Food and Agriculture Organization of the United Nations

SUSTAINABLE DEVELOPMENT GOALS

APCAS/24/B5.5

ASIA AND PACIFIC COMMISSION ON AGRICULTURAL STATISTICS

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Kathmandu (Nepal)

BETTER PRODUCTION | BETTER NUTRITION | BETTER ENVIRONMENT | BETTER LIFE

SIDE EVENT B:

Cambodia Experiences with Farm-based SDG indicators

Implementation & Results of the Cambodia Agricultural Survey

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Metadata

Lead Ministry/Agency	The National Institute of Statistics (NIS), Ministry of Planning, Ministry of Agriculture, Forestry and Fisheries (MAFF)
Data users	Gov't Stakeholders & Non-Gov't Organization
SDGi data source	Cambodia Agriculture Survey, NIS/MoP
Data collection year(s)	2020, 2021, 2022 (for SDG 2.4.1 but ongoing)
Reference period	1 July to 30 June (Annually)
Sample size	Approximately 16,000
Data collection frequency	Annual
Data collection mode	CAPI
SDGi reporting status	CAS2020, CAS2021, CAS2022

Lead Ministry

- The National Institute of Statistics (NIS) , Ministry of Planning (MoP), in collaboration with the Ministry of Agriculture, Forestry and Fisheries (MAFF) undertook Cambodia Agriculture Survey 2020 (CAS2020), CAS2021, CAS2022, CAS2023 a follow up the Cambodia Inter-Censual agriculture Survey 2019 (CIAS 2019)
- Financial and technical support from the Food and Agriculture Organization of the United Nations (FAO), under the scope of the 50x2030 Initiative, FAO, and the 50x2030 Initiative through AGRISurvey project launched in 2018 and the Royal Government of Cambodia.

Survey Questions

- CAS 2020 – FIES Module in CAS - Three Social Indicators of 2.4.1
  - Wage Rate in Agriculture (9)
  - Food Insecurity Experience Scale (FIES) (10)
  - Secure Tenure Rights (11)

- CAS 2021 – Income, Labour & Productivity Module in CAS - Three Economic Indicators of 2.4.1
  - Farm Value of Production (1)
  - Net Farm Income (2)
  - Risk Mitigation Mechanisms (3)

