



IFAD's 2010-2015 impact evaluation initiative :

cost-effective impact evaluation, the holy grail for development effectiveness

Presented to:

Expert Group for Aid Studies (EBA)
Seminar on "Finding the effects of Swedish aid: How to do it?"

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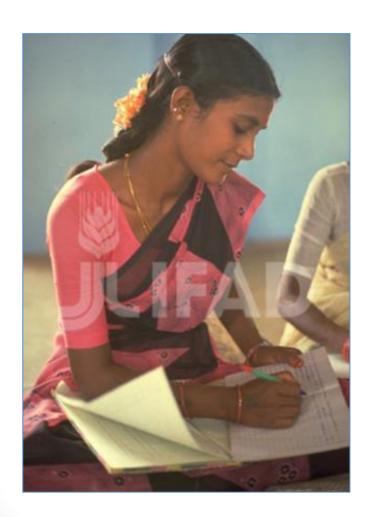


IFAD is ...

- Specialised agency of the UN,
 - one of 3 Rome based agencies (FAO, IFAD, WFP)
 - focussed on agriculture, rural poverty, food and nutrition security
- International financial institution
 - Loans to governments for rural investment programmes
 - Grants for heavily indebted poor countries
- Programme of work:
 - Annually: approx. USD 1 billion, plus cofinancing
 - Annually: 30 projects
 - Ongoing portfolio: 220 investment programmes, worldwide (90 countries), 50% + in Africa
- Projects are owned by country, implemented by country: projects are responsible for M&E and related procurement



Questions we share



- Why evaluate impact?
- Which projects to evaluate?
- Which methods?
- How to use impact evaluations?
- Managing impact evaluations.
- Mainstreaming impact evaluation
- Role of national M&E systems
- The cost and financing of impact evaluations



Why evaluate impact?

- Understand (learning)
 - Impact pathways, causality, attribution (rigorous ex-post evaluations, deep dives)
 - Innovation (experimental designs, RCTs)
 - Scaling up , informing policy
- Accountability (mutual accountability)
 - Multiple levels
 - Country level project management units, to Government (and civil society)
 - IFAD, to its member countries
 - Contribution analysis
 - Using project level results monitoring data (shallow dives: quantitative and qualitative)
 - Statistical inference
- Methodology development: rigour, cost-effectiveness, evaluation culture
- Development effectiveness

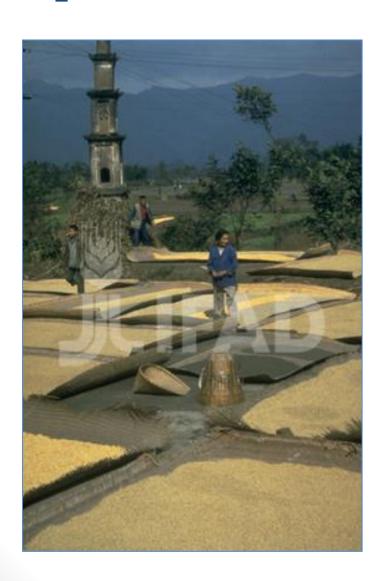


Results monitoring and impact evaluation in IFAD

- 1978 Policies and Criteria for IFAD Financing
- 2003 IFAD's RIMS policy (Results and Impact Management System): process evaluation, impact monitoring
 - Primary focus on 1st and 2nd level results (<u>inputs</u>, <u>outputs</u>)
 - Contribution
- 2013 IFAD IX impact evaluation initiative
 - Rigorous attribution
 - Focus on 3rd and 4th level results, within entire causality chain (<u>outcome and impact</u>)



Impact indicators for IFAD



- Rural Poverty (money metric):
 - Income: expenditure, consumption
 - Range of poverty lines
- Economic mobility
- Outcome level proxies
 - Household assets
 - Nutritional status (stunting)
 - Length of hungry season
- Other dimensions of impact
 - Empowerment
 - Resilience (economic)



Rigorous impact evaluations

- International Initiative for Impact Evaluation (3ie):
 - "analyses that measure the <u>net change in outcomes</u>
 - for a <u>particular group of people</u>
 - that can be <u>attributed</u> to a specific program
 - using the best methodology available, feasible and appropriate
 - to the evaluation question that is being investigated and
 - to the specific context".
- World Bank's DIME Initiative:
 - "Impact evaluations compare the outcomes of a program
 - against a <u>counterfactual</u> that shows what would have happened to beneficiaries without the program.
 - Unlike other forms of evaluation, they permit the attribution of observed changes in outcomes to the program being evaluated
 - by following experimental and quasi-experimental designs".



