



Global Strategy  
IMPROVING AG-STATISTICS



# Assessing Country Capacity to Produce Agricultural and Rural Statistics

## ALTERNATIVE CRITERIA FOR GROUPING THE COUNTRIES



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High Level Stakeholders Meeting on Global Strategy - From Plan to Action  
Expert Meeting on Country Assessment  
Rome, 3 December 2012





## I. Grouping of countries based on Key Aspects of Statistical System *(An exercise in Latin America)*

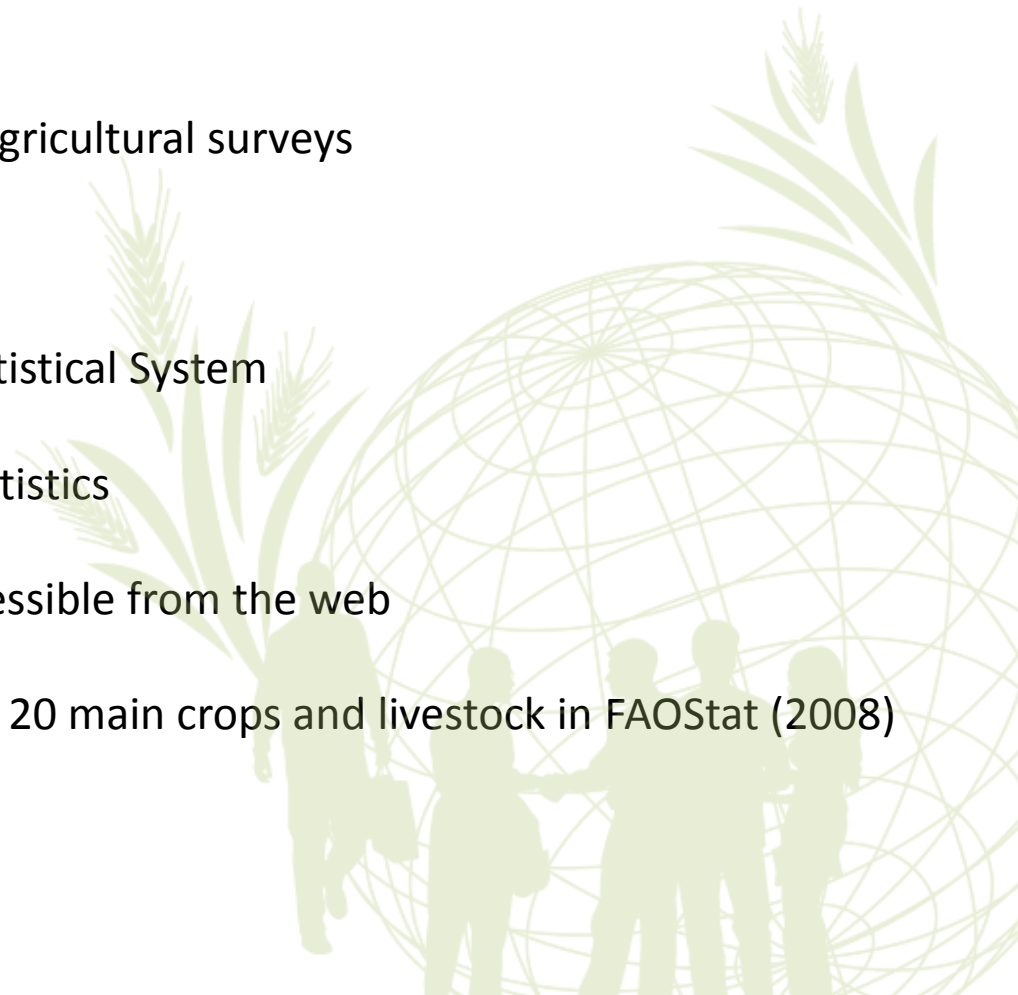
### DATA SOURCES

- Presentations about the situation of agricultural surveys and censuses provided by countries participating in “Roundtable on the 2010 round of Agricultural Census” in Santiago de Chile in September 2008.
- “2000 WCA Country Reports” and “2000 WCA Methodological Review” (in elaboration at that moment).
- FAOSTAT [On line]: <http://faostat.fao.org/site/339/default.aspx>.
- PARIS21 (2010). National Strategies for development of Statistics (NSDS): Worldwide Report on Progress and Emerging issues. PARIS21 Secretariat
- The World Bank. Bulletin Board on Statistical Capacity [On line]: <http://bbsc.worldbank.org/bbsc>
- United Nations Statistical Division [On line]: <http://unstats.un.org/unsd/dnss/cp/searchcp.aspx>



