Science, Technology and Innovation Global Assessment Programme (STIGAP)

Project Concept Note
(05/07/11)
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Starting point

- Need to create a capacity to reflect on STI in a dialogue between researchers and researchers and policymakers at the national, regional and global levels
  - What are the key challenges in relation to the monitoring of STI and STI Policies?
  - Why would UNESCO assume a role in this?
  - What are the strengths UNESCO has in comparison with other organizations?
- Proposal for the programme

Challenges (1)

- International comparability versus local particularity;
- Differences in the capacity to collect adequate data between regions & countries;
- Knowledge is larger than science in labs and universities
- STI indicators are defined in agreement with a specific perception of the National System of Innovation (NSI): data not fitting in the model are not collected;
- The NSI approach has been developed within a specific socio-economic context (OECD) with some minor adaptations to less developed nations (LAC)
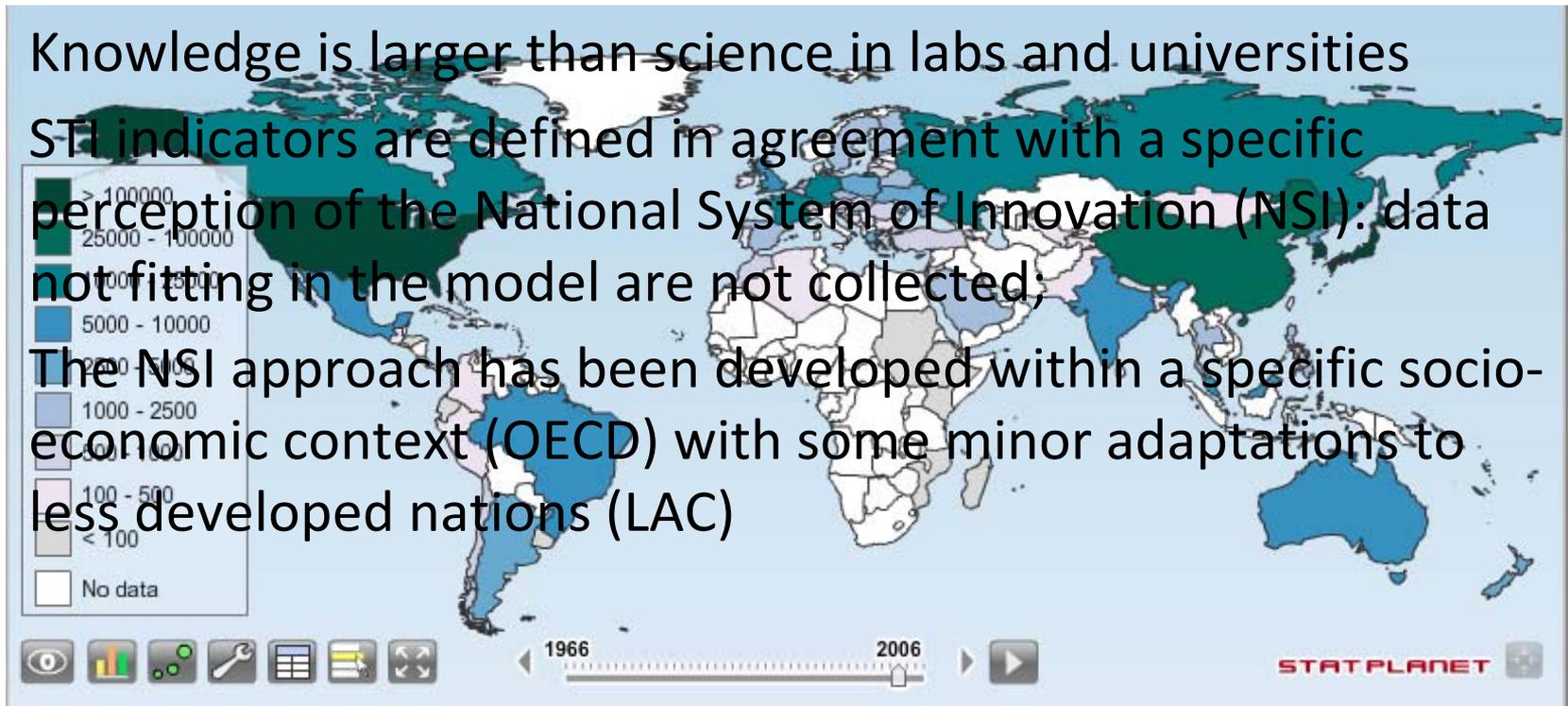
Challenges (2)