Rigorous impact evaluations

- From contribution (correlation) ...
- to attribution (causality)
 - Counterfactual: comparison groups (control groups)
 - Panel data
 - Randomisation: avoid selection biases
 - Random assignment
 - Representative surveys of eligible population to enhance external validity

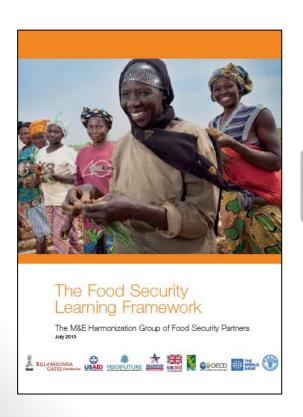


Evaluation methods: on a scale of rigour

- 3 6 Randomised controlled trials (experimental design): supporting IFAD's innovation agenda
 - 3IE agricultural innovation window
 - Specific research protocols
- 24 27 Rigorous ex-post evaluations (quasi- and non-experimental design): supporting IFAD's scaling up agenda
 - 5 diverse centres of excellence
 - Mixed methods: theory based, quantitative, qualitative
 - PSM (propensity score matching)
- 55 shallow dives: supporting the accountability agenda
 - 5 8 quantitative
 - 47 50 qualitative
- Impact of agricultural research on rural poverty
- Impact of policy change on rural poverty
- Systematic reviews and meta-studies
- Statistical inference to entire portfolio: supporting the accountability agenda



Methodological aspects: theory-based evaluation







Methodology challenges (1)

- RCTs: gold standard, when applied to "silver bullets", but ...
 - Defining the researchable question
 - Randomisation (in targeted projects)
 - Commitment of the project staff: implementation strategy
 - Strong internal validity (external validity ?)
- Ex-post evaluations
 - Long term programmes (typically 7 years)
 - Shocks (programmes designed 2004-2009: 2008 food price hike)
 - Recall (when baselines are incomplete)
 - Panel data (without geo-referencing and when migration is high)
 - General equilibrium effects: growth, inequality, higher real prices ...
 - Target group definition
 - Clarity of the theory of change
 - Multiple treatment (heterogeneity)
 - Seasonality
 - Evaluation at project completion (resilience)
 - Repeat projects (second phases)



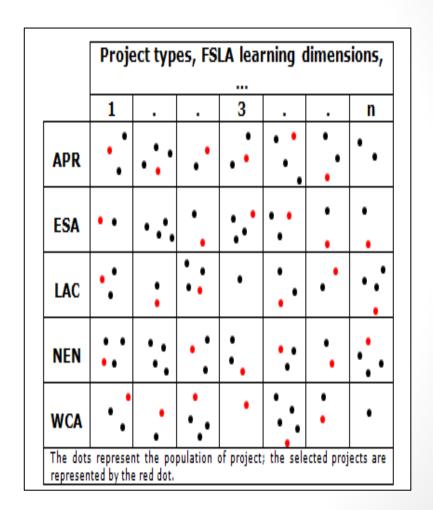
Methodology challenges (2)

Validity: internal and external

- confounding factors
- selection bias
- impact heterogeneity
- spill-overs
- contamination

Project selection: grid

- Random selection: for statistical representativeness and inference to portfolio
- Purposive add-ons





Methodology challenges (3)

- Analytical aspects: no comparison group in RIMS policy
 - single difference
 - propensity score matching
 - When secondary data are available: difference-in-difference
- Cost benefit considerations
 - Limited sample sizes (especially in cases of multiple treatment)
 - Size (complexity) of survey questionnaires ... and
 - time involved for surveyed households