## KEY ASPECTS CONSIDERED

- Undertaking of Agricultural Census
- Methodologies use for the current agricultural surveys
- State of NSDS
- Legal framework of the National Statistical System
- Legal Framework for Agricultural Statistics
- Agricultural Statistical Database accessible from the web
- % of available data on production of 20 main crops and livestock in FAOStat (2008)





## ASPECTS AND SCORES ASSIGNED FOR THE AD-HOC INDEX

Aspects	Scores
<b>Agricultural Census</b>	<b>30</b> if undertook or is ready to undertaking an AC in the present round. <b>20</b> if last AC belongs to the 2000 Round and it has not advanced plans to undertake a new one. <b>10</b> if last AC belongs to 1990 round and it has not advanced plans to undertake a new one. <b>0</b> Otherwise.
<b>Current agricultural surveys</b>	<b>20</b> if the country has probabilistic current agricultural surveys for estimating area, production, yield of main crops and livestock. <b>10</b> if the current information on those variables comes from non-probabilistic procedures. <b>0</b> Otherwise.
<b>NSDS</b>	<b>20</b> if NSDS it is implementing <b>10</b> if NSDS is completed and it is awaiting implementation <b>0</b> Otherwise.



## ASPECTS AND SCORES ASSIGNED FOR THE AD-HOC INDEX (Cont.)

Aspect	Scores
<b>Legal framework of the NSS</b>	<b>20</b> if a National Law organizing the NSS there exist and for its characteristics can be qualified as a “good example” of such laws. <b>10</b> if a National Law organizing the NSS there exist but it does not merit such category.
<b>Legal Framework for Agricultural Statistics</b>	<b>20</b> if a specific rule there exists for regulating the Agricultural Statistical System. <b>10</b> if ad-hoc norms are dictated for specific activities such as Census of Agriculture or Surveys <b>0</b> Otherwise.
<b>Agricultural Statistical Database accessible from the web</b>	10 if there exists 0 Otherwise.
<b>% of available data on production of 20 main crops and livestock in FAOStat (2008)</b>	Percentage
<b>NOTE: The maximum sum of scores for one country is 220. So, in order to get a composite index valued between 0 and 100, the sum of scores for each country was multiplied by 100/220.</b>	

