance	MECS, Better World, iDE, Hybrid Poultry Farm
14. Organic Crop, Poultry feed, Farmer training and Summer brooding https://www.youtube.com/watch?v=wu_lHzrTRv8	1. How a farmer can get a bumper harvest through the use of a plant booster that is environmentally and pocket friendly. 2. How feeding your flock nutritious feed will increase your sales. 3. How training will make you a better farmer. 4. How you can manage your poultry farming in different seasons.	Farm Feed, iDE, Hybrid Poultry Farm
15. LPG, Harvest and post-harvest, Nutrition and Technology https://www.youtube.com/watch?v=ysjksXCnHoc	1. The myths around LPG cookers and how they can make your life easier. 2. How good harvesting practices ensure you get the most out of the yields. 3. Lessons learnt from the previous harvest and how we can learn from them. 4. How farmers can secure the nutrition of their families through very practical steps.	MECS, FAO
16. Beef, Insurance, Fertilizers and Markets https://www.youtube.com/watch?v=ur7ojxMvDZA	1. How to make sure you get best nutrition for beef cattle. 2. Importance of Insurance. 3. Horticulture - Crop nutrition and maize yield. 4. Market access and market information.	Farm Feed, Zari/U2, Yara, Lima links
17. Hybrid Chicken, IPM, Fertilizers and Markets	1. Hybrid village chicken: Keeping chicken in summer-	Hybrid, U2, Yara, Lima links

https://www.youtube.com/watch?v=cm3YGh9AwrU	time 2. What is IPM and why is it a good idea 3. Fertilisers: Increasing yields 4. Markets before planting	
18. Beef, Climate smart crop and Markets https://www.youtube.com/watch?v=mxKulH1ToLk	1. The benefits of understanding what is needed in getting your cattle to be the best for market. 2. How using climate resilient seed and the best agronomy practices will secure a bumper harvest for farmers. 3. Understanding the beef market and how to the best price your cattle. 4. How technology can gain you access to bigger markets that are closer than you think	Self-Help Africa, CORTEVA, Lima Links, Accelerated Innovation Delivery Initiative (AID-I)
19. Fertilizer, Solar Pumps, Markets and Electric Pressure Cooker https://www.youtube.com/watch?v=SB6vYVYg5nk	1. How fertilizer can increase yield. 2. Benefits of a solar pump. 3. How to get a better price for your harvest. 4. How to cook quickly, safely, cheaply!	Yara, Vitalite, Lima Links, MECS, Accelerated Innovation Delivery Initiative (AID-I)
20. Charcoal, Solar Pump, Financial Literacy and Markets https://www.youtube.com/watch?v=_4_nWQUf2R4	1. How a solar pump can be a cost-effective solution to getting water onto the fields. 2. How savings and loans can help with the purchase. 3. How the Solar pump works, Installation and testing. 4. How to get information on market prices.	U2, Vitalite, Lima links, Accelerated Innovation Delivery Initiative (AID-I)

2.3 Communities (Micro-level): radio reach out to smallholder farmers

Radio transmission was identified as a key channel to convert climate relevant information material and disseminate to smallholder farmers. Most of the accelerator bundle partners engaged community radio stations to upscale their CSA innovation packages. Use of radio channels enhances the outreach to smallholder communities also in remote rural areas, as the radio channel is accessible, provides contents in vernacular language to farmers.

Community radio stations were selected in the AICCRA provinces through NAIS communications experts, best suited to reach smallholder farmers. The stations covered the agro-ecological regions widely, drawing on an established listenership. The stations were trusted to represent the local context, and contents were said to be going down deeper as compared to national broadcasting. Every province was said to have 2 to 6 community stations; a total of 7 stations were selected that had agricultural programs established. A

total of 10 episodes on agribusiness and 1 on climate agro-advisories were aired in Bemba and Nyanja. The timing was also in the late afternoon, when it was conducive for farmers to listen in.

This radio program had two components:

- **Agribusiness innovations**: The program leveraged on the MMO TV episodes to extend the innovations on climate and agri-business to rural communities in vernacular languages. A selection of the existing TV episodes were translated into audio format, featuring the AICCRA agri-business partners across the various provinces. The program was launched through an interactive event in Eastern Zambia, creating buy in from the local communities and collecting feedback from the diverse participants.
- **Climate agro-advisories**: The short-term seasonal climate forecasts provided by Zambia Meteorological Department (ZMD) were interpreted by International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) scientists and through a set of questions explained by district agricultural extension experts. The agro-advisories were developed for the selected provinces and disseminated through the community radio.

