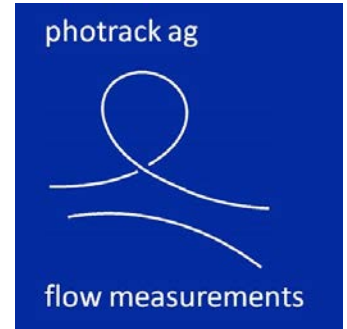


Water DATA scarcity – overcoming gaps for decision-making towards climate resilience

WWWeek at home
27 August 2020



Today's session

Presenters:



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Hycon
Founder, Owner



Donald Kasongi
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Secretary General



Salvador Peña-Haro
photrack
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Moderation:



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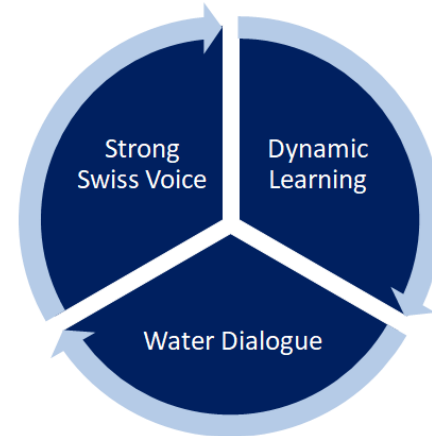
SWP in a Nutshell

Vision

A globally recognized brand of high quality solutions for water security and the multi-stakeholder platform for water in Switzerland. The SWP is a knowledge hub, a knowledge setter and a cross-sector innovation carrier.

Why

Contribute to work towards a **water secure world for all**.



Challenges and «work-arounds»

HYCON GmbH - Thomas Gross

Water Data Scarcity



Rural areas are «white spots»

- No data available for small rivers
- No time for data collection (run-off data)
- No money for run-off assessments
- No access





Example WASH in rural DPRK

- Gravity-fed water supply systems
- No long-time run-off data
- No information on the catchment area





Example RE in rural Afghanistan

- Water for various applications (Energy, Milling)
- No run-off data
- Limited access (security, location)



Hands-on experience

- No-one can guess the run-off or annual patterns
- Local people have experience what applications are feasible and related to changes over the time
- Example: a traditional mill consumes 150 l/s





Climate Change and Weather



Path to overcome data scarcity

- Reliability over accuracy - for rural applications, reliable estimations ($\pm 20\%$) for average and “worst-case” are needed
- Hands-on solutions / rules-of-thumb are helpful for small applications
- Foster innovation to gain low-cost solutions for data collection
- Open data policy for hydrological data
- Research on impacts of climate change on precipitation and run-off patterns

A Nile Perspective

Nile Basin Discourse - Donald Kasongi

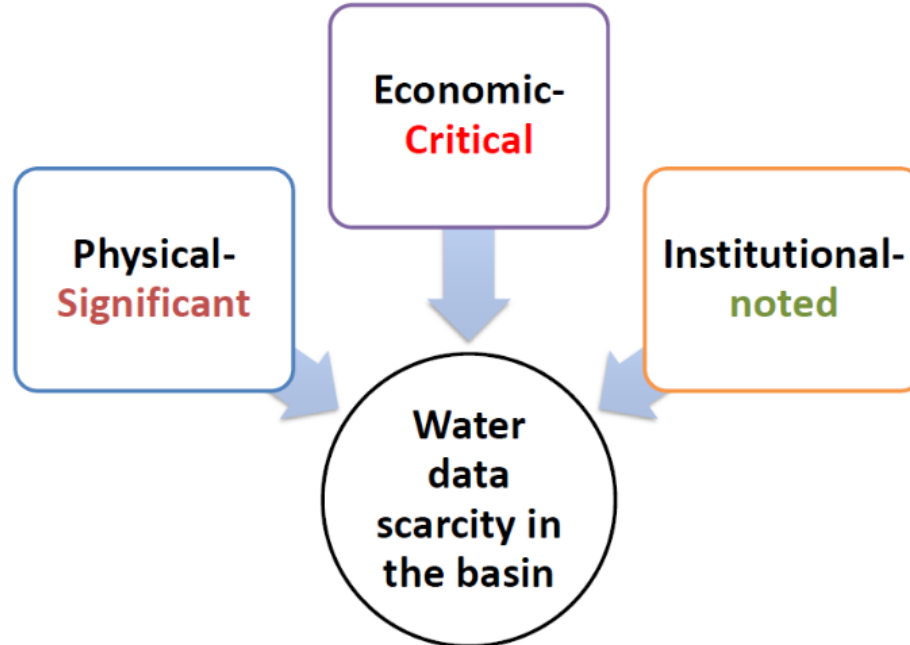
Water Data Scarcity

A Nile Perspective





Water Data Scarcity in the Nile Basin -Typologies



Water Data Scarcity and the Climate Dilemma

Reality check from the field:

(The complex Water- Climate nexus)

- Growing uncertainties with ever “changing normal(s)”
- Demand for timely, evidence-based decision making
- Multi Stakeholder interests - planning, monitoring & investment, sovereign actions



Why water data scarcity in the Nile Basin?

