Photo: G. Smith/The Alliance

CGIAR | Standing Panel on Impact Assessment

Webinar on implementing the Stocktaking process at the country-level

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Definitions and Objectives

Photo: N. Palmer/The Alliance

- A stocktake is an extensive document that captures all CGIAR-related innovations and policy contributions within a country
- It provides key information to understand the pathway between research outputs and farmer's fields (or the targeted sector and users)
- The timeframe spans the two decades leading up to implementation, or 2005 to 2025
- Two main objectives:
  - Synthesis document
  - Identify best-bet candidates for survey data integration

Definitions and Objectives

Photo: N. Palmer/The Alliance

- The stocktake focuses on adoption, seen as a necessary, but insufficient conditions for impact.
- An **innovation** is broadly defined as an approach or technology that incorporates CGIAR-related research or activities as inputs and is novel to its users
- A **policy contribution** refers to CGIAR-related research or activities that can plausibly claim to have contributed to the development or improvement of policies, regulations, or institutions

Elements of a Stocktake

Photo: N. Palmer/The Alliance

A country-level stocktake contains four sheets:

- Innovations
- Policy Contributions
- References
- Glossary

Innovations

Example from Viet Nam listing five innovations:

(A) Innovation	(B) CGIAR-related efforts for development and/or dissemination	(C) Description	(D) Observable feature	(E) Scale and location of activities	(F) Evidence of adoption	(G) Notes on known dissemination strategies/pathways
Genetically Improved Farmed Tilapia (GIFT) derived strains	1 - GIFT dissemination in 1994, 1996 and 1997 to RIA1 (Hanoi) 2 - GIFT dissemination in 1996 and 2006 to RIA2 (HCM) 3 - Enhancing community resilience to climate change by promoting smart aquaculture management practices along the coastal areas of North Central	GIFT are originally pure-bred lines of male tilapia that have two Y chromosomes, thus producing only male progenity. GIFT is a faster-growing strain of Nile tilapia (*Oreochromis niloticus*) improved through selective breeding and made available by Worldfish since 1988. The innovation is suitable for both small-scale and commercial aquaculture. By applying state of the art	Household has farmed hatchery-produced GIFT-derived tilapias. Identification using fish seed source (potential reach) or DNA	1 - TBD 2 - ~4000 breed broodstock released per year to hutcheries for commercial purposes 3 - Commune of Hoang	- Adoption was estimated at 17% of total tilapia seed production in Vietnam in 2001 (ADB, 2005) - RIA1 estimates GIFT-derived strains constitutes 40-50% of market - There are over 250 facilities involved in	- RIA1 and RIA2 provide broodstocks to provinces and local factory that produce fingerlings sold to farmers (~80%) and private companies (20%). Strains released are not necesseraly given a name and can just be from be generation X.
Nutritious-system pond farming	Nutritious-system pond farming (NOW and FAFS CRP, 2014-19)	Sustainable, low-cost approach to feeding in pond aquaculture. By optimizing the carbon-to-nitrogen ratio, the mineralization of waste is accelerated and produce natural food for shrimps. Farmed shrimps thus ingest naturally occurring food alongside feed. Research on semi-intensive white leg shrimp systems has shown that more than 85% of N can be retained by optimizing	Farmers managing semi-intensive (50-80 PL/m2) pacific white shrimp (P. vannamei) farms are monitoring the pond C:N ratio and reduce feed load	Several on-station and on-farm experiments (Hoa De cooperative; My Xuyen district, Soc trang province)		- The National Action Plan to develop Vietnam's shrimp industry Decision 2020-25 (79/QD-TTg) aims at a 36% increse in white leg shrimp (*P. Vannamei*) farming area and a 46% increase in harvest output A multi-stakeholder innovation platform (IP)
Livestock-based interventions for system transformation (5)	Livestock-led interventions toward equitable livelihoods and improved environment in the North-West Highlands of Vietnam (Li-chan, Livestock CRP, 2019-2021)	Site-specific intervention strategies related to improved forage varieties, access to seeds/planting materials, feed management practices, knowledge and skills in animal husbandry	Location-based	Chieng Ching and Chieng Luong communes, Mai Son district, Son La province.	Baseline and endline surveys have been collected using RHOMIS. Results TBD	
Salt-tolerant rice varieties (STRVs)	1 - Consortium for Unfavorable Rice Environments (CURE, IFAD, 2010-2018) 2 - Climate Change Affecting Land Use in the Mekong Delta: Adaptation of Rice-based Cropping Systems (CLUES) (2011-2013) -IRRI and Cuu Long Rice Research institute CLRRI	These varieties contain the saltoi gene. Out of 58 STRVs released since 2000, 21 are IRRI-related. 1- CURE has evaluated varietal performance in multilocational trials and on farmers' fields and introduced promising varieties into the countries' seed multiplication system. FL478 (IR66946-3R-178-1-1) was used as breeding material	Household has grown a STRV derived from a CGIAR-related germplasm on at least one plot. Identification using DNA fingerprinting	Adapted zone is the MRD	1- In an IA carried out in the 7 coastal provinces in MRD, 6 (14%) were identified as salt-tolerant rice varieties by experts (Paik et al., 2019).	Objective of 75% certified seeds used in the MKD by 2030 (Decree 1898/QD-BNN-TT).
Off-field rice straw management practices (3)	1 - Closing Rice Yield Gaps in Asia with Reduced Environmental Footprints (CORIGAP, SDC, 2013-16 and 2017-20) 2 - Scalable straw management options for improved livelihoods, sustainability, and low environmental footprint in rice-based production systems (BMZ, 2016-	Off-field straw management technologies including: i) Rice straw-based composting ; ii) Rice-Straw Mushroom (RSM); iii) Rice straw silage for cattle feed i) First demo of rice straw collection in 2013, continued dissemination ii) Value chain documented in the MRD for domestic market and	i) Straw have been used for composting ii) Farmer cultivate the paddy straw mushroom, Volvariella volvacea (incubation period of 14	1/2 - Tien Giang, Can Tho, Dong Thap, Soc Trang provinces	- 50% of rice straw in dry season is now collected (Hung, 2017)	Decree 19/2019/TT-BNNPTNT facilitate the development of straw baler and mushroom production

