

**USE OF FUNDS PROVIDED THROUGH
THE ICSU GRANTS PROGRAMME IN 2014**

ITEMIZED FINANCIAL STATEMENT

(Deadline for completion: 30 June 2015)

Name of ICSU body: International Mathematical Union

Title of activity: East African Capacity and Network Project (CANP 4)

I.	Grant received from ICSU	€30,000
II.	Grants from other sources	
	Indicate name(s) of co-funder(s) and amount	
	IMU internal support	€25,000
	UNESCO	€ 2,692.8
	ICMI:	€6,868.21
	Was the ICSU grant important in obtaining additional funding	x <input type="checkbox"/> Yes <input type="checkbox"/> No
	Total funds for the activity (I+II)	€ 64,561.01

Breakdown of expenditure of grant	Total Euros €	ICSU Euros €
Research	0	0
Travel/Accommodation for Meetings	38,624	30.000
Training/teaching	14,704	0
Planning/coordination	5,647	0
Publications/documentation *1	0	0
Other (specify)	5587	0

Details

S/N	Description	EURO
1	Research List all items and corresponding costs:	0
2	Travel/Accommodation/ living expenses	
	Include names and professional address of person(s) having benefited from ICSU support.	
2.1	By Air (34 Participants)	15,025
2.2	By Bus (7 Participants)	668
2.3	Conference Dinner	1,856
2.4	TADA (transport allowance/dinner allowance for 49 participants)	8,978
2.5	Food;	
	1st week	5,954
	2nd week	6,143
	Total cost 2	38,624
3	Training/ Teaching	
3.1	Accommodation IPC Hotel Sapphire (72\$ a night, 15 people)	7,991
3.2	IPC costs flights	6,713
	Total cost 3	14,704
4	Planning / Coordination	
	List all items and corresponding costs	
4.1	Administrative Costs Aga Khan University	1,350
4.2	Transport expense (buses)	2,590
4.3	Pre-planning meeting	1,516
4.4	Various Expenses (Food, Stationers and Postage)	190
	Total cost 4	5,646
5.1	Other cost: excursion	587
5.2	Other Cost: follow up 2015	5,000
	Total Cost Activity	64,561

*1: We are currently in contact with Springer about the publication of the national reports of the participating countries.

Date: April 21, 2015

Signature: _



Designation: Professor and Head Research Aga Khan University Institute for Educational Development East Africa, Local Program Chair CANP 4

**ACTIVITY REPORTING FORM
FOR ICSU GRANTS PROGRAMME 2014**

(Deadline for completion: 30 June 2015)

Name of ICSU body: International Mathematical Union

Title of activity: East African Capacity and Network Project (CANP 4)

An activity report must be provided using the format described below for each project that received a Grant. It should be stated how and whether the project objectives were achieved, how the partners benefited from the work, how ICSU's goals were served, and a summary of any follow-on activities that were seeded by this project. The maximum length of the report should be **4-pages**.

After consideration by CSPR, the intention is that this activity report will be made publicly available on the ICSU web site.

- Which priority area(s) from the ICSU Strategic Plan did this project address?

The CANP4 activity was strongly aligned with the ICSU Strategic Plan. It was directly addressing the issue of 'Developing a global scientific community on the basis of equity and non discrimination' by providing strong, high quality and relevant capacity development to mathematics educators in the East Africa region including Tanzania, Kenya, Uganda and Rwanda

- Was an ICSU Regional Office involved, if so, which one:

Yes, the ICSU regional office from South Africa was involved. Daniel Nyanganyura attended the event and also made a presentation.

1. Statement of objectives (1/3 page)

- Including brief description of activity (city, venue, date and the number of participants / beneficiaries as applicable)

Aim: The CANP 4 aimed to build capacity in mathematics education and create a sustainable regional network with a common goal of improving mathematics education

Brief Description of Activities: The programme of the CANP4 included a rich array of lectures, workshops, panel discussions all with a special emphasis on improving mathematics education in the East Africa region. For example, salient topics of interest within mathematics including ICT integration, gender, language, culture and mathematics for Planet Earth will take place. For a wider dissemination and communication of the message there were media engagement sessions and public lectures for the entire community. A series of events were held following the programme to create a regional network and to sustain the progress made during the CANP4.

