



SIAP Training Program for Supporting the Monitoring of Sustainable Development Goals (SDGs) 2030 in the Asia Pacific Region

SDG Indicators under FAO Custodianship

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GOAL 2. END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE



Target 2.a. Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

- Indicator 2.a.1: The agriculture orientation index for government expenditures (Tier I)

IMPORTANCE OF GOVERNMENT SUPPORT TO THE AGRICULTURE SECTOR

- Increasing the government's role in agriculture:
 - ✓ Addresses market failure
 - ✓ Provides infrastructure support
 - ✓ Improves agriculture human capital
 - ✓ Provides favorable conditions to access private capital
 - ✓ Gives potential for improved food security
 - ✓ Reduces inequality
 - ✓ Enables inclusive growth
 - ✓ Creates decent jobs
- Investing in agriculture is one of the most effective strategies for reducing poverty and hunger and promoting sustainability (see the [State of Food and Agriculture 2012](#) report, "Investing in agriculture for a better future")

INDICATOR OVERVIEW

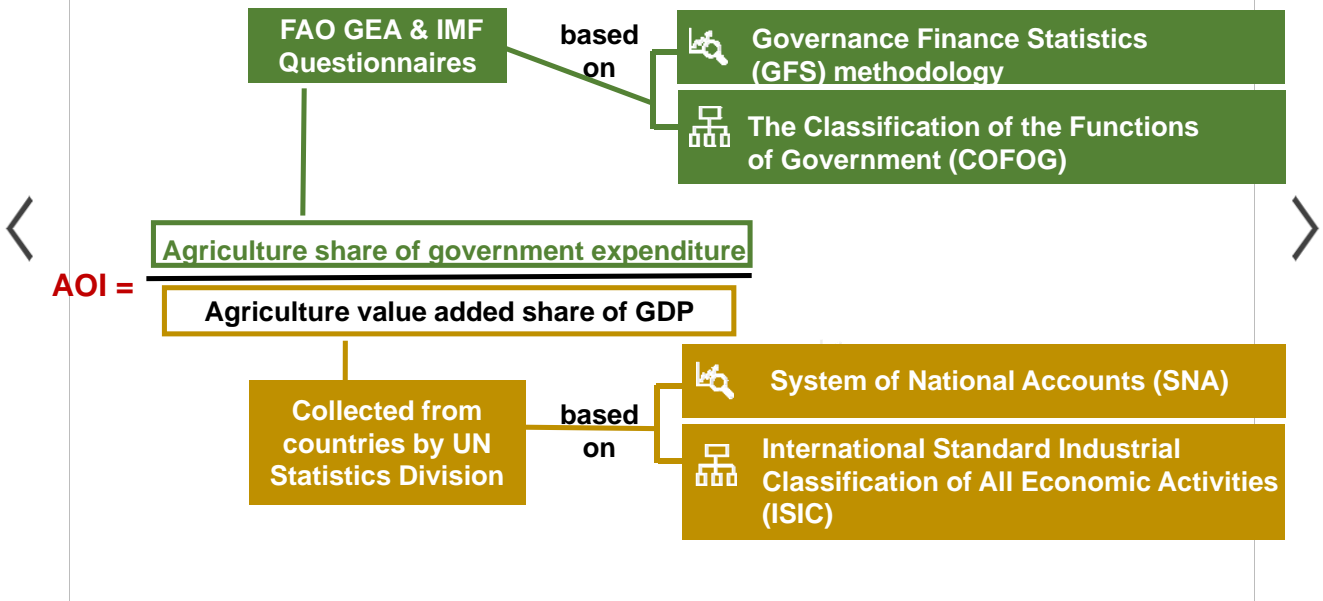
- Indicator: The Agriculture Orientation Index (AOI) for Government Expenditures
- The AOI refers to domestic public flows to agriculture
- It compares the central government's relative contribution to the agricultural sector as compared to the sector's contribution to Gross Domestic Product (GDP).
- Therefore, the AOI gives a **sense of the central government's commitment to agriculture relative to sector's economic contribution**

INDICATOR FORMULA

$$AOI = \frac{\text{Agriculture share of central government expenditure}}{\text{Agriculture value added as share of GDP}} =$$