Table summarizes the community radio stations and listenership.

	Name of the station	Day	TIME	Potential listenership	Coverage
1.	Breeze fm Chipata	Sunday	18:00	1,000,000	Eastern Province
2.	Radio Maria- Chipata	Tuesday Thursday Saturday	18:15	1,500,000	Eastern province
3.	Bluesky fm- Mumbwa	Monday	20:00	227,000	Central province
4.	Chongwe radio	Monday	20:30	Data not available	Lusaka province
5.	KNC radio- Kabwe	Wednesday	18:10	1,200,000	Central and copper belt provinces
6.	Radio Mano- kasama	Wednesday	19:30	800,000	Northern Province
7.	Yangeni radio- Mansa	Thursday	20:00	340,000	Luapula Province

3. Info-grams for outreach and outcome messages

A set of 10 info-graphs with key messages were drafted to illustrate outcomes of the communication and dissemination channel interventions and agribusiness partnerships on uptake of CSA technologies and bundled value chain innovations.

Agricomm was tasked to develop the info-grams based on the structure provided in this chapter, baseline and endline reports and final reports from accelerator partners. The info-gram structure presents each info-gram 1-10.

Demand for CSA technology innovations and gaps

1. Farmers demand information for reducing climate risks specifically to crops and livestock
    a. This is how climate impacts farmers (source: baseline)
        i. Farmers noticing climate change
        ii. Impacts on livelihoods
    b. This is how farmers prioritize CSA technology innovations / adaptation (source: baseline)
        i. Adaptation strategies
        ii. Access to/use of communication channels
    c. Upscaling CSA technology innovations / adaptations requires innovation packages – however the packages are at different levels of 'maturity', depending on the state of the core and complementary innovations, including CSA technologies, market and value chain structures, farmer-to farmer knowledge sharing mechanisms, climate advisory services (Source: conceptual diagram using the barrel as in Schut et al., 2020)

Communication channels and messages

2. Agricomm has reached out to xx policy makers, xx private sector, (segmented audience), through diverse tools including multi-media campaigns, social media, xxx, making impact on
    a. Awareness creation
    b. Linkages and relations

3. Munda Make Over has reached out to xx listeners, % of total listenerships, % were women,
    a. 20 episodes of Life Tv in English
        i. Profile the listeners by province, gender and age, evtl farm sizes, livestock ownership, access to irrigation
    b. Showcasing 30 agribusiness companies, including abc
    c. At a prime time, Sunday 17.00 to 17.30
    d. On innovations that are relevant across the country, including abc
        i. Key messages from most important contents

4. Radio program was broadcasted through 7 community radio stations
    a. Featuring farmers, agribusiness companies and their innovations in Eastern, Northern, Luapula, Central, Lusaka Provinces
    b. 10 episodes, 9 translating MMO contents to audio contents and 1 on climate Information agro-advisories, in Bemba and Nyanja vernacular languages
    c. At prime times, different days during the week late afternoon, so that particularly women could tune in

Key value chains and bundled innovation packages

For each bundle identify the core innovation and complementary innovations, illustrate links

i. Simple illustration of the bundle composition and purpose of each partner
ii. How many farmers were reached
iii. How did the bundle reach out
iv. What are the innovations, how do they interlink (apply scaling readiness concept where possible; convert into diagram that shows core and complementary innovations, perhaps use the barrel

5. Bundle 1: Sustainable finance for off-grid solar irrigation: Three home-grown businesses team up to provide affordable financing to Zambian farmers wishing to invest in off-grid solar irrigation

systems; In Zambia 58% of households have no access to electricity; only % have access to irrigation.

