INNOVATIONS IN WATERSHED MANAGEMENT KNOWLEDGE EXCHANGE

October 27, 2021
Multiple sectors, multiple institutions, linked by water and natural resources...

A Typical Watershed...

…Need for Shared Vision supported by modern information, institutions, and investments…
A new world of “Disruptive Technology”

“Disrupt” data value chains

- **Data Collection**: Monitoring/Surveys (in-situ sensors/IoT/Biometrics, earth observation (satellite, aerial, UAVs), crowdsourcing, digitization...
- **Data Management**: Telemetry, 5G, cloud services, open data, Blockchain, ...
- **Data Analysis**: Big data, Geospatial/ AI/Machine Learning, modeling/ scenario analysis, script repositories, Cloud/Edge/Quantum computing...
- **Data Access**: Open data APIs, data visualization, gamification, mixed reality-AR/VR, ...
- **Outreach**: Platforms/Social Media/Portals/ Apps/e-books/Competitions...

“Disrupt” production value chains

- 3D/4D printing/additive manufacturing...
- “Digital Twins”
- Automation/SCADA...
- Robotics/ Autonomous transport...
- Advanced materials/nanotech/ biotech/genomics/energy tech/ green tech, ag tech...

“Disrupt” stakeholder value chains

- Virtual social networks/ Digital Platforms...
- Sharing economy...
- Crowdsourcing, gamification, competitions (e.g. hackathons, appathons...)
- Mobile money, fintech, cryptocurrency...
- Blockchain enabled value chains
- Maker movement/DIY/Tech Incubators...
- Virtual learning/re-skilling...

http://www.appsolutelydigital.com/dt/
“Top-Down” Data Acquisition System

Satellite & Aerial Earth Observation

Cloud Services

Big Data

Data Science

Platforms

APIs

Machine Learning

& other AI

ChatBots

Crowdsourcing

Data Rescue

GIS and other datasets

Data Management

Analytics/Models

Manual Monitoring

Crowdsourcing

Automated Monitoring

“Bottom-up” Data Acquisition System ➔ IoT
South Asia Region Watersheds Knowledge Resources Tool

Filter by Theme
- Show All
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- Agriculture
- Climate Change
- Ecology
- Erosion_Sedimentation
- Forests
- Groundwater
- Guidelines
- Institutions
- Natural Disasters
- Policy
- Social
- Surface Water
- Technology
- Water Quality
- Water Resources
- Watersheds

Filter by Region
- Show All
- Global
- Afghanistan
- Bangladesh
- Bhutan
- India
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- Nepal
- Pakistan
- South Asia
- Sri Lanka

Filter by Type
- Show All
- Article
- Report
- Video
- Website

Building a more resilient Afghanistan
FAO AQUASTAT Report - Afghanistan
USGS projects in Afghanistan - Water
Water Resources Management in Afghanistan: The Issues and Options
South Asia Region Watersheds: An Interactive e-Book

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Disruptive Technology

WORLD BANK GROUP

Disruptive KIDS (Knowledge, Information & Data Services) Helpdesk

http://spatialagent.org/KIDS/

MC4 - 840
Disrupt or Be Disrupted!

Thanks!

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