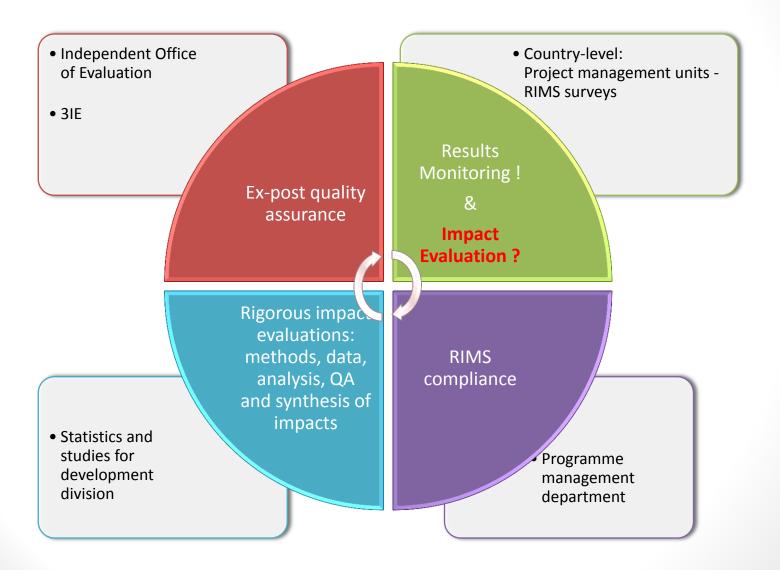
The financing question

- Cost ranges
 - RCTs: 500,000 to 1,000,000 USD
 - Ex-post evaluations: 200,000 350,000 500,000
 - Shallow dives: 30,000 50,000
- Options
 - Included as part of the programme activities and included in programme costs, linking to and strengthening <u>national systems</u>
 - Financed with a specific grant
 - Financed from the administrative budget
- Decision criteria
 - Who needs the knowledge, who needs accountability?
 - Global public good
 - How much capacity building?
- Need for ODA level agreement on how to finance impact evaluations



Organisational set-up in IFAD:

division of labour, checks and balances





Organisational arrangements

- Shift in approach
 - From "turn key" studies commissioned ... to local capacity building
 - From staff lead ... to staff oversight (methodology)
- Partnerships with centres of excellence



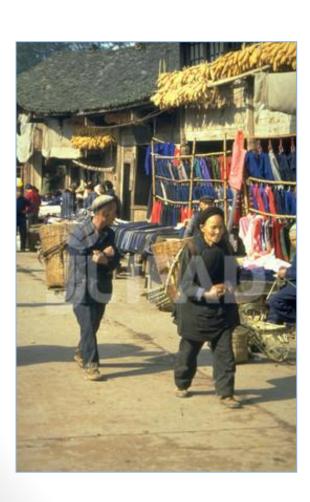
Conclusion

- Need to know what works, why and how:
 - from contribution to attribution
 - For scaling up and to inform policy
- Who is responsible? Who is accountable?
 Who needs to know?
- Diversity of methods:
 matching with programme characteristics and objectives
- Cost effectiveness of methods
- Emphasis on local capacity building
- Which partners, with which role?
- How to finance?



Possible way forward for IFAD?

RIMS +++ and do we need to evaluate all projects and at what cost?



- All portfolio:
 - RIMS++ compliant
 - Target group definition
 - Sampling framework and randomisation
 - Comparison groups (panel data)
 - 3 observations: resilience
 - Correlation, contribution (attribution ?)
 - Basis for statistical inference
- 9 purposively selected deep dives strategically significant projects
 - Causality, attribution
 - Theory of change
 - Scaling up
- 3 thematic groups of RCTs innovative projects (experimental designs)
 - Multi-country experimental designs
 - Scaling up
 - (all of IFAD's research grants?)
- Ad hoc studies
 - After shocks
 - Special issues



Thank you for your attention.

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RCT for



- Ethiopia PCDP III Rural Livelihood Program
 - Mannheim University
 - Stimulating investment and **technology take-up through cost-effective services**. Measuring the effect of SACCO services. (policy relevance of the savings product tested)
- Cambodia ASPIRE
 - IFPRI
 - Testing innovative models of extension
- Sierra Leone SCP
 - IPA
 - Experimental evidence from land rehabilitation, collective farming and agricultural production
- Uganda VODP II Oil Seed Value-Chain Finance
 - Associazione Centro Studi Luca D'Agliano
 - Experimental evidence on the impact of interlinked credit and transactions on smallholders' production choices, productivity, market power and income. (high policy relevance)
- Ghana GASIP
 - IPA/IFPRI
 - Evidence from Soy: nutritional information, farmer food preferences and production of non-traditional food crops in Northern Ghana