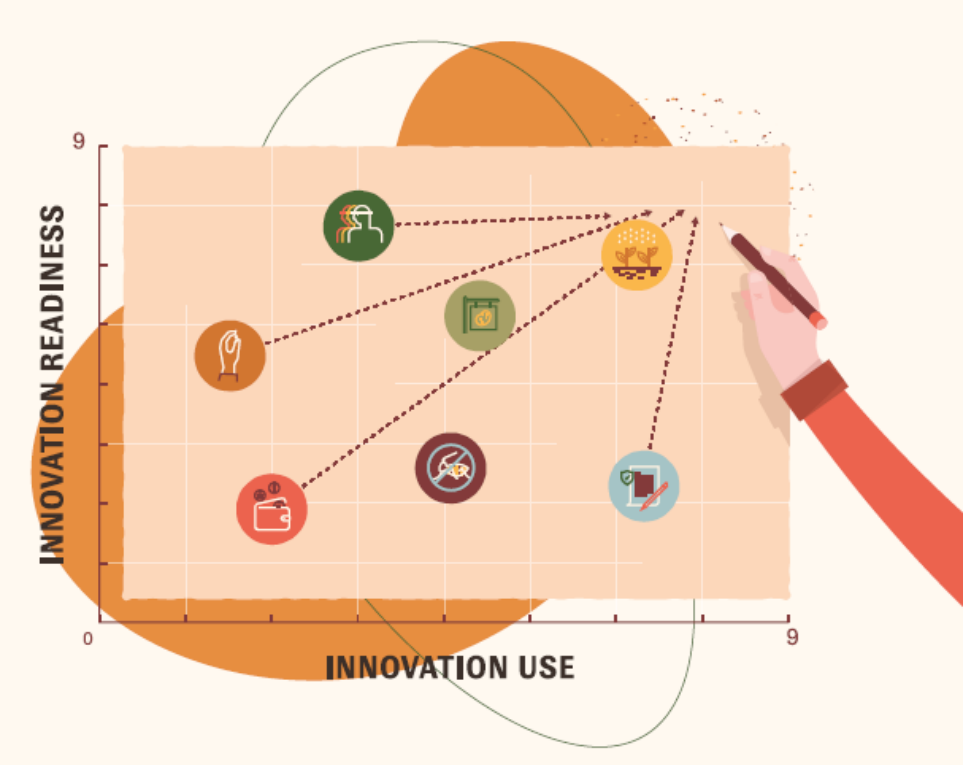
i. Simple illustration of the bundle composition and purpose of each partner: Together, the three businesses (Limalinks, Lupiya, Vitalite) have devised an innovative solution that provides affordable financing to Zambian farmers wishing to invest in off-grid solar irrigation systems.
ii. How many farmers were reached
iii. How did the bundle reach out
iv. What are the innovations, how do they interlink (apply scaling readiness concept where possible): Pay As You Go 'PAYGO' digital platform (Vitalite) + online marketplace for borrowing and lending (Vitalite) + market information and buying seller (Lima Links)

6. Bundle 2: Dryland crops:
7. Bundle 3: Crop livestock
   (i) Simple illustration of the bundle composition and purpose of each partner: Comaco as offtaker and extension partner, the Chitetedzo Cooperative Federation (CCF) as umbrella for many farmers that take up CSA technologies
   (ii) How many farmers were reached: TBD
   (iii) How did the bundle reach out: Through the direct link between COMACO and the CCF
   (iv) What are the innovations, how do they interlink (apply scaling readiness concept where possible): CCF as core innovation, "frame" that holds the barrel innovations together, the complementary innovations as planks – highlight weekest innovations, inbetween and strong innovations; a few implications can be listed. See Appendix 1

