CHALLENGES AND PROSPECTS FOR IMPROVING THE AGRICULTURAL STATISTICAL CAPACITY IN THE COMCEC REGION

April 3, 2014
ANKARA

COMCEC

Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC)

UDA consulting

ASSESSMENT OF AGRICULTURAL STATISTICS IN THE COMCEC REGION

Index of Agricultural Statistics Development

Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC)

THE ENVIRONMENT

- International organizations' databases have reached the critical threshold
- The response rates to FAO questionnaires (excluding trade)
  - 17-40% in Africa,
  - 25-58% in Asia,
  - 28-53% in the World
  - 6-61% for COMCEC Members
- More than quarter of countries never respond to FAO questionnaires.
- Less than half of statistics in FAOSTAT are official.
- Reasons are but Rates are not different for developed countries
- Therefore: New initiatives like Global Strategy to Improve to Food and Agriculture Statistics
- First Step: Statistical Capacity Assessments

STATISTICAL CAPACITY INDICATORS

- Different indicators are developed and used by different organizations to measure the state of development of the statistical systems or to assess the quality of statistics produced at different levels.
- All have similar indicators grouped in various packages under different headings.
- Some of the features which describe quality of statistics include relevance, completeness, accuracy, reliability, timeliness, comparability, coherence , accessibility.
- While it is easier to expand and agree on these features it is harder to measure and quantify them to everybody's satisfaction.
- Therefore measurable, sometimes proxy indicators need to be developed and used in actual assessments.

DIMENSIONS EMPLOYED FOR ASSESSING AGRICULTURAL STATISTICS

Quality Dimensions	EU EUROSTAT	IMF DOAF	OECD SD-QF	FAO ASCI	O-Z-M ADQAF	WB BBSC-SCI	COMCEC IASD
Organization		■		■	■		■
Integrity		■					
Relevance	■		■				
Accuracy	■	■	■		■		
Timeliness	■		■			■	■
Accesibility	■	■	■		■		■
Comparability	■				■		
Coherence	■		■				
Methodology		■		■	■	■	■
Serviceability		■			■		
Credibility			■				
Interpretability			■				
Cost-Efficiency			■				
Completeness					■		
Resources				■			■
Outputs				■			■
Data Source						■	

IASD DIMENSIONS AND INDICATORS

Organization:
- The Legal Framework
- The Organization and Coordination of Statistical Activities
- Availability of a Strategic Framework
- Existence of a Sub-National Statistical System
- Collaboration with Regional and International Institutions

Resources:
- Financial Resources
- Human Resources
- Physical Resources

Methodology:
- Methodology
  - Sources of Data
  - Geographical Coverage
  - Census and Survey Methodology
  - Availability and Use of Frames
- International Norms
  - Use of International Classifications
  - SNA Version Used

Outputs:
- Primary Statistics
- Statistical Indexes and Indicators

Timeliness:
- Most Recent Dates of Availability of Primary Agricultural Statistics
- Most Recent Dates of Availability of Agricultural Indicators
- Most Recent Dates of Major Censuses and Surveys

Availability:
- Existence of a Web Site for Agricultural Statistics
- Online Access to Agricultural Statistics
- Database for Agricultural Statistics
- Dissemination Formats of Statistical Outputs
- Free or Paid Access to Agricultural Statistics

DATA COLLECTION METHODOLOGY

- Standard Self-Assessment Questionnaire (SSAQ)
- UDA Expert Surveys
  - ✓Censuses of Agriculture Survey
  - ✓Dissemination and Databases Survey
- Country Visits-Case Studies
- National and International Statistical Web Pages and Databases
- Previous National and International Studies

(SSAQ)
STANDARD SELF-ASSESSMENT QUESTIONNAIRE

- Consists of 5 parts with approximately 200 cells to be filled:
  - Part1: The Organization of the Food and Agricultural System
  - Part 2: The Outputs of the Agricultural Statistics System
  - Part 3: Resources of the Statistical System
  - Part 4: Dissemination of Agricultural Statistics
  - Part 5: Agricultural Surveys and Censuses

- Prepared in English and French and sent to the contact points in the countries via internet to be completed in electronic or printed formats as convenient
- 31 out of 57 countries responded officially to the questionnaire. 4 more countries responded after the construction of IASD.
- 5 questionnaires were completed by UDA experts based on information provided in the national and international web pages and publications

COUNTRY VISITS-CASE STUDIES

Country visits by senior UDA experts to 8 COMCEC Member Countries:

- Afghanistan
- Cameroon
- Iran
- Malaysia
- Morocco
- Sudan
- Turkey
- Uganda

SSAQ RESPONSE AND COUNTRY VISIT STATUS

African Group (71%)	Arab Group (59%)	Asian Group (61%)	
Benin	Algeria	Afghanistan	
Burkina Faso	Bahrain	Albania	
Cameroon	Comoros	Azerbaijan	
Chad	Djibouti	Bangladesh	
Côte d'Ivoire	Egypt	Brunei	
Gabon	Iraq	Indonesia	
Gambia	Jordan	Iran	
Guinea	Kuwait	Kazakhstan	
Guinea-Bissau	Lebanon	Kyrgyzstan	
Mali	Libya	Malaysia	
Mozambique	Mauritania	Maldives	
Niger	Morocco	Pakistan	
Nigeria	Oman	Tajikistan	
Senegal	Palestine	Turkey	
Sierra Leone	Qatar	Turkmenistan	
Togo	Saudi Arabia	Uzbekistan	
Uganda	Somalia	Guyana	
	Sudan	Suriname	
	Syria		
	Tunisia		
	United Arab Emirates		
	Yemen		
Case Study+ Questionnaire Returned	**Questionnaire Returned**	**Questionnaire Not Returned**	**Questionnaire Filled by UDA**

NATIONAL AND INTERNATIONAL STATISTICAL WEB PAGES AND DATABASES

- Web Pages of National Statistical Offices
- Web Pages of Ministries of Agriculture
- FAO-Statistics Division
- FAOSTAT
- CountrySTAT
- World Bank
- UNSD
- SESRIC

REVIEW OF PREVIOUS NATIONAL AND INTERNATIONAL STUDIES

- Over the past 5 years several similar studies were conducted by international organizations such as FAO, World Bank, IMF, Regional Development Banks such as AfDB, ADB, EBRD within the context of the **Global Strategy to Improve Agricultural and Rural Statistics**.
- FAO Standard Country Assessment Questionnaires and Statistical Metadata Questionnaires results presented in the regional meetings in Africa, Asia, Near East and Central Asia.
- FAO Questionnaire response reports to regional meetings.
- Self-assessment reports by some of the countries on their national agricultural statistical systems.
- These reports, studies and surveys contain information on some COMCEC Member Countries, similar to the ones compiled in the present study.

