
Organisation des Nations Unies
pour l'alimentation
et l'agriculture
Laure BERLING, FAO
29/06/2021, Virtual Event
Explorer
EX-ACT VC
À propos
d'EX-ACT VC
Objectifs de
l'outil EX-ACT
VC
EX-ACT VC
EX-Ante Carbon-balance Tool for Value Chains
© Luis Tato

Objectifs de l'outil

Un outil qui offre une évaluation holistique des projets de chaînes de valeur agroalimentaires

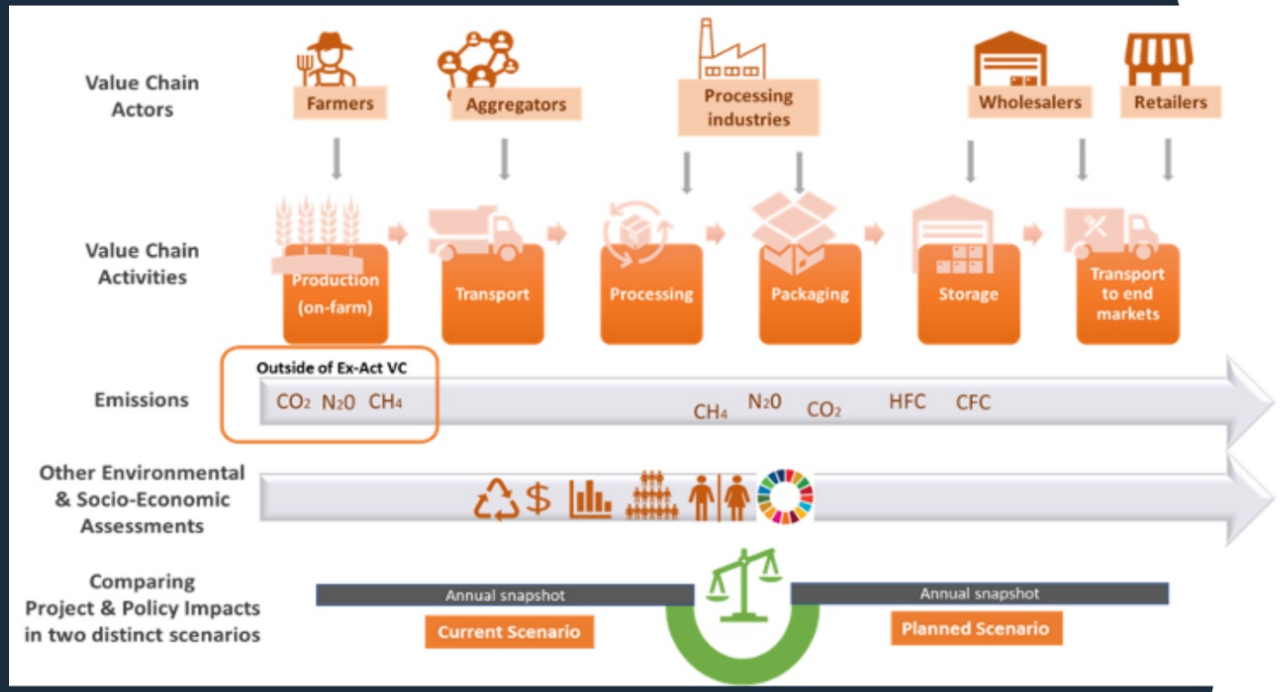
Objectifs

Outil standardisé, transparent et rentable permettant aux décideurs de:

Quantifier	les performances à travers les dimensions environnementales et socio-économiques
Identifier	les moteurs de durabilité en comparant deux scénarios
Déterminer	les points d'entrée pour les investissements
Évaluer	si les objectifs sont atteints
Concevoir	les chaînes de valeur agroalimentaires durables