8. Bundle 4: Aquaculture
9. Bundle 5: GESI

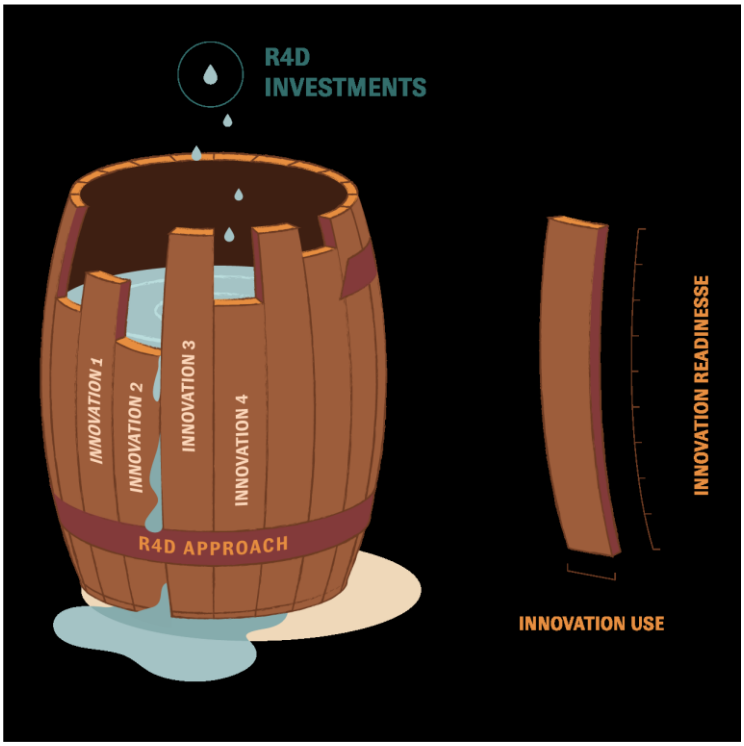
4. Appendix

A1. Visualizations for infogram 5 to 9, graph

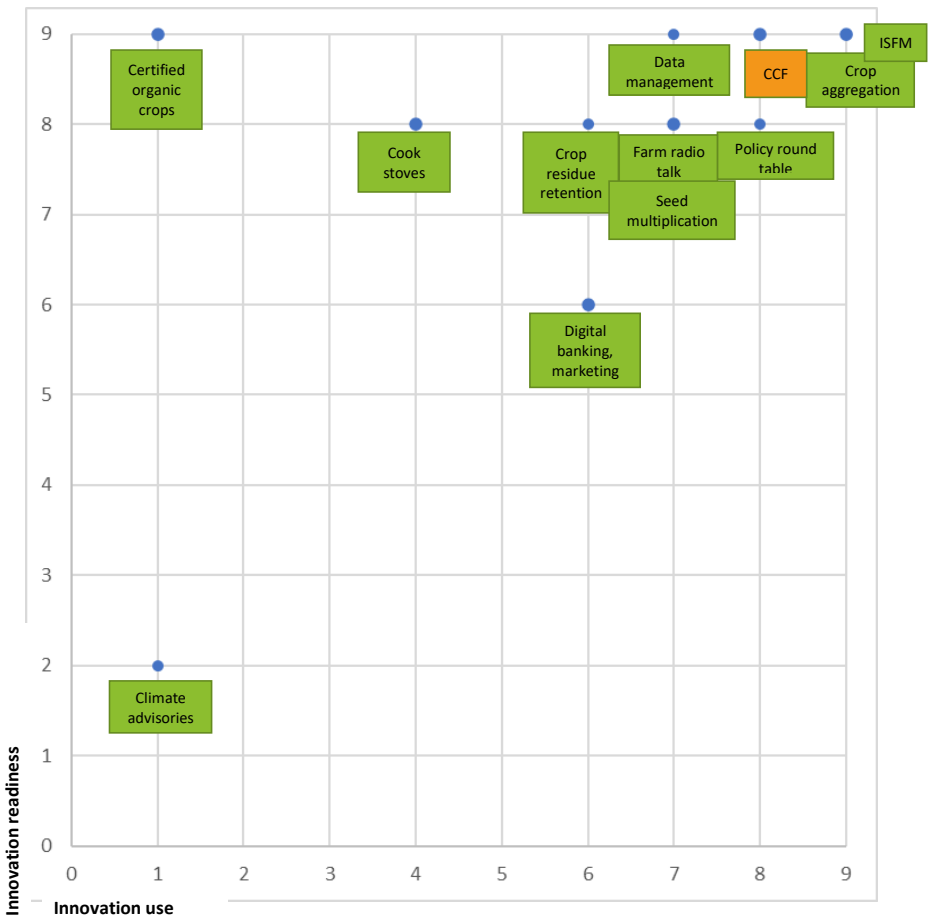


A2. Visualizations for infogram 5 to 9, scaling readiness barrel

Be wary of the bottlenecks with the lowest innovation readiness and the lowest innovation use and reflect critically on what other innovations may be linked to them. Scaling Readiness Barrel to illustrate how innovation(s) with the lowest readiness limit an innovation package's capacity to achieve impact at scale.



A3. Example: Bundle 4, readiness results for infogram 7, adpted from A1



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