SUMMARY of IASD SCORES

Dimension/Indicators	Maximum Score	Source
Organization	**22**	
Legal Framework	5	SSAQ Part 1
Structure	6	SSAQ Part 1
Strategic Framework	6	SSAQ Part 1
International Cooperation	5	SSAQ Part 1/UNSD
Outputs	**21**	
Statistics	12	SSAQ Part 2.1
Statistical Indicators	9	SSAQ Part 2.2
Timeliness	**30**	
Statistics	10	SSAQ 2.1
Statistical Indicators	10	SSAQ 2.2
Census Calender	10	SSAQ 15+UDA Survey+FAO
Methodology	**50**	
Classifications	15	SSAQ Parts 1.4, 2.3, 5
Census Methodology	13	FAO+SSAQ Part 5+UDA Survey
Data Sources	12	SSAQ Part 2.1
Data Coverage	10	SSAQ Part 2.2
Resources	**15**	
Financial	4	SSAQ Part 3.1
Human	8	SSAQ Part 3.2
Physical	3	SSAQ Part 3.3
Availability	**62**	
Dissemination Format	21	SSAQ Part 4
UDA Web Survey	26	SSAQ 14/UDA Survey
CountrySTAT Partnership	15	UDA/FAO
Total Maximum Score	**200**	

ORGANIZATION SCORES

Indicators/Variables	Maximum Score
Legal Framework	**5**
Existence of a Statistical Law?	1
Coverage of Agricultural Statistics in Statistical Law?	2
Is it operational / applied?	1
Statistical Advisory or Coordination Unit?	1
Structure of Statistical System	**6**
NSS Decentralized - Minimum Coordination	0
NSS Decentralized - Active Coordination	3
NSO for most statistics	3
NSO for all statistics	**1**
Statistical System at Sub-National Level?	1
Agricultural Statistics at Sub-National Level?	2
Strategic Framework	**6**
National Strategy for Agricultural Statistics?	2
National Strategy for Agricultural Statistics Operational?	2
Program of Activities for Agricultural Statistics?	2
International Cooperation	**5**
Collaboration with International Organizations	2
Membership in UN Statistical Commission	3
Organization Indicator	**Max 22**

Note: Cameroon, Libya, Niger, Oman are presently the only members of the UN Statistical Committee

OUTPUT-TIMELINESS AND COVERAGE SCORES FOR PRIMARY STATISTICS

Statistics	Output Scores	Timeliness Scores	Source Scores	Coverage Scores
Crop Production	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Harvested Area	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Yield per hectare	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Livestock Production	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Forest Products	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Fishery Products	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Agricultural Exports	0.5	(0-2)*5/24	(0-3)*5/36	-
Agricultural Imports	0.5	(0-2)*5/24	(0-3)*5/36	-
Producer Prices	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Agric Input Prices	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Consumption (Quantity)	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
" (Calories)	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
" (Protein)	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
" (Fats)	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Land Use	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Rural Population	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Active Population	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Labor	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Machinery	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Fertilizers	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Pesticides	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Rural Infrastructure	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Rural Employment	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Agricultural Credit	0.5	(0-2)*5/24	(0-3)*5/36	(1-5)*6/55
Output Primary Statistics	Max 12			
Timeliness Primary Statistics		Max 10	2013=2/ 2012=1/ 2011 and before=0	
Methodology Source Indicator	Census=3/ Survey=2 Admin=1/ Reverse for Exports & Imports		Max 10	
Methodology Coverage Indicator			Village=5/ District=4/ Province=3/ Region=2/ Nation=1	Max 12
Max 32		10	10	12

OUTPUT AND TIMELINESS SCORES FOR STATISTICAL INDICATORS

Statistical Indicators	Output Score	Timeliness Score
Agricultural GDP	1	(0-2)*5/9
Rural Income	1	(0-2)*5/9
Terms of Trade	1	(0-2)*5/9
Output Price Index	1	(0-2)*5/9
Input Prices Index	1	(0-2)*5/9
Agro- Environmental Indicators	1	(0-2)*5/9
Food Balance Sheets	1	(0-2)*5/9
Agricultural/Rural income Distribution	1	(0-2)*5/9
Land Distribution	1	(0-2)*5/9
Output Statistical Indicators	Max 9	
Timeliness Statistical Indicators		Max 10
Max 19	**9**	**10**

METHODOLOGY SCORES

Indicator		Score
Classifications		15
ISIC		1
CPC		1
SITC		1
HS		1
SNA93		1
EAA		2
Updatedness of EAA		0-3 (2010=1/2011=2/2012=3)
Availability of Register/List		2
Use of Register in Agriculture		3
Agricultural Census Methodology		13
Availability of Metadata		3
Availability of a Frame		2
Integration with Population Census		2
Full Census or Survey		Full +Survey= 3 points; Sample Survey: 2 points
Coverage		Full Coverage: 3 points; Partial Coverage: 1 point
Sources of Data	See Table 31	12
Geographical Coverage	See Table 31	10
Total Methodology		50