Why data?

- Water data critical for water security -to address threat to people, the planet and the path to inclusive and sustainable development

Water data is required for:

- Mapping opportunities for mitigating risks & mitigating vulnerability & investments and management regimes
- Stimulating innovations, adaptation to climate change
- Policy and practice recommendations / reforms
- Decision support and managing conflicts

Status Quo:

- Nile basin initiative -NBI Intergovernmental body in collaboration with Nile Discourse Forum (NBD)
- Issue with data **Availability**, **Access**, **Utilization**
- Water data too generic
- Hardly geographically-local contexts
- Lack of longitudinal trends
- Ongoing efforts under the NBI Decision Support System but no community level friendly



Opportunities for alleviating water data scarcity

- **Availability.** Invest in Engagement across multiple sources and actors, innovate use of emerging mapping technologies (GIS, remote sensing), quality, ethics including ethnographic
- **Accessibility.** Simplify formats accountability, transparency
- **Utilization.** Embed data in policies, promote purposive sharing, monitoring, evidence-based, context-relevant, user friendly



New technologies to alleviate data scarcity

photrack AG - Salvador Peña Haro

Water Data Scarcity

Lack of data

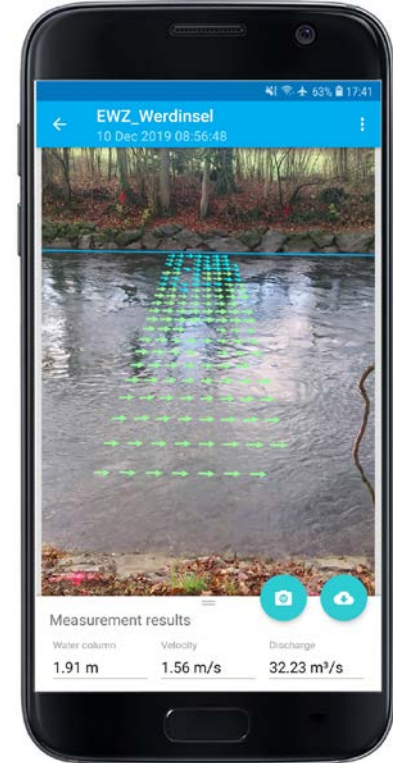
Traditional monitoring methods:

- High investment costs
- Difficult to operate and maintain
- Prone to vandalism
- Data collection, error prone
- Data sharing and access



New technologies can alleviate data scarcity

- Use of smartphones to measure discharge
- Cost-efficient
- Non-intrusive
- Non-expert -> Local involvement
- Data transmission is error free
- Data validation
- Data can be (is) open
- Proof image (Evidence-based)