Venue/ City: Aga Khan University Institute for Educational Development East Africa

Dar-es Salaam Tanzania

Date: 1-12 September 2014

Number Of Participants: There were 80 participants including mathematics teachers and teacher educators from remote locations in the East Africa Region. Participants included a strong representation of women. Effort was also made to include participants who could sustain the effort and work for CANP4 beyond the life of the project. For example this included representatives of CEMASTEAM (Strengthening Science Mathematics in Secondary Education (SMASSE) a significant initiative launched by the Ministry of Education Kenya in collaboration with the Japan International Cooperation Agency was launched in 1998 and further extended), SESEMAT (Secondary Science Education and Mathematics Teachers Project initiated by the Ministry of Education and Sports Uganda in collaboration with the Japan International Cooperation Agency since 2004) and the Aga Khan University Institute for Educational Development also has a strong group SIGMAS (Special Interest Group in Mathematics and Science Education) that leads capacity development in science and mathematics in East Africa.

2. Major outcome / achievements (1-2 pages) (Including a summary statement (1-2 sentences) of major outcome)

Major outcome (s) of the CANP4 is:

- Establishment of a 'Mathematics Education Research Network East Africa'. This network offers potential sustainability to the CANP4 initiative (Resolution attached)
- A book of high quality for mathematics educators, researchers and educators in sub-Saharan Africa.

The CANP4 was a highly successful event and its significant achievements include:

- Bringing together key stakeholders in mathematics education in the region.
- Establishing a community of mathematicians and mathematics educators that have sustained beyond the CANP4
- Development of comparative perspectives on the status of mathematics education in Kenya, Tanzania, Rwanda and Uganda.
- Offering high quality workshops and capacity development sessions for mathematics teachers.
- Bringing together regional and international experts to lead the sessions. The international speakers were as follows
 - Prof. Jill Adler - University of Witwatersrand, South Africa
 - Prof. Ferdinando Arzarello - Università di Torino Via Carlo Alberto Italy President ICMI
 - Prof. Pierre Arnoux - University of Aix-Marseille (département de Mathématiques and Institut de Mathématiques de Luminy) France
 - Dr. Samuel Bengmark - Department of Mathematical Sciences. Chalmers University of Technology Gothenburg Sweden
 - Prof. Edward Lungu – University of Botswana
 - Prof. Christiane Rousseau - Department of Mathematics and Statistics University of Montreal, Canada

REGIONAL SPEAKERS

- Prof. Anjum Halai – Aga Khan University Institute for Educational Development East Africa
- Peter Kajoro- Aga Khan University Institute for Educational Development East Africa
- Dr. Simon Karuku-Kenya
- Patrick Kogolla- Centre for Science Mathematics Technology Education Africa (CEMASTEAM) Kenya
- Masamba Masur- Secondary Science and Mathematics Teachers' (SESEMAT) Program Uganda
- Dr. Alphonse Uworwabayeho- Rwanda College of Education (formerly Kigali Institute of Education), Rwanda
- Silas Mirau – Nelson Mandela African Institute of Science & Technology, Arusha Tanzania
- Mussa Muhamed- Aga Khan University Institute for Educational Development East Africa
- Nancy Nui- Centre for Science Mathematics Technology Education Africa (CEMASTEAM) Kenya
- Veronica Sarungi- Aga Khan University Institute for Educational Development East Africa
- Dr. Geoff Tennant- Aga Khan University Institute for Educational Development East Africa

3. Value of collaborative partnerships and benefits to the scientific community and other stakeholders (1/3 page)

In this dynamic, global and technological world of the 21st century, mathematics, mathematical thinking and mathematical literacy is crucial for success in the digital society and also in a range of disciplines such as medicine, social sciences, environment studies, climate, business and finance. Teaching and learning mathematics must reflect and be responsive to the changing needs of the society in this dynamic and digital age.