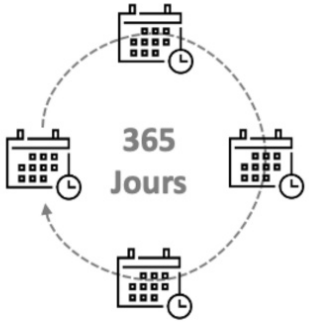
À propos d'EX-ACT VC

Cadre Logique

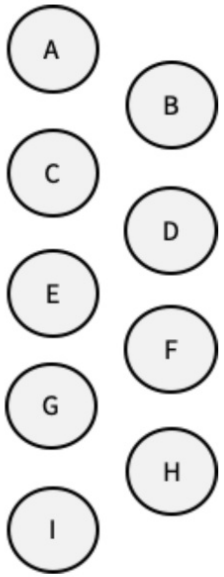


Portée d'EX-ACT VC

Cinq catégories de produits de base

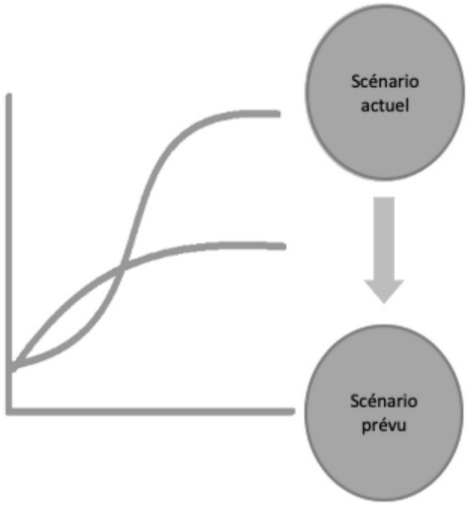


Instantané annuel de la chaîne de valeur



Jusqu'à neuf catégories uniques d'acteurs

Cinq activités possibles



Actuel vs prévu scénario

Étapes Méthodologiques

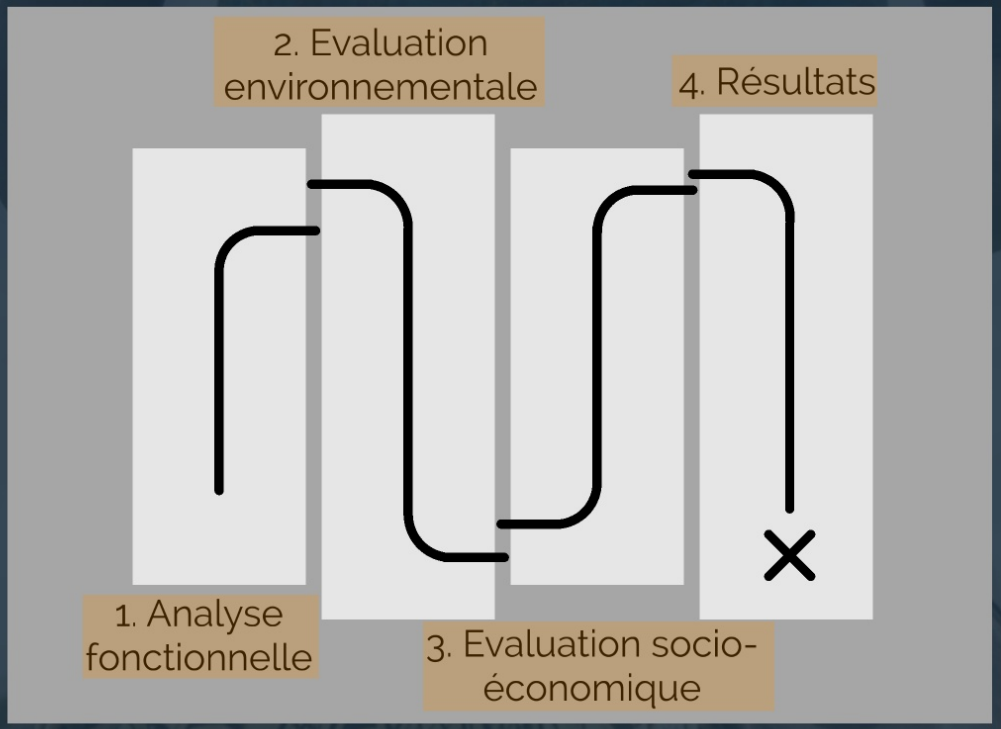
1 Identification de:
- La chaîne de valeur des produits de base