## STRENGTHS AND WEAKNESSES OF THE INDICATORS.

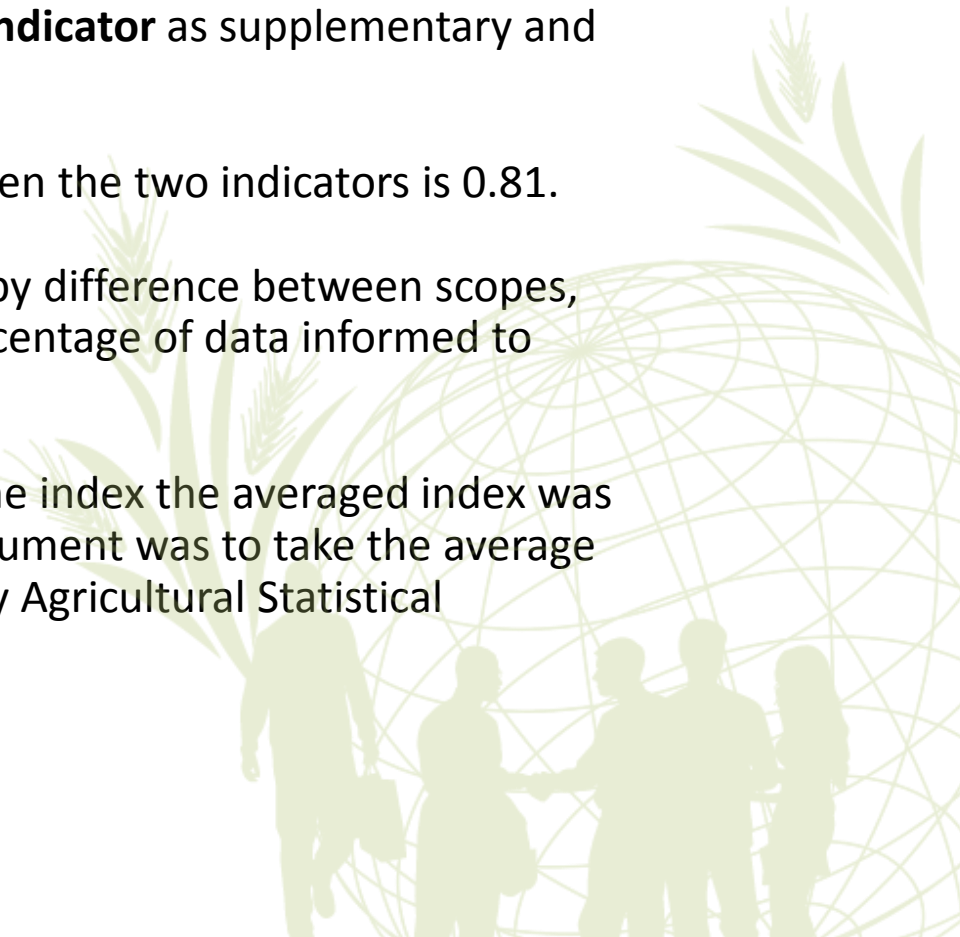
- Some values are easy verifiable, for example:
  - *“Situation with respect to Agricultural Census”*,
  - *“Existence and type of current agricultural surveys”*
  - *“Legal framework of the NSS”*,
  - *“Agricultural Statistical Database accessible from the web”* and
  - *“% of available data on production and livestock in FAOStat (2008)”*
  
- For the case of “NSDS” the information from Paris21 refers only to International Development Association (IDA) borrower and Lower Middle Income Countries (Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, Peru). Information for the other countries could be not completed accurate.
  
- *“Legal Framework for Agricultural Statistics”* is the weakest of all indicators because no database was found and information from web pages is incomplete, fragmented and not comparable.

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## VALIDATION OF RESULTS

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Results were validated :

