UNESCO's Hydro Open-source software Platform of Experts (HOPE) initiative.

The Priority Africa intersectoral platform

BACKGROUND: Responding to the urgent need for action in Africa stressed by the 4th Annual International Conference on ICT for Africa (2012), the 23rd Annual Teaching and Learning Innovations Conference (2010) and the fact that all these conferences underlined that the time had now come for Africa to adopt open software to make ICT accessible to all to support development and help to build a sustainable future, UNESCO is planning to launch, in 2012, the Hydro Open-source software Platform of Experts (HOPE) initiative.

Free and Open Source Software (FOSS) offers benefits for people in developing countries including facilitating access to and increasing ownership of ICT for Human Development. The

Free and Open Source Software model provides alternative tools and processes with which women and men can create exchange, share and exploit applications and knowledge efficiently and effectively.

A dire need exists for affordable and accessible specialized software in engineering, as most of software applications are not affordable for low-income and middle-income economies and increases the digital divide, the gaps and barriers the world, especially when it comes to the engineering curricula.

To solve real and local problems, hydrologists are constantly creating innovative mathematical models to manage water in an effective way. But for the models to be effective themselves, they should be easy to use and be able to handle massive data sets. However, this last step requires sophisticated software infrastructure, which may take years to build and expensive to get.

OVERALL OBJECTIVES: High-quality education capacities in water management developed and reinforced through innovative use of ICTs, especially taking into account Africa and gender equality issues

Through the International Hydrological Programme (IHP), the only intergovernmental programme of the UN system devoted to water research, water resources management, education and capacity building, UNESCO is willing to contribute to this global development by creating an UNESCO's Hydro Open-source software Platform of Experts (HOPE), which would provide an alternative to the commercial specialized engineering software in the field of hydrology (e.g. Water resources, rivers and groundwater; urban water modeling and GIS, Collection systems, water distribution, flooding, wastewater treatment etc.).

HOW? It would be a free, open source software platform, targeting experts that can assist African water authorities, teachers, university lecturers and researchers to elaborate water management models. The UNESCO's Hydro Open-source software Platform of Experts (HOPE) would be a set of organizations (Universities, institutes, centers, etc.) and practitioners committed to opening development through the use of information and communication technologies (ICTs). The UNESCO's HOPE features will be three core resources: Knowledge, People and Tools.

OUTPUTS: These efforts and commitments will reinforce the determination of the African Union Member States to accelerate the translation into action, at the national, sub-regional and regional levels of the African Water Vision 2025 and the Sharm El Sheikh commitments on Water and Sanitation. The creation of UNESCO's HOPE will equally contribute to the dissemination of innovative practices in the area of Greening Technical and Vocational Education and Training (TVET); preparing people for green jobs that particularly contribute to preserving the environment while improving human well-being and social equity.

Partner institutions will provide expertise and guidance, such as capacity building workshops and technical assistance. The UNESCO's HOPE network and communities of practice will provide linkages to leading technologists, from government CEOs to field-based innovators, to consult and consider pressing development challenges.

UNESCO's HOPE partners will bring many technology solutions to the table and would facilitate, at this stage, the application of these tools, from ideation to incubation. The platform will play an important role as a practical instrument for development as its free and open aspirations make it a natural component of development efforts in the context of the Millennium Development Goals (MDGs) in the African countries..

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EXPECTED RESULTS: AND WORK PLAN DRAFT:

			Expected results:	Work Plan
Phase 1			✓ UNESCO's Hydro Open-source software Platform of Experts (HOPE) is established;	1- An initial discussion will take place on WSIS KC - Knowledge Communities platform ; 2- A meeting will be organized for the launching.
			✓ An initial package of free and open-source software in the field of water management validated by UNESCO's Hydro Open-source software Platform of Experts (HOPE) is made available to the member states;	3- UNESCO will appoint a consultant(s) to identify initial package of free and open-source software in the field of water management according to the HOPE's platform guidance;
	Phase 2		✓ The use of the free and open-source software package in the field of water management is promoted;	4- UNESCO will distribute the package through capacity building demonstration workshops;
			✓ user requirements in terms of FOSS are collected and analyzed to enhance current HOPE portfolio;	5- UNESCO will distribute questionnaires during the capacity building demonstration workshops;
			✓ the HOPE portfolio and services are developed and updated;	6- UNESCO will appoint a consultant(s) to develop and update the HOPE portfolio and services;
		Phase 3	✓ Chemical and physical data at national or regional level are collected;	7- UNESCO will identify project pilots with African water authorities partners for data collection;
			✓ HOPE applications are use with chemical and physical national or regional data for the calibration and/or model development.	8- UNESCO will organize capacity building workshops.