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Workshop report on

## **DATA SHARING USING THE VOLTA BASIN AUTHORITY GEOPORTAL**



**(28 – 29<sup>th</sup> OCTOBER, 2010)**

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## **Introduction**

The Workshop on GeoPortal was held at the University of Cape Coast, Cape Coast from 28th to 29th October 2010. The workshop saw a participation of 30 invited scientist and practitioners from research institutions, authorities and ministries. The aim of the workshop is to demonstrate, discuss and train participants on the use of the new Volta Basin Authority (VBA) GeoPortal towards ensuring the sustainability of information and data sharing, information dissemination, acquisition and usage by institutions operating on the water sector of the Volta Basin. The VBA-GeoPortal, which technically is a further development of the former GLOWA Volta Geoportal, was redesigned and optimized during the „Sustainable Development of Research Capacity“ (SDRC) Project which is funded by the German Ministry for Education and Research. The resource person for the workshops were Antonio Rogmann (Center for Development Research, ZEF), Symphorien Meda and Evence Zoungrana (Volta Basin Authority, VBA).

## **Opening Session: Introductions and Opening Remarks**

The Head of Department of Geography and Regional Planning, Dr. Kwabena Barima Antwi, opened the Workshop with a brief welcome note. He was however hopeful that after the workshop, there will be a better data infrastructural platform for effective data access and data exchange especially to the benefit of academic institutions in aid of proper research work in the nations universities. Participants were then invited to introduce themselves, and give a brief expectation of the workshop.

## **Day I**

### **Session I: GeoPortal Project Framework**

To start the session, Antonio Rogmann elaborated on the program and explained what we should expect to cover for the entire two days. The first part of the workshop is to let participants have some background to the project frameworks in which the VBA Geoportal development was performed and will be embedded in the future e.g. by linkages to the upcoming African-German WASCAL project, the Volta Basin Information Sharing System (VB-ISS) project by GEF Volta, and others.

Possible benefits for institutions from using the GeoPortal for data sharing as well as necessary contributions to the GeoPortal were highlighted. Particular attention was also paid to basic principles of data management, which might be strengthened within an institution by using the GeoPortal as web-based data sharing facility.

The general architecture and services in the context of web-based geo-spatial data sharing systems, the general standards for data sharing and interoperability, and accordingly the ability of GeoPortals to be integrated into national and international Spatial Data Infrastructures, which

is to connect geographically distributed geo-service providers with each other, was explained by a presentation held by Mr. Evence Zoungrana (VBA).

Other important issues discussed in this session concentrated on the architecture and features of the VBA GeoPortal, Data Preparation (Data and Metadata Management) and finally, how attendees could search, and assess data in the GeoPortal.

Antonio's (ZEF) presentation on the development of the GeoPortal touched briefly on user rights and setting privileges, user administration, user groups and the general usage on the GeoPortal platform as well as a brief overview of the architecture and software in use (GeoNetwork Opensource and GeoServer) and their features on the GeoPortal. Time was taken to explain the new VBA-GeoPortal as compared to some already existing platforms of data exchange and data acquisition. Antonio did indicate that meeting certified standards helps to update and access data for use in the GeoPortal. This was to sensitize the participant on what they stand to enjoy or benefit from the GeoPortal Platform, and the new modifications as enacted on the new platform. .

Symphorien Meda (Volta Basin Authority, VBA) gave a presentation on the Metadata Management. The concepts discussed touched on sampling of information about data (metadata) by following metadata concepts and standards as ISO 19115/19139 which is used in the GeoPortal. The standard comes with data type-specific sets of metadata elements in order to reduce the complexity of the metadata standard which consists of approximately 400 metadata elements. He entreated attendees to gather as much information as possible for storage in the GeoPortal metadata base.

The end of the theoretical note on the GeoPortal opened the platform for questions, challenges, verifications and comments from the facilitators and general participant body to particularly get them well acquitted to the platform even before they attempt its use. Because of the manageable size of participants (attendees), there was a fruitful general discussion after the first session.

Some of the challenges Antonio outlined included:

1. People's unwillingness to share their data on the platform, and
2. The limitations people place on the sharing of their data.

