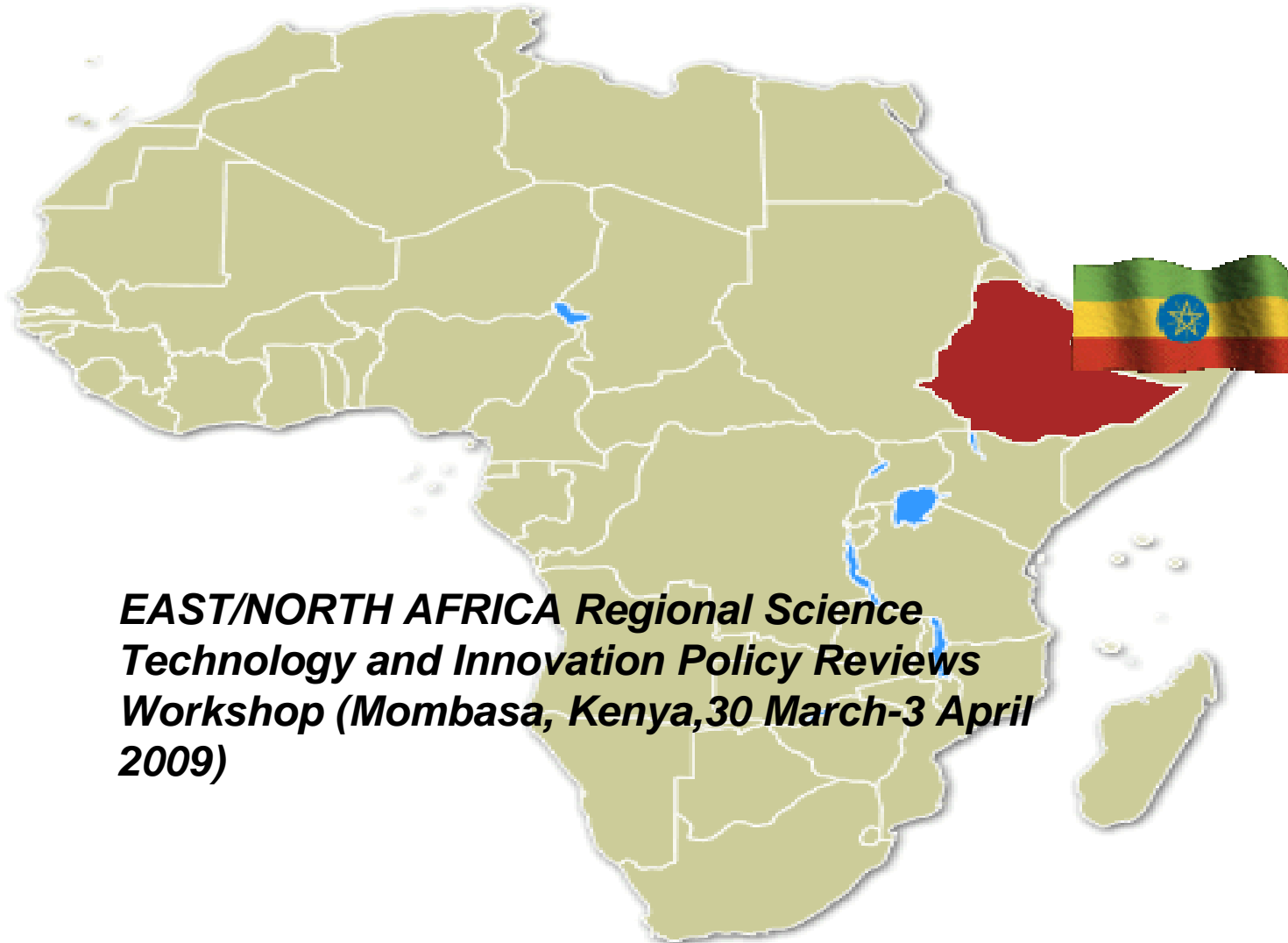




United Nations Educational,
Scientific and Cultural Organization



***EAST/NORTH AFRICA Regional Science
Technology and Innovation Policy Reviews
Workshop (Mombasa, Kenya, 30 March-3 April
2009)***

OUTLINE

- Process of the survey
- HR profile by level of Educ. on STS Center
- HR by field of Sc.on STS
- Expenditure of STS Centers
- HR of Higher Learning Institution(HLI)
- R&D personnel by Head Count (HC) in HLI
- Full Time Equivalent (FTE) in HLI
- Financial Resource of HLI
- HR of research Institute and Centers by level of Education.
- Researchers in R&D institute by field of Sciences
- Financial Resources profile of Research institute
- *Government R&D expenditure/GDP*
- *Challenges*
- *The way forward*