- Limitations of the model underlying many of the current STI indicators / assessments:
  - Input-output model with little capacity to assess impacts;
  - It has a focus on GDP with little attention to transversal societal goals (peace, environmental sustainability, poverty);
  - Innovation conceived as "the business of business", the sampling unit is the firm; people are not addressed as the locus of innovation (knowledge economy versus knowledge society)
  - Lack of explanatory power, paths versus projects
- The concepts and definitions are not always relevant to low income countries which might explain why they "vote with their feet"

The social and economic importance of informal sector

Table 1 : Contribution of informal sector to GDP in various regions.

	Informal sector (including agriculture) in % of total GDP	Informal sector (excluding agriculture) in % of non agricultural GDP	Informal sector (excluding agriculture) in % of total GDP
Sub-Saharan Africa	54,7% (60.6)	37,7% (41.1)	23,7% (25.6)
North Africa	37,7%	30,4%	26,3%
Asia	23.9%	26,8%	21,5%
Latin America	30.6%	25,9%	23,4%
Caribbean	22,2%	21,2%	19,7%
Transition economies	21,7%	13,9%	11,8%

Sources: Table based on regional tables presented in appendices. **Notes** : Between brackets : without Botswana and South Africa. Figures in Italics are based on a very small number of countries.

Source: Charmes 2006

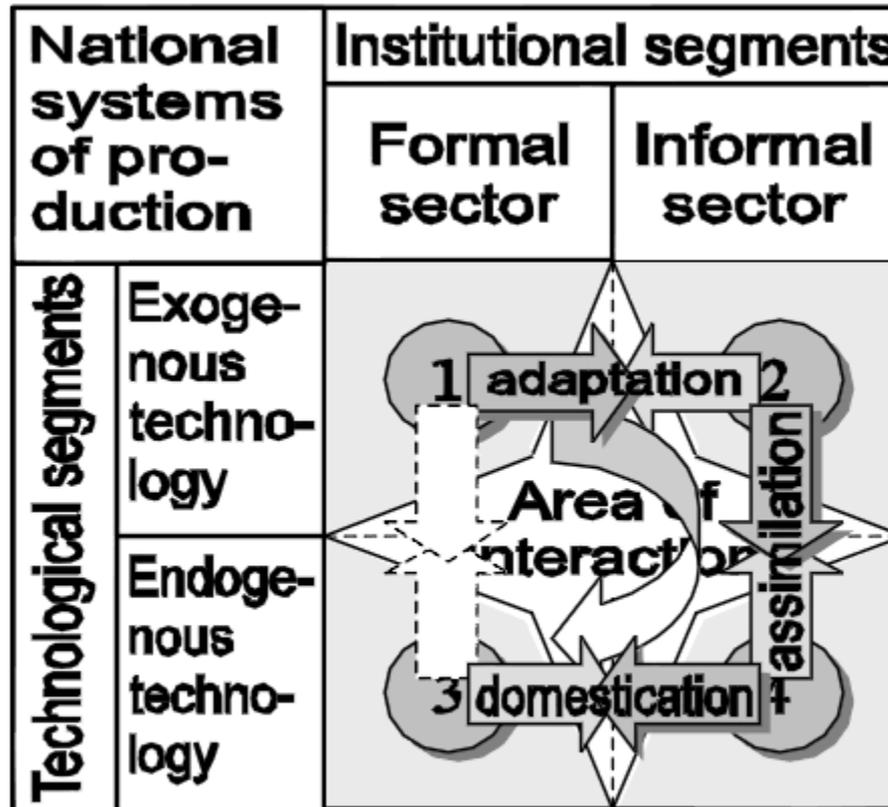# The technological importance of the informal sector

Figure 2: The technological assimilation "by-pass"

Source: Muelller 2004.

