FINAL MINUTES

1st Workshop of Ah GIS Expert Group on the Project "Preparation of the Implementing Documents for Establishment of SAVA GIS"

11 September 2009, from 10:00 to 13:00, Sava Commission premises, Nova Ves 11, Zagreb, CROATIA

SESSION 1: 10.00 - 10.30 Welcome and Introduction

WELCOME (DRAGAN ZELJKO AND SINIŠA ŠPEGAR, ISRBC SECRETARIAT)

The 1st Workshop of the Ah GIS Expert Group (Ah GIS EG) was introduced by Mr. Siniša Špegar (Project Coordinator, ISRBC Secretariat) and welcomed by Mr. Dragan Zeljko (Deputy Secretary for integrated RBM and water planning, ISRBC Secretariat).

Mr. Siniša Špegar (SŠp) introduced members of the ISRBC Secretariat and Ah GIS EG (see Annex 1: List of participants).

He informed that 22 bidders applied for the tender. The Croatian company GISDATA has been selected to undertake the Project "Preparation of the Implementing Documents for Establishment of the SAVA GIS". Assignment will last for a six months.

SŠp also introduced GISDATA and it team members who are working on the assignment: Ms. Višnja Omerbegović (VOm) - Team Leader, Mr. Davorin Singer (DSi) - GIS Expert and Mr. Damir Dekić (DBe) - Water Management Expert. SŠp also gave a brief overview on the Project goals and presented Agenda for the workshop.

PURPOSE, STRUCTURE AND EXPECTATIONS OF THE WORKSHOP (VIŠNJA OMERBEGOVIĆ, GISDATA)

VOm welcomed participants of the workshop. She thanked for the cooperation during the visits or phone interviews with the members of the Ah GIS EG undertaken in July. All participants confirmed the importance of the establishment of the SAVA GIS by using web and GIS services wherever is possible highlighting the issue of using all what was developed so far at the national level, within Danube GIS, and other initiative.

The primary activities undertaken during the Inception phase were focused on the understanding users and their requirements that must be supported by the Sava GIS, preparation of the list of information products, tools and services, assessment on the set of standards and identification of thematic water management related data sets.

VOm also summarized Project requirements described in the ToR and stressed the value of active participation of the Ah GIS EG and other members involved in the work of ISRBC during the assignment. Data and information for supporting SAVA GIS will be provided by the Parties, so their early involvement will facilitate processes of implementing future activities on Sava GIS.

She explained that the purpose of the workshop is to gain a clear understanding of the project goals or what must be provided toward implementation Sava GIS Strategy. Furthermore, she highlighted that Consultant needs to receive a feed-back on the objectives and content of the Inception report, as well as to have group's decisions on the issues important for the further development of the SAVA GIS.

She outlined that a three responses, one stakeholder questionnaire and two user requirement templates, where received by the given deadlines. Reponses were provided by the Ministry for Agriculture, Forestry and Water Management – Republic Directorate for Water of Serbia, Republic Geodetic Authority of Serbia and Federal Hydrometeorological Institute of Republic of Srpska. The proposed priorities related to the SAVA GIS requirements were taken into the account and changed accordingly.

She also mentioned common naming rules for the Sava GIS that has been proposed pointing to main reason that is ensuring everybody can easily understand the structure of information system.

SESSION 2: 10.30 - 11.30 Activities undertake during Inception phase

USER AND STAKEHOLDER REQUIREMENTS (DAVORIN SINGER, GISDATA)

DSi gave a short presentation on the purpose of user and stakeholder requirements, outlining that Sava GIS should meet a wide range of users and their requirements, therefore expectations on what will be developed should be clear. To be able to ensure that Sava GIS assets will be useful and valuable to its users in the long-term, the direction and support should be provided to those who are developing and building it.

Consultant presumed that the templates with preliminary defined priorities are handy way to collect information thus facilitating and speeding up development process.

DSi outlined structure of the templates and presented design of Sava GeoPortal reflecting general and other issue relevant for reporting, analysis, data access and manipulation, as well as other specific requirements relating to the construction of the pre-defined queries applicable to a certain user's groups or datasets.

SŠp asked members of the Ah GIS EG group to review updated templates and to provide their written confirmation on the proposed content.

In summary:

- Templates for the user need assessment will be revised by the Ah GIS EG and written information will be provided within 10 days from the day of Ah GIS EG receive request by e-mail.

SAVA GIS PRODUCTS, TOOLS AND SERVICES (VIŠNJA OMERBEGOVIĆ, GISDATA)

VOm outlined SAVA GIS future architecture which will consist of four tiers: 1) Client Tier or Geoportal with Tools – Discovery, Mapping, Data View, Data Download, Reports, Static Web Content, 2) Application Tier with Services for Tools and Supporting Component, 3) Operation Tier that will enable infrastructural component – Spatial Catalogue Services, Metadata Repository, Data Upload, Hosted Data, Authorization and 4) Data/Metadata Tier with Web Service Interface, Catalogue Services, etc.