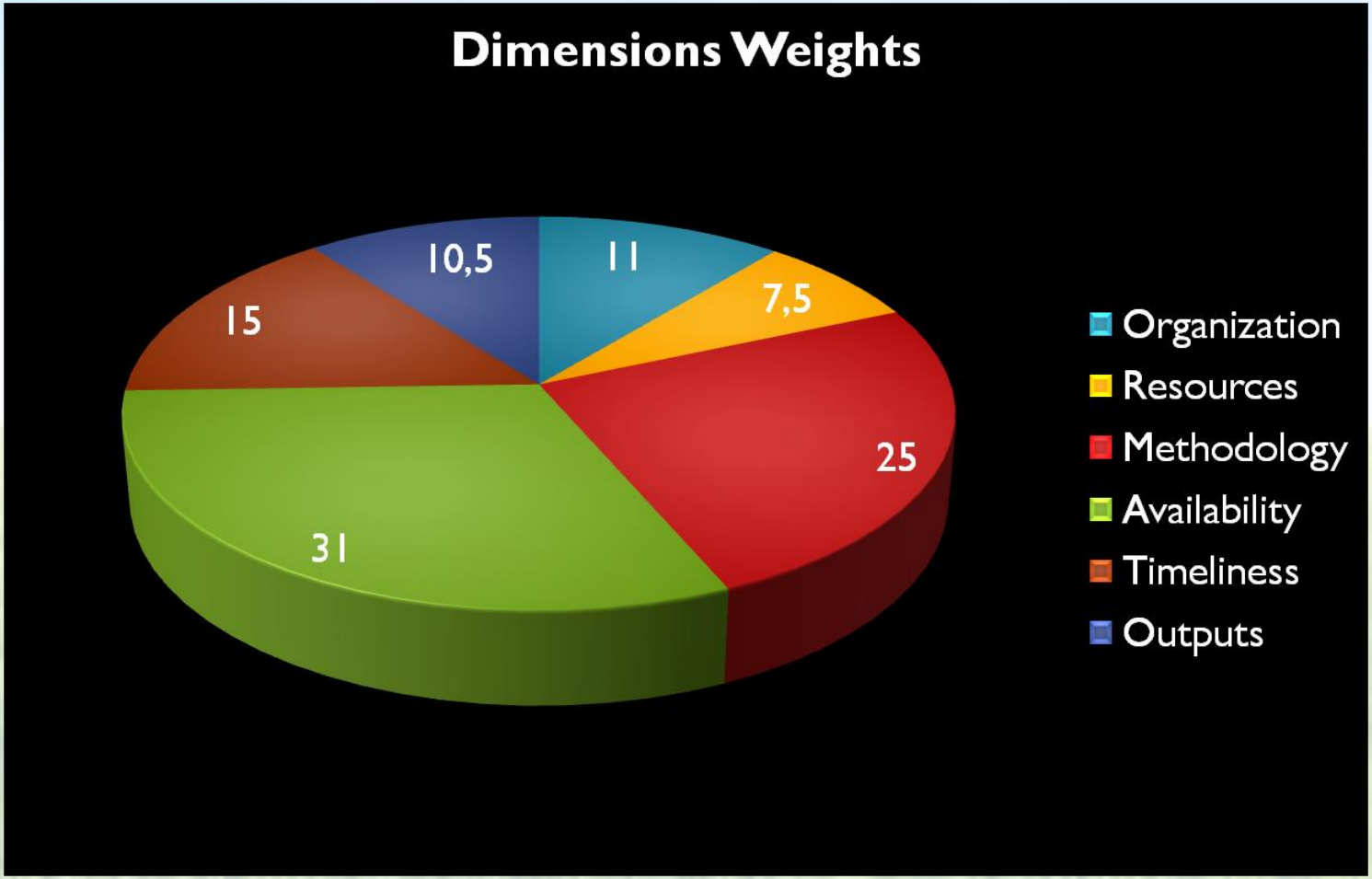
RESOURCES SCORES

Indicators	Score
Agricultural Statistics Budget	4
Staff	8
Total Professional Staff at HQ	2
Total Professional Staff at Field	2
Total Support Staff at HQ	2
Total Support Staff at Field	2
PCs Used for Agricultural Statistics	3
PCs at HQ	1.5
PCs at Regional Offices	1.5
Total Resources	Max 15

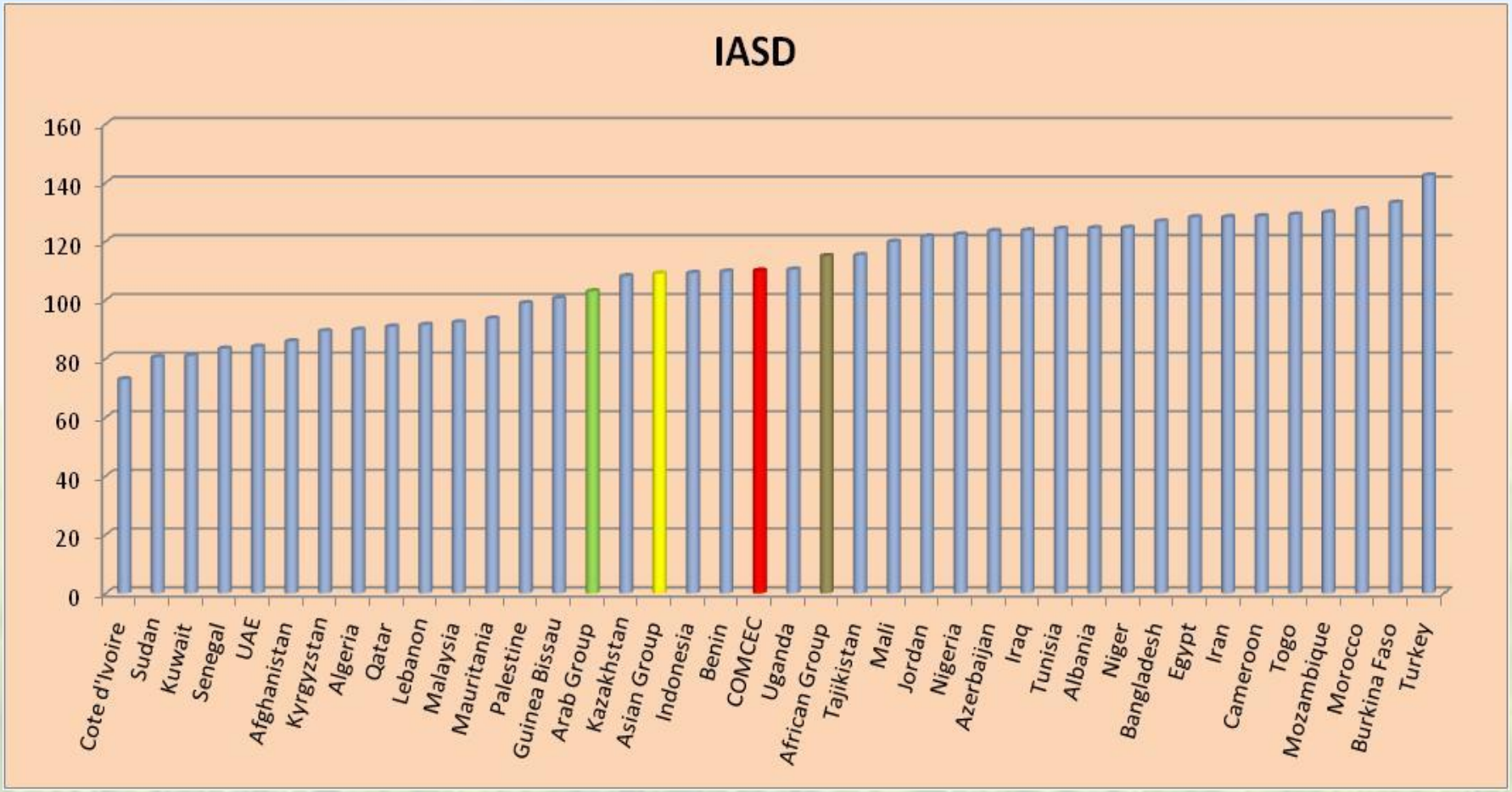
AVAILABILITY SCORES

Indicator	Variable	Score
Dissemination Format		19
	Free Web	12 (1.2 per Statistics Group)
	Free CD	6 (0.6 per Statistics Group)
	Free Hardcopy	3 (0.3 per Statistics Group)
Web Based Database		26
	Language	1.3
	Ease of Access	1.3
	Timeliness	3.9
	Data Richness	2.6
	Metadata	2.6
	Agricultural Census	2.6
	Online Inquiry/Request	1.3
	Online Search	5.2
	Coverage	5.2
CountrySTAT Partnership		15
	Active Member	15
	Limited Activity Member	10
	No Activity Member	5
Total Availability		62