Cartographie des:
- Acteurs
- Activités
- Volumes

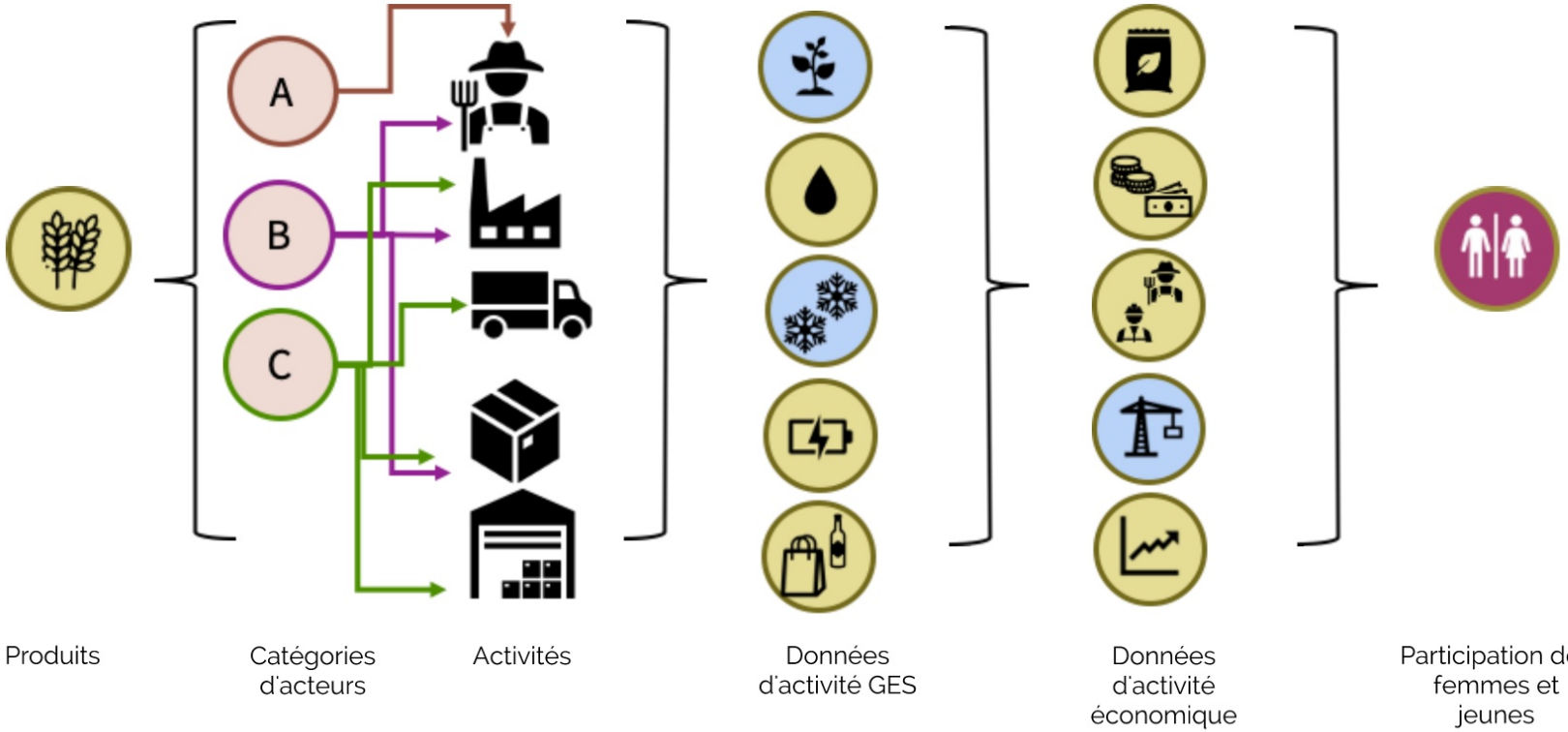
2 Estimation
- Émissions de GES
- Perte de nourriture
- Consommation d'eau

