Committee for Developing Countries of the European Mathematical Society

Report for the meeting of the Executive Council of the EMS in June 2014

Michel Waldschmidt, May 28, 2014

The Committee for Developing Countries of the European Mathematical Society has 11 members (plus the EC responsible member) and 11 associate members. We meet once a year, for a full working day; we discuss the various activities which took place the previous year, the ones we are planing for the next year; this annual meeting also offers an opportunity for each of us to give a report on his or her activities related with mathematics in developing countries. Some of these reports are available on our website

http://euro-math-soc.eu/EMS-CDC/reports.php

Besides, the afternoon before this meeting, we have a round table on a topic related with the objectives of our committee. This year in Berlin the topic of the round table was « How to coordinate efforts for mathematics in developing countries ». These annual meetings have a strong positive impact on the coordination of our diverse activities.

Here are the **Terms of reference** of our committee:

The EMS Committee for Developing Countries (CDC) will assist developing countries (DCs) at the following levels:

- Mathematics curriculum development for universities.
- Cooperation with local staff in conducting MSc and PhD programs; holding special courses in various areas of mathematics in which there is no local expertise.
- Helping to build up libraries through donations from colleagues in developed countries; supply mathematical literature upon request by institutions and/or individual researchers in DCs; negotiate with publishers on special book rates for DCs.
- Helping to build up regional centres and networks of excellence: these are centres
 directly or connected in part to universities, and which provide expertise in areas and
 on levels in which regional universities are in need.
- Providing information about where students from DCs (who already have an MSc) can
 do their PhD, and what possibilities for PhD grants exist. At the same time, in order to
 avoid a brain drain, as much as possible, CDC will support efforts to build up PhD
 programmes in DCs according to international standards (regional centres of
 excellence could serve this purpose).
- Mobilising funds for junior and senior researchers to attend conferences in developed countries, and also help (both on an academic and financial level) organising DCs conferences in DCs.

At the beginning, the main activity of this committee was related with the third point, namely *helping to build up libraries*. Our book donation scheme has been very active, it is still going on, we have moved tens of tonnes of books and journals, from Europe, USA and Canada, to Africa, South East Asia, and South and Central America. But our focus has been somewhat shifted. Now we put the emphasis with helping institutes in DCs to improve access to online resources. On the one hand, one member of the committee, <u>Anders Wandahl</u>, has run several <u>workshops on electronic access</u>. On the other hand, we help libraries to have access to databases. In particular we have an **Agreement with Zentralblatt**: free access is

granted for a first period of two years starting with the date of the registration of the first customer from the corresponding country. This is a donation of the EMS, as a result of the collaboration of the EMS as member of the Coordinating Committee of ZbMATH. We also help libraries in DC to have access to MathScinet.

In order to achieve the goal assigned to us of helping to build up regional centres and networks of excellence, we started the scheme "Emerging Regional Centres of Excellence" (ERCE):

http://euro-math-soc.eu/EMS-CDC/erce.php

Our first call for interest went out in <u>2010</u>. The first label ERCE has been attributed in 2011 to the <u>Abdus Salam School of Mathematical Sciences</u> in Lahore, Pakistan. In 2013, the ERCE label was awarded to two more institutions - Centro de Investigación en Matemáticas, Mexico (<u>CIMAT</u>) and the Vietnam Institute for Advanced Studies in Mathematics (<u>VIASM</u>). In 2014, two new institutions received the ERCE label:

- INSPEM : Institute For Mathematical Research (Malaysia); http://www.inspem.upm.edu.my/
- IASBS: Institute for Advanced Studies in Basic Sciences, Zanjan, (Iran); http://iasbs.ac.ir/math/en

During a meeting that we organized in June 2013 in Paris, the three first institutes which received the ERCE label decided to cooperate and to build a Network of International Mathematics Centres (NIM).

We plan to expand this ERCE program. A new call for interest will go out within a few months. So far, we did not succeed to include any institute from Africa in this program - this is one of our concerns and we are considering various ways to correct this weakness of the ongoing scheme.

The ERCE scheme is one of our main tools for achieving our other duties related with MSc and PhD programs and helping students from DC's to pursue their studies.

Our committee has limited funds, we use them only for supporting young mathematicians from DCs, and mainly in a perspective of South-South cooperation. We supported the participation of young students from developing countries to programs like *Summer Programme in Mathematics* (SPIM) in the Harish Chandra Research Institute (HRI) of Allahabad (India). One of our main achievements has been to provide a financial support to a young student from Indonesia who is preparing a PhD in ASSMS Lahore. We supported his studies for the first two years (September 2012-September 2014). We hope that other funds will be available for him to pursue up to his PhD. In April 2014, we decided to support the travel and stay expenses of four students (one from Nepal and three from Cambodia) who will go to Kuala Lumpur to pursue their studies in INSPEM. After a few months in Malaysia, they should receive a local scholarship in order to support the rest of their studies there. The cost of such programs is incredibly low, the consequences on the long range should be tremendous; we wish to expand such actions and to support the studies in ERCE labelled institutes of a larger number of young students from neighboring countries.

We will participate to the program "Mathematics in Emerging Nations: Achievements and Opportunities" (MENAO) which is going to take place on Tuesday, August 12, 2014 just before the ICM2014. We wish that this one day event will give us opportunities to get more support for achieving our goals - in particular we need to receive more support, our duty of

mobilising funds has not yet been achieved in a satisfactory way.

We work alongside a number of organisations, including the International Mathematical Union (IMU), The Abdus Salam International Center for Theoretical Physics (ICTP), the International Science Program (ISP) at Uppsala University, the Centre International de Mathématiques Pures et appliquées (CIMPA), The London Mathematical Society (LMS), the Swiss Mathematical Society, ZentralblattMATH, The Norwegian Programme for Development, Research and Education (NUFU), e-Math for Africa, Bordeauxthèque, the International Council for Industrial and Applied Mathematics (ICIAM). Further sponsors include Les Amis d'Arthur Besse, the reviewers from ZbMATH and Donations to EMS.

Looking at the terms of references, we fulfill most of our duties, some of them are our main tasks as a committee, the others are done by members and associate members on an individual basis. We probably need to put more efforts in our contribution to helping MSc and PhD programs in DCs, in cooperation with the organisations and institutions which are already involved in such activities.

The <u>website of our committee</u> provides more information on our activities; in particular the home page

http://euro-math-soc.eu/EMS-CDC/index.php displays the latest news from the EMS-CDC.