

CP Project No. 64
BASIN FOCAL PROJECT, NIGER
6-Monthly Progress Report
(Date: July 2008)

OVERALL PLAN

The overall strategy to implement the BFP Niger has not changed. Based on the prescribed BFP arrangement of 6 Work Packages, one Coordination Cell and a Basin Coordinator, the BFP Niger aims to understand the links between poverty, water, agricultural water productivity as well as the influence of the institutional context and existing and proposed interventions within the basin. The BFP Niger intends to identify and recommend high potential development actions and research themes in the basin. Details of the research strategy can be found in the respective MOUs. N.B. Andrew Ogilvie has taken over from Billy Troy as Deputy Project Leader.

In terms of the methodology, some readjustments have been necessary. These are mostly due to budgetary considerations, related to the current depreciation of the US dollar. Indeed, the budget was estimated in Euros and converted to US dollars at the time of submitting the proposal. However in the last year, the dollar has lost around 20% of its value and therefore our operational budget has effectively lost around 70,000 EUR. This is clearly non negligible, and in order to mitigate any detrimental effects, we must decide between reducing scientific activities (limiting partners, inferior data precision) and decreasing our impact pathway (number of stakeholders invited to restitution etc). In parallel, we are also actively seeking additional sources of funding (details below).

The constantly evolving security situation in West Africa has and will continue to influence our activities, as rebellions in the northern part of the basin (Mali/Niger) and towards the final Nigerian delta, as well as the political crisis in Guinea will prevent us from undertaking any fieldwork in these areas. Ongoing food protests (every country except Mali in the last few months) may in time further restrict activities, but as a whole the BFP is privileging desk-based research, as clearly studying in detail in under 2 years a basin spread over 2,5million km² with only 600,000USD is not an option.

PROGRESS AND PROBLEMS

Impact pathways

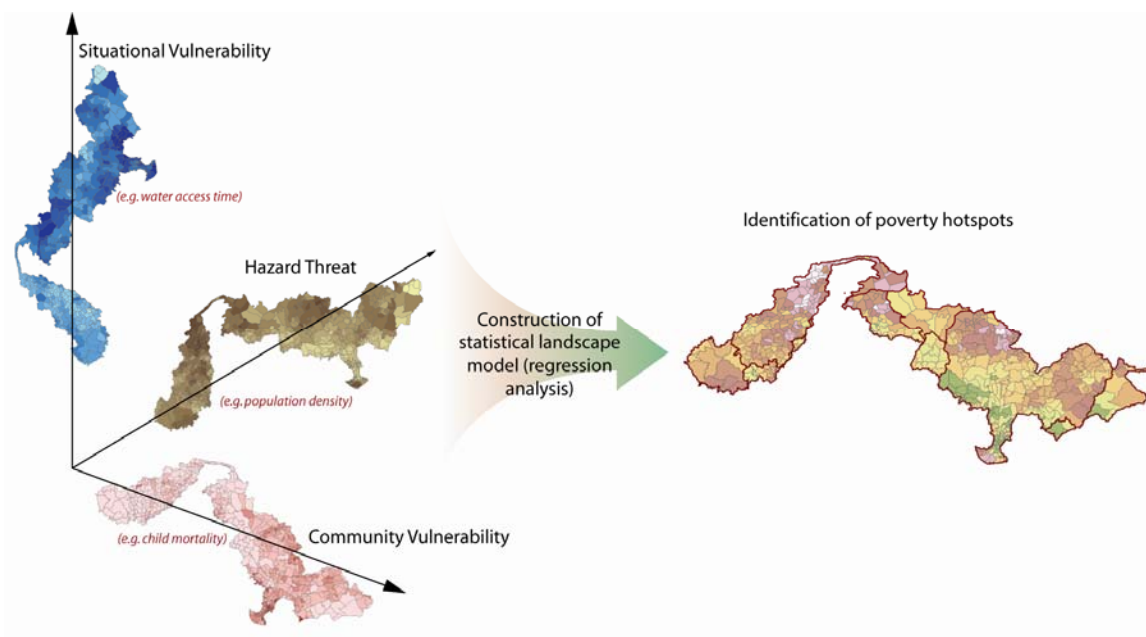
The Impact Pathways worksheet has been reviewed - please see attached Excel spreadsheet for details. Major issues include:

- Financial restrictions impose a limitation on number of scientific partnerships
- NBA remains uninvolved in the project
- ECOWAS WRCU on the contrary seems very interested and receptive to project
- Current agricultural food crisis may optimise interest of stakeholders (NGOs, donors etc) in project
- Funding for final restitution and atlas is not yet forthcoming – have widened search.

Scientific progress

WP1 is approaching the final draft of a literature review on analytical tools and methods for poverty and vulnerability assessment and mapping. Insights combined with findings from their Rapid Basin Assessment (expert consultation and semi-structured interviews with village elders in Mali and Burkina Faso in March 08) have led to a number of key variables, believed to quantitatively estimate the variance in basin poverty. Variables include water resources and accessibility, education, child mortality, soil type, forest cover, population density, climate, livestock densities, etc. Water poverty determinates have been broadly classified as factors that affect a) water availability, b) water productivity, c) water productivity facilitators, d) community and governance structures affecting access and e) entitlements. Potential stressors, threats and hazards have also been evaluated as to their impact on the vulnerability of spatially referenced water poverty. Data representing these variables or acting as a suitable proxy are being compiled, tested for compatibility and suitability and rendered into a consistent data format for our landscape statistical model. GIS layers are then produced to spatially identify areas at greatest risk (cf. fig.1 and Outputs).

Figure 1: schematic diagram of WP1 CSIRO methodology



The spatial analysis described above will in time be completed at different resolutions to determine the optimal scale (district, regional etc) for policy application. The set of poverty variables and related indicators will also be refined. Due to lack of spatially referenced national health and demographic survey data, the Chadian part of the basin has been dropped for now (representing only about 2% of the basin) but contacts at GTZ may help fill this gap. Statistical analysis should highlight further data gaps and inconsistencies, and where possible we will confront results derived from nation/basin-wide data sources to findings of selected case studies.

WP2 has begun collecting data in Cameroon and Chad for the Benue river and has scheduled a field trip to Mali, Burkina Faso and Niger after August to gather additional data on the Niger river from national and international agencies, including the Niger Basin Authority in Niamey. Along with previously acquired data (e.g. water access in Mali) and IRD's significant hydrological data on the River Niger, WP2 should have sufficient data for the subsequent analysis. A grant from the French Embassy in Nigeria has been secured to welcome a Nigerian hydrologist for 4 months within HSM/IRD. He is working on preparing the necessary files to run the hydrological model. WP2 has also obtained the authorisation to use and modify the Integrated Management Model for the River Niger Inner Delta (MIDIN), developed in 2000 by an IRD team. The related code-development work is due to start in September this year. Mac Kirby's water-use account spreadsheets have also been looked into, and WP2 envisages using this tool with the more accurate data available to HSM/IRD (as currently woodland is shown in desert areas!). Funds have also been provided by HSM and the BFP for Arsenic sampling around Fadamas in southern Nigeria and subsequent analysis in Montpellier, as clearly water access and productivity issues imply a certain quality of water.

WP3 is continuing its literature review related to agricultural water productivity (CPWF working papers, concepts and indicators, rainfed crop WPr, irrigated crop WPr, livestock, fisheries, etc.). Visits to Niamey, Niger and the NBA, Aghrymet and ARID have been undertaken and new data sources have been identified, for which further meetings will be necessary. Field visits to Lake Kainji, Nigeria and the Inner Delta, Mali have also been undertaken by J. Lemoalle to study fish water productivity issues. In terms of capacity building, two students are collaborating on the literature and data review, and a local agronomist from Burkina Faso has been recruited. Administrative delays in signing the MOU have had knock on effects and delays on sub contracts and partners. Ongoing wider problems with the current WP3 leadership have led to a review of the current structure and improvements are being made.