She gave an overview on the tools that will be developed and used via Sava GeoPortal i.e. Discovery Tool will enable users to discover data and information via external (Google) and internal (Sava GIS content and reports) search engine; Static Web Content (text, pictures, logos, authors, links, help, contact) and Reports (PDF, Word, Excel and any other non-html/xml document); Mapping Tool (cartographic display, attribute selection, navigation, content-layer selection, legend, scale…); Data Viewing Tool (tabular, graphic or descriptive); Data Download Tool will provide ability to it users to identify access and download data and information in appropriate format; Dynamic Report Tool will generate dynamically selected

content with information that changes over time. Information for dynamic reporting will be collected by using predefined report templates.

Mr. Dragan Zeljko (DZe) asked about purpose and feasibility on the establishment of such a sophisticated tool. He asked about examples with similar functionalities and to identify by whom such tool will be used. To his understanding, in the initial stage of the Sava GIS implementation, this functionality would not be needed or requested.

Mr. Aleš Veršič (AVr) asked how powerful Sava GIS should be to provide an answer on very complex spatial query that includes long time series analysis and visualization?

VOm explained that Dynamic Report Tool is mostly related to get the either real time (on-line) measurements/observation and/or time series data visualized, perform on-line cross queering or complex historical and spatial data analysis and/or reporting. She added that dynamic should not necessarily point to infinite query or inclusion off all available data, rather to a possibility of selecting meaningful reporting elements for the appropriate periods. It should be avoided to select all offered possibilities in once by warning user that such query does not have meaning.

From the technical point of view, for all possible user requests and possible range of periods (time series), scenarios must be predicted and results defined (programmed) and visualized in an advance. A dynamic tool gives the user feeling that system (computer) provides a dynamic or stochastic answer on the request. However, all answers or results should exist before query happened.

Mr. Samo Grošelj (SGr) Deputy Secretary for Protection of Waters and Aquatic Eco-system, ISRBC Secretariat) thought this tool is important for the assessment on the water quality due to a time variance of the parameters.

Explaining reporting service, VOm said that it will accept the parameters from client tools determining properties of the result that would be produced by the service. Parameters will include the specification of: i) report template that defines the report content; ii) an area of interest (spatial/keyword) that will be used to tailor the report content; iii) a map filter query to refine the results presented in a report (an area of interest, map layer visibility and/or keywords); iv) and a tabular filter query to refine the results presented in a report.

She outlined that Mapping Service will provides the ability (and interfaces) to generate a map product based on the area of interest filter, and/or attribute filter and/or advanced options that will include spatial operations such as buffer, union, intersect etc. The Mapping Service will consume and provide Feature services (WFS) data (point, line, polygon), rendered by the Mapping Service; Raster services (WMS) data (images), rendered by the respective remote raster service and WMC (Web Map Context).

She outlined that data View Service will be template-based, enabling branded styles for presentation, a wide variety of data packed into template-based representation and metadata information on spatial data (in line with the data, or alongside) in response.

VOm also explained functions forming Data Download Service and Content Management System Catalogue Service.

In summary:

- It has been recommended to remove development of the Dynamic Report Tool from this phase of the Project.

SESSION 3: 12.00 – 12.30 Activities undertake during Inception phase (cont)

ASSESSMENT ON STANDARDS (DAVORIN SINGER)

DSi outlined importance of the standards. He said that Web services will be used across heterogeneous platforms and for achieving a functional Sava GIS, interoperability is needed at multiple levels. One of the most important features of the application profile for Sava GIS will be the specification used for the common rules for design of the registry, also referred to as the catalogue. He said standards will allow for relatively easy expansion of a system once it is implemented without expensive customization or bespoke development.

Ideally, a uniform standard approach ensures maximum interoperability. If all participants of Sava GIS will be required to, for example, use the same database schema, a high level of consistency would be achieved. Once a standard (or combination of standards) has been adopted, it will be necessary to define and develop a profile of these standards to define which elements are to be used, which are mandatory and, in some cases, the domains of key elements.

He pointed out on a list of ISO/CEN standards which will form a framework for SAVA GIS are given as the Annex of the Inception report.

THEMATIC WATER MANAGEMENT DATASETS (VIŠNJA OMERBEGOVIĆ)

VOm presented core thematic dataset groups, background and other thematic dataset groups. Core thematic dataset is defined based on: the FASRB request, "Strategy on Implementing FASRB", EC requirements related to the reporting on the implementation of the WFD at the level of the international commission, as well as on flood and other water management related directives.