Why UNESCO

- UNESCO has a mandate for science in combination with culture and education:
  - Different from other (UN) agencies with mandates focused on the economy (OECD, UNCTAD, etc.).
- UNESCO has a mission towards peace, inclusiveness and sustainability ;
- UNESCO has a tradition:
  - First manuals were developed by UNESCO in the 1960s, complete national reports in 1971, and STI policy series were produced ever since.
- UNESCO has a present:
  - Through UIS collects data on education, science and technology worldwide;
  - Through the SPD it STI policy making in Member States ;
  - The science report (5th edition publlished in 2010).

UNESCO's strengths and opportunities

- The core values of UNESCO's mission (peace, inclusiveness, and sustainability).

  – Transcend economy;

- Focus on people as the loci of the knowledge society;

  – Include local knowledge, the informal sector and diffusion;

- Capacity to rely on local resources in the Member States and a bottom-up process

- Be relevant to STI policies

STIGAP's responses

- Regional networks integrated in global project with exchanges of ideas and progressive debates on STI, STI monitoring and policies

- Stimulate catch-up through a regionally differentiated budget and promoting assessments that are based in the Member States;

- Bottom-up driven expansion of the indicators based on local appropriateness and relevance as well as regional and global comparability (dialogue);

- Inclusion of local knowledge, non-frontier technologies, informal sector, diffusion, and knowledge society elements in the national and regional assessments

Some ideas about expanding STI indicators

Item	Approach	Who
Peace	Evaluate R&D for military versus non-military aims	HIC, MIC
Equity	Add Gini to GDP	All
People	Diffusion studies of key knowledge and technologies	All
Informal	Include informal "enterprises" in sample national STI survey	MIC, LIC
Sustainability	Evaluate Green R&D, and adoption of green technologies	All

NB: Bottom up; "one size fits all"