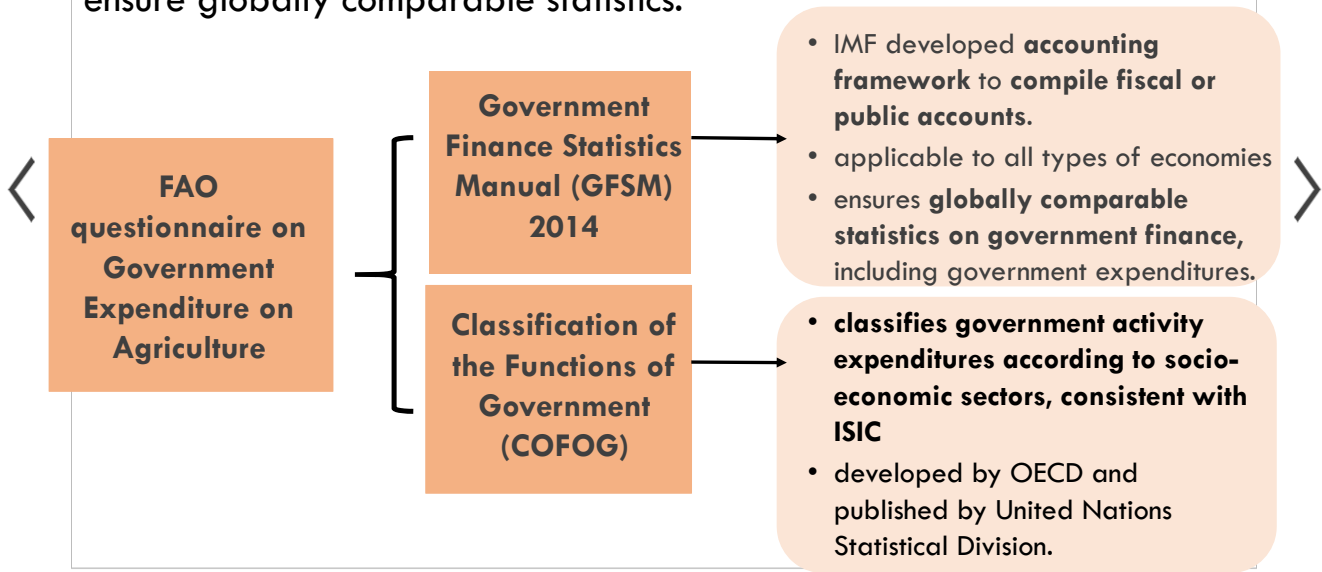
$$= \frac{\frac{\text{Central government expenditure on agriculture}}{\text{Total central government expenditure}}}{\frac{\text{Agriculture value-added}}{\text{GDP}}}$$