DischargeApp

DischargeApp

Low cost technology,
accurate

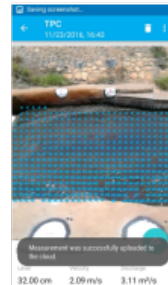


Citizen science
Local involvement



Setting-up a site

Proof image +
free error transmission

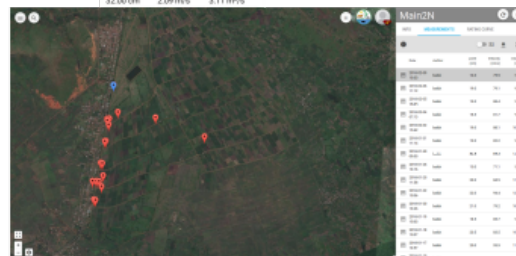


Vandalism free, cost,
Maintenance, easy

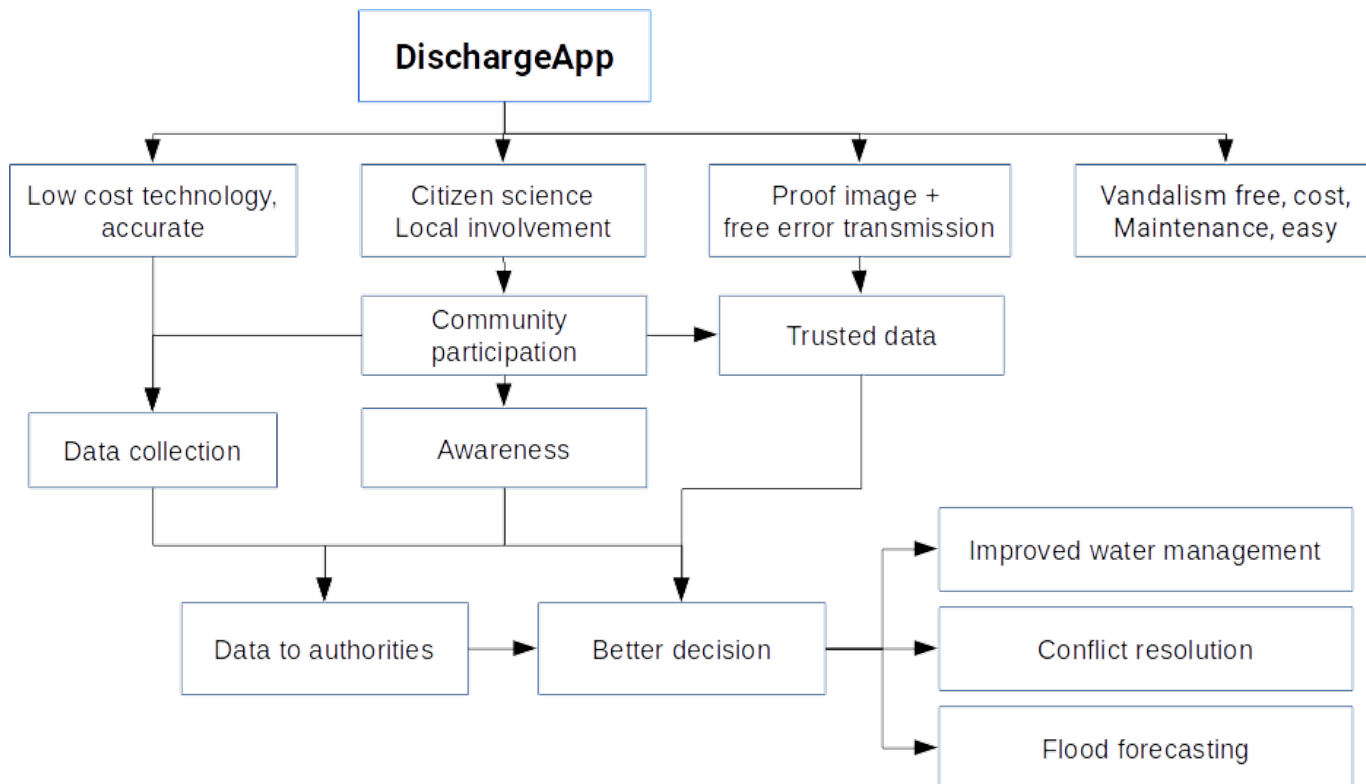
FREE	BASIC	PROFESSIONAL	PREMIUM
Our FREE plan gives you the opportunity to explore the DischargeApp technology. Once you are familiar with DischargeApp you may want to upgrade to a more suitable plan, which will give you more measurement points and enable you to manage and analyse your collected data.	DischargeApp is a modern equipment plan that offers 100 measurement points per year for maximum 10 sites that are free from any non-standard water measurement profiles. All of this will be accompanied by our own DischargeApp registration.	DischargeApp is offering everything that is larger quantity, in addition to the standard water measurement profiles. It is possible to use the solution even for non-standard measurement points.	DischargeApp is offering everything that is larger quantity, in addition to the standard water measurement profiles. It is possible to use the solution even for non-standard measurement points.
FREE	CHF10 per month	CHF40 per month	CHF200 per month
START FREE	NO BASIC	GO PROFESSIONAL	GO PREMIUM
FREE <ul style="list-style-type: none"> standard 5 non-standard measurement points 5 sites 100 measurements 	BASIC <ul style="list-style-type: none"> standard 5 non-standard measurement points 5 sites 100 measurements 	PROFESSIONAL <ul style="list-style-type: none"> standard 5 non-standard measurement points 5 sites 1000 measurements 	PREMIUM <ul style="list-style-type: none"> standard 5 non-standard measurement points 5 sites 1000 measurements



Performing a measurement



DischargeApp



Challenges

- Service center needed
- Contractual agreements
- 5.5 USD per site per month
- Budget allocation
- Motivation
- Data disconnected from authorities
- Standard Operating Procedures
- Validation of new technologies
- Data compatibility



Conclusion

- Keyword: **Data governance**
- Local level: even if data is available, it's restricted to use or not shared
- Traditional data collection methods are costly and difficult to maintain
- International/ transboundary level: which data is used? is the data functional also on community level?
- Long term data for climate resilience is not available.

Panel Discussion

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Take away messages

- reliable, open data is needed
- an institution has to be in charge
- low-cost data collection with inclusion of the local communities will increase awareness
- for policy reforms concerning climate change, long-time series need to be collected --> starting now to see trends

THANK YOU!

Links

<https://www.swisswaterpartnership.ch/>

<http://www.photrack.ch/>

<http://www.discharge.ch/>

<http://www.hycon.ch/>

<https://www.nilebasindiscourse.org/>

<http://governancelinkstz.or.tz/>



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