Innovations

(A) Innovation

(B) CGIAR-related efforts for development and/or dissemination

- "Project name (Acronym, donors, dates of implementation)."

Ex: *Livestock-led interventions toward equitable livelihoods and improved environment in the North-West Highlands of Vietnam* (*Li-chan, Livestock CRP, 2019–2021*).

- CGIAR programmatic approaches has evolved: Challenge Programs (2001-2010), Research Programs (2011-2019), Research Initiatives (2020-2024)

(C) Description of the innovation

Innovations

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(D) Observable features

An example with Alternate Wetting and Drying (AWD)

“Households follow three periodic irrigation rules:

a) Irrigation is applied when the water level drops 15 cm below the soil surface, and the field is re-flooded to a depth of 5 cm.
b) The field is kept flooded during the flowering stage.
c) After flowering, the water level is allowed to drop 15 cm below the soil surface before re-irrigation.

A perforated water pipe (‘pani-pipe’) is recommended to monitor water depth, though it is not always used by farmers (Yamaguchi et al., 2016).”

Innovations

(E) Scale and location of CGIAR activities

(A) Innovation	(B) CGIAR-related efforts for development and/or dissemination	(E) Scale and location of CGIAR activities
Terra-I	1 - Terra-i for near real time monitoring of forests (UN-REDD Phase II, 2017-19) 2 - Increase the involvement of civil society organizations (CSOs) and local communities (LCs) in emission reduction program (ER-P,SRD, 2019) 3 - Coffee Agroforestry and Forest Enhancement for REDD+ (CAFÉ-REDD, IKI & BMU, 2020) 4 - Increasing the participation of grassroots social organizations (CSOs) in the monitoring of REDD + programs in Vietnam (UE, 2021-23) 5 - Integrated sustainable landscape management through deforestation-free jurisdiction project in Lam Dong and Dak Nong, Vietnam (EU, 2022-26)	1 - Di Linh district, Lam Dong province 2 - Tuong Duong district, Nghe An province 3 - Lac Duong district, Lam Dong province 4 - Ky Son & Tuong Duong districts, Nghe An province 5 - Di Linh & Lac Duong districts, Lam Dong province; Dak G'Long and Dak R'Lap districts, Dak Nong province

Innovations

(F) Evidence on adoption

- We encourage the research team to include all relevant documents, regardless of the source (or journal quality)

- We advise reporting the adoption figures along with details on the sample size and the scale of data collection efforts

- Evidence of adoption at scale is more robust if multiple sources can be found. For instance:
  - Howeler (2007) reported that an estimated 33% of the cassava area (95k ha) is planted with improved varieties, primarily KM 94.
  - Kim et al. (2005) reported that 52-60% of Vietnam's cassava area uses new varieties, compiling data from GSO and MARD.
  - Using DNA fingerprinting, Le et al. (2019) found that CIAT-related germplasms account for 91% of the adopted varieties. Two varieties, KM94 and KM419, cover nearly 70% of the cassava farming area.