INDICATOR METHODOLOGY



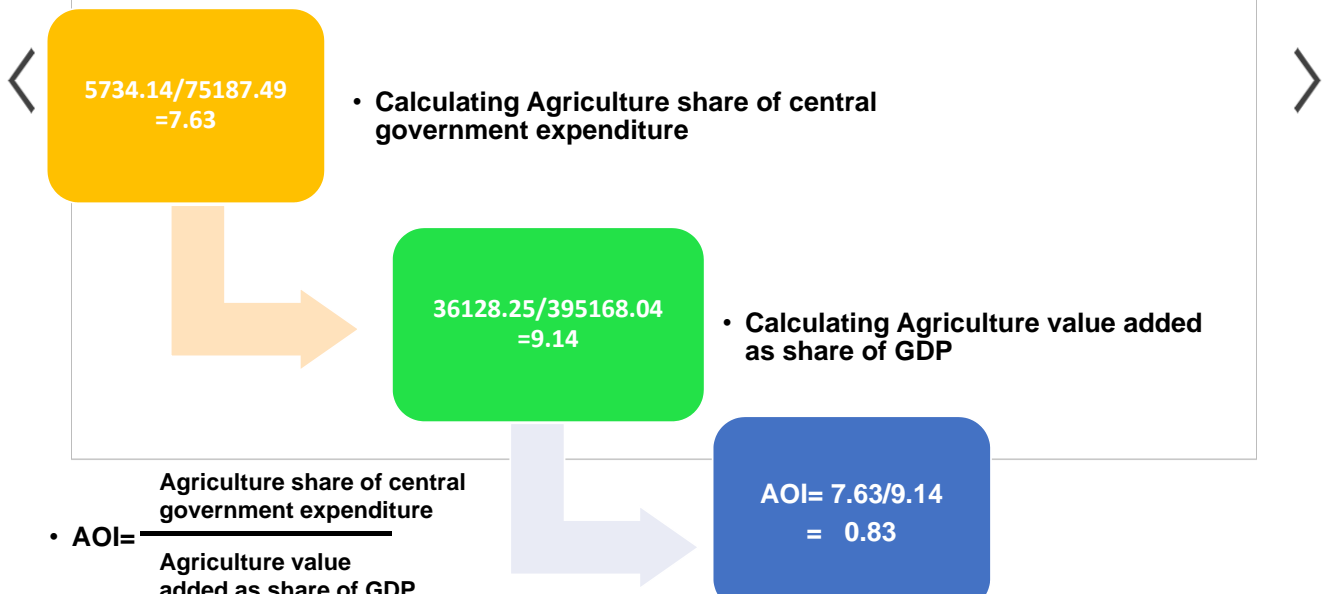
INDICATOR METHODOLOGY

▪ The GEA questionnaire is based on well-established and internationally agreed methodologies and classification, in order to ensure globally comparable statistics.



INDICATOR Calculation: The Case of Thailand 2015

Country (Time)	Central government expenditure on agriculture	Total central government expenditure	Agriculture value-added	GDP
Thailand (2015)	5734.14	75187.49	36128.25	395168.04

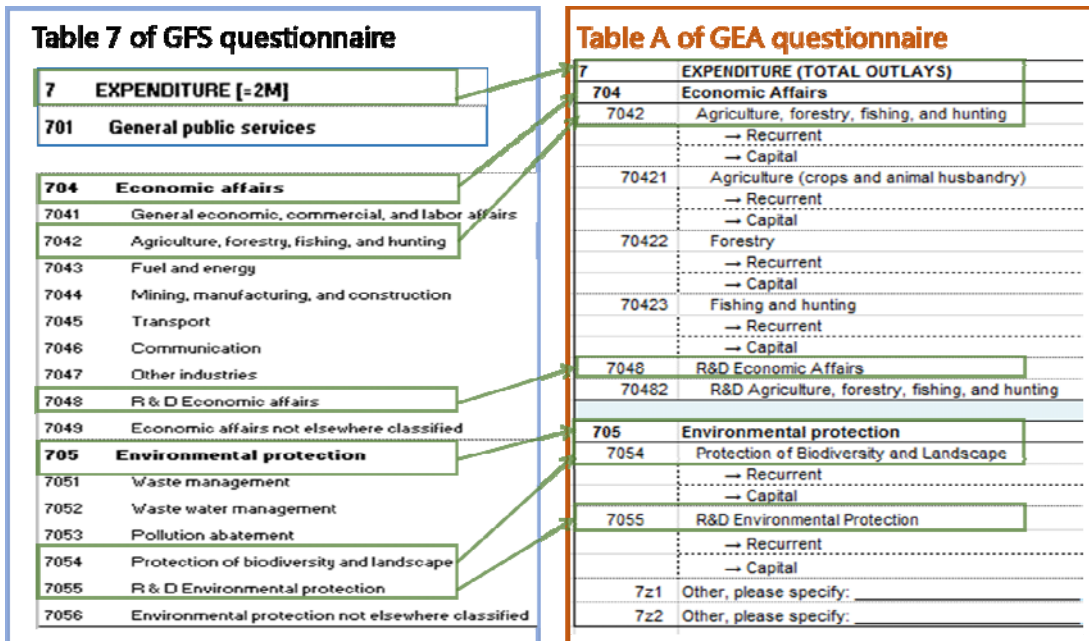


INDICATOR METHODOLOGY: THE GEA QUESTIONNAIRE

- FAO GEA questionnaire developed in collaboration with IMF, which is responsible for the global compilation of annual data on Government Finance Statistics (GFS).
- Table A of the GEA questionnaire developed to parallel IMF GFS Questionnaire Table 7 – “Expenditure by Function of Government (COFOG)”
- FAO questionnaire seeks more details on Agriculture sector, plus recurrent/capital breakdown
- Data sharing between FAO and the IMF helps validate data and fill gaps.
- FAO-IMF coordination extends to technical training

DATA COLLECTION

- The FAO GEA Questionnaire replicates the relevant aggregates of Table 7 of IMF GFS Questionnaire but drills down to request additional detail related to the agriculture and environmental protection sectors



INDICATOR METHODOLOGY

- The numerator of the indicator covers only Central government expenditure on agriculture
- Including all levels of government, while ideal, suffers severe data gaps



Central Government,
also referred to as
federal government.