Process of the Survey for Year 2007

- **Project Proposal Prepared**
- Questionnaire **STS** and **R&D** and Guideline Updated
 - Birr 216,106.80 approved
(**USD 21,610.68**)
 - Remaining balance as of July 1st Birr 74,081.94
(**USD 7,408.19**)
- **11 Graduates Plus one Secretary Contracted**
- R&D institutions and STS Identified
 - **9** Higher learning
 - **55** Research Institutes & Centers
 - **43** STS Centers
- Routes identified
 - **4 Cars** availed (3 Cars rented, one MoST)
 - **North, South, East West Central**
- Data Collection & Compilation
 - **R&D**
 - **STS**
 - **Higher learning**

Human Resource Profile by Level of Education on STS Centers

	PhD	2 nd Deg	1 st Deg	Tech	Aux	Total
Federal STS Centers	12	178	390	917	1956	3453
Regional STS Centers	-	46	80	172	441	739
Total	12	224	470	1089	2397	4192

Human Resource Profile by Field of Sciences on STS

No	Field of Sciences	2 nd Deg		1 st Deg		Sub total		Total
		M	F	M	F	M	F	
	Natural Science	10	-	9	-	19	-	
	Engineering Technology	-	-	3	-	3	-	
	Medical Science	3	-	16	1	19	1	
	Agriculture Science	31	2	43	6	74	8	
	Social Science			2		2		
	Humanities							
	Total	44	2	73	7	117	9	

Expenditure of STS Centers

	Government	Foreign Grant	Own Fund	Total
Federal STS Centers	448,875,653.15	8,524,651.45	21,807,500.00	479,207,804.6
Regional STS Centers	18,350,899.00	3,116,888.51	-	21,467,787.51
Total	467,226,552.15	11,641,539.96	21,807,500.00	500,675,592.11

R&D personnel by head count (HC) in Higher learning Institutions

Summary of Human Resources of Higher Learning Institution

No	University	PhD		2 nd degree		1 st degree		Tech		Auxiliary		Total
		M	F	M	F	M	F	M	F	M	F	
2	Universities	298	8	385	29	100	10	127	17	71	78	1,123
3	Colleges	14	-	14	-	3	3	-	-	-	1	35
Total		312	8	399	29	103	13	127	17	71	79	1,158

**Personnel
IN Full Time
Equivalent in Higher
learning institutions
(FTE)**

Summary of Human Resources of Higher Learning Institution/FTE/

No	Higher Learning Institutes	PhD		2 nd degree		1 st degree		Technician		Auxiliary		Total
		M	F	M	F	M	F	M	F	M	F	
1	Universities	74.5	2.75	107.5	9.5	25.75	3.25	34.75	5.75	18.5	23.25	306
2	Colleges	3.5	-	4.25	-	0.75	0.75	-	-	-	0.25	9.5
Total		78	3	112	10	27	4	35	6	19	24	316

Summary of Human Resources by Field of Sciences of Higher Learning Institution

Summary of Human Resources by Field of Sciences of Higher Learning Institution

Field of Sciences	PhD		2 nd Deg		1 st Deg		Sub total		Total
	M	F	M	F	M	F	M	F	
Natural Science	76	3	49	3	5	-	130	6	136
Engineering & Technology	73	2	45	1	13	-	131	3	134
Medical Science	15	1	84	8	30	4	129	13	142
Agricultural Science	101	-	110	10	41	3	252	13	265
Social Science	39	2	84	6	14	6	137	14	151
Humanities	8	0	27	1	0	0	35	1	36
Others/not Specified	-	-	-	-	-	-	-	-	-
Total	312	8	399	29	103	13	814	50	864

Financial Resources of Higher Learning Institutes

Summary of Financial Resources of Higher Learning Institution

NO	College s/ Univers ities	Government	Foreign grant	Foreign loan	Own fund	Others	Total
1	Unive rsities	10,479,702.56	32,497,37 4.17	-	125,00 0.00	148,04 2.96	43,250, 119.69
2	Colleg es	2,302,048.13	631,400.0 0	-	-	-	2,933,4 48.13
Total		12,781,750.69	33,128,77 4.17	-	125,00 0.00	148,04 2.96	46,183, 567.82

