

Question	Answer
<b>Integrated Water Resource Management in fragile states – UNEP’s experience from seven years of IWRM in Darfur, Sudan</b> by Flemming Nielsen & Atila Uras	
<p>are measures undertaken to prevent the irrigated land for contaminants or calamities with hazardous substances (for example oil leakage)</p>	<p><i>Two sources of hazardous substances are currently of importance in the area. One is agro-chemicals and the other is gold mining. The agro-chemical market in Sudan is in reality unregulated and the awareness about proper use and protection non-existing. Deaths have occurred as a result. UNEP incorporate training on agro-chemicals in various training activities and promote non-hazardous alternatives.</i></p> <p><i>Large amounts of gold are being mined in the area and result in significant amounts of mercury being released into the environment. Gold mining is largely outside the control of the government and in the hands of various rebel groups that still act with impunity. This makes it risky to interfere and unlikely that much will be achieved until gold mining is brought under some form of government control and regulation.</i></p>
<p>Is/Was there hydrological catchment study done for Korga Weir? (e.g. The maximum flash flood peak and duration)</p>	<p><i>Yes, hydrological modelling of the catchment has been done by several projects and the government. Specific studies were made in preparation for each weir. UNEP is currently working on an updated hydrological model for Wadi El Ku with the Universities of Khartoum and El Fasher.</i></p> <p><i>The main issue is the lack of data. Only a few short time series exist from a few stations. Several of them from a time when the climate was quite different from what we see now. Taken together with the large area of the catchment and the high climatic variability, the results of the models obviously have a high level of uncertainty.</i></p> <p><i>More data is required before meaningful improvements of the hydrological models can be expected. UNEP is involved in initiatives that aim at collecting more environmental data in Sudan. In the Wadi El Ku project, ground water, flood sensors and data loggers are being installed together with the government. The project is also implementing a “citizen science” component where farmers collect temperature, rainfall and flood level data with simple equipment. This is a start but data series of much longer duration than the project are needed.</i></p>
<b>Update on the sustainable environmental restoration of Ogoniland, Niger Delta</b> By Michael (Mike) Cowing	
<p>are local remediation companies capable to conduct a remediation this size and complexity?</p>	<p><i>Presently, simple sites are being remediated. These have only shallow contamination with no impacted ground water. These are all being remediated by national companies – primarily using enhanced bio-remediation. The next phase is to address complex sites – with deep contamination and contaminated ground water. This will require a range of technologies including incineration and or thermal desorption. These are beyond the experience of national contractors – so, the strategy is to get the best international companies to partner with national companies in JVs to undertake the work and to ensure skills are passed on.</i></p>