Innovations

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Policy Contributions

(A) Policy, program and related tools	(B) Description	(C) Contribution of the CGIAR	(D)Type of Contribution
Participatory Forest Management (PFM) included in the forest policy Act 542/2007 and further strengthened in Act 1065/2018.	Participatory Forest Management (PFM) is a co-governance institutional arrangement where forest management responsibilities and use rights are legally shared between a government agency and a community-based organization.	Initially promoted by environmental NGOs in Ethiopia in the mid-90s, PFM has been extensively researched by CIFOR (e.g. Kassa et al, 2008, 2017). With the support of organizations notably FARM-Africa, GIZ and SOS Sahel), a PFM working Group was established to convince the government to adopt PFM as a national strategy and to develop a guideline on PFM. Over the years, CIFOR closely worked with Wondo Genet College of Forestry, the Ethiopian Forestry Society and the Ministry of Agriculture and contributed to the preparation of national forest policy and drafted the national forest act (proposed by CIFOR and Farm Africa) that was supposed to facilitate implementation of the 2007 forest proclamation No. 542/2007. When the government adopted its climate resilient green economy strategy in 2011 and established the first Ministry of Environment and Forestry in 2013, CIFOR worked closely with the new ministry and contributed to the process of revising the 2007 Forest Law. As a result, a new, more progressive law was enacted by the Parliament in January 2018. The proclamation 1065/2018 adopted PFM as a major mechanism to achieve the objective of putting 2m Ha of natural forests under improved management. The areas in the new forest law where CIFOR influence were prominent relate to i) recognizing additional ownership categories, notably community and associations; ii) recognizing community rights over forests; iii) recognizing the importance of including forests and dense woodlands in the dry low lands in the definition of forests and improving the management of forests in the dry lands; iv) recognizing the need for sustainable timber harvesting from natural forests based on approved forest management plans; v) emphasizing the responsibility of the government in protecting biodiversity rich forests. CIFOR has also worked with federal and regional forestry institutions to identify effective forest management strategies and identified enabling conditions for scaling them up in the Regional states of Tigray, Amhara, Oromia, Benishangul Gumuz and SNNPR States.	Policy framework design / national level
Direct Seed Marketing (DSM, 2015)	Direct Seed Marketing (DSM) was introduced by ATA in 2013. In contrast to the Conventional seed marketing (CSM) system in which seeds are streamlined through a long chain of actors (Seed producers, regional Bureaus of Agriculture, Woreda, Development Agents, cooperative unions and farmers), seed producers are allowed to sell seed directly to farmers.	An evaluation conducted by IFPRI in 2013-15 indicates that DSM could propel wider and more effective distribution of seed to farmers. Hence, in 2018, the DSM covered 228 woredas and reached 1.4 million smallholder farmers with quality seed of multiple crops. See http://www.ifpri.org/publication/performance-direct-seed-marketing-pilot-program-ethiopia-lessons-scaling	Impact assessment influenced scaling-up

The Stocktaking Process

Photo: CGIAR in South East Asia

1. Identifying Innovations and Policy Contributions

What has been the extent of CGIAR research activities in this country over the 2005-2025 period?

2. Address gaps through progressive approximation

Has this innovation likely reached farmers at scale?

- **1. Identifying Innovations and Policy Contributions**

Photo: CGIAR in South East Asia

- General Context
- History of CGIAR centers' establishment
- Consultation Workshops
- In-person Meetings and Qualitative Interviews
- Desk Research
  - Scientific Publications
  - CGIAR Results Dashboards
  - Reporting from CGIAR centers, donors or projects
  - IAES Evaluation Reports & Reviews
  - Monitoring, Evaluation and Learning website
  - Government policies
  - Internal Documentation and Administrative Data
  - Social Media

2. Address Gaps Through Progressive Approximation

Photo: CGIAR in South East Asia

- At this stage, a comprehensive list of innovations is known, and a (large) corpus of documents was built.
- Step 2 consists in identifying knowledge gaps, addressing them, and collectively deciding whether, based on the information available in the stocktake, an innovation may have reached farmers at scale.
- We strongly recommend adopting this iterative and collaborative approach
- A practical rule of thumb for determining whether an innovation is at scale is if it has been adopted by at least 20,000 households

- **2. Address Gaps Through Progressive Approximation**

Photo: CGIAR in South East Asia

Looking at each innovations:

1. Identify gaps in the columns
2. Consult the sources already collected
3. Identify the missing information
4. Engage with CGIAR scientists, stakeholders, or do more desk research
5. Collectively review the current information present in the stocktake and take a decision

The outcome should be either "This innovation is likely to be at scale" or "This innovation is unlikely to be at scale."

If no consensus can be reached, restart the process (step 3 of the workflow).