Deep dives: rigorous impact evaluations

Region	Country	Project Name	Project Type	IFAD Financing (USD '000)	Direct beneficiaries	Indirect beneficiaries	Selection basis	Who
L <mark>APR</mark>	Philippines	RuMePP	CREDI	19 130	1 000 000		Random	3ie
2 <mark>APR</mark>	Cambodia	Rural Livelihoods	AGRIC	12 014	113 000	56 500	Purposive	IDS/UEA
APR	Laos	Attapeu and Sayabouri	RURAL	20 491	131 000		Random	IDS/UEA
1 APR	Pakistan	MIOP	CREDI	26 456	900 000		Random	IDS/UEA
APR	Pakistan	PRISM	CREDI	35 006	800 000		Purposive	IDS/UEA
APR	Bangladesh	Sunamganj Project	AGRIC	21 973	675 000		Random	IFPRI
7 APR	Bangladesh	MFMSFP	CREDI	20 059	1 050 000		Random	IFPRI
APR	China	South Gansu PRP	AGRIC	29 254	1 500 000		Purposive	Shuai
APR	China	MRDP - XUAR	AGRIC	25 148	792 000		Purposive	Shuai
APR	China	IMARRAP	AGRIC	30 001	625 000		Purposive	Shuai
L <mark>APR</mark>	China	DAPRP	AGRIC	31 875	385 000		Purposive	Shuai
2 <mark>APR</mark>	China	SPEAR	RURAL	30 470	280 000		Purposive	Shuai
APR	India	Orissa Tribal Empowerment	AGRIC	34 996	338 000		Purposive	
I <mark>ESA</mark>	Malawi	RLSP	RURAL	14 780	192 000		Random	IFPRI
ESA ESA	Zambia	Rural Finance Programme	CREDI	13 811	750 000		Random	KIT
ESA ESA	Uganda	CAIIP-1	RURAL	31 987	1 000 000	3 700 000	Random	KIT
7 <mark>ESA</mark>	Madagascar	PPRR	RURAL	14 500	200 000		Random	PEP
B <mark>ESA</mark>	Kenya	Dairy Programme	AGRIC	18 335	120 000		Purposive	PEP
ESA ESA	Madagascar	Menabe and Melaky Regions (AD2M)	AGRIC	18 655	200 000		Random	PEP
ESA	Kenya	Horticulture Programme	MRKTG	23 930	60 000	425 000	Purposive	PEP
L <mark>ESA</mark>	Ethiopia	Small-scale Irrigation	IRRIG	39 997	310 000		Random	PEP
2 <mark>ESA</mark>	Madagascar	PROSPERER	AGRIC	29 041	250 000	105 000	Random	PEP
LAC	Colombia	OPORTUNIDADES	CREDI	20 000	134 400		Purposive	ICF
1 LAC	Nicaragua	PRODESEC	RURAL	14 000	66 000	245 300	Random	ICF
LAC	Peru	SIERRA SUR	RURAL	24 586	75 000		Random	IFPRI
NEN	Egypt	West Noubaria	STLLM	18 485	135 000	135 000	Purposive	ICF
7 <mark>NEN</mark>	Yemen	Al-Dhala	RURAL	14 349	38 900		Random	ICF
NEN .	Sudan	WSRMP (LOT)	RURAL	25 463	255 000	10 000	Random	ICF
WCA	Ghana	REP II	RSRCH	11 245	400 000		Purposive	IDS/UEA
WCA	Gambia, The	PIWAMP	AGRIC	7 085	60 000		Random	KIT
L <mark>WCA</mark>	Burkina Faso	PDRD	AGRIC	16 029	150 000		Purposive	KIT
	Senegal	MATAM 2/PRODAM II	RURAL	12 508	150 000		Purposive	
	Ghana	NRGP	RURAL	22 725	225 000		Purposive	
				728 384	13 360 300	4 676 800		