IASD DIMENSION WEIGHTS



INDEX OF AGRICULTURAL STATISTICS DEVELOPMENT



EXTENSION OF THE IASD FOR 36 COUNTRIES TO ALL COMCEC MEMBER COUNTRIES

- The IASD is calculated and analyzed for only 36 COMCEC Member Countries who responded to the questionnaires or whose questionnaires were completed by UDA experts.
- The study extends the index to 57 COMCEC Member Countries using information available in the literature and analysis performed by UDA experts.
- Points of caution:
  - Different studies in the literature used different indicators and employed different scorings and/or weights.
  - Different studies were carried out for different years and groups of countries.
  - Even the same studies repeated overtime for the same group of countries showed differing results.
  - Nevertheless, there is a moderately high correlation between the results of different dimensions and studies, although there is no match in absolute numbers or ranks.
- Therefore, this task is carried out by putting together the findings of different assessments,
- not at the index level but at 4 levels of agricultural statistics development.

36 COMCEC MEMBER COUNTRIES BY IASD CATEGORIES

- **Category A Countries** (126 and more): Countries which have relatively well-developed agricultural statistics systems, i.e. in the top 25 percent. There are 9 countries in this group: **Turkey, Burkina Faso, Morocco, Mozambique, Togo, Cameroon, Iran, Egypt and Bangladesh.**
- **Category B Countries** (115-125): Countries with better than average agricultural statistics systems, i.e. between 25-50 percent. There are 9 countries in this group: **Niger, Albania, Tunisia, Iraq, Azerbaijan, Nigeria, Jordan, Mali and Tajikistan.**
- **Category C Countries** (92-114): Countries with below average agricultural statistics systems, i.e. lower than 50 percent, but better than the lowest 25 percent. There are 9 countries in this group: **Uganda, Benin, Indonesia, Kazakhstan, Guinea-Bissau, Palestine, Mauritania, Malaysia and Lebanon.**
- **Category D Countries** (91 and less): Countries with relatively inefficient agricultural statistics systems, i.e. ranking in the bottom 25 percent. There are 9 countries in this group: **Qatar, Algeria, Kyrgyzstan, Afghanistan, United Arab Emirates, Senegal, Kuwait, Sudan and Côte d'Ivoire.**