3 Estimation
- Valeur économique ajoutée
- Nombre d'emplois
- Participation des femmes & jeunes

4 Résultats



Approche d'EX-ACT VC



Changements principaux dans la nouvelle version

Méthodologie révisée

- Eaux usées (Affinement du GIEC, 2019)
- Stockage (PRG de réfrigérants)
- Inclusion facultative du coût du capital fixe

Nouveaux facteurs d'émission de GES

- Transport
- Énergie

Modules inclus

- Analyse fonctionnelle
- Evaluation quantitative du genre et de la jeunesse
- ODD

Modules supprimés

- Évaluation qualitative de la résilience du système
- Calcul des émissions terrestres

Explorer l'EX-ACT VC

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Food and Agriculture Organization of the United Nations

EX-ACT VC Version 3.0

Start | Commodity tracker | Off-farm GHG assessment | Socio-economic assessment | Results

Step 1 - Description of Project

User Name	Sravya Mamidanna
Date	27/05/21
Project Name	Commercialization and De-risking for Agricultural Transformation Project
Project Code	P171482
Project Budget (USD)	300 M
Funding Agency	World Bank
Implementing Agency	
Project Status	Implementation

EX-ACT VC

EX-ANTE CARBON-BALANCE TOOL FOR VALUE CHAIN ANALYSIS

Click for instructions

Step 2 - Description of Value Chain

Value Chain Commodity		Annual Crop
Type of Value Chain		Domestic value chain
Location of Value Chain:	Continent	Eastern Africa
	Country	Rwanda
	Region / Municipality	
Exchange rate (USD / local currency)	1 USD =	1002.04 RWF

Global Warming Potential 100-year	
Fifth Assessment Report (AR5)	
CO2	1
CH4	34
N2O	298

Step 3 - Mapping out the Value Chain

	Category of Actor	Please Name Category	Please Describe Category	Number of Actors within Category		Describe Commodity Sold	Purchases Commodity From:		Sells Commodity To:		Please identify activities performed (either current or planned)								Is the commodity sold at retail level?	Location of Category of Actor		
				Current	Planned		Current	Planned	Current	Planned	Primary Production	Storage (Pre-Processing)	Processing	Water Used (Processing)	Packaging	Storage / Display	Transportation: Pick Up	Transportation: Delivery		Country	Exchange rate (1 USD = ___)	Local Currency
	Example:	*Small Scale Producers*	*Small-scale vegetable growers*	*20*	*30*	*Fresh Tomatoes*			*Local Coop*		*Yes*	*Yes*	*No*	*Yes*	*No*	*No*	*N.A*	*Yes*				
	Actor(s) A:	Maize Producers	Small-scale Maize Producers - Improved	474266	474266	Maize Grain	N/A	N/A	Aggregators	Aggregators	Yes	Yes	No	No	Yes	No	No	Yes		Please select		Please select
	Actor(s) B:																					
	Actor(s) C:																					
	Actor(s) D:	Aggregators	Maize grain aggregators and traders	1	1	Maize Grain	Maize Producers	Maize Producers	Maize Processors	Maize Processors		Yes	No	No	No	No	No	Yes	No	Please select		Please select
	Actor(s) E:	Maize Processors	Processors producing Maize Flour	10	10	Maize Flour	Aggregators	Aggregators	Wholesalers	Wholesalers		Yes	Yes	Yes	Yes	Yes	No	Yes	No	Please select		Please select
	Actor(s) F:	Wholesalers	Wholesalers distributing Maize Flour	1	1	Maize Flour	Maize Processors	Maize Processors	Other Actor	Other Actor		No	No	No	Yes	Yes	No	No	No	Please select		Please select
	Actor(s) G:																					
	Actor(s) H:																					
	Actor(s) I:																					