- Using **WB Statistical Capacity Building Indicator** as supplementary and mirror data.
  - The linear **correlation coefficient** between the two indicators is 0.81.
  - Some observed gaps may be explained by difference between scopes, reference periods, and mainly for the percentage of data informed to FAOSTAT.
  - In order to increase the robustness of the index the averaged index was also calculated. The suggestion in the document was to take the average index as a preliminary indicator of country Agricultural Statistical Development.
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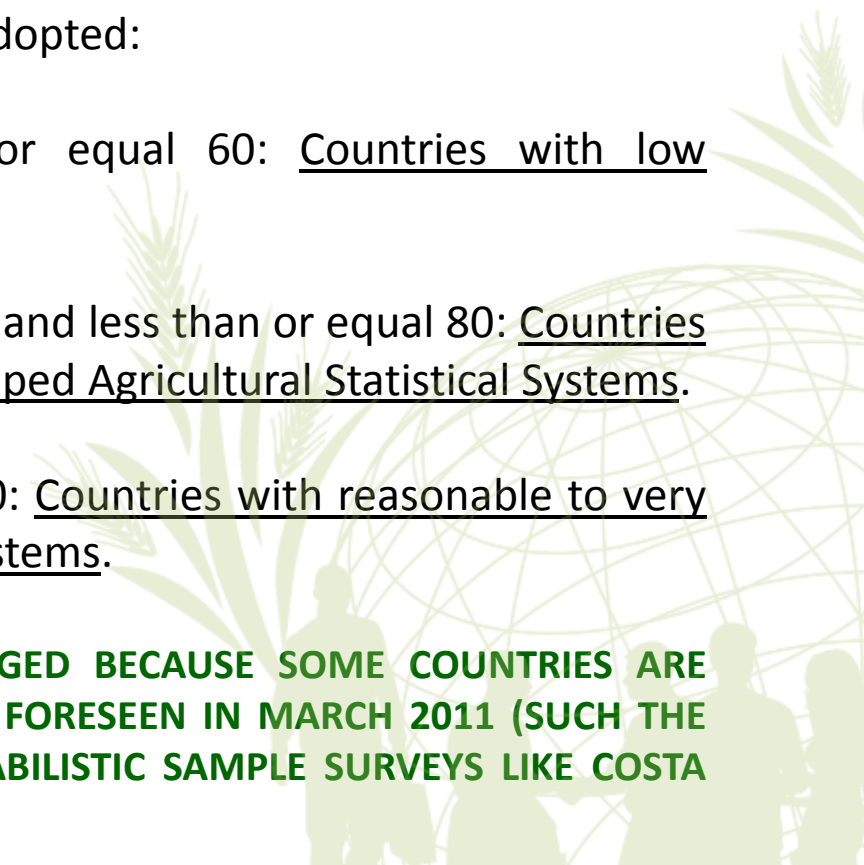
## CRITERIA OF GROUPING

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Looking at the final distribution of scores and after deciding the formation of three groups the following criteria was adopted:

- Group A.** Average score less than or equal 60: Countries with low Agricultural Statistical Development.
- Group B.** Average score greater than 60 and less than or equal 80: Countries with moderate to reasonable well developed Agricultural Statistical Systems.
- Group C.** Average score greater than 80: Countries with reasonable to very well developed Agricultural Statistical Systems.

**IMPORTANT NOTE: THIS SITUATION CHANGED BECAUSE SOME COUNTRIES ARE UNDERTAKING STATISTICAL ACTIVITIES NOT FORESEEN IN MARCH 2011 (SUCH THE CASE OF PERU AND COLOMBIA) OR PROBABILISTIC SAMPLE SURVEYS LIKE COSTA RICA.**







## GROUPING OF COUNTRIES

Country	Ad-hoc	WBSCI	Avg index
Uruguay	82	96	88,9
Panama	89	76	82,3
Mexico	80	84	81,8
El Salvador	75	87	81,0
Colombia	77	84	80,6
Brazil	84	77	80,5
Chile	64	92	77,8
Peru	68	81	74,6
Honduras	73	76	74,4
Ecuador	61	83	72,2
Argentina	59	84	71,5
Nicaragua	66	74	70,0
Guatemala	55	83	68,8
Venezuela	68	67	67,6
Costa Rica	52	75	63,6
Paraguay	61	61	61
Dominican Rep.	50	70	60,0
Paraguay	57	61	58,9
Bolivia	36	65	50,7
Cuba	s/d	s/d	s/d





