Food and Agriculture Organization of the United Nations

SUSTAINABLE DEVELOPMENT GOALS

AFRICAN COMMISSION ON AGRICULTURAL STATISTICS

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AFCAS 28

LEVERAGING DATA & STATISTICS FOR AGRIFOOD SYSTEMS TRANSFORMATION IN AFRICA

AGENDA ITEM 12

PROGRESS AND NEW DEVELOPMENTS ON MEASURING SUSTAINABLE DEVELOPMENT GOAL INDICATORS (SDG INDICATORS)

AFRICAN COMMISSION ON AGRICULTURAL STATISTICS

Capacity Development and Technical Assistance Programme on SDG indicators **2.3.1** and **2.3.2** : ***The experience of Burkina Faso***

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Plan

I. Context

II. AFRISTAT support

III. Computing SDG2.3

IV. Keys results

V. Takeaways

Context

- Agricultural statistics as helpful tool for gorverning food security.
- SDGs are defined since 2015 and submitted to the UN member countries to be used in fighting against hunger.

❑**Main issue** : the SDGs indicators are not computed !

- ✓ Needed data missing
- ✓ Low exploitation of data
- ✓ Computation methods ignorance
- ✓ etc.

Context

- **Solution :** Computing from national agricultural surveys data (TA of Afristat)
- **Indeed,** EPA survey in Burkina Faso provides microdata enabling the discrimination of small holdings from the grand ones and then to compute afterwards SDG2.3.1 and 2.3.2.

AFRISTAT support

- Online training (Burkina Faso, Mali, Niger);
- Presential training (Ouagadougou) with FAO;
- Remote working with the national team;
- Protocol with DGESS/MAAH/BF (june 13-october 15, 2022);

AFRISTAT support

- Computing SDG2.3 with existing data (September 12-17th);
- Results dissemination with potential national users (Nov 24th);
- Support to new data collection (enhancing questionnaries) june 13-16th ;
- Development of SDG2.3 toolKit (Excel).

Computing SDG2.3

- SDG2.3.1 : Land productivity (S) or labor productivity (L) of the small farms

$$SDG\ 2.3.1 = I^t_{2.3.1} = \frac{\sum_{j=1}^{n}\left(\frac{\sum_i V^t_{ij} p^t_{ij}}{Ld^t_j}\right)}{n}$$

- SDG2.3.2 : Small farms average revenue

$$\text{SDG } 2.3.2 = I^t_{2.3.2} = \frac{\sum_{j=1}^{n}\left(\sum_i (V^t_{ij} p^t_{ij} - C^t_{ij})\right)}{n}$$

Computing SDG2.3

- **Data**

Yearly collected near **households** sample (size **5 322** in 2021).

SDG Variables	Components	Units	TLU Factor	EPA source	RGA Source	Status
Crop area (ha)	Rain season	ha		C2		C
	Tree crops	ha		C5.2		E
	Garden crops	ha		C5.2		E
	Fallow	ha		C4.3-C2		E/C
Livestock (number)	Cows	Number	0,7	C1.6		C
	Goats/sheeps	Number	0,3			C
	Donkey	Number	NA			C
	Camels	Number	1			C
	Horses	Number	0,8			C
	Pigs	Number	0,5			C
	Poultry	Number	0,1			C
Revenue (XOF)	Livestock	XOF		C1.6		C
	Other animal products	XOF		C5.2		E
	Vegetal crops produced	XOF		C5.1-C5.2		C/E
	Vegetal crops received as payement	XOF				C
Cost (XOF)	Vegetal crops given as payement	XOF		C5.1-C5.2		C
	Vegetal crops used for seeds	XOF				C
	Fertilizers costs	XOF		C8.1		C
	Workers payement (crops & breeding)					
	Animal inputs (vaccines, ...)	**XOF**		**NA**		**M/C**
	Other production costs	**XOF**				**C**
Labor (H/J)	Family workers (Breeding)	H/J		C1.1		E
	External workers (Breeding)	H/J		NA		C
	Family workers (Crops)	H/J		C1.1		E
	External workers (Crops)	H/J		C2		C

Computing SDG2.3

Data : computing SDG2.3 variables

- **Crops area** (ha) = Rain season/garden + Tree crops + fallow

  Tree crops area (S) = Tree crop production (**P**) x Yield (**R**)

  Yield (R) *could be found on technical files (INERA's website, rechearch notes, Wikifarmer, etc.).*

- **Livestock (TLU)** : number per kind (on july 31st)

  TLU = Number (**N**) x Conversion factor value (**CF**)

  FAO TLU are available at https://www.fao.org/3/Y4176E/y4176e04.htm

Computing SDG2.3

Data : computing SDG2.3 variables

- **Revenue** (XOF) : **Crops** + **livestock**
  - ✓ crops = Production x price
  - ✓ livestock = number sold x price
  - ✓ other animal products = quantity x Unit Price

WB PPA conversion rate at http://data.worldbank.org/indicator/PA.NUS.PPP

- **Production costs** (by nature or cash) :