STEP 4 - Description of On-Farm Activities

		Maize Producers		
For the SDG Tracker, can this category of actor be defined as "small-scale"?		Yes		
		Current	Planned	
Value-Chain (Meso) Level Data	Total Amount Harvested	153188.1	160847.5	Tonnes
	Total Land used for Production	56912.0	56912.0	Ha
	Average Yield	2.7	2.8	Tonnes/Ha
	Total Emissions Associated with Production			tCO_2e / yr
Individual (Micro) Level Data	Total Amount Harvested	0.3	0.3	Tonnes
	Total Land used for Production	0.1	0.1	Ha

Flow of Commodity

For the entire category of actors:		Absolute (tonnes)		Percentage	
		Current	Planned	Current	Planned
Maize Producers	Amount harvested	153,188	160,848		
	Amount left unharvested	-	-	0%	0%
	Amount lost during harvest	32,935	18,514	22%	11.5%
	Amount consumed	27,267	28,631	18%	18%
	Amount put in storage, before processing	92,985	113,703		
	Amount lost during storage, before processing	-	-		
	Amount packaged	92,985	113,703		
	Amount lost during transport (delivery)	-	-	0%	0.0%
	Amount of Maize Grain sold to Aggregators (current)	92,985		100%	
	Amount of Maize Grain sold to Aggregators (planned)		113,703		100%
Amount sold to Aggregators - Individual Level		0.20	0.24		

Transportation Details

Tier 2

Type of fuel		Type of transport used		# of km		Type of conditioning		Total Fuel Used (Litres)	
Current	Planned	Current	Planned	Current	Planned	Current	Planned	Current	Planned
None	None	Animals	Animals	15	15	Non-refrigerated	Non-refrigerated	0	0

Food and Agriculture Organization of the United Nations

EX-ACT VC Version 3.0

Start | Commodity tracker | Off-farm GH assessment

Step 1 - Description of Project

User Name	Sravya Mamidanna
Date	27/05/21
Project Name	Commercialization and De-risking for Agricultural Transformation Project
Project Code	P171462
Project Budget (USD)	300 Million
Funding Agency	World Bank
Implementing Agency	
Project Status	Implementation

EX-ACT VC

EX-ANTE CARBON-BALANCE TOOL FOR VALUE CHAIN ANALYSIS

Click for Instructions

Step 2 - Description of Value Chain

Value Chain Commodity		Annual Crop
Type of Value Chain		Domestic value chain
Location of Value Chain:	Continent	Eastern Africa
	Country	Rwanda
	Region / Municipality	
Exchange rate (USD / local currency)	1 USD =	1002.04 RWF

Global Warming Potential 100-year	
Fifth Assessment Report (AR5)	
CO2	1
CH4	34
N2O	298

Step 3 - Mapping out the Value Chain

Category of Actor	Please Name Category	Please Describe Category	Number of Actors within Category		Describe Commodity Sold	Purchases Commodity From:		Sells Commodity To:		
			Current	Planned		Current	Planned	Current	Planned	Pri Proc

Step 3 - Mapping out the Value Chain

?

Category of Actor	Please Name Category	Please Describe Category
Example:	***Small Scale Producers***	***Small-scale vegetable growers***
Actor(s) A:	Maize Producers	Small-scale Maize Producers - Improved
Actor(s) B:		
Actor(s) C:		
Actor(s) D:	Aggregators	Maize grain aggregators and traders
Actor(s) E:	Maize Processors	Processors producing Maize Flour
Actor(s) F:	Wholesalers	Wholesalers distributing Maize Flour
Actor(s) G:		
Actor(s) H:		
Actor(s) I:		

Rwanda

1002.04 RWF

Fifth Assessment Report (AR5)	
CO2	1
CH4	34
N2O	298

Number of Actors within Category		Describe Commodity Sold	Purchases Commodity From:		Sells Commodity To:	
Current	Planned		Current	Planned	Current	Planned
20	30	*Fresh Tomatoes*			*Local Coop*	
474266	474266	Maize Grain	N/A	N/A	Aggregators	Aggregators
1	1	Maize Grain	Maize Producers	Maize Producers	Maize Processors	Maize Processors
10	10	Maize Flour	Aggregators	Aggregators	Wholesalers	Wholesalers
1	1	Maize Flour	Maize Processors	Maize Processors	Other Actor	Other Actor

roducers

Flo

Please identify activities performed (either current or planned)

