# "Welcome to HCS Consultant"

The projection of climate change and its impacts over West Africa are highly uncertain affecting decision-making and rendering the design of efficient adaptation measures very challenging. The weaknesses of the intervention measures are due to a lack of technical and infrastructural capacities to support public-private operational bodies through co-development of sustainable solutions. HCS is a demand-driven research and service provision institution devoted to tackle the root causes of vulnerabilities of communities and production systems through capacities' development at various intervention scales. Our Experts hold advanced University Degrees (PhD) in Meteorology, Hydrology and Water Resources Management, Agro-meteorology and related disciplines. They have good understanding of water and climate services, thorough experience in designing and providing capacity building support at various levels: (i) satellite and remote sensing applications for operational hydrometeorology; (ii) applied water resources management with numerical prediction; (iii) disaster risk reduction and management (DRR/M); (iv) ICT system design for hydrometeorological observation systems and database development & management; etc.



Provides expertise in Meteorology, Hydrology and Water Resources Management to support effective hydroclimate services provision

"We were especially impressed with the care and attention HCS Consultant gave us in helping to find innovative environmental management solutions."

Prof. Brice A. Sinsin

### Offerred services

Practice Research & Capacity Building
Multisectoral/multidisciplinary Data Collection
Weather & Water Observation Design
Hydro-Climatic Risks Assessment
Water Management Strategies & tools
Policy Review & Development
Environmental Impact Studies
Disaster Risks Reduction Concepts & Tools
Water Structure Design and Dimensioning
Project Monitoring-Evaluation
Concepts for Water and Numerical Governance

### Intervention fields

Hydrology and Water Management
Water, Weather and Climate Observation
Remote Sensing and GIS
ICT and Data Management
Disaster Risks Reduction and Management
Capacity Building
Cross-cutting Research

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Opening Doors for Evidence-based Decision Making





HCS develops self-learning tools and provide training on demand or on identified need. Our priority target groups are practitioners and professionals including absolute beginners.

#### Practice Research & Capacity Building >>>

HCS builds its capacity development solutions on the following identified gaps in academic/capacity building curricula related to hydro-climate service provision: (i) The curricula are not often oriented towards hydro-climate service provisions, (ii) the general teaching courses are often not open to experts and practitioners, (iii) the curricula of few institutions giving training in hydro-climate services provision do not clearly consider the interdisciplinarity component of hydro-climate services dellivery. HCS consequently develops self-learning tools and provide training on demand or on identified need. Our priority target groups are practitioners and professionals including absolute beginners.

#### Policy Review & Development >>>

Responding to the hydro-climate challenge implies developping a coherent set of institutional framework and policies documents. Solutions offered by HCS under this thematic include (i) the analysis of local, national and regional hydro-climate services provision policies documents in light of actual and future user needs, (ii) the development of a cross-scale policies coherence framework, and (iii) the technical support in policies development. Our solutions are built on lessons learnt from states of the art hydro-climate services policies like the European Union Water Framework Directive or the European research and innovation roadmap for climate services. Furthermore, these solutions are rooted in our clear understanding of challenges in hydro-cliamte services policies at both the ECOWAS and national levels..



### Disaster Risks Reduction Concepts & Tools >>>

In West Africa, floods and droughts are the major climate hazards that cause disasters. In fact, often these climate hazards overcome easily local response capacity of the countries and substantially affect the social and economic development (Adegoke et al. 2019). Risk assessment is defined as all activities that aim at maintaining or improving a region's ability to cope with a hazard. It is typically expressed by the product of three main components: hazard, vulnerability and exposure. HCS proposes solutions that are based among others on (i) Geospatial Information Technologies (GIT), including Geographic Information Systems (GIS), Remote Sensing, Global Positioning Systems (GPS) and Internet GIS to support all phases of disaster risk reduction/management (DRR/M).

#### Water Structure Design >>>

Hydrological and hydraulic models application as means for water structure design is also an expertise provided by HCS. This support comes in a variety of forms, either fit-for-use or learning by doing.

#### Project Monitoring-Evaluation >>>

HCS provides projects M&E solutions based on several methods including the Logical Framework Approach, Pre-Post test comparison design, uni-dimensional quantitative indicators etc.

#### Water Management Strategies & Tools >>>

HCS offers operational tools to develop and evaluate the increase of water storage capacities, the improvement of land management in the catchment, the development of water saving technics.

## Concepts for Water and Numerical Governance >>>

HCS proposes tailored water governance solutions built on the principles of participatory, responsibility, and traditional rules recognition in the form of numerical water management tools.

#### Environmental Impact Studies >>>

HCS proposes solutions for (i) preliminary environmental reviews; (iii) screening/scoping; and (iii) prescribes necessary environmental measures, monitoring and reporting to be undertaken.

# Multisectoral Data Collection Including Weather- Water Observation Design >>>

HCS provides services in terms of (i) development of coherent procedures and tools for data collection in the fields of agriculture, water management, socio-economics, etc.; (ii) near-surface observation network diagnosis and design; etc.







Finding a solution that's right for you >>>



HCS is with you every step of the way >>>

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