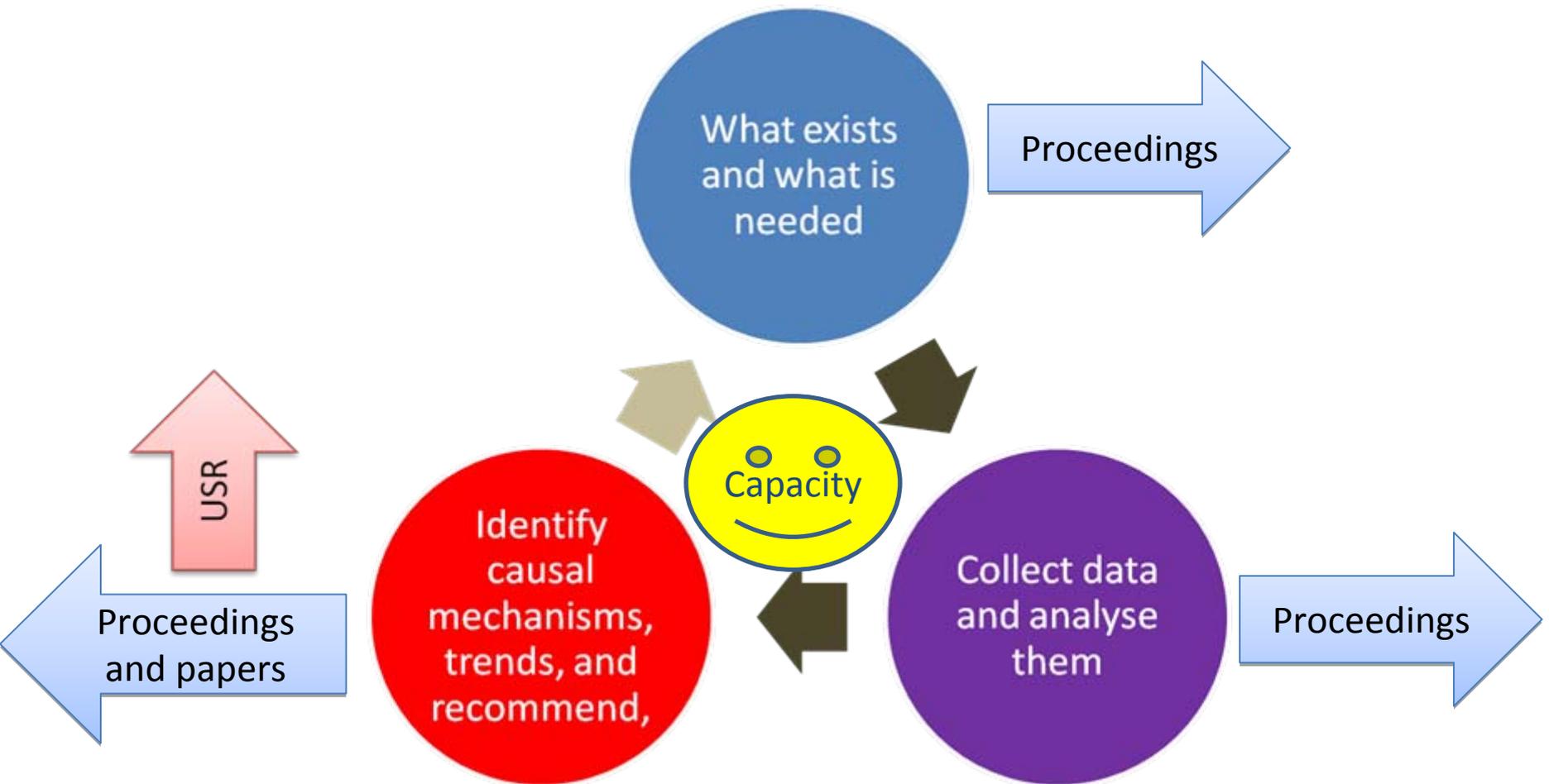# STIGAP: Vision and objective

- **Vision**: The unfolding of an ongoing worldwide reflection on the role of STI policies in building peace, social inclusion and sustainable development.

- **Objective**: Develop a process for global dialogue on data collection that will result in more relevant data and a better assessment of the development of STI at the international, regional and national level.

Specific objectives

- **Building capacity** during all implementation of the programme, in particular in regions where a catch-up remains necessary;

- **Uniting research centres**, research groups and individual researchers in networks around the issues of STI, peace, inclusive development and environmental sustainability;

- **Promoting the formulation of quantitative and qualitative STI indicators** that respond to the mission of UNESCO and guarantee the ongoing production of the necessary data and data analysis by all countries;

- **Guaranteeing the ongoing reflection** on the usefulness of the indicators;

- **Using the outcomes** (essays, science reports, policy briefs and data sets) to support Member States in the design of their national STI policies;

Model: learning cycle

Organization: Integrated set of regional networks

Africa
• ATPS
• NEPAD, Subreg.

Arab states
• NECTAR
• Etc.

Asia
• CASTED
• ASEAN

LAC
• RICYT
• Carribean states
• SPIN, etc.