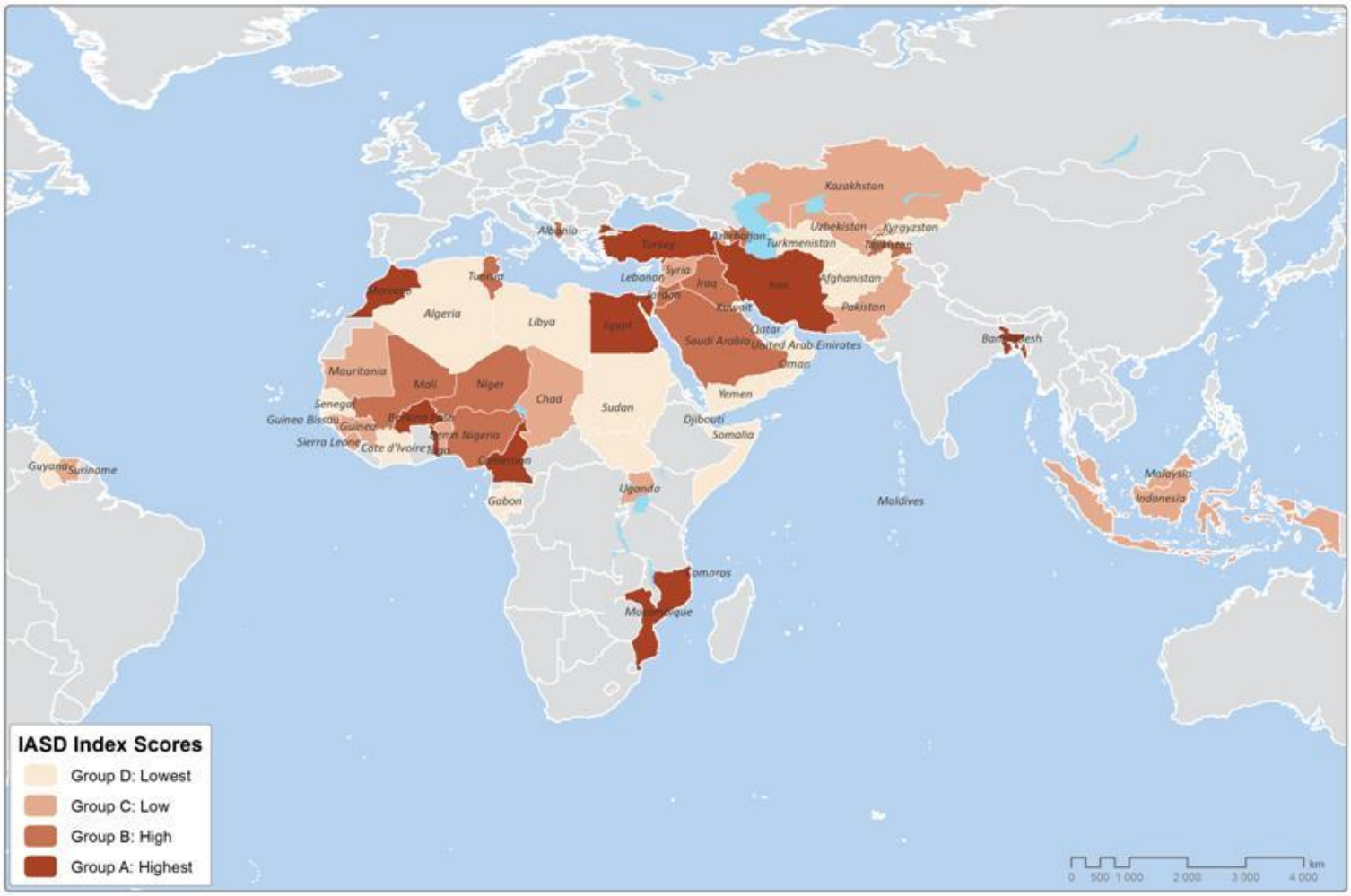
ESTIMATION OF IASD FOR NON-RESPONSE COMCEC MEMBER COUNTRIES

IASD		AfdB/FAO Overall	AfDB/FAO Institution	AfDB/FAO Resources	AfDB/FAO Method	AfDB/FAO Dissem.	FAO ASDI	WB/SCI Overall
	African Group							
110	Benin	B	A	C	C	B	A	C
133	Burkina Faso	B	A	B	B	A	A	B
129	Cameroon	C	B	B	C	C	D	C
C	Chad						B	C
73	Côte d'Ivoire	C	C	A	C	D	A	C
D	Gabon	D	D	B	C	C	C	D
56	Gambia	C	C	D	B	D	B	B
C	Guinea	D	D	C	C	B	C	C
101	Guinea-Bissau						C	C
120	Mali	B	B	B	B	A	A	B
130	Mozambique	B	B	A	A	C	B	B
125	Niger	B	B	D	A	B	B	B
122	Nigeria	B	A	B	B	B	B	B
83	Senegal	C	D	B	B	C	A	C
C	Sierra Leone	B	C	C	A	C	C	C
129	Togo	D	D	C	C	D	B	C
110	Uganda	B	A	B	A	D	A	B
	Arab Group							
90	Algeria						A	C
C	Bahrain							
D	Comoros						D	D
D	Djibouti	C	B	C	D	C	D	D
128	Egypt	A/A	C/B	B/A	A	A/A	A	A
124	Iraq	A	A	A	A/A	A		C
122	Jordan	A	D	A	A	A		B
81	Kuwait							
92	Lebanon	C	C	B	C	B		B
D	Libya						D	D
94	Mauritania	C	B	C	C	B	C	C
131	Morocco	B/A	C/C	C/A	A/A	A/A	B	B
54	Oman							
99	Palestine							
91	Qatar							
B	Saudi Arabia	A	A	A	B	D		
D	Somalia							D
80	Sudan	D/A	C/B	D/A	D/A	C/B	B	D
C	Syria							C
124	Tunisia	B	A	C	A	B	A	B
84	UAE							
D	Yemen	D	D	D	D	D		D
	Asian Group							
86	Afghanistan	C	D		D	D		C
125	Albania							B
124	Azerbaijan							B
127	Bangladesh	B	D		A	B		B
D	Brunei							
109	Indonesia	B	D		C	B		A
128	Iran	B/A	B/A	A	B/A	B/A		B
108	Kazakhstan							A
89	Kyrgyzstan							A
92	Malaysia	A	A		A	C		B
B	Maldives	B	C		A	D		B
C	Pakistan	C	D		D	D		B
115	Tajikistan							B
142	Turkey							A
D	Turkmenistan							D
C	Uzbekistan							C
D	Guyana							D
C	Suriname							C

IASD EXTENDED TO 57 COMCEC MEMBER STATES

CATEGORY A (9)	CATEGORY B (11)
Burkina Faso, Cameroon, Mozambique, Togo, Egypt, Morocco, Bangladesh, Iran, Turkey	Mali, Niger, Nigeria, Iraq, Jordan, Saudi Arabia, Tunisia, Albania, Azerbaijan, Maldives, Tajikistan
CATEGORY C (17)	**CATEGORY D (20)**
Benin, Chad, Guinea, Guinea-Bissau, Uganda, Sierra Leone, Bahrain, Lebanon, Mauritania, Palestine, Syria, Indonesia, Kazakhstan, Malaysia, Pakistan, Uzbekistan, Suriname	Côte d'Ivoire, Gabon, Gambia, Senegal, Algeria, Comoros, Djibouti, Kuwait, Libya, Oman, Qatar, Somalia, Sudan, Yemen, United Arab Emirates, Afghanistan, Brunei, Kyrgyzstan, Turkmenistan, Guyana

IASD FOR COMCEC MEMBER STATES



Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC)

COMCEC

UDA consulting

IASD BY COMCEC REGIONAL GROUPINGS

	Lowest IASD (D)	Low IASD (C)	High IASD (B)	Highest IASD (A)
(I) African Group	Côte d'Ivoire, Gabon, Gambia, Senegal	Benin, Chad, Guinea, Guinea-Bissau, Sierra Leone, Uganda	Mali, Niger, Nigeria	Mozambique, Burkina Faso, Togo Cameroon
(II) Arab Group	Algeria, Comoros, Djibouti, Kuwait, Libya, Oman, Qatar, Somalia, Sudan, United Arab Emirates, Yemen	Bahrain, Lebanon, Mauritania, Palestine, Syria	Iraq, Jordan, Saudi Arabia, Tunisia	Egypt, Morocco
(III) Asian Group	Afghanistan, Brunei, Kyrgyzstan, Turkmenistan, Guyana	Indonesia, Kazakhstan, Malaysia, Pakistan, Uzbekistan, Suriname	Albania, Azerbaijan, Maldives, Tajikistan	Bangladesh, Turkey Iran

