

## **Technical Training**

## **Operation and Maintenance of**

# **CAWa HyMet Hydrometeorological Monitoring Stations**

Dedicated to the International Mountain Day under the United Nations

Preliminary Programme and Schedule

### 1 Venue & Date

Venue: CAIAG, Bishkek (Kyrgyzstan)

Conference -hall - 3rd floor

Date: 8<sup>th</sup> – 12<sup>th</sup> December 2014

**Language:** All lectures are given in Russian language or English with Russian translation. The course materials will be provided in Russian and English.

#### **Trainers and Lecturers:**

- Cornelia Zech, GFZ Section 1.2, Global Geomonitoring and Gravity Field
- Katy Unger-Shayesteh, GFZ Section 5.4, Hydrology
- Dr. A. Zubovich, CAIAG Department 3, Monitoring Systems and Data Management
- A. Sharshebaev, CAIAG Department 3, Monitoring Systems and Data Management
- D. Mandychev, CAIAG Department 3, Monitoring Systems and Data Management

### **Organisers**

CAIAG Central Asian Institute for Applied Geosciences Timur Frunze rd. 32/2 720027 Bishkek, Kyrgyzstan

in association with:

Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences Telegrafenberg 14473 Potsdam, Germany



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# 2 Course Programme

| Monday, 8 <sup>th</sup> December 2014    |   |  |  |
|--|---|--|--|
| 09.00 – 09.30                            | Welcome by representatives of CAIAG and   | Dr. Moldobekov – co-director CAIAG   |  |
|  | the CAWa Project  | Cornelia Zech – GFZ  |  |
|  |   | Dr. Zubovich - CAIAG   |  |
| 09.30 – 10.00                            | General overview about the CAWa Project   | Dr. Bolot Moldobekov – co-director CAIAG   |  |
| 10.00 – 10:10                            | Collective photo  | Garden of CAIAG  |  |
| 10:10 – 10:30                            | Coffee break  | 2 <sup>nd</sup> floor(conference hall)   |  |
| 10.30 – 12.00                            | HyMet Monitoring station concept  | Lector - Cornelia Zech – GFZ   |  |
| 12.00 – 13.30                            | Lunch   | Kafe "Kazanok"   |  |
| 13.30 – 15.00                            | <ul><li>HyMet Station Hydrological Components</li><li>Working principle<br/>(sensors/system)</li></ul>                        | Lector – Katy Unger-Shayesteh – GFZ  |  |
| 15:00 – 15:30                            | Coffee break  | 2 <sup>nd</sup> floor(conference hall)   |  |
| 15:30 – 16:30                            | <ul><li>HyMet Station Hydrological Components</li><li>Installation, Configuration</li></ul>                                   | Lector - Cornelia Zech – GFZ   |  |
| 18.00                                    | Welcome Dinner  | Restaurant "Arzu"  |  |
| Tuesday, 9 <sup>th</sup> D               | December 2014   |  |  |
| 09.00 – 10.00                            | <ul><li>HyMet Station Sensor System</li><li>Working principle<br/>(sensors/system)</li></ul>                                  | Lector - Cornelia Zech – GFZ   |  |
| 10:00 – 10:30                            | Coffee break  | 2 <sup>nd</sup> floor(conference hall)   |  |
| 10:30 – 12:00                            | <ul><li>HyMet Station Technical Components</li><li>Datalogger, Power System</li></ul>   | Lector - Cornelia Zech – GFZ   |  |
| 12.00 – 13.30                            | Lunch   | Kafe "Kazanok"   |  |
| 13.30 – 15.00                            | <ul> <li>HyMet Station Computer System</li> <li>Basic operation, configuration, system start-up, data transmission</li> </ul> | Lector - Cornelia Zech – GFZ   |  |
| 15:00 – 15:30                            | Coffee break  | 2 <sup>nd</sup> floor(conference hall)   |  |
| 15:30 – 16:30                            | Practical training: Computer System  Maintenance, troubleshoot  | Lector - Cornelia Zech – GFZ   |  |
| Wednesday, 1                             | 0 <sup>th</sup> December 2014   |  |  |
| 09.00 – 13.00                            | Fieldtrip to Baytik (HM01)  Practical training: Maintenance, troubleshoot   | Lectors - Dr. Zubovich - CAIAG<br>- Cornelia Zech – GFZ                                |  |
| 12.00 – 13.30                            | Lunch   | Kafe "Kazanok"   |  |
| 13.30 – 15.00                            | HyMet Station Satellite Data Communication Installation and configuration of VSAT antenna                                     | Lector – A.Sharshebaev - CAIAG   |  |
| 15:00 – 15:30                            | Coffee break  | 2 <sup>nd</sup> floor(conference hall)   |  |
| 15:30                                    | Free time   |  |  |
| Thursday, 11 <sup>th</sup> December 2014 |   |  |  |
| 9:00 – 9:45                              | Greetings on the Occasion of the International Mountain Day   | Dr. Moldobekov – co-director CAIAG,  Mountain Partnership - Elbegzaya Batjargal  F.A.O |  |