EUR+
• ERA-Watch
• OECD
• SPRU, etc.
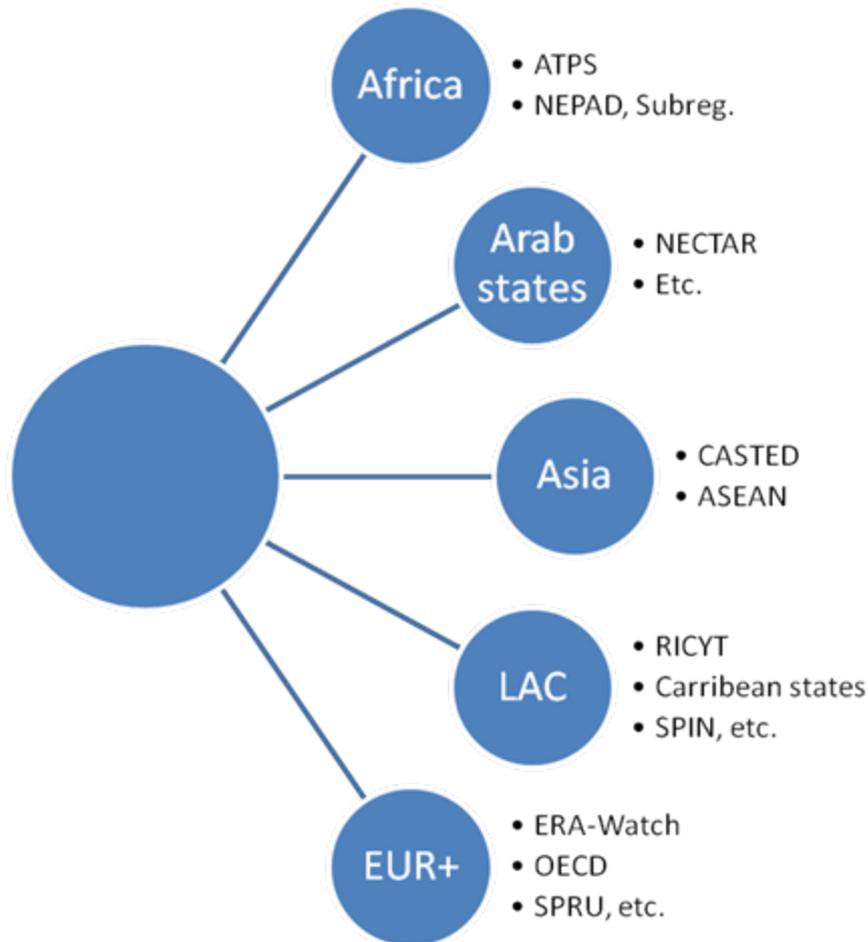
- Regional networks based on and organize by UNESCO's Regional Bureaux
  - Linkages with the field
  - Regionally differentiated
  - Cost effective
  - Global outreach
  - Workable scale (10-25 countries in one sub-network)
- Integrated in worldwide network in SPD

Possible calendar of activities

Year	1												2												3												4											
Month	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Identification of partners																																																
Workshops																																																
Paper writing																																																
Peer reviewing																																																
Writing research proposals																																																
Selecting research proposals																																																
Research																																																
Produce Proceedings																																																
USR Report preparation																																																
UIS adapts questionnair																																																
UIS adapted survey																																																
UIS results available																																																
UNESCO chairs/UNITWIN																																																
Report publication & launch																																																

| Regional offices |
| National partners |
| Head quarters |
| UIS |
| HQ+RO |

Activities

Action	Who	When
1. Create a network of researchers and research institutions	Regional Bureaux (RB)	Year 1
2. Discuss preliminary assessment of STI status, policy and indicators and propose on locally adequate adaptations at regional workshop 1, produce, select research proposals, start research	Research institutes (RI) + RB	Year 1
3. Investigate STI status, policy and indicators on the basis of research protocols produced under 2.	RI	Year 2
4. Produce and present results of 3. at 2nd regional workshop	RI + RB	Year 2
5. Continuation of national research to produce STI stocktaking, an analysis of national and regional policies and formulate recommendations	RI	Year 3
6. Present papers to the regional partners to prepare the selection of case studies	RI+RB	Year 3
7. Final drafting and updating of the regional chapters and selected country chapters	Selected researchers /institutes	Year 4
8. Produce, launch and market final report	UNESCO SPD	Year 4

Outputs

- A catch-up in the capacity to collect and analyze data;
- Analyses of the status of STI, STI policies, trends and for at least 100 countries;
- Five regional networks spanning comprising at least 100 nations;
- Fifteen proceedings of regional meetings on STI indicators, stocktakings, policy analyses and foresighting (only in electronic format) published on the internet;
- One global Science Report
- One global conference;
- Five regional conferences at leading universities on STI, STI indicators and STI policies;
- Three annual project performance reports and an internal end-of-project evaluation;
- Ongoing data flow to UIS and the Science Policy Information Network (SPIN), with the local partners acting as SPIN's focal points.