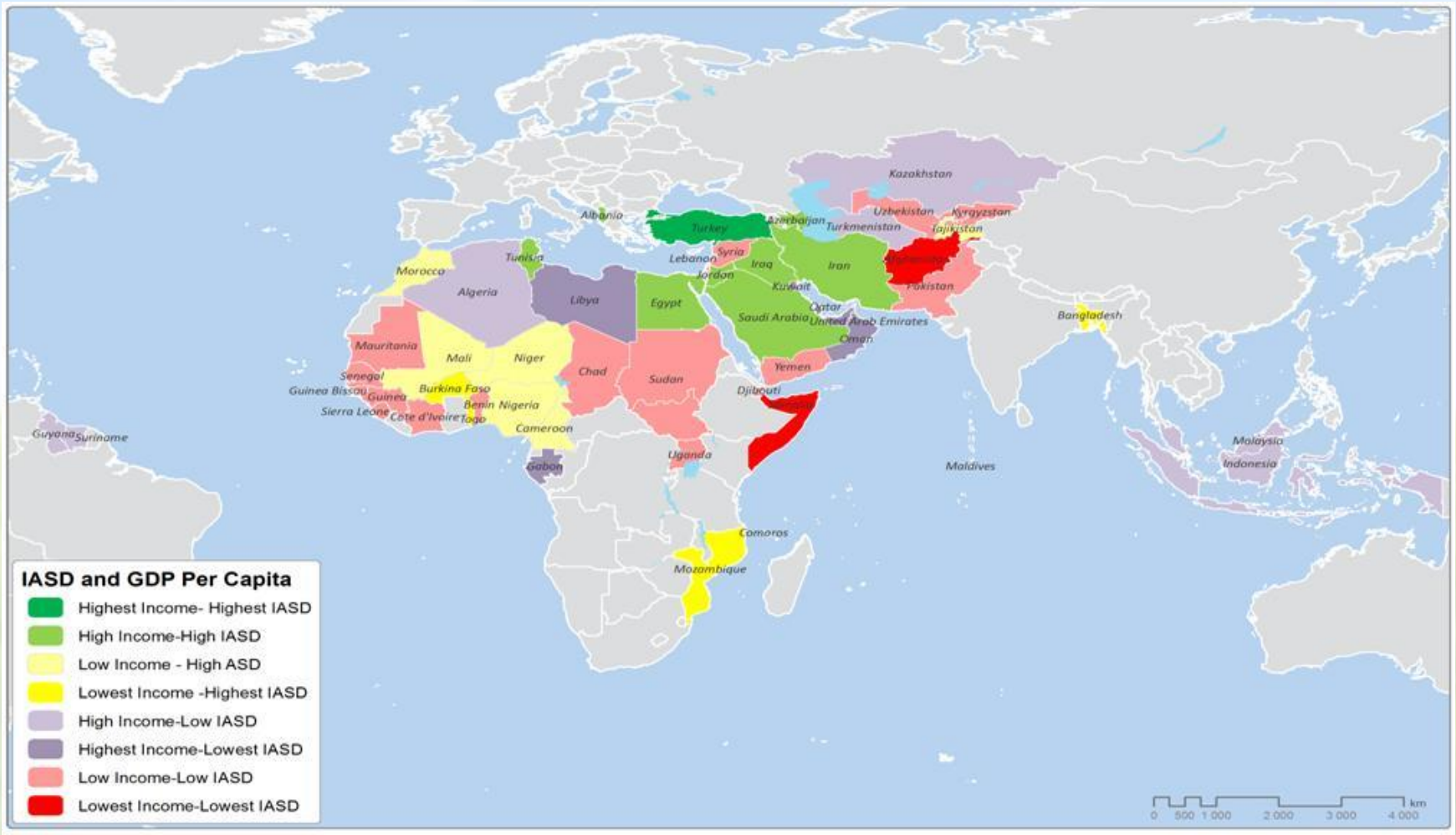
OBSERVATIONS (I)

- 9 of the COMCEC Members are classified to have well-developed agricultural statistics. 11 members of COMCEC have been classified to have fairly developed agricultural statistics open to limited improvement. The third group of 17 COMCEC Member Countries has less developed agricultural statistics systems and need major improvement. The remaining 20 COMCEC Member Countries have severe problems with their agricultural statistics and are in need of serious improvement efforts.
- In the lowest IASD category, 55 percent of countries are from the Arab group. The shares of African and Asian group countries are 20 and 25 percent respectively. In the top IASD category, on the other hand, 44 percent are from the African group and 22 and 33 percent from Arab and Asian groups. Therefore, the Arab group shows the worst performance with the lowest share in high IASD category while having the highest share in lowest IASD category .
- In the African group, 24 percent of the countries are in the lowest IASD category, 24 percent are in the highest, and the remaining 52 percent are in-between. In the Arab group, 50 percent of the countries are in the lowest IASD category, only 9 percent in the highest and the remaining 41 percent are in-between. In the Asian group, 28 percent of the countries are in the lowest, 17 percent in the highest and the majority (55 percent) is in-between.

IASD BY GDP PER CAPITA

	Lowest IASD	Low IASD	High IASD	Highest IASD
Highest per Capita	Kuwait, Brunei, Oman, Libya, Qatar, UAE, Gabon	Bahrain, Kazakhstan, Malaysia	Saudi Arabia	Turkey
High per Capita	Algeria, Guyana, Turkmenistan	Indonesia, Suriname, Lebanon	Tunisia, Iraq, Jordan, Albania, Azerbaijan, Maldives	Egypt, Iran
Low per Capita	Côte d'Ivoire, Senegal,Yemen, Sudan,Djibouti, Kyrgyzstan	Mauritania, Pakistan, Uzbekistan, Palestine, Syria	Nigeria	Cameroon, Morocco
Lowest per Capita	Somalia, Gambia, Afghanistan, Comoros	Benin, Chad, Guinea, Guinea-Bissau, Sierra Leone, Uganda	Niger, Mali, Tajikistan	Mozambique, Burkina Faso, Togo, Bangladesh

IASD BY GDP PER CAPITA



OBSERVATIONS (II)

- A country with high income can have good agricultural statistics and a country with low income can have poor agricultural statistics, as expected.

- On the other hand, a country with high income can have poor agricultural statistics and a country with low income can have good agricultural statistics.

OBSERVATIONS (III)

- Some countries require serious capacity building but do not have the financial resources to do so.
- Some countries are in a position to provide both financial and technical support for capacity building in the area of agricultural statistics.
- Some countries can provide a limited amount of technical as well as financial support. These countries will, at least, not require any financial or technical support.
- Other countries, on the other hand, require serious technical support and can fund it.
- There are countries in need of serious technical support but do not need external financial resources for the costs of such capacity building.
- Finally, there are countries that have the capability to provide technical assistance to other countries but do not have the luxury to do so for free.

ASSESSMENT OF AGRICULTURAL STATISTICS IN THE COMCEC REGION

Issues, Challenges and Recommendations

April 3, 2014
ANKARA

COMCEC

Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC)

UDA consulting

DIMENSIONS

- **Economic Dimension:** Consists of resources that enter into the production process and the outputs that result from it. The output takes on many forms. Some are consumed by the household, some are retained for seed or feed, and others enter supply chains that extend to markets. The outcome of the production process is income for the agricultural and non-agricultural enterprises, and to households for both agricultural and non-agricultural. The impact of the production process affects food security, poverty and the performance of the economy.

- **Environmental Dimension:** Consists of the sector's role as a user of natural resources - principally land and water - and as a provider of environmental services. In addition to its direct use of natural resources in production, its impacts also relate to the waste and emission by products generated for production.

- **Social Dimension:** Begins with households and household members - both farm and nonfarm. It is especially important that the combination of agricultural and non-agricultural income sources among households, farms, and nonfarm businesses are represented. It is also important to examine the relationships that exist between agriculture and other sectors in rural society. Finally, social data is needed to examine households and individuals not only in their roles as producers and consumers, but also as users of social services such as health and education programs.