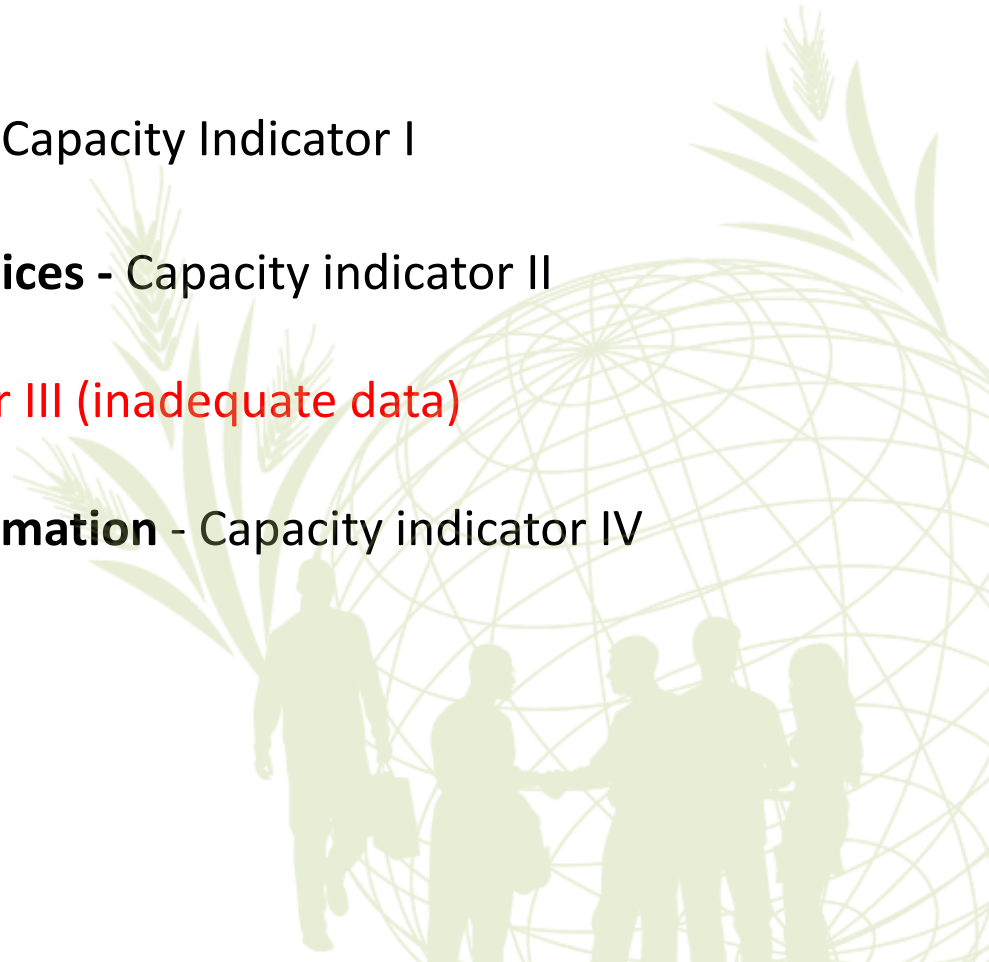
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## **II. Grouping of countries based on Capacity Indicators** *(tried on data from Asia)*

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### **DIMENSIONS OF CAPACITY CONSIDERED**

- **Institutional Infrastructure - Capacity Indicator I**
- **Statistical methods and practices - Capacity indicator II**
- **Resources - Capacity indicator III (inadequate data)**
- **Availability of statistical information - Capacity indicator IV**





## STEPS FOR GROUPING

**Step 1:** Calculate the **three quartiles** of the distribution of scores on the three indicators for a defined region.

Example based upon data from 38 Asian and the Pacific countries

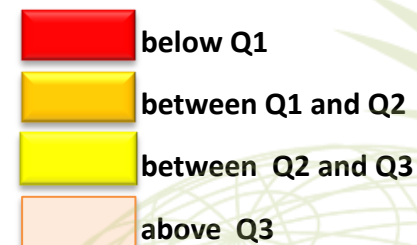
Quartiles/Indicators	CI. I	CI. II	CI.IV
Q1	45.75	51.50	47.00
Q2 (Median)	60.00	61.00	62.00
Q3	78.50	71.50	82.00
Q4	100.00	100.00	100.00

## STEPS FOR GROUPING

**Step 2:** Verify the status of each country on each on the three dimensions with respect to respective quartiles of that dimension.

