BEOBAL Coordination and Methodological Workshop propositions

1) WMO, Geneva, Switzerland

Main 10 challenges to GAW

1. Maintaining long term measurements of quality in the current network
2. Establishing long term measurements of quality to improve global coverage, particularly in countries that are developing or in transition.
3. Developing collaboration between NHMSs and the chemical measurement community in some countries
4. Calibration, quality assurance and standard operating procedures: costly and not high profile but essential
5. Working with contributing partners that have networks as substantive as GAW to build a global network.
6. Developing World Data Centres that are comprehensive global repositories for high quality global observations of *targeted* GAW species.
7. Development of GAWSIS so that the GAW global network is accurately known.
8. Building a global aerosol monitoring network and integrated data analysis system in partnership with other organizations including satellite agencies.
9. Implementing with partners a Integrated Global Atmospheric Chemistry Observations (IGACO)
10. Continue to build air quality management capacity in countries with mega-city air pollution problems.

Invitation to join GAW and other programmes of WMO

2) UFS, Zugspitze, Germany

1. Partner for hosting a workshop ...UFS Schneefernerhaus Ltd. (Conference facilities - 200 m2; Overnight capacity - 44 beds **(SSA_A4)**
2. Possible partners: **(SSA_A3, SSA_A6, A1)**
   <u>High Atmosphere</u>
   German Air & Space Center (DLR Oberpfaffenhofen)
   <u>Cosmic radiation</u>
   GSF Neuherberg
3. <u>UV radiation</u> **(SSA_A3, SSA_A6, A1, SSA_A5)**
   Met. Institute, Univ. of Munich
   <u>High-altitude Medicine</u>
   Med. Clinic (Pneumology), Univ. of Munich
4. BEOBAL and the GAW Training & Education Centre- methodology transfer in the frame of GAW **(SSA_A3, SSA_A6, A1, SSA_A5)**
   <u>Already in place</u>
   GAWTEC training for Bulgarian collegues (UFS Schneefernerhaus, German Environmental Agency)
   <u>Further possibilities</u>
   Special training in GAW related measurements, data evaluation and data quality

control (at German GAW Global Station)
- Met. Obs. Hohenpeissenberg (German Weather Service)
- UFS Schneefernerhaus (German Environmental Agency

3) ALOMAR observatory, Andenes, Norway

Networking opportunities with the BEOBAL Project **(SSA_A5, A1)**

1. Exchange of technical and scientific personnel- make use of the ALOMAR eARI funding and Beobal's own funding
2. new activities in the 7th FP, similar to "Station Managers" forum in FP 5's ENVINET Project
3. distinct measures to ensure the data quality of collected data (key word monitoring in FP7)

4) INFN, Torino, Italy

1. Study of the effect of UV and radiation on Photosinthetic Organisms
2. Study of the effects of long exposures to low radiation doses (To study the effect on the human health of the higher environmental radiation background)
3. Science Communication **(SSA_A4)**
   Communication on HMO activities
   - 15th of January 2006- 28th of February 2006
     Winter Olimpic Games in Torino
   - Exibition on European HMO at the Library of Torino University - Historical place (15th century)
   - End 2006- beginning 2007
     Important exibition on HMO at Forte di Bard space- a new space in Valle d'Aosta for Alpine environment activities
   - 2007 Book on HMO " The science Observatories"
   - edited by Electa Mondadori
   - 2007 Hmo Exibition at
     - Observatoire de Paris Paris France
     - UMSA La Paz Bolivia
     - Berna University Berna Switzerland

5) IFSI/INAF , Rome, Italy

SVIRCO OBSERVATORY UPGRADE: 2005
(ready for young researcher training)

6) INP, Prague, Czech Republic

Improvement of Human Resources **(SSA_A3, SSA_A6, A1, SSA_A5)**

- Stays for PhD students in NPI:
  - 30 + 14 days – advances in TED method, particularly for Rn detection and dosimetry – just started
  - 30 + 14 days – advances in radioactivity measurements, particularly for 14C and T measurements by LSC - planned 2006/2007
- Seminars to advanced topics:

- Track etch detectors and their use for environmental dosimetry and other studies - done
- Methods and equipment for external exposure in the environment; their metrology – planned early 2006

7) Delegation of EC in Bulgaria

Invitation to be active in variety of fields and programmes

8) CETI, Podgorica, Montenegro

PROPOSAL FOR CETI'S PARTICIPATION
Upgrading the existing Environmental Laboratory and HM station on High Mountain Durmitor in Zabljak on 1450m as West Balkan Station

- Provision and installation of new gamma background detector for low dose rate.
- Installation of neutron gas counter
- Provision and installation of Rn low level analyzer,
- Provision and installation of α-background scintillation detector and α-spectrometer
- Provision and installation of the gas concentration monitoring analyzers for O3, NO, NO2, Nox, Sox,CO, Pb, and aerosols collection devices for PM2,5 and PM10(cascade impactor)
- Improvement of computer network and connection with CETI and BEO CoE.
- Upgrading of the collection of meteorological data's.

9) VINS, Belgrade, Serbia and Montenegro

A3. The *implementation and development of advanced methodology, technology, methods and advanced metrology*, *monitoring and observing system and innovations transfer*, in the field of Global change and ecosystems and their regional and European projections and components

- Beside Workshops, Conferences
- *VINCA INSTITUTE propose Visio-conferences among participants in BEOBAL*
- (Up to now we had this type of activity with NOKIA, DARESBERY, … It is not expensive and very successful and useful)

B. Improvement of Human Resources *including advanced Human Resources long-term management*

- VINCA INSTITUTE propose in the frame of SSA_A6: *THESES en cotutelle for young researchers*

(Up to now we had 3 theses of this kind with France. Student has two co-directors of the these; during 3 years he stay certain time in each institute; the PhD diploma of two universities without nostrification)

10) BEO Moussala, Bulgaria

A1. Diversification, broadening and enhancement of International collaboration and cooperation in the field of:

- evaluation and study of process of exposure to complex environmental factors (toxic elements, radioactivity) of the living organisms

- investigation of the correlations between the harmful influence and the organisms response
- investigation of the influence of some toxic elements on the microelement balance and biological parameters of the organisms
- estimation of the pollution influence on the energy spectra of the water in biological systems

1. Setting up SAP server
2. Making data compliant with DAQAS server
3. Using DAQAS client program for data quality management
4. Sharing real time data on WAP for viewing with GSM phones
5. Sharing real time video on WAP for viewing with GSM phones

- Innovation Transfer Management
- IPR Management
    - The muon telescope
      The intellectual rights will be defended as "Moun telescope with water Cherenkov detectors"
    - Cherenkov telescope for atmospheric transparency measurements
      The intellectual rights will be defended as "New method and device for measurement of atmospheric transparency
    - Neutron detector
      The new is the method for dose rate estimation and the methods for full response simulation

One of the important results from the BEOBAL workshop is the meeting with the Mayor of Blagoevgrad, Mr. Lazar Prichkapov.

As consequence from engagements and commitments which have been taken by the BEOBAL staff, and especially BEO CoE and INRNE, a new projects joint proposals of INRNE (BREO CoE) and SWU for Bachinovo environmental monitoring site development was prepared for the Bulgarian National Science Foundation special call in 2006 and also for Bulgaria – Macedonia joint call with participation of IP, Skopje).