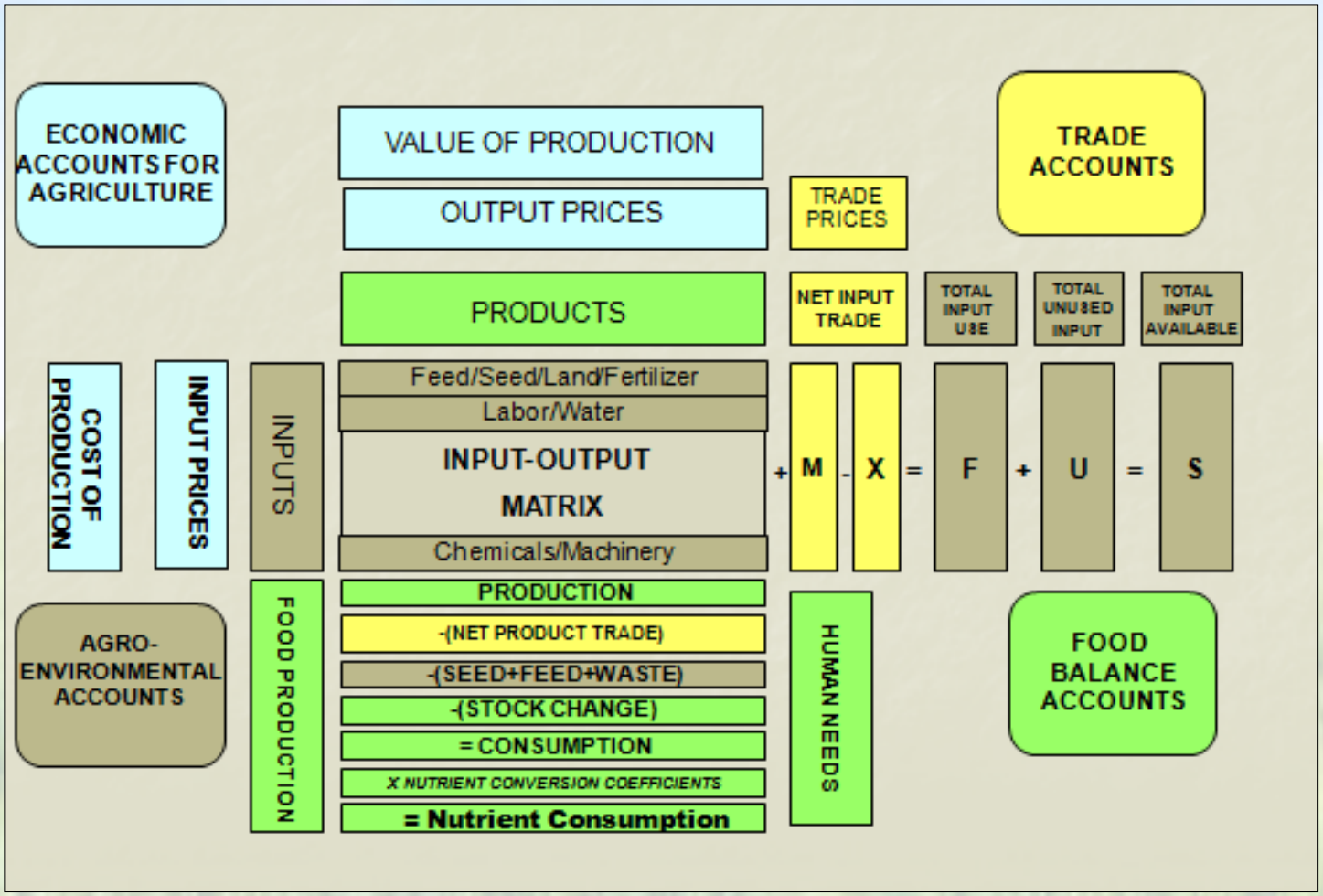
TOOLS FOR DIMENSIONS

- **System of National Accounts (SNA) and its satellite account Economic Accounts for Agriculture (EAA),** which provides international standards for concepts, definitions, and classifications of economic activities, set the guidelines for the economic dimension of agricultural statistics.

- **System of Integrated Environmental and Economic Accounting (SEEA) is a satellite account of the SNA,** which sets the guidelines for the environmental dimension of agricultural statistics.

- **Food Balance Sheets (FBS) and Supply Utilization Accounts (SUA)** provide a partial framework by covering the (consumption and food security) consumer welfare side of the social dimension. Unfortunately there is no internationally accepted standard for social statistics as a whole.

INTEGRATION OF AGRICULTURAL STATISTICS



COVERAGE

- An agricultural holding is the basic unit for economic statistics. The basic unit for social statistics is the household, while the proper unit for environmental statistics is the land parcel. The challenge will be to cover and link these statistical units.

- Agricultural statistics should cover enterprises that service agriculture, such as input suppliers, processors, and transporters of agricultural goods. While these economic units are outside the conceptual framework for agriculture, they do provide information on prices and quantities that are important for economic and environmental accounts.

- Agricultural statistics need to take into account the seasonality and heterogeneity of agricultural production.

ROUTES FOR EXPANSION (1)

- **Agriculture to Rural**: This is a route suggested with the development of the Geographical Information System (GIS) technology, which makes measurements based on area frames easier and more reliable. However, it is not easy to properly define the term 'rural', and to link agricultural households or enterprises, which are at the heart of agricultural statistics, to spatial measurements.

- **Resources to Production**: Statistics making it possible to link resource use to output, in addition to providing isolated information on the components EAA, Input-Output (I-O) and Social Accounting Matrices (SAM) are essential to conduct economic analysis on productivity and efficiency in agriculture.

- **Producer to Consumer:** Agricultural policies of the past (and at present in many countries) generated agricultural statistics which are predominantly producer-oriented, neglecting the consumers. Consumers are in both urban and rural areas, and constitute the reason for the existence of agriculture. This is why many institutions are now referring to "food and agriculture" statistics instead of "agriculture statistics".

ROUTES FOR EXPANSION (2)

- **Agriculture to Agro-Industry**: This is where most of the value is added to agricultural products. This is also the main source of diminishing agricultural GDP in the total GDP. As more and more agricultural products are processed and transported further away from the field, before reaching the consumers, the agricultural value added shifts from the agricultural sector to the industrial sector and services. Agricultural statistics should capture the journey of agricultural value added, in order to maintain the interest in agriculture and related statistics.

- **Agriculture to Related Non-Agriculture:** Agriculture does not operate in isolation from other sectors of the economy. It is therefore important to be able to link the agricultural sector and its statistics to the rest of the economy, to be able to analyze the forward and backward linkages of the sector.