State Government,
also known as provincial
or district government.



Local Government,
also known as
municipal government.

- Combined, all sectors of government are called The General Government

TABLE A: Government expenditure on agriculture and related functions		General Government								
		Central Government (excluding social security funds)				Social Security Funds	State Governments	Local Governments	Consolidation Column	General Government ³
		Budgetary Central Government	Extrabudgetary Units	Consolidation Column	Central Government ²					
Functional classification ²		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	EXPENDITURE (TOTAL OUTLAYS)									
704	Economic Affairs									
7042	Agriculture, forestry, fishing, and hunting									
	→ Recurrent									
	→ Capital									
70421	Agriculture (crops and animal husbandry)									
	→ Recurrent									
	→ Capital									
70422	Forestry									
	→ Recurrent									
	→ Capital									
70423	Fishing and hunting									
	→ Recurrent									
	→ Capital									
7048	R&D Economic Affairs									
70482	R&D Agriculture, forestry, fishing, and hunting									

Total central government expenditure

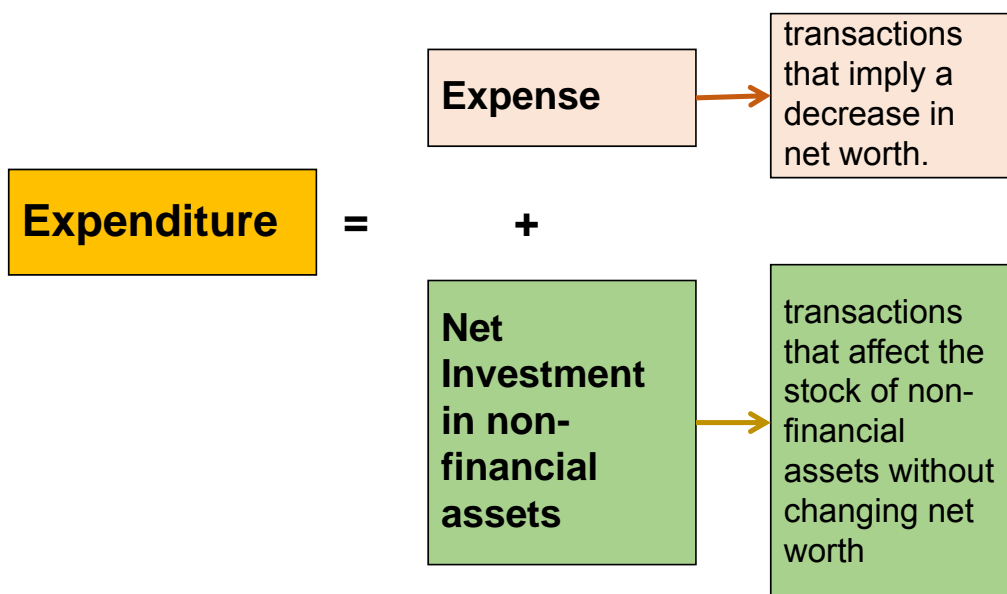
Central government expenditure on agriculture

INDICATOR METHODOLOGY

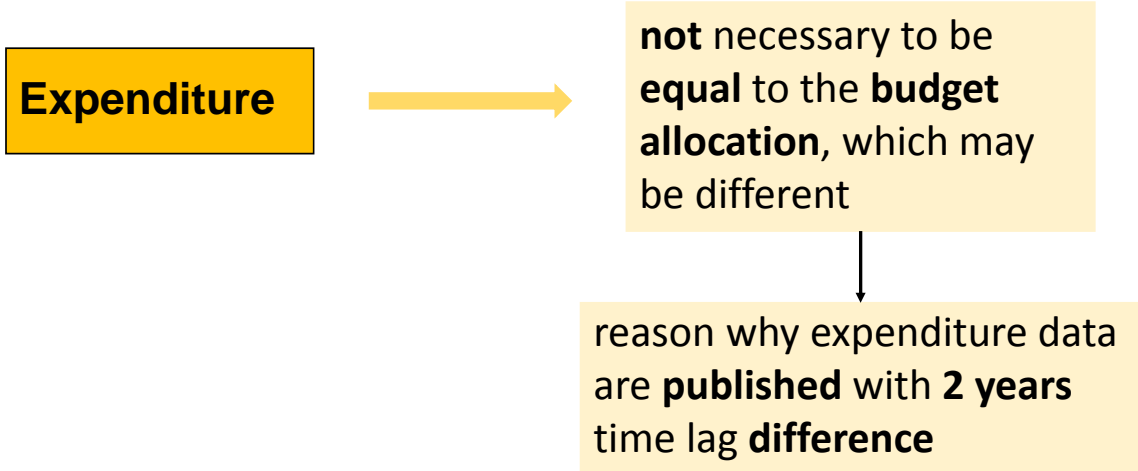
Definitions to remember:

- **Expenditure** as Expense plus Net Acquisition in Nonfinancial Assets (IMF GFS)
- **Agriculture expenditure** corresponds to COFOG 042 – Agriculture, Forestry, Fishing and hunting
- **Central Government** includes budgetary and extra budgetary units

GOVERNMENT FINANCE STATISTICS (GFS)




GOVERNMENT FINANCE STATISTICS (GFS)




Levels of Government in Table A of the FAO GEA Questionnaire

TABLE A: Government expenditure on agriculture and related functions	General Government								
	Central Government					State governments	Local governments	Consolidation Column	General Government ⁴
	Budgetary Central Government	Extrabudgetary Units	Social Security Funds	Consolidation Column	Central Government ³				
Functional classification ²	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
7 EXPENDITURE (TOTAL OUTLAYS)									
704 Economic Affairs									
7042 Agriculture, forestry, fishing, and hunting									
→ Recurrent									
→ Capital									
70421 Agriculture (crops and animal husbandry)									
→ Recurrent									
→ Capital									
70422 Forestry									
→ Recurrent									
→ Capital									

 The Budgetary Central Government lists all Central Government entities covered by the official budget, such as courts of law, ministries, departments, and parliament, and government boards, commissions, or central government agencies.


Levels of Government in Table A of the FAO GEA Questionnaire

TABLE A: Government expenditure on agriculture and related functions	General Government								
	Central Government				Central Government*	State Governments	Local Governments	Consolidation Column	General Government†
	Budgetary Central Government	Extrabudgetary Units	Social Security Funds	Consolidation Column					
Functional classification ²	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	EXPENDITURE (TOTAL OUTLAYS)								
704	Economic Affairs								
7042	Agriculture, forestry, fishing, and hunting								
	→ Recurrent								
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70421	Agriculture (crops and animal husbandry)								
	→ Recurrent								
	→ Capital								
70422	Forestry								
	→ Recurrent								
	→ Capital								

 The Extra-budgetary Central Government list units or **entities** that operate under the authority of the Central Government but are **not** (fully) covered by the central government budget, and have individual budgets, separate banking and institutional arrangements, separate governance structures, or own-revenue sources.

Levels of Government in Table A of the FAO GEA Questionnaire

TABLE A: Government expenditure on agriculture and related functions	General Government								
	Central Government				Central Government*	State Governments	Local Governments	Consolidation Column	General Government†
	Budgetary Central Government	Extrabudgetary Units	Social Security Funds	Consolidation Column					
Functional classification ²	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
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	→ Recurrent								
	→ Capital								

 Social Security Funds include units operating one or more social security schemes **providing benefits** in cash or in kind for old age, disability, parental leave, unemployment insurance, work-related injury, pensions, etc.

Levels of Government in Table A of the FAO GEA Questionnaire

TABLE A: Government expenditure on agriculture and related functions		General Government							General Government ⁴	
		Central Government				Central Government ³	State Governments	Local Governments		Consolidation Column
Functional classification ²		Budgetary Central Government	Extrabudgetary Units	Social Security Funds	Consolidation Column				(5)	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	EXPENDITURE (TOTAL OUTLAYS)									
704	Economic Affairs									
7042	Agriculture, forestry, fishing, and hunting									
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	→ Recurrent									
	→ Capital									
70422	Forestry									
	→ Recurrent									
	→ Capital									

The Consolidation Column eliminates intragovernmental transfers that occur between Budgetary units, Extra-budgetary units and Social Security Funds, to avoid double-counting.