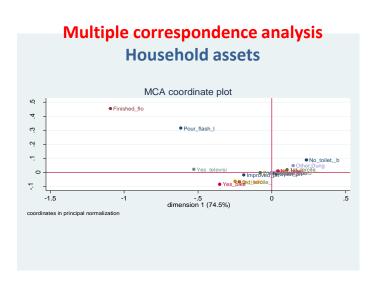


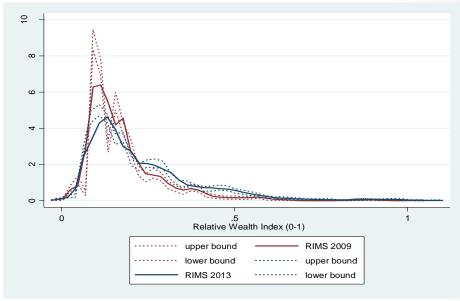
Deep dives: reserves

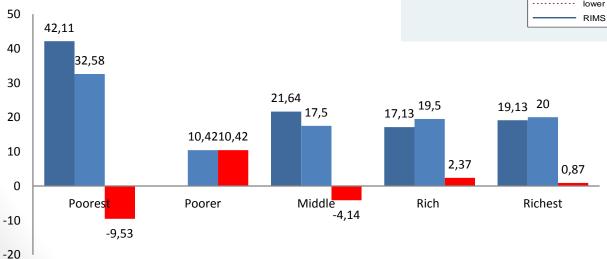
	Region	Country	Project Name	Project Type	IFAD Di Financing be (USD '000)	irect li eneficiaries b	ndirect peneficiaries	Selection basis	Who?
1	APR	Mongolia	RPRP	RURAL	14 806	360 000		Random	n.a.
2	APR	India	Himalayas Livelihoods	CREDI	39 920	360 000		Random	n.a.
3	APR	Bangladesh	MFTSP	CREDI	16 298	1 380 000		Random	n.a.
4	APR	Bhutan	AMEPP	RURAL	14 007	110 000		Random	n.a.
5	APR	Maldives	FADIP	AGRIC	3 505	8 400		Random	n.a.
6	ESA	Lesotho	Agric & Natural Resource	AGRIC	10 129	125 000		Random	n.a.
7	ESA	Swaziland	Lower Usuthu Irrigation I	IRRIG	14 958	15 300		Random	n.a.
8	ESA	Lesotho	Rural Financial Programme	CREDI	8 688	37 000		Random	n.a.
9	LAC	Paraguay	Paraguay Rural	RURAL	15 116	98 700		Purposiv e	n.a.
10	LAC	Nicaragua	PROCAVAL	MRKTG	20 328	109 200		Purposiv e	n.a.
11	NEN	Yemen	Dhamar Development	RURAL	21 515	130 000	150 000	Random	n.a.
12	NEN	Sudan	GASH	AGRIC	24 946	360 000	120 000) Random	n.a.
13	WCA	Mauritania	Oasis Sustainable Dev.	RURAL	11 408	250 000		Purposiv e	n.a.
14	WCA	Chad	PADER-G	RURAL	17 400	130 000		Purposiv e	n.a.
					233 024	3 473 600	270 000)	



Qt shallow dives: Bangladesh





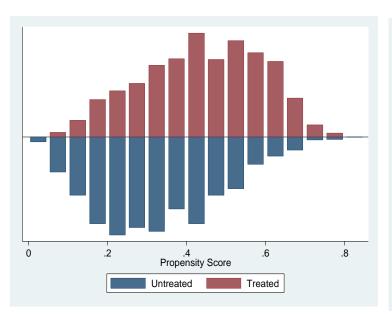


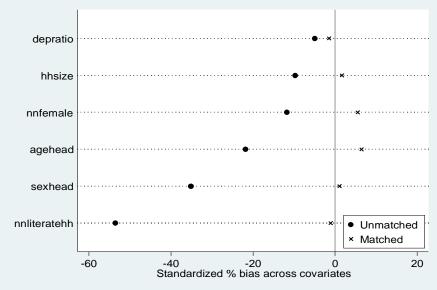
■ 2009 ■ 2013 ■ Diff

7342 HHs or 36,713 people



Qt shallow dives: Bangladesh (cntd)





			Balance				
Variable	Matched	Treated	Control	%bias	bias	t	p>t
N. female	U	2.66	2.82	-11.7		-3.17	0.002***
	M	2.66	2.58	5.5	53.1	1.4	0.16
HH size	U	5.24	5.45	-9.7		-2.58	0.010***
	M	5.24	5.20	1.7	82.7	0.43	0.667
Dependency ratio	U	104.30	108.18	-4.9		-1.32	0.187
	M	104.30	105.48	-1.5	69.5	-0.41	0.685
N. literate	U	2.13	3.13	-53.5		-14.42	0.000***
	M	2.13	2.15	-1.1	97.9	-0.3	0.764
Sex head	U	1.06	1.18	-35.1		-9.17	0.000***
	M	1.06	1.06	1	97	0.34	0.736
Age head	U	42.32	45.36	-21.8		-5.85	0.000***
	M	42.32	41.42	6.4	70.5	1.64	0.102

Ql shallow dives



Background

PPILDA was implemented over nine years in the context of two major food crisis that hit Niger in 2005 and 2010. The project's objective was to re-capitalize the most vulnerable households - in particular the food-insecure, women, and youth - by reducing their vulnerability and exposure to risk through the support of new development opportunities.