It was Antonio's hope, however, that at the end of the program, participants will help reduce these challenges by sharing freely their data, or reducing the limitations they place on data sharing.

Raymond Kasei opened the discussions with his question on the limitations on the new GeoPortal and how to get it minimized. His question in connection with Antonio's outlined challenges called for a brief discussion on the way forward towards reducing these challenges

among particularly participants (attendees) who themselves were stakeholders (contributors in terms of information sharing) on the new GeoPortal Platform.

According to Antonio, an institution for instance could use the system to manage the distribution of, and access to data without necessarily referring to any administrator or any fellow outside the institution for administrative rights of access or distribution of data. In his view, a trusted person who will also act as the main administrator could create user groups and give usage (user) rights and parameters to groups who belong to that institution. He was optimistic that by this medium, dissemination of data could be done with ease on the new GeoPortal.

Other questions that came on-board bothered around;

1. The ability to undertake geospatial processes on the GeoPortal
2. The possibility of publishing maps on the GeoPortal, and
3. How access right could be solved.

Several suggestions came on board as participants tried to brainstorm on the issues concerning how people could access and download information freely on the Geoportal, and the possibilities of protecting the right of owners of the data by setting access and downloading right and privileges. General discussions also spanned on who should be given the right to issue downloading right of the data on the GeoPortal to ensure sanity and easy modes of data exchange and data sharing.

On the issue of access right and privileges of metadata on the GeoPortal, Ms Dilys opted for an institution bounded management system where rights of access are conferred on users by the authority of the institution. By this medium, she felt administrators would not give information out freely to friends for selfish reasons of gaining something in return. This she believes will bring some sanity unto the platform and encourage people to contribute more by freely uploading their data on the GeoPortal without fears of not gaining any acknowledgement for being the true owners of the data or authors behind the piece of information.

Kofi Nyarko and Dr. Antwi who were of similar views stressed that if there exist a sponsorship or funding for collecting and processing the data, then usage rights and access on the platform will be made more liberal, but the opposite in terms of having no sponsorship for data collection and processing will make it difficult for access rights and usage to be made liberal.

Finally, Antonio pointed out that a Federation that seeks to sign-up institutions whose interest lies in the usage of the data could be formed as a team (of institutions) so that the access right of data exchange could be established among these institutions. By this, other interested parties or institutions will be made to refer to the Federation for access to their data. This, according to Antonio is possible in the new GeoPortal. Antonio added that clustering of institutions is made possible on the GeoPortal platform to ease access to, exchange and usability of data. He

emphasized such access rights and privileges were made possible by the user accounts and passwords given to users or groups.

It was evident from the discussions that the user rights and privileges set on data on the GeoPortal could pose a serious challenge to data sharing if stringent measures among member groups and institutions were not settled amicably before the actual usage of the platform by stakeholders got underway. However, the positive suggestions brought onto the discussion table indicated a positive future ahead for data exchange and data sharing on the GeoPortal platform.

## **Day II**

### **Session I: Practical Exercises – Part One**

Antonio Rogmann opened the day's session with a presentation on user management by group administrator, data ownership, access-rights, distribution channels and institutional subnetworks, and the creation of metadata templates on the GeoPortal.

Other concept he presented included data sharing, user group and administrative rights, profiles for administrators, groups and other users with their respective tools and privileges. The discussions of equal important also bothered on functions and capabilities of users (like the content reviewer and the editor), groups, and administrators.

Questions concerning these discussions were welcomed before the commencement of the online practical session. All the answers to participants' questions were provided by Antonio. The following sentences presents the questions and response sections that characterized this session of practical exercises.

**Question:** What is the difference between the User and the Administrator? By: Mr. Akowuah.

**Answer:** The GeoPortal Administrator has access to all the functions on the GeoPortal whilst the User only has access to functions provided with his/her user profile, which could be Group Administrator, Editor, Content Reviewer, and Registered User.

