Interactive comment on "The Global Streamflow Indices and Metadata Archive (GSIM) – Part 1: The production of daily streamflow archive and metadata" *by* Hong Xuan Do et al.

W. Grabs (Referee)

grabsw@gmail.com

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Review

Wolfgang E. Grabs

20 Insert references on global runoff estimation using global discharge data sets

35 GRDC operating under the auspices of the UN - World Meteorological Organization (WMO)

40 Update statistics from current GRDC catalogue

95 ARCTICNET is a now static database that is mirrored in the GRDC. In GRDC, stations of ARCTICNET are updated based on data deliveries to GRDC. The ARCTIC-HYCOS river discharge network is hosted and operated by GRDC with currently over 500 stations that are online available.

115 Most data of the European Water Archive (EWA) hosted by GRDC are available under the GRDC data policy and are no longer restricted to the FRIEND data policy. Based on data deliveries, the EWA is updated.

140 ARCTICNET is superseded by the arctic river basin database and ARCTIC-HYCOS databases that are part of the GRDC database. However, the ARCTIC-HYCOS database is operated as a project and data are open.

230 It needs to be noted that data deliveries from national official data suppliers also contain errors. GRDC is performing plausibility checks on these data sets to detect and correct errors and provide feed-back to data suppliers.

Question: Have there been some checks to detect consistency of data sets supplied by national suppliers with data sets from the same stations contained in the GRDC?

It is always necessary to check for the latest available versions of databases!

280 As standardization issues are a prominent issue it its important to describe if the development of the metadata catalog has followed standrds set (and endorsed by WMO as a standard setting organization), by the Open Geospatial Consortium (OGC), using WATER ML-2

320 Is GSIM Metadata compliant with OGC standards?

435 ff Provide information on the status of time series. In the case of archived time-series: describe whether there are update mechanisms in place or whether some of the data are closed data sets. There is the danger to generate orphaned data sets

with incomplete information (metadata) on the version and last date of such data sets. This has often created confusion as researchers worked with outdated data sets (such as the UNESCO RivDis that still is used although it is outdated since over 20 years. It is used as the data is open without restrictions but the data holdings contain errors and/or have long since been replaced or updated including error correction.

510 Explain in a more transparent manner that GSIM will provide the metadata archive and not the actual time series as a result of different data policies from database operators including national services.

Discuss in more detail existing update mechanisms of databases and an indication which data sets are closed historic archives and which are living databases that are continuously updated.

Corrections in tables:

Table 1 ARCTICNET is part of GRDC, in addition, GRDC hosts the ARCTIC-HYCOS database; ARCTICNET is a closed historic database

Table 2 Example for Spain: EWA has 239 stations, GRDC 0 BUT: EWA is hosted under GRDC and data are available under GRDC data policy. These are no longer separated data bases!

20, citation of global discharge:

http://www.bafg.de/GRDC/EN/03_dtprdcts/33_CmpR/unh_grdc_node.htmlPlease cite in your publication the GRDC as the source of the data: Fekete, B., Vörösmarty, C., and W. Grabs (2002): Global composite runoff fields on observed river discharge and simulated water balances / Water System Analysis Group, University of New Hampshire, andGlobal Runoff Data Centre. Koblenz, Germany : ...

HighâĂŘresolution fields of global runoff combining observed river ... http://onlinelibrary.wiley.com/doi/10.1029/1999GB001254/pdfHigh-resolution fields of global runoff combining observed river discharge and simulated water balances.

Balázs M. Fekete and Charles J. Vörösmarty1. Complex Systems Research Center, Institute for the Study of Earth, Oceans, and Space, University of New Hampshire,. Durham, New Hampshire, USA. Wolfgang Grabs.

Charles J. Vörösmarty - Google Scholar Citations http://scholar.google.com/citations?user=5kSVDe4AAAAJ&hl=deHighâĂŘresolution fields of global runoff combining observed river discharge and simulated water balances. BM Fekete, CJ Vörösmarty, WGrabs. Global Biogeochemical Cycles 16 (3), 2002. 411, 2002. A continental–scale model of water balance and fluvial transport: Application to south America. CJ Vörösmarty, B MooRe, ...

Welcome To UNH/GRDC Composite Runoff Fields V1.0 http://www.grdc.sr.unh.edu/Balázs M. Fekete Charles J. Vörösmarty Wolfgang Grabs. Report and Supporting Documentation Âů Station Data Explorer Âů Basin Data Explorer Âů Runoff Data Explorer Âů Data Download (Monitoring Stations, River Networks & Runoff Fields). Database Supporters, Co-sponsors. Return to Water Systems Research Group Home ... Website, downloads etc...)

280 Metadata data exchange standard

OGC$^{®}$ WaterML | OGC http://www.opengeospatial.org/standards/waterml1) Overview Âů 2) Documents and Downloads Âů 3) Official Schemas Âů 4) Related News. 1) Overview. WaterML 2.0 is a standard information model for the representation of water observations data, with the intent of allowing the exchange of such data sets across information systems. Through the use of existing OGC standards, ...

The 5 Essential Elements of a Hydrological Monitoring Programme ... https://public.wmo.int/en/bulletin/5-essential-elements-hydrological-monitoring-programmeFor example, the Water ML2.0 standard provides for the exchange of (1) point- based time series data, (2) processed values such as forecasts and ... and stored out of harm's way, (2) metadata are complete, and (3) documentation is available for any changes in methods that could potentially impact the integrity of the

data.