Primary Production	Storage (Pre-Processing)	Processing	Water Used (Processing)	Packaging	Storage / Display	Transportation: Pick Up	Transportation: Delivery
Yes	***Yes***	***No***	***Yes***	***No***	***No***	***N.A***	***Yes***
Yes	Yes	No	No	Yes	No	No	Yes
	Yes	No	No	No	No	No	Yes
	Yes	Yes	Yes	Yes	Yes	No	Yes
	No	No	No	Yes	Yes	No	No

w of Commodity

	Absolute (tonnes)	Percentage

Type of fuel	Type of tran

Is the commodity sold at retail level?	Location of Category of Actor ?		
	Country	Exchange rate (1 USD = ___)	Local Currency
	Please select		Please select
No	Please select		Please select
No	Please select		Please select
No	Please select		Please select

Flow of Commodity

	For the entire category of actors:	Absolute (tonnes)		Percentage	
		Current	Planned	Current	Planned
Maize Producers	Amount harvested	153,188	160,848		
	Amount left unharvested	-	-	0%	0%
	Amount lost during harvest	32,935	18,514	22%	11.5%
	Amount consumed	27,267	28,631	18%	18%
	Amount put in storage, before processing	92,985	113,703		
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	Amount packaged	92,985	113,703		
	Amount lost during transport (delivery)	-	-	0%	0.0%
	Amount of Maize Grain sold to Aggregators (current)	92,985		100%	
	Amount of Maize Grain sold to Aggregators (planned)		113,703		100%
Amount sold to Aggregators - Individual Level		**0.20**	**0.24**		

Type of fuel	
Current	Pla
None	N

Transportation Details

Tier 2

Type of fuel		Type of transport used		# of km		Type of conditioning		Total Fuel Used (Litres)	
Current	Planned	Current	Planned	Current	Planned	Current	Planned	Current	Planned
None	None	Animals	Animals	15	15	Non-refrigerated	Non-refrigerated	0	0

STEP 4 - Description of On-Farm Activities

		Maize Producers		
For the SDG Tracker, can this category of actor be defined as "small-scale"?		Yes		
		Current	Planned	
Value-Chain (Meso) Level Data ?	Total Amount Harvested	153188.1	160847.5	Tonnes
	Total Land used for Production	56912.0	56912.0	Ha
	Average Yield	2.7	2.8	Tonnes/Ha
	Total Emissions Associated with Production			tCO_2e / yr
Individual (Micro) Level Data	Total Amount Harvested	0.3	0.3	Tonnes
	Total Land used for Production	0.1	0.1	Ha

Food and Agriculture Organization of the United Nations

EX-ACT VC Version 3.0

Start | Commodity tracker | Off-farm GHG assessment | Socio-economic assessment | Results

Step 1 - Description of Project

User Name	Sravya Mamidanna
Date	27/03/21
Project Name	Commercialization and Scaling for Agricultural Transformation Project
Project Code	P171422
Project Budget (USD)	300 Million
Funding Agency	World Bank
Implementing Agency	
Project Status	Implementation

Step 2 - Description of Value Chain

Value Chain Commodity		Annual Crop
Type of Value Chain		Domestic value chain
Location of Value Chain:	Continent	Eastern Africa
	Country	Rwanda
	Region / Municipality	
Exchange rate (USD / local currency)	1 USD =	1002.04 RWF

EX-ACT VC

EX-ANTE CARBON-BALANCE TOOL FOR VALUE CHAIN ANALYSIS

Click for instructions

Global Warming Potential 100-year	
Fifth Assessment Report (AR5)	
CO2	1
CH4	34
N2O	298

