Mission Report of Kusakabe's visit to IRGM, June 3rd to 26th June, 2014 Minoru Kusakabe

1. Purpose of the visit

Mid-term evaluations by JICA and JST on the SATREPS-NyMo project were unndertaken in October-November 2013 in Cameroon and in February 2014 in Tokyo, respectively.

The JICA's evaluation can be summarized as follows: The project has met up with most of its planned objectives. Judging from their five evaluation criteria, (A) Adequacy was regarded as High, (B) Effectiveness as Low to Middle, (C) Efficiency as Low, (D) Impact as High, and (E) Sustainability as Medium. Based on this evaluation, JICA recommends the followings. (1) Regular internal meetings with all project members including project managers, researchers, technicians, and administrators should share information freely to solve problems, discuss and take decisions, monitor the feed-back, and have frequent consultation on project issues with all members. (2) Communication should be enhanced not only between the representatives of both sides, but also between Japanese and Cameroonian researchers. (3) Ensure proper use and maintenance of supplied equipment in IRGM laboratory. (4) IRGM should take necessary steps to hire the PhD students who are presently pursuing studies in Japan. If this is difficult, IRGM should consider alternative ways to collaborate with them so as to attain the project purposes.

During the 4th JCC meeting held on 13th June 2014, the results of JST's evaluation was presented by JST program officer (Prof. Honkura). The overall evaluation was Adeduced from the rankings of S, A+, A, A-, B and C (with S as the highest) of the criteria. The A- grade is a summation of the following: (F) Achievement of the joint research objectives is High, (G) Contribution to society is still Insufficient, (H) Capacity development requires more extensive training of Cameroonian staff, (I) Research activity is generally High, but communication among respective project groups is insufficient, (J) Management of research fund is insufficient, (K) Participation of young researchers in the project is insufficient, (L) Sustainability of the project may be secured by positive participation of Cameroonian scientists and by preparation of a disaster reduction manual. Post-Ph.D activities of six Cameroonian Ph.D course students now in Japan are definitely required for the sustainability. Based on the evaluation, JST recommends the following. (1) Drastic reformation is required in the leadership of the chief investigator on the Japan side. Ameliorate communication among Japanese team members, among Cameroon team members and inter-communication between both teams. (2) Participation of the Civil Protection Agency (DPC) and of local government officers in prevention management should be secured, (3) Role of Cameroonian Ph.D. students now in Japan needs to be clarified in the project. More training is required for Cameroonian technicians. (4) Equipment donated to Cameroon should be well maintained for sustainable use during and after the project.

MK attended the 4th JCC. Other J-side participants were Prof. Honkura (JST), Ms. Doi (JICA), Prof. Ohba (J-side leader of SATREPS-NyMo), Ms. Egusa (J-Embassy) and Ms. Amanai (JICA-Yaounde). Since the minutes of the JCC will be prepared by IRGM, the summary of the JCC is not included in this Mission Report. However, it is to note that a pre-JCC meeting was held at IRGM to discuss the practicality of JCC agenda.

To implement some of the recommendations and suggestions made by JICA and JST, M. Kusakabe (MK) visited Yaounde from 3rd to 26th of June 2014. The purpose of his visit can be basically divided in to two categories; (1) Improvement of mutual communication within IRGM, and (2) Suggestions for better laboratory management in IRGM.

2. Improvement of mutual communication within IRGM

<u>2-1 Regular seminar</u>

One of the ways to improve mutual communication within IRGM is to organize scientific seminar on a regular basis. MK had proposed such an activity before his visit. The 1st seminar in the Nkolbisson laboratory was organized on 5th June 2014 (Photo 1). There were 3 presentations; (a) MK on a brief introduction of SATREPS as a whole, SATREPS-NyMo, the results of Mid-term Evaluation by JICA, a proposal of laboratory management committee at Nkolbisson, sample storage, recording samples collected, etc., (b) Justin on current problems about the ion chromatographs (separation columns need to be replaced?), (c) Jean-Christel on the lack of space to store bottles and no-functioning of a UPS (for the IC, and (d) Robert on no-functioning of the Milli-Q system due to the lack of proper filters, and high noise from the AAS duct. It was good that Jean-Christel was able to fix the UPS himself.

The 2nd seminar was held on 18th June. Djomou presented recent data from the climate stations at Lakes Nyos and Monoun as a rehearsal for the AOGS 2014 meeting at Sapporo. Djomou's presentation was followed by that of Fantong Wilson who gave a talk on chemical and isotopic study of carbonate precipitates collected from the CVL hot springs. Nnange and Eyong commented that the seminar was good and should be continued in the future. The 3rd seminar was undertaken on 25th June. MK gave a talk

entitled "You can make this laboratory Center of Geochemistry in Africa". He again emphasized the purpose of his visit that internal collaboration, laboratory management and support by IRGM are essential to achieve the slogan "You can make this laboratory Center of Geochemistry in Africa".



Photo 1. Seminar at the Nkolbisson laboratory on 5th June 2014

2-2 Setup of the laboratory management committee (LMC)

Although an intra-organization similar to LMC appears to exist in IRGM, its rules for running the laboratory have been obsolete and it has not been working. Currently voice from the laboratory does not reach the headquarter smoothly, resulting in poor functioning of the laboratory due to frequent power cut, unavailability of internet and the delay of delivery of consumables, for example. For this reason, MK stressed the necessity and importance of setting up a new laboratory management committee (LMC) headed by an active researcher. The LMC is expected to work as a direct link between the lab workers and IRGM headquarter for prompt actions to solve problems in the laboratory.

Disclosure of the laboratory budget including the SATREPS counterpart fund is essential to keep the laboratory working, since the laboratory members can see what can be attained including research proposals and plans for field work and analysis of samples. It is also advisable to disclose the list of materials purchased by the budget and report the list to the next JCC.

A participatory cleanup of the laboratory by researchers technicians was initiated by Fantong Wilson. MK proposed a regular coffee break in the laboratory which aimed at enhancement of mutual communication. The coffee break is held at "Café 100" which was nick-named by Ms. Inaba.

2-3 Curators of the analytical instruments supplied by SATREPS-NyMo

Proper management of any instrument is essential to have its full performance and sustainability. Currently it is not clear who takes care of what. For this reason, MK proposed the following persons as tentative curators of the analytical instruments supplied by SATREPS-NyMo. Those who are listed below should take full responsibility for maintenance of the instruments.

General laboratory management	. Massussi + Wilson
Ion chromatographs	. Wilson + Jean-Christel + Justin
PICARRO	.Wilson + Robert
AAS	. Aka + Robert + Jean-Christel
Laser ¹³ C analyzer	. Issa + Justin
CTD	. Issa + Justin
Multi-beam sonar	Alain + Issa
Auto observation buoy	. Djomou + Romaric
Climate stations	. Djomou + Romaric
Solar-powered deep water pumping system	. Djomou + Issa

2-4 Storage of laboratory goods in order

Laboratory goods should be kept in order, for disorder takes your time and efficiency. MK rearranged some unused cabinets and bookshelves in the laboratory and recommended that classified laboratory goods should be stored in the cabinets depending on the kind of goods. The following photos (Photos 2, 3 and 4) show the examples of such a shelf and cabinets. Shelves for storing rock samples should also be secured.



Photos 2, 3 & 4 (from left to right). Shelf for empty and filled sample bottles. Cabinet storing lab goods for filtration, tools, etc. Cabinet storing chemical reagents.