**Question:** The difference between the Registered User and the Editor? By: Ms. Dilys.

**Answer:** The Editor has the privilege to edit the content of his own data resp. metadata whilst the Registered User cannot do any editing of any kind. The Registered User is only to download of data being not in public domain. For that he has to have an account in the group on which the data he requires is related to. The Registered User can be accounted by the GeoPortal Administrator or by the Group Administrator (only for his own group).

**Question:** Can the Content Reviewer edit the content of a metadata? By: Ms. Salamatu

**Answer:** The Content Reviewer only reviews and reports the corrections or comments to the editor. He is also able to edit the metadata of Editors which are members of his group. But he is the only one who can publish a metadata set to the common public. When an Editor wants to publish his data to the common public he needs to have a separate account with the Content Reviewer profile.

**Question:** Can an editor perform the same functions for three (3) different groups on the GeoPortal? By: Mr. Mensah

**Answer:** An Editor could be an Editor for three (3) (or more) different groups given he belongs these groups. But he only can edit metadata created by himself, or when he got the right for editing from another Editor (metadata owner).

**Question:** Can an Editor be an Editor of a different group he is not a member? By: Ms. Dilys.

**Answer:** No. He could download in case that the data is in public domain, but not edit for a different group.

**Question:** What is the process involved in creating the user profiles, groups profile and others? Which one comes first? By: Mr. Gerrald.

**Answer:** The GeoPortal Administrator creates the groups and associated users with specific profiles. A User Administrator can create other user accounts with different profiles, but only for the group he belongs to.

**Question:** Could one person review, edits, or publish within all within one department?

**Answer:** There exist two (2) functions within this platform. The editor for instance edits and set privileges for other users, whiles the content reviewer only reviews. So it's possible that a department confers such privileges to one person. But it's advisable to give different people such rights.

The issue of user profiles with their privileges and functions were intensively discussed.

**Question:** What is the Temporal Extent? By: Mr. Mawuli

**Answer:** The time point or time period of validity of the data. For example, if you have remote sensing or time series data, you can enter in the „temporal extent“-field of the metadata the date of creation of the image or the time period which is covered by the measurements.

## **Session II: Practical Exercises – Part Two**

The Second session was a comfortable orientation of the online GeoPortal platform to participants. Antonio who led the orientation assisted participants to create temporal accounts of Administrators, Editors, Content Reviewers, and Registered Users for their familiarization on the GeoPortal.

Data was accessed and downloaded given some searching parameters as a demonstration by all participants. Challenges bothering the searching parameters for a successful output of results were tackled and solved by the use of the advanced searching buttons provided on the GeoPortal platform. The downloading and editing abilities of users provided a clear evidence of the privileges held by each user helped participants to better appreciate the challenges that user rights and privileges could pose to some people of mere registered user account

In his concluding remarks, Antonio requested of participants on their assurance of the sustainability of the new GeoPortal platform. He indicated that a formal communication to the top officials of different institutions that has interest in the platform and would want to contribute to the platform will be contacted and established to ensure the sustainability of the platform to be assured. It was gathered from this concluding remarks that the only secured way to ensure the sustainability of the new platform was the consistent contributions (uploading of information), constant access and sharing of data, expansion of the user population, and a positive relationship between different user groups (especially institutions) on the new GeoPortal platform.

## **Session III: Open Forum – Comments and Recommendations**

Mr. Kankam Yeboah was of the view that the initiative to involve personalities or participants unto the platform should stem from Volta Basin Authority (VBA). In their letters to some of the institutions seeking their inclusion, Mr. Kankam indicated that they should mention some important names of personalities who have been parts of the GLOWA VOLTA Workshops before and it is hopeful that the authorities of these institutions will give the necessary responds for their inclusion on the GeoPortal platform.

According to Ms. Dilys, the practical lessons that crowned the first day's theoretical lessons were like the icing on the cake, so she proposed to expand the practical part of the workshop at next time.

Mr. Gerald observed that with his experience in ArcCatalog and the lessons provided during the workshop, he's been able to expand his understanding on the concept of metadata. He was of hope that the existing bugs in the systems could be dealt with to ease the difficulty on the platform in terms of searching and access to data.