Step 3 - Mapping out the Value Chain

Category of Actor	Please Name Category	Please Describe Category	Number of Actors within Category: Current	Number of Actors within Category: Planned	Describe Commodity Sold	Purchases Commodity From: Current	Purchases Commodity From: Planned	Sells Commodity To: Current	Sells Commodity To: Planned	Primary Production	Storage (Pre-Processing)	Processing	Water Used (Processing)	Packaging	Storage / Display	Transportation: Pick Up	Transportation: Delivery	Is the commodity sold at retail level?	Location of Category of Actor: Country	Exchange rate (1 USD = ___)	Local Currency
Example:	Small Scale Producers	Small-scale vegetable growers	20	30	Fresh Tomatoes			Local Coop		Yes	Yes	No	Yes	No	No	N.A	Yes				
Actor(s) A:	Maize Producers	Small-scale Maize Producers - Improved	474266	474266	Maize Grain	N/A	N/A	Aggregators	Aggregators	Yes	Yes	No	No	Yes	No	No	Yes		Please select		Please select
Actor(s) B:																					
Actor(s) C:																					
Actor(s) D:	Aggregators	Maize grain aggregators and traders	1	1	Maize Grain	Maize Producers	Maize Producers	Maize Processors	Maize Processors		Yes	No	No	No	No	No	Yes	No	Please select		Please select
Actor(s) E:	Maize Processors	Processors producing Maize Flour	10	10	Maize Flour	Aggregators	Aggregators	Wholesalers	Wholesalers		Yes	Yes	Yes	Yes	Yes	No	Yes	No	Please select		Please select
Actor(s) F:	Wholesalers	Wholesalers distributing Maize Flour	1	1	Maize Flour	Maize Processors	Maize Processors	Other Actor	Other Actor		No	No	No	Yes	Yes	No	No	No	Please select		Please select
Actor(s) G:																					
Actor(s) H:																					
Actor(s) I:																					

STEP 4 - Description of On-Farm Activities

For the SDG Tracker, can this category of actor be defined as "small-scale"? Yes

		Current	Planned	
Value-Chain (Meso) Level Data	Total Amount Harvested	153188.1	160847.5	Tonnes
	Total Land used for Production	56912.0	56912.0	Ha
	Average Yield	2.7	2.8	Tonnes/Ha
	Total Emissions Associated with Production			tCO_2e / yr
Individual (Micro) Level Data	Total Amount Harvested	0.3	0.3	Tonnes
	Total Land used for Production	0.1	0.1	Ha