DATA COLLECTION

- Data providers vary by country: They may be the Department of Finance (or other central planning agency), National Statistics Office, and/or Ministry of Agriculture
- As FAO does not know which institution will be responding in every country, it sends the GEA always to the **National Statistical Office**
- The questionnaire is sent to countries on an annual basis, in May of each year
- Last year it was dispatched on 12th May, this year on 10th May



GUIDELINES FOR RESPONDING TO THE FAO QUESTIONNAIRE ON GOVERNMENT EXPENDITURE ON AGRICULTURE AND RELATED CATEGORIES

- FAO has updated guidelines for responding to the questionnaire

APRIL 2017



INDICATOR POLICY USE AND INTERPRETATION

- AOI = 1 indicates a **neutral** orientation of the central government towards agriculture sector relative to the sector 's contribution to the economy
- AOI > 1 suggests a **higher** orientation of the central government towards the agriculture sector relative to the sector 's contribution to the economy
- AOI < 1 suggests a **lower** orientation of the central government towards the agriculture sector relative to the sector 's contribution to the economy

INDICATOR POLICY USE AND INTERPRETATION

- An $AOI > 1$ may reflect
 - ✓ “over investment” in agriculture;
 - ✓ diminishing marginal returns to public investment in agriculture relative to other sectors;
 - ✓ for small economies with small agriculture sectors, fixed costs of sector spending.
- An $AOI < 1$ may reflect
 - ✓ “under investment” in agriculture
 - ✓ greater spending in other sectors that face higher degrees of market failure or income inequality

INDICATOR LIMITATIONS

- Indicator only reflects central government.
 - Underestimates AOI if agriculture is largely undertaken by provincial governments.
- $AOI = 1$ may not necessarily be the ideal target for every country
 - This is due to different degrees of decentralization, and different degrees of market failure and income redistribution policies.


INTENSIVE DATA REQUIREMENTS

- Obtain detailed and exhaustive expenditures for all levels of government
 - **Needs coordination across levels of government**
- Obtain detailed and exhaustive expenditures from all ministries within a level of government
 - **Needs coordination across ministries**
- Different expenditure classifications between countries and within countries
 - **Needs consistent classification against COFOG**

Country	Last date	2.a.1
Afghanistan	2013	0.20
Bhutan	2016	0.79
India	2013	0.35
Iran	2009	0.15
Japan		
Lao PDR		
Malaysia	2016	0.36
Maldives	2016	0.05
Mongolia	2015	0.09
Pakistan	2016	0.05
Papua New Guinea		
Republic of Korea	2016	2.23
Samoa	2016	0.26
Thailand	2015	0.83
Turkmenistan		
Uzbekistan	2015	0.88

2.A.1: GLOBAL TRENDS (2001-2016)