According to Mr. Emmanuel Mensah, the lack of spatial data infrastructure makes it's difficult to implement any meaningful spatial data processing on the platform. He was however optimistic that if a workable suggestion could come along with the software and with some mode of interaction between institutions, there would be a better appreciation of what institutions do with their data. Antonio's responds to Mr. Mensah's comments was on the view that an initial establishment of partnerships amongst institutions concerning what they need, where they will get it, and how to get it, could help solve the problem of data access, data usage and effective corporations among partner institutions. This initial partnerships could serve as models for more partner-subnetworks within the GeoPortal user-community.

Dr. Antwi and Mr. Mensah were of the view that the metadata of persons or institutions should be made available to people or users, at least to give a clue to users that such information or procedures exist somewhere. Dr. Antwi was particular on the fact that VBA designs a summarized data for people to access given their searching parameters.

Antonio in responds to the comments as made by Dr. Antwi and Mr. Mensah declared that VBA, which is a partner of GLOWA and SDRC, seeks to focus and strengthen the upcoming linkage between WASCAL and the VBA GeoPortal to have a solidified platform that seeks to put together information and data that arose from the work/outcomes of GLOWA VOLTA, WASCAL and other projects or works of some professionals (amongst whom were part of the participants) to foster data exchange, acquisition and use.

This session was also interwoven with some questions from the attendees and clarifications from Antonio.

For instance, Mawuli wanted to find out about how those who were not on the network, or have any idea about the website could get access to it.

In clarifying Mawuli's question, Antonio pointed out that there will be a link created on Google which makes it possible for people to access and acquire information on the GeoPortal website from the Google Search Engine. In addition links will be placed on partner sites, e.g. as the VBA homepage.

Joseph Akowuah also wanted to find out if someone's permission was needed before data could be shared or even uploaded on the GeoPortal.

Antonio responded that it's the individual decision to either share or upload his data on the GeoPortal. However, he requested the free means to share and upload more information on the GeoPortal will ensure the sustainability of the platform. He also stressed again that the metadata of data could go out but not the raw data in terms of data sharing.

Mr. Gerald wanted to find out if we were adhering to the naming conventions on the GeoPortal or it could be changed. Antonio did respond by saying that one could easily come up

with his own naming conventions. The presented approach only should be seen as a good practice.

In his concluding remarks, Antonio insisted that anyone interested in using the GeoPortal to establish relationships of any kind should kindly contact his or her respective Administrator or Chief Executives of his or her institution and his outfit will be so glad to hook the person or bring the person on- board.

He further iterated that the user account prepared for participant for the purpose of the training programmed last for a period of two (2) weeks of which he's of great believe that participants will use that opportunity to better familiarize themselves on the platform. He insisted that participants should feel free to send his outfit emails concerning any further questions or clarifications and he hopes to clarify issues as fast as he could.

### **Closing Remarks:**

In giving the vote of thanks for the workshop training, Dr. Antwi started by saying that the series of training programmers in the GLOWA-VOLTA has really enlightened every one of the participants of diverse professions and interest. He thanked the facilitators and the organizers of the workshop training sessions for their efforts, time, and patient.

*“On our part, I wish to say that let us all use and contribute to the GeoPortal (something done for our sub-region). Let us take keen interest in this project (especially the Universities) to build scenarios to put before policy makers to help change conditions in our sub-region. We duly appreciate the package as presented by the GLOWA-VOLTA Project,”* said Dr. Antwi.

Participants were thanked for their attendance, engagement and the wealth of experience they shared, and were asked to convey thanks to their organizations for their commitment of staff time and resources to this workshop training and other workshop training sessions of the GLOWA-VOLTA Project.

Kofi Nyarko extended special thanks to Antonio and his team of facilitators and entreated individual institutions to build an in-house GeoPortal so it could be improved upon for a better data infrastructure in the near future. He finally declared that the next workshop training would be a Media Training for Scientist to help them ably present their work or findings especially to seek better cognition and attention from the business world and policy makers.

A short break was observed for a group picture of participants and the facilitators after which participants travelled back to their various destinations.

## List of participants

No	Name	Institution	Email
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