***Human Resource of Research
Institutes & Centers by level of
Education***

Summary of Human Resource Profile by Level of Education in Research institutes

No	Research Institute	PhD		2 nd Deg		1 st Deg		Techn	Auxila ry	Total
		M	F	M	F	M	F			
1	EIAR	91	4	187	31	215	13	298	1527	2369
2	ARARI	10	-	63	5	134	9	137	537	895
3	ORARI	14	-	62	2	117	1	180	715	1091
4	TARI	5	-	27	-	29	5	37	35	138
5	SRARI	11	-	24	-	48	4	83	233	403
6	SORPARI	-	-	11	-	34	-	17	45	107
7	MoARD	8	-	22	1	10	2	41	96	180
8	GARI/C	1	-	3	1	13	1	13	5	37
9	Inst. In & around A.A	21	3	56	14	37	13	131	222	497
Total		161	7	455	54	637	47	937	3415	5717

Researchers in R & D Institutes by Field of Sciences

Summary of Human Resource profile by field of studies

Field of Science	PhD		2 nd Deg		1 st Deg		Sub Total		Total
	M	F	M	F	M	F	M	F	
Natural Science	21	1	63	10	43	7	127	18	145
Engineering & Technology	2	-	7	-	13	1	22	1	23
Medical Science	4	2	15	5	8	4	27	11	38
Agricultural Science	132	4	358	38	560	34	1050	76	1126
Social Science	2	-	12	1	13	1	27	2	29
Humanities	-	-	-	-	-	-	-	-	-
Others/not specified	-	-	-	-	-	-	-	-	-
Total	161	7	455	54	637	47	1253	108	1361

Financial Resources Profile of Research Institutes & Centers

Summary of R&D Institute Budget Profile

Research Institute	Government	Foreign Grant	Foreign loan	Own Fund	Others	Total
EIAR	64,434,592.58	8,698,286.00	1,295,506.00	-	808,490.00	75,236,874.58
ARARI	23,426,272.93	6,178,633.47	-	-	-	29,604,820.22
ORARI	27,492,388.14	702,295.00	-	-	29,484.00	28,224,167.36
TARI	4,398,923.00	98,000.00	-	-	-	4,496,923.00
SRARI	16,773,519.00	-	-	500,000.00	-	17,273,519.00
SORAPARI	24,506,709.00	6,709.00	-	-	-	24,513,418.00
GARI	3,794,380	-	-	-	468,799.41	4,263,179.41
Ministry of A&R Dev't	4,877,154.02	11,789,913.83	248,233.46	-	-	16,915,300.00
IN & AROUND A.A	30,003,800.00	19,361,811.00	-	70,000.00	-	49,426,611.00
Toal	199,707,737.00	47,009,397.00	1,543,739.00	570,000.00	1,306,773.00	249,954,898.00

Summary of Human Resources of R & D Organization

No	R & D Institutions	PhD		2 nd degree		1 st degree		Technician	Auxiliary	Total
		M	F	M	F	M	F			
2	R & D org.	161	7	455	54	637	47	937	3415	5717
3	Higher Learning	78	3	112	10	27	4	41	43	316
Total		236	10	567	64	664	51	978	3458	6023
Percentage of researchers by sex		96.2	3.8	89.9	10.1	92.9	7.1			

Summary of Financial Resources of R & D Organization

NO	R & D Institutions	Government	Foreign grant	Foreign loan	Own fund	Others	Total
1	R & D org.	199,707,738.89	46,826,648.69	1,579,739.46	570,000.00	1,306,773.00	249,990,900.04
2	Higher Learning	12,781,750.69	33,128,774.17	-	125,000.00	148,042.96	46,183,567.82
Total		212,489,489.58	79,955,422.86	1,579,739.46	695,000.00	1,454,815.96	296,174,467.86

Government R&D Expenditure/GDP

- ***Government R&D expenditure/GDP = 0.2%***
- ***No. of researchers/million = 20***

Challenges

- Unavailability of well organized & documented information
- Unavailability of responsible focal unit in some Universities
- Lack of willingness
- Inconvenient time to undertake the survey
- Response to the questionnaire at universities
- Shortage of time to undertake the survey
- The questionnaire design is not simple to understand & to give response for respondents easily

The Way forward

- Identify the number of researchers by their field of specialization
- Profile of lab equipment
- Inclusion of Development institutions, Private sector, NGOs & Business Enterprise
- Regular budget allocation for the Survey
- Employing professionals on permanent basis
- Updating the information regularly
- Profile of S&T activities



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THANK YOU