Component Summary

#	Component Name	Funding Allocation	# Sub	Sub-component Type	SSD Domain
1	Valorization of local innovation	6%*	-	Local capacity-building	#9
			2.1	NRM/Protection	#9
2	Capacity-building of rural organizations	2%*	2.2	Input supply	#8
			2.3	Capacity-building	#9
3	Support funds for local innovation (FAIIL)	31%*	-	Rural financial services	#8
4	Reinforcement of local services (FAROLS)	35%*	4.1	Rural infrastructure	#8
			4.2	Institutional support	#2
5	Project coordination	26%*	-	M&E/Management/Coordination	#2

Results Snapshot

Total Beneficiaries

Project Cost

Outcomes

Poverty NR

279,272*

61% 🕍 39%

155% of design

\$19.4M

60% IFAD | 94% disbursed

Women's Income 56% Men's Income* 32% Malnutrition Assets*

compared to 24% in nonparticipating households.*

men's increased by 184%.*

Impact Summary

Most of the activities planned at the start have been implemented during the project course with a global disbursement rate of 94%. Although the effect induced by the project on poverty reduction is not directly measured, a set of evidence shows positive results on the living conditions of the target beneficiaries mainly through improvement of social assets, agricultural intensification, environmental regeneration and income diversification. Women's living conditions have been particularly enhanced.

PPILDA Claim Support ported Partially Supported Not Supported 20% 40% 60% 80% 100%

Agricultural Production - Domain #1

Through the diffusion of local innovation reducing the vulnerability in the agricultural sector, the project has significantly improved agricultural and livestock productivity. More than 10,500 farmers have participated in agricultural intensification training. According to an impact survey conducted in 2013, more than 70% of the supported households have adopted the innovations recommended by the project and yields have increased between 40% to 65% per hectare for participating households.

Food Security - Domain #3

In terms of food security, the project has supported the creation of 284 cereal banks serving more than 95,000 households (90% of women). As a direct impact, food requirements during the lean season have been satisfied for more than 85% end of 2008 compared to 6% at the start.

Environmental Sustainability - Domain #4

The introduction of trees into existing agricultural systems has greatly improved soil fertility and moisture. Participating farmers have planted on average between 100 to 150 trees/hectare which has led to a sharp change in the landscape of the project target zone of Aguié, with a reduction in desentification and seeds loss, an increase in millet productivity estimated between 30 to 220kg/hectare, a better availability of an additional 265 tons of fodder for livestock as well as increase of incomes derived from sale of fodder estimated at 1,000,000 CFA, and finally an increase of access to fuel wood.

Economic Mobility - Theme #8

In the field of rural services and equipment PPILDA's contribution has also been significant through the establishment of health infrastructures, education and drinking water infrastructures in six municipalities. Health-care coverage has increased by 17% in the project area. Regarding rural organizations, more than 1,000 groups have been created or supported by the project and 70% of them are fully operational, leading to a vibrant community.