The East Africa region (Kenya, Tanzania, Uganda, Rwanda) has made tremendous progress in providing access to basic education. For example Tanzania has met the target of Education for All by 2015 under the UN millennium development goals. However, the quality of the education is sadly lacking and this is especially true for mathematics. A report by think tank UWEZO included a regional study on student achievement in numeracy and literacy. It was stated that only 3 in 10 pupils studying in the 3rd grade can add, subtract and multiply and only 1 in 10 pupils studying in 3rd grade can read a basic story (UWEZO 2012 for details: <http://www.uwezo.net>).

Relatively little is known about the quality of *secondary mathematics education* in the East Africa region from the perspective of: a) Mathematics curriculum and syllabus in public secondary schools; b) Teaching & learning in public secondary mathematics classrooms; c) Achievement in mathematics; and d) Mathematics teacher education.

A strong value of the collaboration results in outcomes and achievements that is responding to a great need in the area of education quality in the region. A significant effect of an initiative like CANP4 is that it brings together the hitherto fragmented community of mathematicians and mathematics educators in the region.

The scientific community is keen to ensure that the fruits of the knowledge society are shared equally within the African continent especially in the less developed contexts of the sub-Saharan Africa. Towards this end there are regional networks of mathematicians and mathematics educators in South Africa and Francophone West Africa. However, East Africa was not connected through a network focussed on improving mathematics education in the region. This partnership is aimed at filling this gap, and to bring together key players in the field (e.g. Strengthening Mathematics and Science Secondary Education (SMASSE), Mathematics Association of Tanzania, AIMS).

Finally, the report arising from the CANP4 is a comprehensive book establishing the status of mathematics education in the region which will be published by Springer- ICMI. It raises significant questions and issues for further research by the scientific community. The book presents, and discusses critically, the content, process and outcomes of secondary mathematics education in the region; provide a comparative perspective of the issues in mathematics education in the four countries, and raises questions for policy and practice. These questions are related to the quality of mathematics teaching and learning and also significantly for the policy initiatives to *harmonize education provision* in the East African Community.

4. Follow up activities and future implications (1/2 page)

- On the Pi-Day the members of the CANP4 community worked with regional partners to lead workshops for school children and teachers. Partners included mathematics educators and mathematicians including those from AIMS-Tanzania. The mathematics activities aimed to promote a broader, more enjoyable vision of mathematics (a brief write up attached).
- A follow –up meeting of the local organizing committee (now the working group on the ‘Mathematics Education Research Network East Africa’) is in planning. Subject to funding a small group (6-7) members will convene in Rwanda to further consolidate the work in progress in the network
- The network anticipates participating in the AFRICME 2015 if one is scheduled
- In May 2015, Veronica Sarungi, a member of the CANP4 local organizing committee participated in the ICMI Study 23 meeting in Macao. She is a female mathematics educator from Tanzania and her participation was funded by the Aga Khan University and the University of Macao/ China where the ICMI Study 23 conference is hosted (for details see <http://www.mathunion.org/ICMI/>)
- Members of the CANP4 community will participate in the International Congress Mathematics Education (ICME) in Germany in July 2016 (for details see <http://icme13.org>). A presentation will be made on the achievement and implication of CANP4 and the network so created.
- The CANP4 community has voted unanimously to conduct the AFRICME 2017 in Tanzania and for it to be hosted by The Aga Khan University Institute for Educational Development East Africa. Subject to funding and availability of resources, the Aga Khan University has agreed to host the AFRICME 2017.

The list of activities and events noted above are significant for a number of reasons. First, they demonstrate the motivation of the people on the ground to sustain the work of CANP4 in building capacity in mathematics teaching. Second, the activities demonstrate a strategic range in outreach and networking as they go from the local to regional and then international level. If sustained through regular mentorship from senior mathematics education, mathematicians and adequate resourcing, the Mathematics Education Research Network East Africa' could become a thriving node for mathematicians and mathematics educators in the East Africa Region.

Date: April 21, 2015

Signature: _



Designation: Professor and Head Research Aga Khan University Institute for Educational Development East Africa, Local Program Chair CANP 4