Ex:

Country	CI. I	CI.II	CI.III
AFG	45	67	29
ARM	92	100	87
AUS	73	47	82
AZR	86	53	70
BGD	51	76	72
BTN	53	94	61
CMB	60	33	100
COK	85	42	37
FIJ	46	61	33
GEO	73	67	63

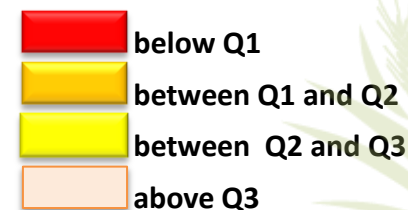


## STEPS FOR GROUPING

**Step 3:** Assign a group to countries as follows (5 groups):

**Gr 1: Least developed** [below Q1  $\geq$  2 dimensions]

Country	CI. I	CI. II	CI. III
AFG	45	67	29



**Gr 2: Developing with constraints** [below Q1 = 1 dimension]

Country	CI. I	CI. II	CI. III
CMB	60	33	100

**Gr 3: Developing** [below Q2  $\geq$  1 dimension; not part of the above groups]

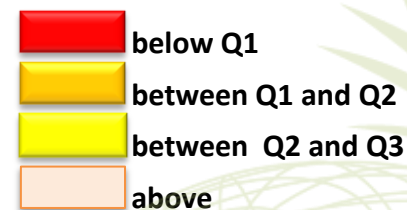
Country	CI. I	CI. II	CI. III
MVD	55	61	87

## STEPS FOR GROUPING

**Step 3:** Assign group to countries as follows, cont.d:

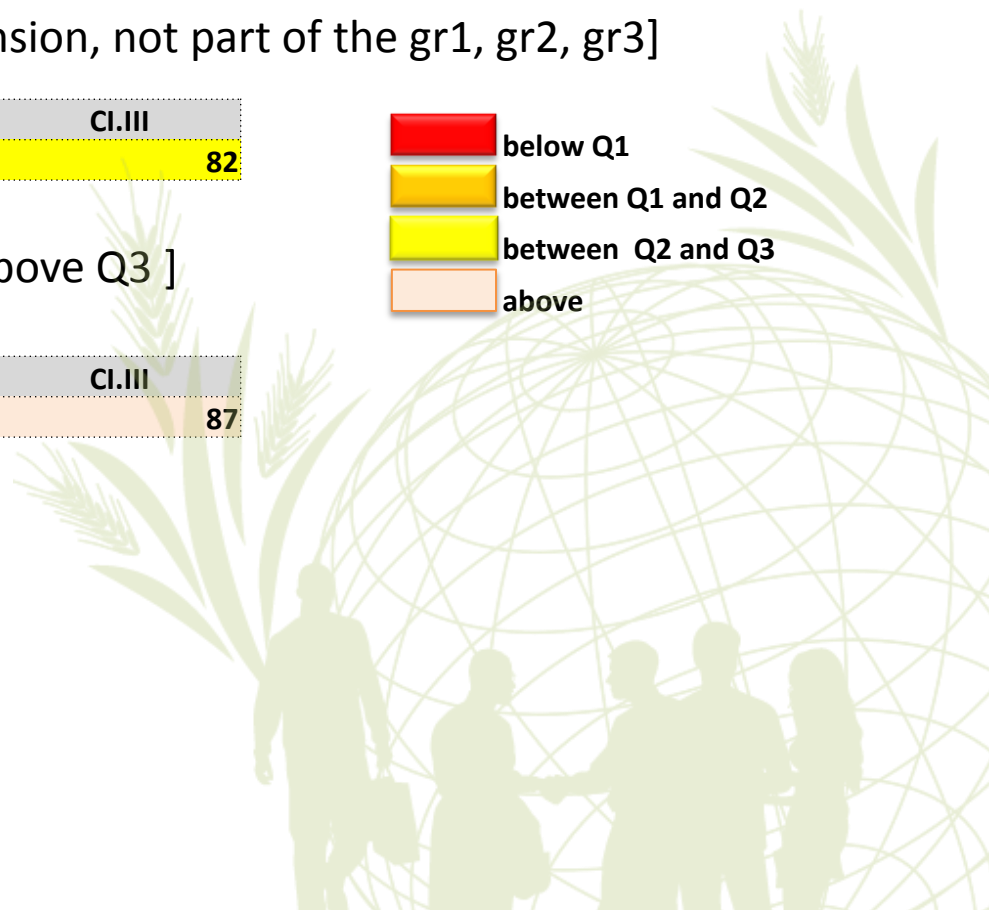
Gr 4: **Progressive** [ below Q3  $\geq$  1 dimension, not part of the gr1, gr2, gr3]

Country	CI. I	CI.II	CI.III
NPL	64		82



Gr 5: **Developed** [ all dimensions are above Q3 ]

Country	CI. I	CI.II	CI.III
ARM	92	100	87





## ISSUES IN THIS APPROACH

- Require information on the complete distribution of Capacity indicators on all the three dimensions .