PPILDA Code Matrix



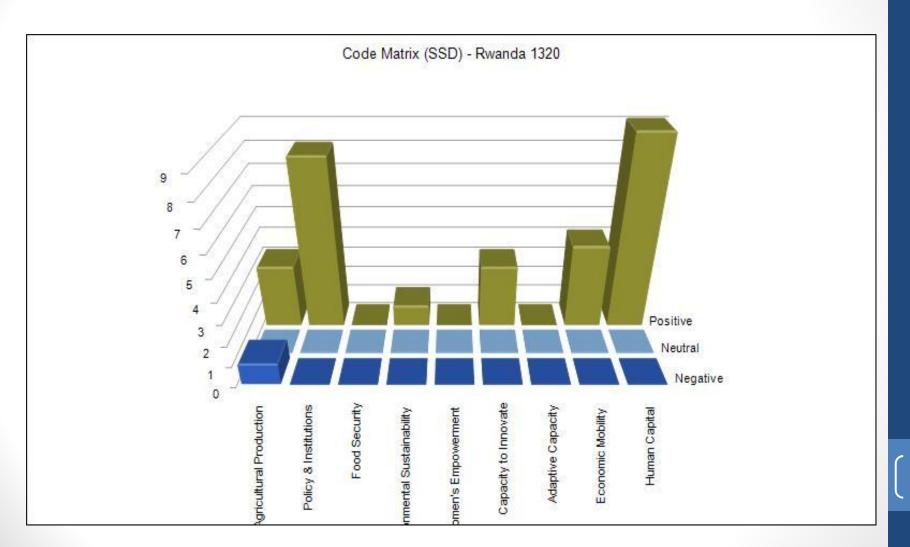
Report Overview

The PCR and PCR annexes were reviewed for the development of this impact summary. Unfortunately, the RIMS datasets were not available at the time of this writing making this project ineligible for an SSD impact analysis exercise. Although the PCR is of good quality and refers to numerous studies as supporting evidence for impact using comparison groups, the results should be handled with caution since most of the data are based on qualitative declaratory surveys.

Independent surveys

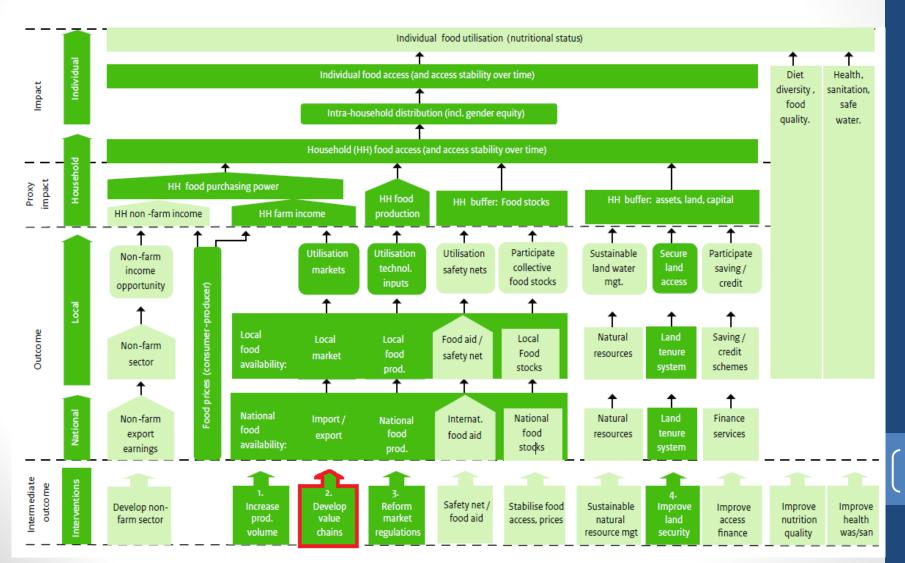


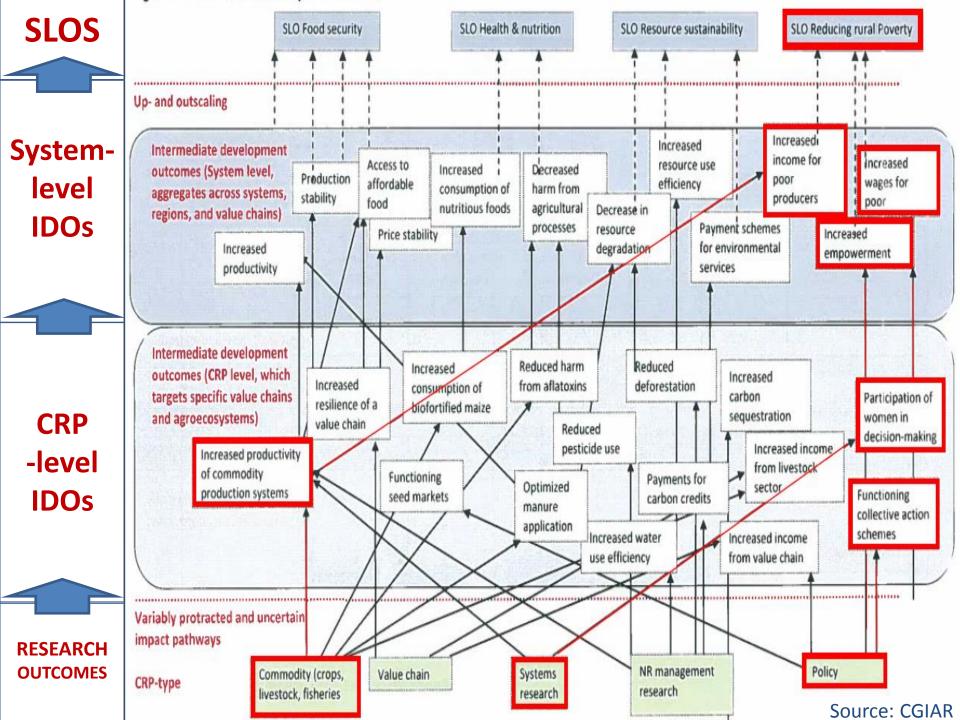
Ql shallow dives





Impact pathways of value chain intervention







Systematic review of impact of agricultural research

- 6 studies with Propensity Score Matching (PSM)
- 5 studies with Instrumental Variables (IV)

