



**COORDINATING COMMITTEE FOR GEOSCIENCE PROGRAMMES
IN EAST AND SOUTHEAST ASIA (CCOP)**

52nd CCOP Annual Session
31 October - 3 November 2016
Bangkok, Thailand

Cooperating Country Report of FINLAND

Submitted by

**PHILIPP SCHMIDT-THOMÉ, JAANA JARVA, KRISTIINA
NUOTTIMÄKI (Vietnam)
ESKO KORKIAKOSKI (Myanmar and Lao PDR)**

Geological Survey of Finland (GTK)

(For Agenda Item 5)



**COORDINATING COMMITTEE FOR GEOSCIENCE PROGRAMMES
IN EAST AND SOUTHEAST ASIA (CCOP)**

CCOP Building, 75/10 Rama VI Road, Phayathai, Ratchathewi, Bangkok 10400, Thailand

Tel: +66 (0) 2644 5468, Fax: +66 (0) 2644 5429, E-mail: ccopts@ccop.or.th, Website: www.ccop.or.th

ANNUAL COOPERATING COUNTRY REPORT

Country/Organization:	Finland	Period:	30 June 2015 – 31 October 2016
------------------------------	----------------	----------------	---------------------------------------

1. Summary

During the reporting period the Geological Survey of Finland (GTK) has been implementing the following projects or activities in the CCOP Region:

1. Sustainable development of mineral resources in Myanmar
2. Climate change adaptation project in Vietnam
3. WB funded geological mapping project in Lao PDR

2. Review of current technical activities and geoscience programmes in the CCOP Region (Multilateral or Bilateral)

2.1 Sustainable development of mineral resources in Myanmar (SUSMIN)

The “Sustainable development of mineral resources in Myanmar” (SUSMIN project) started in March 2014, the local counterparts being the Department of Geological Survey and Mineral Exploration (DGSE), and the Department of Mines (DoM), both from the new Ministry of Natural Resources and Environmental Conservation (MOFAC) into which the earlier Ministry of Mines was integrated. The project is financed by the Ministry for Foreign Affairs of Finland (MFA) the total budget being about USD 800 000. It started in April 2014 and with extension will continue till the end of 2016.

The Memorandum of Understanding (MoU) between the Ministry of Mines, Department of Geological Survey and Mineral Exploration and Department of Mines (DGSE) on one side and GTK on the other was officially signed in March 2014. The three areas of the project are the following:

- 1) **ສິ່ງ 1** **ສູ່ງ 1** **ສູ່ງ 1** **ສູ່ງ 1** **ສູ່ງ 1**
- 2) **GIS aided geological mapping process**
- 3) **Promotion of mineral potential of Myanmar**

The activities in area 1 focus on capacity building within the geo-sector with the main emphases on GIS training, digital data production/compilation and information management infrastructure development. As a result, a new GIS office including five computers with ArcGIS software has been established, and nine selected staff members have had an intense and tailored GIS training. In addition to the GIS training and general institutional capacity building, the main aim of the project is to develop a digital Myanmar GeoDataBase (MMGEODB), into which all available and future geodata will be stored into geographically uniform and easy-to-use format to support the fact-based decision making.

Area 2 on GIS aided geological mapping included practical training on how to do digital geological mapping, store the data and add into the MMGEODB. The field teams have also visited several mines getting an understanding of the mine mapping and ore enrichment processes. The geologists participating in the field training were the same as those in GIS training.

One of the important goals of the project is to modernize the local geological survey and develop its function as the national Geoinformation Centre where all existing and future geodata is collected, stored and used for fact-based decision making and eventually used for Promotion of mineral potential of Myanmar (area 3). As part of the promotion, GTK experts have visited several mining meetings together with the Myanmar delegation giving both poster and oral presentations.

As part of the training program, ten GIS trainees from MoM had a one month study tour to Finland in June 2015, complemented with a four member delegation representing the Myanmar private mining sector. Participants got familiar with the GTK functions and activities involving also aspects related to the modern mining industry and its technologies through company and mine visits.