Some non-responding countries

Estimation of quartiles will be less accurate

- Could choose arbitrary cut-offs

- What distribution should be considered?

For each region separately

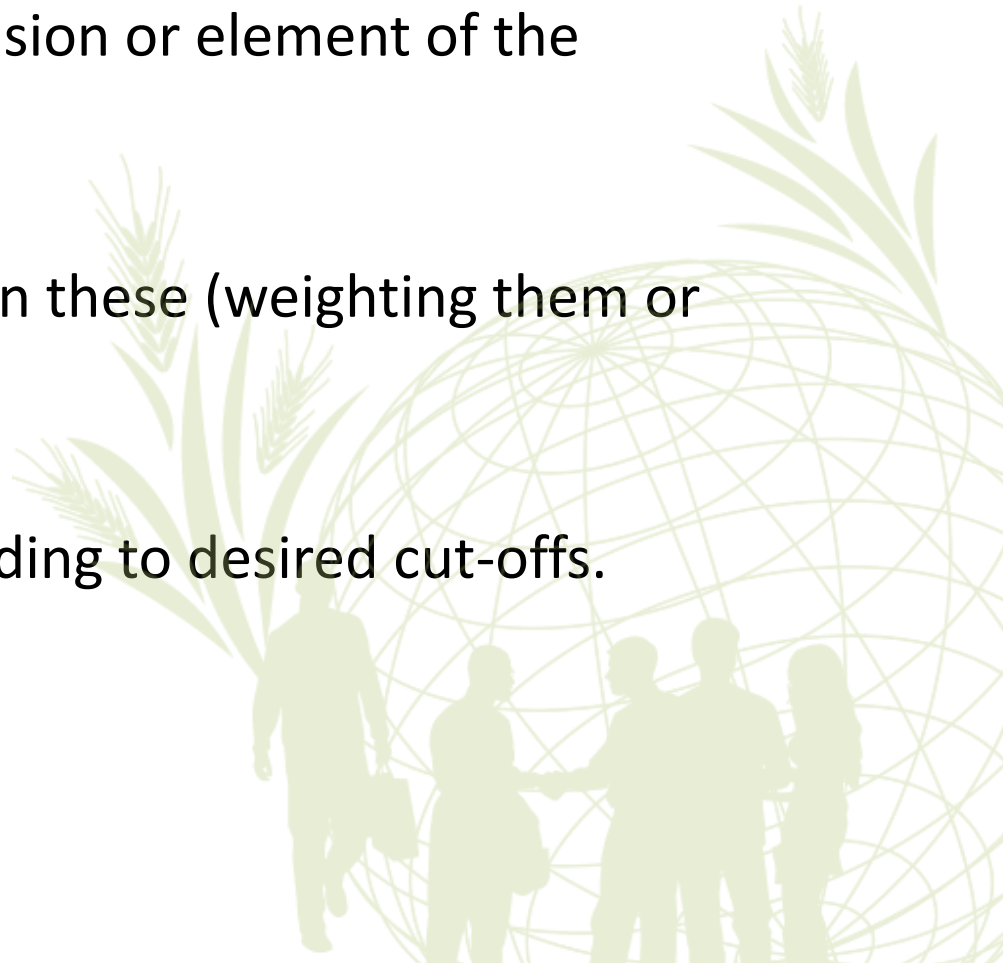
The whole world





### III. Purposive grouping

- Choose any specific dimension or element of the capacity.
- Aggregate the indicators on these (weighting them or not).
- Group the countries according to desired cut-offs.







# THANK YOU