ISSUES AND CHALLENGES

- **Basic Unit of Statistical Compilation and Analysis**: An agricultural holding is the basic unit for economic statistics. The basic unit for social statistics is the household, while the proper unit for environmental statistics is the land parcel. The challenge will be to cover and link these statistical units.
- **Wider Scope of Agricultural Statistics**: Agriculture is covered when the supply, demand and market issues are addressed simultaneously, and integrated into the rest of the economy and further to the rest of the world.
- **Micro-Data and Confidentiality**: Everybody wants micro-data but nobody wants to share their micro-data with others. Providers of agricultural statistics need to find a way to disseminate micro-data, while ensuring that the privacy of the data is not violated.
- **Quality of Statistics**: Quality of statistics depends on the quality at the source, processing and user levels. Trade-offs between time, cost and statistical error are unavoidable.
- **Metadata**: With the use of the internet, there is an influx of information and statistics available from various sources with different definitions and quality, yet often it is not possible to differentiate due to limited metadata. Therefore, metadata is now an essential complement of statistical data.
- **Common Definitions and Classifications**: The use of international and consistent national classifications and definitions is a must for the integration of information at all levels.

RECOMMENDATION 1: COOPERATION

▪There is a good environment for cooperation among COMCEC Member Countries. There are those that have the technical capacity but are short on resources. There are those that have good resources but are low on statistical capacity. There are those that have both good resources and statistical capacity, and of course those that are short in both resources and technical capacity.

	Lowest IASD	Low IASD	High IASD	Highest IASD
Highest per Capita	Kuwait, Brunei, Oman, Libya, Qatar, UAE, Gabon	Bahrain, Kazakhstan, Malaysia	Saudi Arabia	Turkey
High per Capita	Algeria, Guyana, Turkmenistan	Indonesia, Suriname, Lebanon	Tunisia, Iraq, Jordan, Albania, Azerbaijan, Maldives	Egypt, Iran
Low per Capita	Côte d'Ivoire, Senegal,Yemen, Sudan,Djibouti, Kyrgyzstan	Mauritania, Pakistan, Uzbekistan, Palestine, Syria	Nigeria	Cameroon, Morocco
Lowest per Capita	Somalia, Gambia, Afghanistan, Comoros	Benin, Chad, Guinea, Guinea-Bissau, Sierra Leone, Uganda	Niger, Mali, Tajikistan	Mozambique, Burkina Faso, Togo, Bangladesh

RECOMMENDATION 2: CAPACITY BUILDING

- The COMCEC Member Countries are already involved in capacity building activities as part of
  - SESRIC,
  - Various regional bodies like AFCAS and APCAS,
  - Support provided by FAO, Regional Development Banks, EU and World Bank.

- Of course these should continue with more active participation.

RECOMMENDATION 3: ONLINE DATABASE

- None of the COMCEC Member Countries have an integrated comprehensive online database for agricultural statistics

- **An integrated database not only facilitates dissemination to users, adds value and makes agricultural statistics visible, but also shows where the deficiencies and missing links are.**

- Building a database requires careful thinking and planning about what the structure, coverage, time span, level of disaggegation, degree of integration, etc. of the database. Otherwise it results in a storage of lots of data with little use.

RECOMMENDATION 4: CountrySTAT

- CountrySTAT is a good initiative to integrate statistics under one roof and disseminate them. Few COMCEC members are active members, but many are either non-active or none members. This is a good opportunity with little or no financial resources to start a database on agricultural statistics.

- **The time series information in FAOSTAT database contains data more than that can be found in most COMCEC member countries.**

- Transferring FAOSTAT data on a country's CountrySTAT is already a good start.

- **Augmenting it with sub-national data is a major step.**

- COMCEC members therefore should make an effort to participate in the existing CountrySTAT workshops, organize one in their region, and request technical cooperation support from donors in this area.

RECOMMENDATION 5: COUNTRY REPORTS

- COMCEC Member Countries should be encouraged to prepare a report on the state of agricultural statistics in their countries, in a similar format to the case studies in this study, or in the "panorama" reports in CountrySTAT, "metadata for national agricultural statistics" reports prepared for FAO's regional meetings, "country statistical situation reports" of The Euro-Mediterranean Statistical Cooperation (MEDSTAT), "global assessment" reports of United Nations Economic Commission for Europe (UNECE).
- **Country reports prepared for Afghanistan, Sudan, Morocco, Turkey, Malaysia, Uganda, Iran and Cameroon in this study.**
- Panorama reports prepared for Benin, Burkina Faso, Côte d'Ivore, Guinea-Bissau, Mali, Mozambique, Niger, Senegal and Togo in CountrySTAT
- **MEDSTAT country reports for Egypt and Morocco**
- UNECE global assessment reports for Kyrgyzstan and Tajikistan,
- **FAO's metadata reports for Bangladesh, Indonesia, Iran and Pakistan,**
- Even with this incomplete list, it can be seen that almost half of COMCEC Members already have a report on the state of agriculture in their countries. The problem is that these reports are conducted for and by different organizations, and are difficult to access as they are not deposited in one location. It is recommended that an outlet be found for these reports, apart from the national websites of the disseminating countries. SESRIC, as the statistical research and training centre for Islamic countries, could be a potential host for this platform.

RECOMMENDATION 6: INTEGRATION

- COMCEC Member Countries should make every effort to integrate agricultural statistics into their National Statistical Systems.

- **They should seriously consider placing agricultural statistics in National Statistical Offices and maintain close ties to the Ministries of Agriculture, contrary to the current situation in most countries.**

- Agricultural economics have a better chance to flourish in the NSO, since most of the recent domains of agricultural statistics are in this office (such as national accounts, social statistics, consumer prices, trade, food consumption, labor force, agro-industry). Agricultural statistics in NSO will benefit from these and many more externalities.

RECOMMENDATION 7: OIC-StatCom AGENDA

- The OIC-Statistics Commission is an existing and active platform for the National Statistical Systems of the OIC Member States for sharing knowledge and exchanging experiences and best practices with a view to enhance their performances while being guided by the objectives and principles to strengthen the solidarity and cooperation among the Member States.

- **COMCEC Members should hold a workshop to discuss integration and coordination issues, in which heads of statistics and agricultural statistics participate.**

- This can be the subject of one of the annual meetings of the OIC-Statistics Commission.

RECOMMENDATION 8: SELF ASSESSMENT

- **Assessment of the agricultural statistics systems in COMCEC Member Countries should be a continuous process.**
- The SSAQ and IASD should be updated regularly with better information.
- **After few more updates at the COMCEC coordination office, the IASD should be transferred to a true self-assessment system, where the index scores are computed by the countries, and peer reviewed and finalized in an annual meeting of the agricultural statistics representatives of the member countries.**
- The transformation of the system to one that is self-assessment would require finalization of the SSAQ index methodology, weights and scores, documentation and training.