6 studies with Propensity Score Matching (PSM)



Country	Crop	Poverty type	Poverty alleviation
BANGLADESH	RICE	Poverty type: calories intake Poverty line: USD 0.29/capita/day	Adopters less likely to be poor by: - 14%
MEXICO	MAIZE	Poverty type: cash poverty Poverty line: MXP 1.124/capita/month (in 2005)	Adopters less likely to be poor by: - 18%
MEXICO	MAIZE	Poverty type: Food-poverty (expenditure on food) Poverty line: USD 1.2/capita/day	Probability to fall below the poverty line: Hybrid - 38% Creolised - 20%
CHINA	RICE	Poverty type: cash poverty Poverty line: 2000: USD 0.24/capita/day 2002: USD 0.25/capita/day 2004: USD 0.26/capita/day	Poverty gap index 2000: - 5-8.6 % 2002: - 4-6.1 % 2004: - 1-3.2 %
UGANDA	GROUNDNUT	Poverty type: cash poverty Poverty line: 2000: USD 1/capita/day	Head count index - 7–9 % Poverty gap index - 4.5-6 %
TANZANIA	PIGEONPEA	Poverty type: basic needs poverty Poverty line: TSh 468/capita/day (2008) USD 0.29/capita/day* *Converted with today exchange rate	Head count index - 12–13 % Poverty gap index - 8–10 %
	BANGLADESH MEXICO MEXICO CHINA	BANGLADESH RICE MEXICO MAIZE MEXICO MAIZE CHINA RICE UGANDA GROUNDNUT	BANGLADESH RICE Poverty type: calories intake Poverty line: USD 0.29/capita/day Poverty type: cash poverty Poverty line: MXP 1.124/capita/month (in 2005) MAIZE Poverty type: Food-poverty (expenditure on food) Poverty line: USD 1.2/capita/day Poverty line: 2000: USD 0.24/capita/day 2002: USD 0.25/capita/day 2004: USD 0.26/capita/day UGANDA GROUNDNUT Poverty type: cash poverty Poverty line: 2000: USD 0.26/capita/day 2004: USD 0.26/capita/day Poverty line: 2000: USD 1/capita/day Poverty line: 2000: USD 1/capita/day TANZANIA Poverty type: basic needs poverty Poverty line: TSh 468/capita/day (2008) USD 0.29/capita/day*

5 studies with Instrumental Variables (IV)

1-011	

YEAR	Country	Crop	Poverty type	Poverty alleviation
2008	MADAGASCAR	RICE	Poverty type: cash poverty Poverty line: USD 0.43/capita/day	A doubling of the rice yields is associated with a reduction of the number of perceived food insecure households by 38%
2011	NIGERIA	MAIZE	Poverty type: cash poverty Poverty line: NR	Rice income and expenditure increase by:
2013	ETHIOPIA	MAIZE	Poverty type: cash poverty Poverty line: USD 1-1.25-1.45/capita/day	Headcount ratio: - 0,7-1.3 % People pulled out of poverty = 1.8-3.3% Poverty gap: - 0.26-0.48 % People pulled out of poverty = 2.3-2.7% Poverty severity: - 0.14 to - 0.44 % People pulled out of poverty = 2.9-4.3%
2014	KENYA	MAIZE	Poverty type: cash poverty Poverty line: 2000: KES 1009 /capita/month 2004: KES 1336/capita/month 2007: KES 1629/capita/month 2010: KES 2144/capita/month	Poverty gap index 2000: - 5-8.6 % 2002: - 4-6.1 % 2004: - 1-3.2 %
2104	ZAMBIA	MAIZE	Poverty type: cash poverty Poverty line: NR	Poverty gap index 10 kg of subsidized hybrid seeds reduce the HH-specific poverty gap by: - 0.8%