Who does what….

Who	What
UNESCO HQ-PSD	Coordinates and supervises, nominates editorial board
UNESCO Regional Bureaux	Identify national partners, brings them together, in regional seminars, and decide about the allocation of funds? May be involved in selection of papers/chapters final report? Co-organization regional promotional seminars
National/regional Research institutions and researchers	Build and consolidate networks (UNESCO chairs, UNITWIN), do research (collect data, analyse data and policies and propose indicators), peer reviewing papers from outside their region?
UNESCO Institute of Statistics	Engages with regional networks, incorporates appropriate indicators in its surveys, assists with the analysis and integration of data a a global level
International Editorial board	Supports UNESCO editorial team, guarantees peer review. amplifies network for distribution

Estimated costs: ≈7.8 MUS$

No video	Action	Agent	Unit cost	Unit	Total cost
Year 1	Mobilization of research network	UNESCO Reg. off.	$25.000	5	$125.000
(2012)	First regional workshops with national partners	UNESCO Reg. off.	$60.000	5	$300.000
	Research grants to participating institutions	STI research units	$10.000	100	$1.000.000
	Financial assistant				$40.000
	Subtotal				$1.465.000
Year 2	Research grants to participating institutions	STI research units	$20.000	100	$2.000.000
(2013)	Second regional seminar on preliminary results	UNESCO Reg. off.	$60.000	5	$300.000
	UIS launches adapted STI survey	UIS	$100.000	1	$100.000
	Financial Assistant				$40.000
	Subtotal				$2.440.000
Year 3	Research grants to participating institutions	STI research units	$15.000	100	$1.500.000
(2014)	Third regional seminar on state of the art	UNESCO Reg. off.	$60.000	5	$300.000
	Data analysis	UIS	$100.000	1	$100.000
	Creation of UNESCO chairs UNITWIN networks	UNESCO Reg. off.	$20.000	5	$100.000
	Nomination and functioning of editorial board	UNESCO HQ	$100.000	1	$100.000
	Financial Assistant				$40.000
	Subtotal				$2.140.000
Year 4	Functioning of editorial board	UNESCO HQ	$100.000	1	$100.000
	Editing, publication and distribution of the report	UNESCO HQ	$200.000	1	$200.000
(2015)	Global conference on STIP	UNESCO HQ	$300.000	1	$300.000
	Side events in key universities/research inst.	UNESCO Reg. off.	$50.000	5	$250.000
	Financial Assistant				$40.000
	Subtotal				$890.000
	Overhead (13%)				$901.550
Grand total					$7.836.550