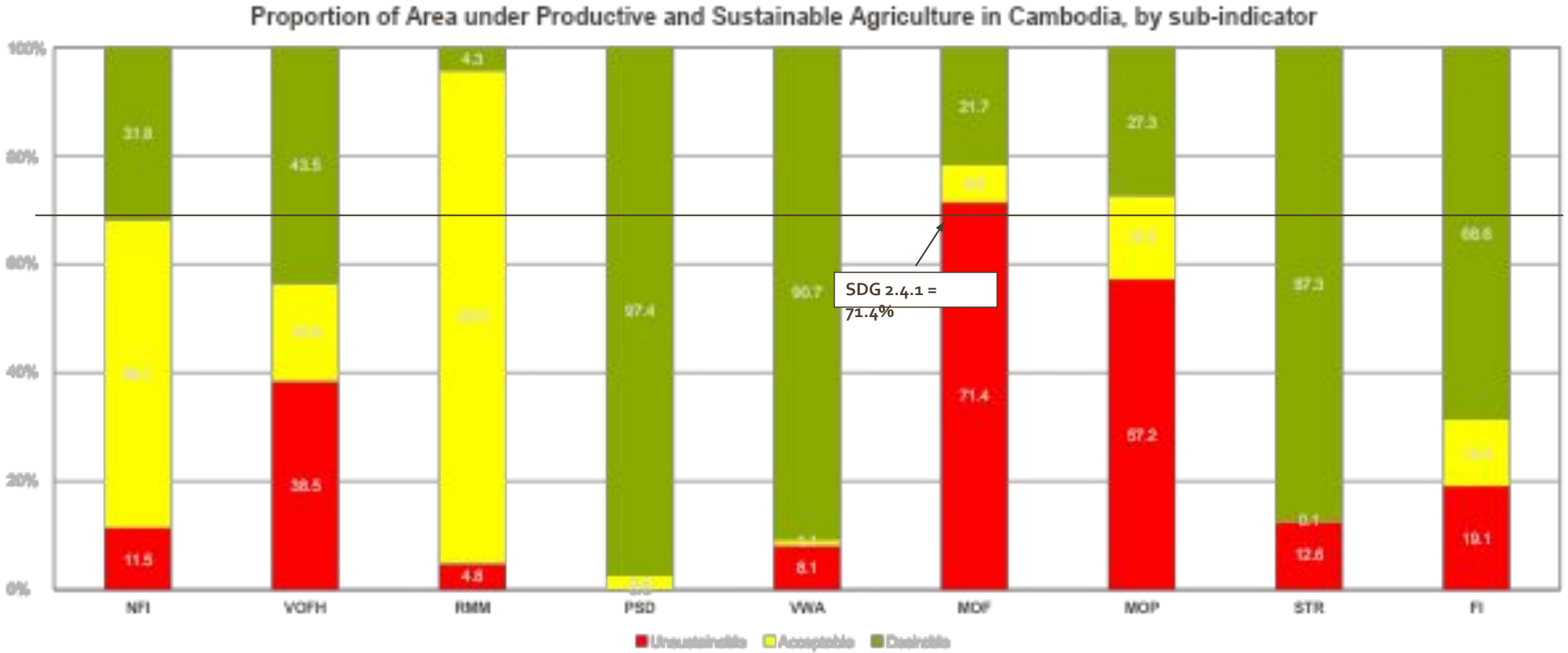
- CAS2022 – Production Methods & Environment in CAS - Four Environmental Indicators of 2.4.1
  - Prevalence of Soil Degradation (4)
  - Variation in Water Availability (5)
  - Fertilizer Management (6)
  - Pesticide Management (7)
  - Biodiversity (8)

Adaptation of Questions

- No official organic certification in Cambodia (CAS 2022)
- Used “Good Agricultural Practices (GAP)” as proxy
- Some difficulty in moving questions into (and out of) rosters
- Photos of pesticides
- No minimum wage in Cambodia

S6_Q28a. DO NOT READ OUT LOUD: Use the provided list to identify the pesticides used by the holding and report all the pesticides categories from column 4. I * Select all that apply E S5A_PARCELHOMELOT.Count(x=>x.S5A_CROP.Any(y=>y.S5A_Q06==1)) > 0 || S6_Q14==1	MULTI-SELECT 00 ☐ 0 01 ☐ 1 02 ☐ 2 03 ☐ 3 04 ☐ 4 05 ☐ 5 06 ☐ 6 07 ☐ 7 08 ☐ 8 -99 ☐ Cannot identify	S6_Q28a
S6_Q28b. Is the packaging (e.g. bottle, box, container) available on the holding for any of the pesticides you cannot identify? E S6_Q28a.Contains(-99)	SINGLE-SELECT 01 ○ Yes 02 ○ No	S6_Q28b
S6_Q28c. Do you allow me to take a picture of these packagings? E S6_Q28b==1	SINGLE-SELECT 01 ○ Yes 02 ○ No	S6_Q28c
S6_Q28d. DO NOT READ OUT LOUD: Gather the packagings of all of the pesticides you cannot identify and take a photo. I * Make sure that the product label from all packagings is visible on the photo. E S6_Q28c==1	PICTURE	S6_Q28d

Indicator Results



Interpretation

- *Variation in Water Availability, 90.7 percent of holding were assessed as desirable*
- *Risk Mitigation Mechanism 90.9 percent acceptable*
- MOF is the limiting indicator in productive and sustainable agriculture in Cambodia
- MOP 57.2% of those assessed with unsustainable
- For fertilizer management, 71.4 percent of holdings were assessed as unsustainable
- However, 67.3 percent did not indicate if any risk management measures were taken
- 64.3% of those assessed with unsustainable fertilizer management did not know if any risk management measures were taken

Challenges & Solutions

- 9/11 indicators calculated
- Wage rate in agriculture could not be (difficulty in aligning indicators from questionnaire)
- Biodiversity could not be (Value of Production had not yet been calculated for CAS 2022)
- Both are possible, but time consuming and difficult. With time constraints they were removed for now.
- CAS 2022 not yet published and weighting not final. All environmental indicators calculated using CAS 2022 are using a standardized weight equal to 1. These will be updated, recalculated and finalized once the weighting is complete.