|  |   | Acad.Prof. A.Aidaraliev – President MUK                                       |
|--|---|---|
|  |   | Dr. Talant Ryspaev – Dean, Kyrgyz Techical<br>University                      |
| 9:45 – 10:00                           | Coffee Break  | 2 <sup>nd</sup> floor(conference hall)  |
| 10:00 – 12:00                          | Sensor Data Storage System SDSS  Introduction Basic operation, Data retriever | Lectors - Dr. Zubovich - CAIAG<br>D. Mandychev - CAIAG                        |
| 12.00 – 13.30                          | Lunch   | Kafe "Kazanok"  |
| 13.30 – 15.00                          | Sensor Data Storage System: Data evaluation, tests • Practical training       | Lectors - Dr. Zubovich - CAIAG<br>D.Mandychev - CAIAG                         |
| 15:00 – 15:30                          | Coffee break  | 2 <sup>nd</sup> floor(conference hall)  |
| 15:30 – 16:30                          | Sensor Data Storage System: Data evaluation, tests • Practical training       | Lectors - Dr. Zubovich - CAIAG<br>D.Mandychev - CAIAG                         |
| 17:00                                  | Certificate Ceremony, Photo   | Dr. Moldobekov – co-director CAIAG<br>and members of the Mountain Partnership |
| Friday, 12 <sup>th</sup> December 2014 |   |   |
| 09.00 – 11.00                          | Summary and conclusions   | Dr. A. Zubovich, CAIAG  |
| 10:00-10:30                            | Coffee break  | 2 <sup>nd</sup> floor(conference hall)  |
| 11.00 – 12.30                          | Feedback & Farewell   | Dr. A. Zubovich, CAIAG<br>A.Sharshebaev, CAIAG<br>D.Mandychev, CAIAG          |
| 12.30-13.00                            | Certificate Ceremony, Photo   | Dr. Moldobekov – co-director CAIAG<br>Dr. A. Zubovich, CAIAG (CAWa)           |
| ~ 13.00                                | End   |   |

### **Course characteristics:**

The technical training will be hold in full-day lessons for 4.5 days. The focus will be on the practical demonstration of systems, software and sensors by the lecturer and the application and implementation of the learned concepts by the participants. This course and hands-on trainings shall enable participants to install, operate and maintain a hydrometeorological monitoring station.

## 3 Participants and Funding

Target group are specialists and technicians as well as local operator from the hydrometeorological services in Central Asia who are responsible for the operation of hydrometeorological stations. Participants are expected to have basic technical skills and preferably first experience with the installation of field stations, communication systems and/or data management.

The CAWa project provides funding for travel and accommodation expenses for up to three participants from each invited organization.