She stated that the FASRB defines three main goals of the process of cooperation: 1) establishment of an international regime of navigation on the Sava River and its navigable tributaries, 2) establishment of sustainable water management and 3) undertaking measures to prevent or limit hazards, therefore the main principles contributing in gaining the goals, among the others, is continuous exchange of information on water regime and navigation regime within the basin.

SGr asked what was meant by the sediment data in the thematic group "FSARB – Sustainable River Basin Management?"

VOm explained that it was a typing error and should be deleted there. A sediment management is described under separate thematic group and covers sediment monitoring, designated areas for mineral and capital dredging, sediment disposal and sediment pollution and treatment.

In summary:

- AVr recommended taking into the account INSPIRE data specifications since this initiative is streamlined on the establishment of European-wide spatial information infrastructure and communication via Web and GIS services.
- Sediment data layer will be removed from the dataset group on Sustainable River Basin Management.

METADATA (DAVORIN SINGER)

DSI stressed out that Metadata is the information and documentation, which makes these resources understandable and sharable for users over time. Since WFD GIS working group recommends the application of the rules laid down in **ISO 19115** for creating a metadata profile Consultant therefore recommends utilization of the same metadata profile, but keep it on minimum as possible.

DSi highlighted that this proposal is also in line with the draft implementing rules for metadata of the INSPIRE initiative, thus proposed Sava GIS metadata profile is mainly based on the guidelines for metadata included within the document "Guidance Document on Implementing the GIS Elements of the Water Framework Directive".

Very fruitful discussion followed presentation. Below is summarised outcomes of the discussion.

In summary:

- It will be checked if GMET supports all languages of the ISRBC Parties. In case it does not support, a glossary of commonly used water management terms should be available in all languages including the English.
- It has been recommended to provide metadata in the languages of the ISRBC Parties. Each participating institutions (data provider) will provide metadata in the mother tongue language.
- To avoid duplication of the efforts, it should be checked what metadata were provided for the Danube GIS and used all compliant to future SAVA GIS. metadata profile.

DISCUSSION (ALL PARTICIPANTS)

Participant did not have any addition remarks regarding proposed approach to the preparation of the implementing documents for the establishment of Sava GIS.

SŠp asked members of the Ah GIS EG group who attended the Workshop to provide written confirmation of their organizations on the proposed content of the Template, although the official deadline has expired. All members of the Ah GIS EG group agreed to give some more effort on this.

SESSION 4: 12.30 - 13.00 Closing Session

FINAL CONCLUSIONS

Since discussion had occurred after each topic being presented, conclusions and main action points from the summaries are enlisted below accordingly.

- On the 1st Workshop of the Ah GIS Expert Group (Ah GIS EG) members of the ISRBC Secretariat and Ah GIS EG have been informed that the Croatian company GISDATA has been selected to undertake the Project “Preparation of the Implementing Documents for establishment of the SAVA GIS”, and that the assignment will last for a six months. An overview on the Project goals and requirements were clearly presented by Consultants, and the Ah GIS EG and other members were informed of their importance as an active participation in the work of ISRBC during the assignment.

- It was agreed that the Dynamic Report tools would not be needed in the initial stage of the Sava GIS implementation, and in the Final Report it should be addressed as a valuable possibility for the analysis and visualization of results.
- It was agreed to remove Sediment data layer from the dataset group on sustainable River basin management.
- Ah GIS EG will provide written confirmation on the proposed content of the Templates not later than October, 2nd.
- Recommendation is given on the metadata languages of the ISRBC Parties, in such a way that each participating institutions (data provider) would provide metadata in the mother tongue language. It should be checked what metadata were provided for the Danube GIS and used all compliant to future SAVA GIS metadata profile.

ANNEX 1: LIST OF PARTICIPANTS

Institution	Name	Function
ISRBC Secretariat	Siniša Špegar	Advisor for Technical Issues of Navigation
	Dragan Zeljko	Deputy Secretary for integrated river basin management and water planning
	Željko Milković	Deputy Secretary for Navigation
	Samo Grošelj	Deputy Secretary for Protection of Waters and Aquatic Eco-system
	Janja Zlatić-Jugović,	Advisor for protection against detrimental effects from waters and extraordinary impacts on the water regime
ARSO (SI)	Aleš Veršič	IT Expert - Geographer/Cartographer
Srbijavode (RS)	Aleksandar Miličević	
Hrvatske vode (HR)	Tihana Turudić	IT Expert in the Institute of Water Management
Građevinski fakultet Beograd (RS)	Miloš Stanić	
Agencija za vode oblasnog riječnog sliva rijeke Save (BA)	Nebojša Nikolić	
GISDATA, Consultant	Višnja Omerbegović	Team Leader
	Davorin Singer	GIS Expert
	Damir Bekić	Water Management Expert