Myanmar is becoming an important target country for Finnish development aid, and a new governmental office has been established in Yangon. To continue collaboration, efforts have been made to locate new financial resources. The broader aim of this is to link future collaboration towards more commercial directions, following the new development policy of Finland.

2.2 Developing and implementing climate change adaptation measures at local level in Vietnam – VIETADAPT II

The successful work of the VIETADAPT project has continued in the second phase 2015 – 2016 under Institutional Cooperation Instrument programme funded by the Ministry for Foreign Affairs of Finland. The aim is to develop and implement concrete climate change adaptation measures in two districts, Hau Loc (Thanh Hoa Province) and Tan Thanh (Ba Ria Vung Tau Province). In 2015, several missions and field work to study surface water and groundwater resources and water management within two case study areas were conducted. The cooperation with local stakeholders continued fruitfully. Two rounds of stakeholder workshops to design first local adaptation measures for sustainable water management in changing climatic and socio-economic conditions were held in October 2015 and in May 2016.

Young Vietnamese experts have received training in English language and a variety of software and risk assessment and groundwater modeling applications. Also local stakeholders have been involved in risk assessment and groundwater modeling training. In June 2016, four young Vietnamese scientists visited Finland and received training in several topics and techniques of applying water management and climate change adaptation in practice, including environmental management, artificial groundwater recharge and urban flash flood prone area management.

In June 2015, October 2015 and in March 2016, the VIETADAPT II project conducted three joint workshops on geohazards, water management and climate change in close cooperation with CCOP.

The first workshop was held together with the Department of Mineral Resources of Thailand (DMR) in Bangkok, Thailand. There were 58 participants from Finland and CCOP member countries (Indonesia, Thailand, Vietnam). This workshop focused on an interactive exchange of ideas, insights by CCOP member countries on aspects related to geohazards and climate changes and discussion on extension possibilities in the other CCOP member countries.

The second workshop was held in cooperation with the International Union of Geosciences' Geo-environment working group, IUGS-GEM in Da Nang, Vietnam. Approximately 20 participants attended the workshop, paying attention to presentations from experts from Vietnam, Finland, India, Japan, USA and Namibia. The exchange of methodologies, technologies and best practice examples on how to conduct environmental research and implement natural hazard mitigation and climate change adaptation in practice was very fruitful.

The third workshop was conducted in connection to the 66th CCOP Steering Committee meeting in Siem Reap, Cambodia, with local support from the General Department of Mineral Resources of Cambodia (GDMR). This workshop presented the results of ongoing projects assessing risks to natural and agricultural resources. The applied modelling and assessments and methodologies triggered very constructive discussions. The workshop identified possibilities for geosciences to support South and South-East Asian societies in safeguarding water and food resources. We hope to continue the fruitful discussion in the future and intend to develop joint projects.

2.3 Activities in Lao PDR

After completing two projects in Lao PDR, the FMA funded Lao-Finnish Minerals Sector Institutional Project "LAOFIMIN" (2009-2011) and its continuation, the Mining Cadastre System project (2012-2013) financed with the World Bank (WB), GTK is now (since April 2016) implementing a new WB funded geological mapping project "**Consultant services for acquisition and development of geodata infrastructure (geological mapping) within selected areas in Lao PDR**". GTK is leading this project the other partners being International Geoscience Services Ltd (IGS) from UK and Canadian Paterson, Grant & Watson Ltd (PGW). The geological mapping on the 2100 sq. km study area is preceded by airborne geophysical survey carried out by Sander Geophysics Ltd as a sub-contractor.

Objective of the project is to develop a targeted geological interpretation of the study area by integrating new airborne geophysical, geological mapping data and any other geodata to update the existing geodatabase in ArcGIS format. The project will continue till the end of 2017 and includes about 30 working months (excluding the airborne survey). It is conducted in collaboration with the Lao Ministry of Energy and Mines (MEM).

3. Proposed future activities and assistance to CCOP in support of current and future activities

The VIETADAPT project proposes to hold a workshop on “Geohazards and Climate Change” during the CCOP annual session 2016 in Bangkok.

GTK would like to invite CCOP countries to start talks on cooperating in future joint activities in the CCOP region.