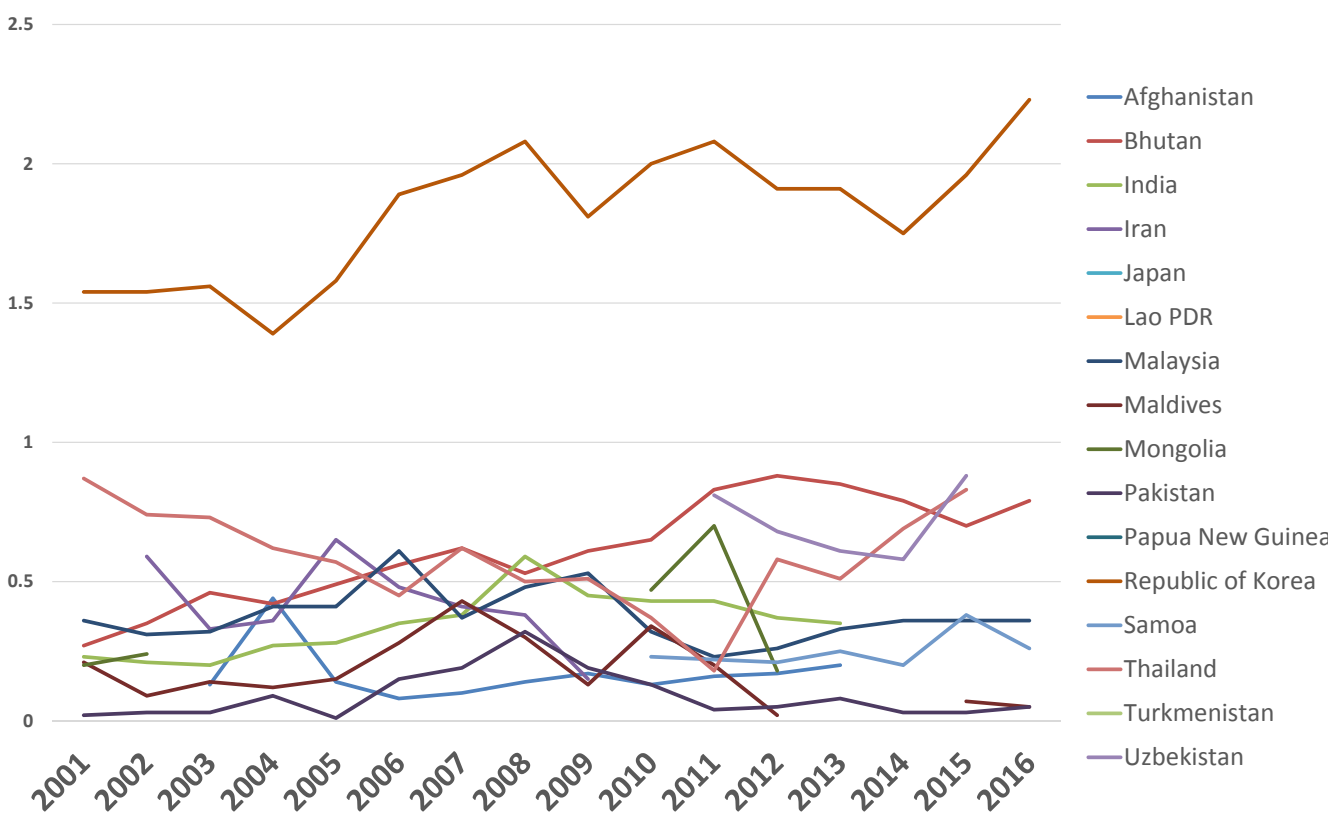
 Declined:
from 0.38
to 0.23

 Stable at
1.4% to 1.6%

$$AOI = \frac{\text{Agriculture share of central Government Expenditure}}{\text{Agriculture value-added share of GDP}}$$

 Increased
from 4.1% to
6.8%

SDG INDICATOR 2.A.1 IN ASIA PACIFIC COUNTRIES



CAPACITY DEVELOPMENT/TECHNICAL ASSISTANCE

- Global training workshop organized in Italy in March 2018. Two Asian Pacific country participants:
 - ✓ **Samoa:** Ms. Toeseanuopototo TAUTALAGIA, Principal Statistical Officer, Samoa Bureau of Statistics (toese.uelese@sbs.gov.ws)
 - ✓ **Malaysia:** Ms. Azlin BINTI ISMAIL, Principal Assistant Secretary, Ministry of Finance Malaysia (azlin.ismail@treasury.gov.my).
- E-learning course already available in English since February 2018
- Training driven by country requests

FAO PROPOSAL FOR POSSIBLE ADDITIONAL INDICATOR [2.A.3]: AGRICULTURE ORIENTATION INDEX FOR CREDIT

- Credit to Agriculture measures loans to agriculture producers provided by commercial bank credit.
- Currency measures are standardized to millions of units, and provided both in terms of local national currency, and US dollars.
- Similarly to existing SDG indicator 2.a.1, it is proposed to express the indicator as an Agriculture Orientation Index, i.e. to compare the share of credit to agriculture in total credit to the share of agriculture value added.

Country	Credit to Agriculture as AOI Index	Credit to Agriculture as share of Total Credit (%)
Afghanistan		
Bhutan	0.31	0.05146%
India		
Iran	0.92	0.08848%
Japan		
Lao PDR		
Malaysia		
Maldives	0.93	0.02822%
Mongolia		
Pakistan		0.08437%
Papua New Guinea	0.07	0.01437%
Republic of Korea	0.70	0.01401%
Samoa		
Thailand	0.09	0.00779%
Turkmenistan		
Uzbekistan		



THANK YOU

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For more detailed information on Indicator 2.a.1 please see:

<http://www.fao.org/sustainable-development-goals/indicators/2a1/en/>