Results

Flow of Commodity

For the entire category of actors:		Absolute (tonnes) Current	Absolute (tonnes) Planned	Percentage Current	Percentage Planned
Maize Producers	Amount harvested	153,188	160,848		
	Amount left unharvested	-	-	0%	0%
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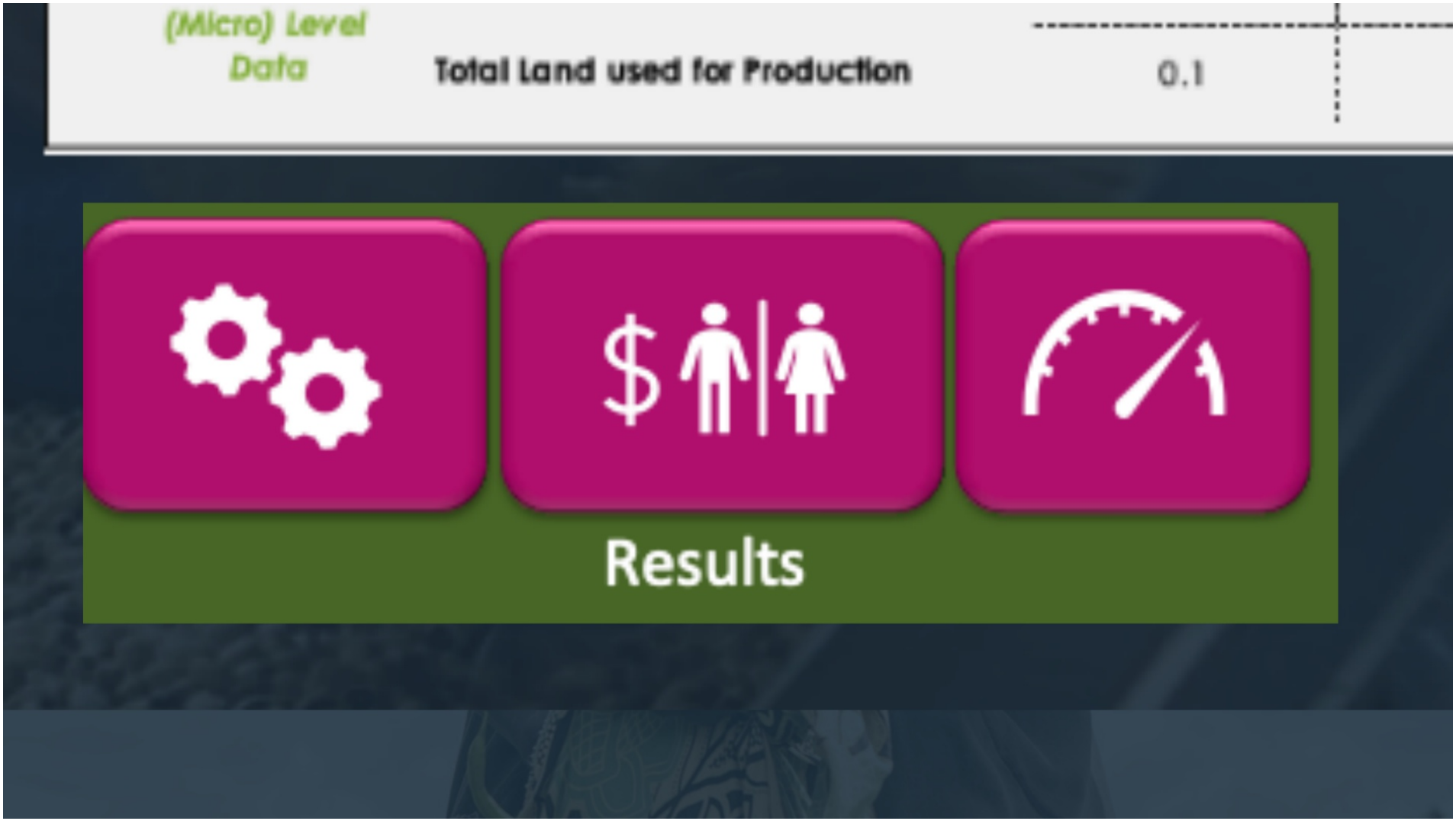
Amount sold to Aggregators - Individual Level		0.20	0.24		

Transportation Details

Tier 2

Type of fuel: Current	Type of fuel: Planned	Type of transport used: Current	Type of transport used: Planned	# of km: Current	# of km: Planned	Type of conditioning: Current	Type of conditioning: Planned	Total Fuel Used (Litres): Current	Total Fuel Used (Litres): Planned
None	None	Animals	Animals	15	15	Non-refrigerated	Non-refrigerated	0	0


(Micro) Level Data
Total Land used for Production
0.1
Results

EX-ACT VC - Réultats

Indicateurs environnementaux

- Émissions de GES
- Empreinte carbone
- Perte de nourriture
- Consommation d'eau

CO_2
CH_4
N_2O

Indicateurs socio-économiques

- Valeur économique de l'analyse de l'atténuation du changement climatique
- Valeur de la production brute / valeur ajoutée G&N
- Indicateurs de l'emploi
- Revenu net
- Inclusion des jeunes & genre

Indicateurs ODD

- ODD #2 Faim <<zéro>>
- ODD #5 Égalité entre les sexes
- ODD #6 Eau propre et assainissement
- ODD #9 Industrie, innovation et infrastructures
- ODD #12 Consommation et production responsables

Merci!

Ada Ignaciuk
Senior Economist and EPIC Team Leader

Joanna Ilicic
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EX-ACT for Value Chains
Sravya Mamidanna
Maria Giulia Crespi
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For more information, please visit:

http://www.fao.org/tc/exact/ex-act-home/en/

http://www.fao.org/climatechange/epic/home/en/