"Budget" by type of action and year
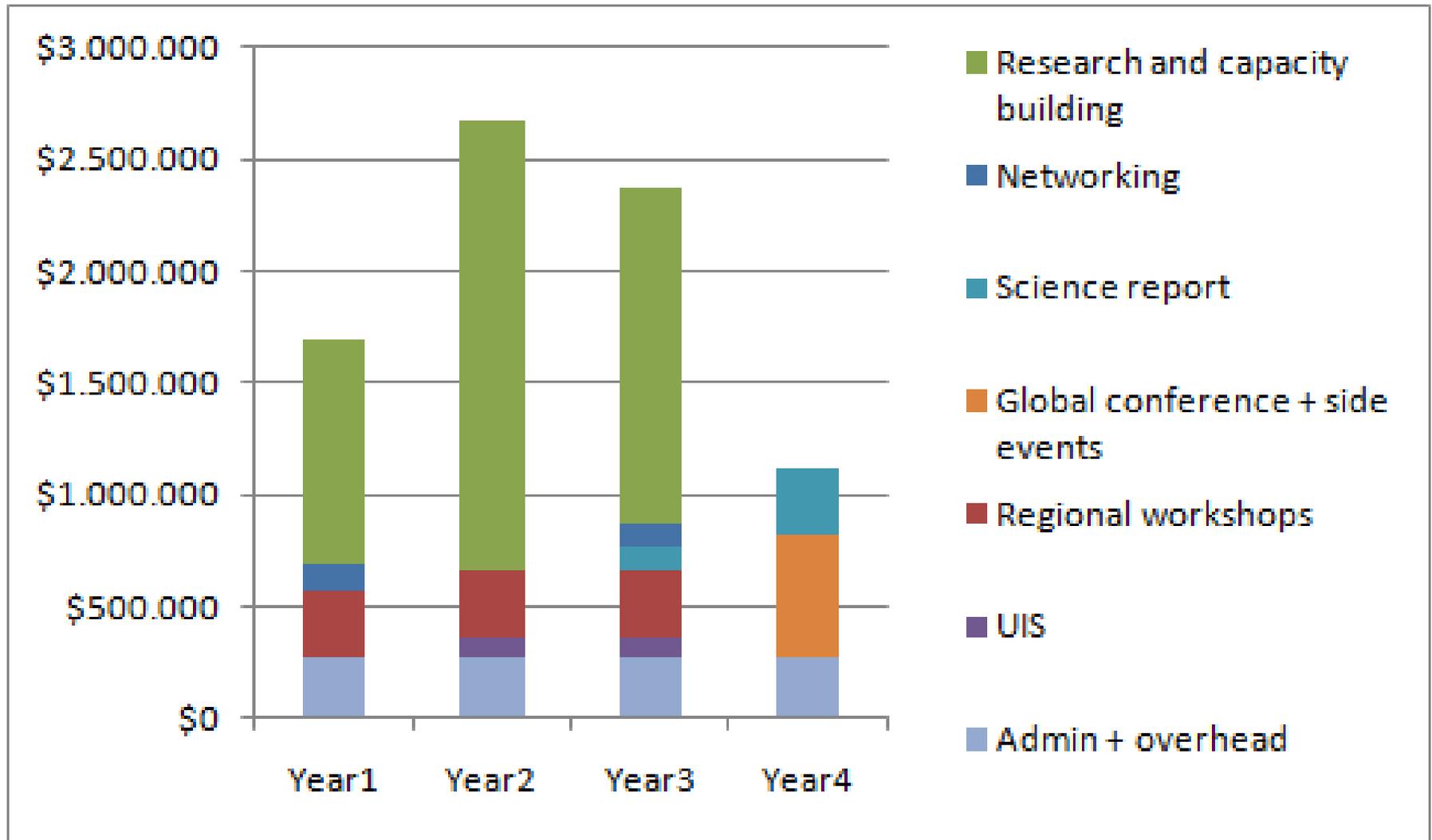
"Budget" by type of region

Region	Region	Amount (US$)	Percentage	Regional funds
	Africa	2.141.000	27,3%	
EUR	Arab States	1.054.000	13,4%	300.000
LAC	Europe & North Am	600.000	7,7%	600.000
A&P	Latin Am. & Car.	837.000	10,7%	900.000
AFR	Asia & Pacific	1.182.000	15,1%	1.850.000
ARAB	WORLD	2.022.550	25,8%	850.000
Total	**Grand total**	**7.836.550**	**100,0%**	4.500.000

Summarizing:

- Between 2012-2015, the programme will cover at least 100 countries;
- Effort will be adapted to regional differences in capacities, coverage, and number of Member States;
- Africa, in this scenario, is the largest beneficiary.

Next steps

- Listen to comments and suggestions during this roundtable and possible afterwards
- Produce a Science Policy Series issue on the workshop
- Rewrite the concept and transform it in a project proposal (proposals)
- If possible, start with elements of STIGAP in 2012.

Merci

"There is a way of doing it beter – find it"

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