Challenges & Solutions

- Survey is long and involves some complex questions. Difficult to translate and to enumerate.

S7A_Q48. Were medically important antimicrobials used as growth promoter for [livestock] during 1 July 2021 through 30 June 2022?		
* Any substance of natural, synthetic or semi-synthetic origin which at low concentrations kills or inhibits the growth of micro-organisms, but causes little or no host damage		
◯	1	Yes
◯	2	No
◯	-999	Don't know

- Different reference period among questions (last 12 months, 3 years, 5 years).

S4_Q16. Has there been any change in the soil quality of parcel [parcel#] from 1 July 2017 to 30 June 2022?		
◯	1	Yes
◯	2	No

S3_Q02a. Was irrigation used on any parts of this holding from 1 July 2019 to 30 June 2022?		
◯	1	Yes
◯	2	No

Recommendations

- Use simple terminology
- Consistent reference period
- Shorter questionnaire

The Cambodia Agriculture Survey 2021 Questions

- The Holding
- Characteristics of the household and managers
- Crops Production
- Livestock Production
- Aquaculture/Fishing Production
- Economy of household
- Household of the holder and Co-holder
- Labour Used by the holding
- Household Dwelling and Assets

2022 Annual Survey of Agriculture can produce the four environmental indicators:

- Prevalence of soil degradation
- Variation in water availability
- Fertilizer management
- Pesticide management biodiversity

TABLE 1. SDGi 2.4.1 framework

Dimension	No.	Theme	Subindicator: Proportion of agricultural area under sustainable agriculture	Farm type	Reference period
Economic	01	Land productivity	Farm output value per hectare	All types	Last calendar year
	02	Profitability	Net farm income	All types	Last three calendar years
	03	Resilience	Risk mitigation mechanisms	All types	Last calendar year
Environmental	04	Soil health	Prevalence of soil degradation	All types	Last three calendar years
	05	Water use	Variation in water availability	All types	Last three calendar years
	06	Fertilizer pollution risk	Management of fertilizers	All types	Last calendar year
	07	Pesticide risk	Management of pesticides	All types	Last calendar year
	08	Biodiversity	Use of agrobiodiversity-supportive practices	All types	Last calendar year
Social	09	Decent employment	Wage rate in agriculture	Farms hiring unskilled workers	Last calendar year
	10	Food security	Food insecurity	Household farms	Last 12 months
	11	Land tenure	Secure tenure rights to land	All types	Last calendar year

TABLE 2. SDG indicator 2.4.1 subindicators by sustainability category (in percent)

Variable	Subindicator: Proportion of agricultural area under productive and sustainable agriculture	Desirable (d)	Acceptable (a)	Unsustainable (u)
S01	FOV per hectare	38.05	23.05	38.90
S02	NFI	19.17	35.39	45.44
S03	RMM	19.46	37.76	42.78
S04	PSD	10.21	29.79	60.00
S05	VWA	35.39	32.74	31.87
S06	MOF	15.04	48.67	36.28
S07	MOP	56.10	25.04	18.86
S08	BSP	04.85	48.68	46.47
S09	WRA	68.08	1.76	30.14
S10	FI	15.97	40.05	43.98
S11	STR	14.75	49.70	35.55

Survey questions:

The CAS 2021 utilized one main agricultural household questionnaire.This same questionnaire was also used to collect data from the non-household, or juridical, agricultural holdings.

Respondent's identification and informed consent	Livestock and poultry production
Holding characteristics	Aquaculture/capture fishing
Land tenure	Economy
Crop Production	Household members
Seed and input use and acquisition	Labour used by the holding

Thank you for your attention!

For more information, please visit:

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