Inputs+Labor+affording area (renting)+ Fonctionning expenditures

Computing SDG2.3

Data : Final format

HH_ID	Area	Livestock_TLU	Revenue	Costs	Labor	Sexe	Location	Autochton

ID_MEN	SUPTOT	EFF_CHEPTEL_UBT	REVENU_TOT_AGRI_PPA	COUT_TOT_PPA	QTE_TRAVAIL2	SEXE	MILIEU	AUTOCHTONE	COEFTOT_AJ
5050080090	,04	,00	,00	,00	300,00	1,00	1,00	1,00	33,68
22020130206	2,07	,00	,00	31,43	1,00	1,00	1,00	1,00	375,84
14050030003	2,75	,00	,00	242,26	940,00	1,00	1,00	1,00	185,50
27040030134	3,37	,00	,00	72,53	15,00	1,00	1,00	1,00	339,94
32050020921	3,84	,00	,00	,00	1154,00	1,00	1,00	1,00	752,77
32050020631	4,94	,00	,00	,00	1154,00	1,00	1,00	1,00	136,70
27060240016	5,76	,00	,00	,00	1400,00	1,00	1,00	1,00	378,18
7050020054	7,30	,00	,00	,00	886,00	1,00	1,00	1,00	146,32
32050020815	11,19	,00	,00	,00	1154,00	1,00	1,00	1,00	752,77
27060240019	12,22	,00	,00	,00	1049,00	1,00	1,00	1,00	123,64
11180540141	,02	,05	,00	3,63	300,00	1,00	1,00	1,00	28,01
15070240938	5,05	1,40	,00	1788,64	710,00	1,00	1,00	1,00	209,95
32050020877	8,05	4,75	,00	,00	1154,00	1,00	1,00	1,00	752,77
11170150005	,15	,80	13,81	106,38	400,00	1,00	1,00	1,00	338,01
18010100322	3,80	2,46	24,00	602,01	800,00	1,00	1,00	1,00	432,80
11140121060	,03	,09	28,00	,00	400,00	,00	1,00	1,00	525,47

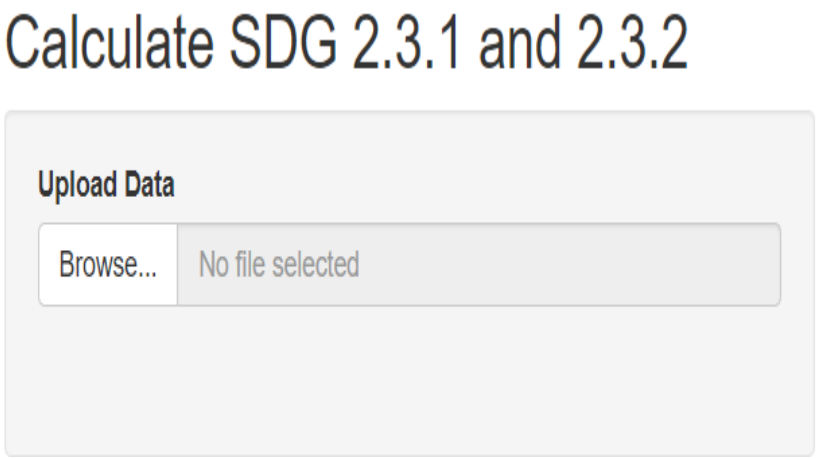
Computing SDG2.3

Tools : 3 ways

1 *Programming*

2 *Using Shiny online*

https://sdg-indicators.shinyapps.io/SDG231_2/



3 *AFRISTAT Toolkit*

Key results

Year	Type of farm	SDG2.3.1				SDG2.3.2	
		Productivity/ha		Productivity/labor			
		$PPP	XOF	$PPP	XOF	$PPP	XOF
2019	Small	518,6	106 693,5	1,3	277,4	263,8	54 269,7
	Grand	869,3	178 841,7	4,7	976,8	2 342,8	481 988,7
2020	Small	1 295,9	281 426,1	3,5	764,1	1 384,1	300 579,9
	Grand	2 082,9	452 359,6	8,4	1 814,5	5 599,8	1 216 113,7
2021	Small	1 633,8	337 884,0	3,9	802,0	1 599,1	330 709,5
	Grand	2 338,1	483 538,6	8,8	1 810,6	6 213,2	1 284 930,9

In 2021, **Land productivity** (1 633,8 $PPP/**ha**), **Labor productivity** (3,9 $PPP/**labor**), **revenue** (1599,1 $PPP)

Takeaways

- Enhancing data collection tools so as to to make easy the SDG2.3 variables computation (case of 2022);
- Computing SDG2.3 at the regional level (country 3rd administrative level) for national policies needs (to help Atlas SDG building);

Takeaways

- Computing yearly the SDG2.3 till 2030 for continous SDGs monitoring;
- Achieving the national agricultural surveys integration process with the support of FAO to garantee the maintain of the SGD2.3 variables in the future data collections.

Thank you for your attention!

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