WP4 has finished the literature survey on the "Robustness of Socio Ecological Systems" (Anderies and al. 2004) required to produce the analytical grid (qualitative model) and design a case study. The site of the African Development Bank-funded Talo Dam (weir) in Mali was selected for this case study, after the initial Guinean site had to be abandoned due to the political events in Conakry. The Talo project is one of 4 additional structures (weirs at Talo and Djenne in Mali for irrigation, and hydroelectric dams at Fomi in Guinea and Taoussa in Mali) wanted by basin authorities but set to increase the existing strain placed on water resources, notably between downstream rainfed Office du Riz de

Ségou and irrigated Office du Niger de Mopti. One WP4 assistant is currently in Mali studying this interesting and conflict-prone institutional context.

The next stage aims to collect institutional data in order to map and document institutional arrangements and conflicts related to water management, however finding pertinent data and case studies on traditional institutions (land tenure, water access rights) in the basin is proving more difficult and time consuming than expected.

WP5 has started the literature review and collecting necessary data on crop production (area cultivated, irrigated area, crop yield statistics, etc.), livestock population, food consumption levels, human population but also information on existing and planned water infrastructure (dams, river diversion weirs, boreholes, small reservoirs, etc.). Such data will be adapted for use with the PODIUMSIM model to assess the situation of water demand and supply in the Niger River basin based on different intervention scenarios and therefore policy options.

WP6 has made significant progress on the database and in producing basin-specific GIS base layers. The needs of various Work Packages were analysed to define and develop an appropriate database structure, web site interface and to address issues of confidentiality and access rights. These are under construction but users can already access the web site at www.bfpniger.eu and notably download basin, sub-basin and administrative GIS layers, produced by an assistant. Basin-wide standard data (population, proportion of country in basin, land use etc) and scenarios (demographic increase, climate change etc) are also being compiled to guarantee homogeneity across the Work Packages. Over time, the website will hold all the administrative and scientific outputs of the BFP, in addition to a comprehensive database. A forum is also being developed to encourage cross WP coordination. Metadata forms, produced according to ISO 19115 standards, are required by each WP when submitting data, but this process may need to be streamlined in order to reduce the time and effort required from other WPs. In the coming months, the functionality of the proposed Google Earth interface will be more accurately defined and the database query form and results page will be developed.

IMPLICATIONS FOR REMAINING WORK

The above mentioned financial issues have had the largest implications so far. At the coordination level, basin tours and meetings/workshops have been reduced to a minimum, and we may therefore not be able to undertake a basin tour in the Nigerian Fadamas (one of the proposed hotspots). Funds for a final restitution will be limited, however, we are fostering links with ECOWAS WRCU (Water Resources Coordination Unit), European Union, Agropolis and IRD in order to identify additional funds for such events (publish atlas, organise restitution workshops etc). WP3 have had to reduce the number of partners in order to achieve economies of scale and WP1 also expects to reduce collaboration with WP4 and WP5 due to time and resources available. WP5 originally planned to undertake field surveys across the basin, and hold stakeholder consultation workshops. Due to financial constraints, field surveys will only be conducted in the lower section of the basin and internet-based structured questionnaire will replace the stakeholder consultation workshops.

This is regrettable, especially considering Echel Eau initially allocated 500,000 € for the Niger Basin to the CPWF, but with 375,000 € (600,000 USD at today's rate) the BFP can not achieve more.

Minor modifications in the WP2 schedule have also been necessary (e.g. the assistant scientist will work mostly from Yaounde instead of Bamako, will visit HSM for 5 weeks instead of 3 etc...)

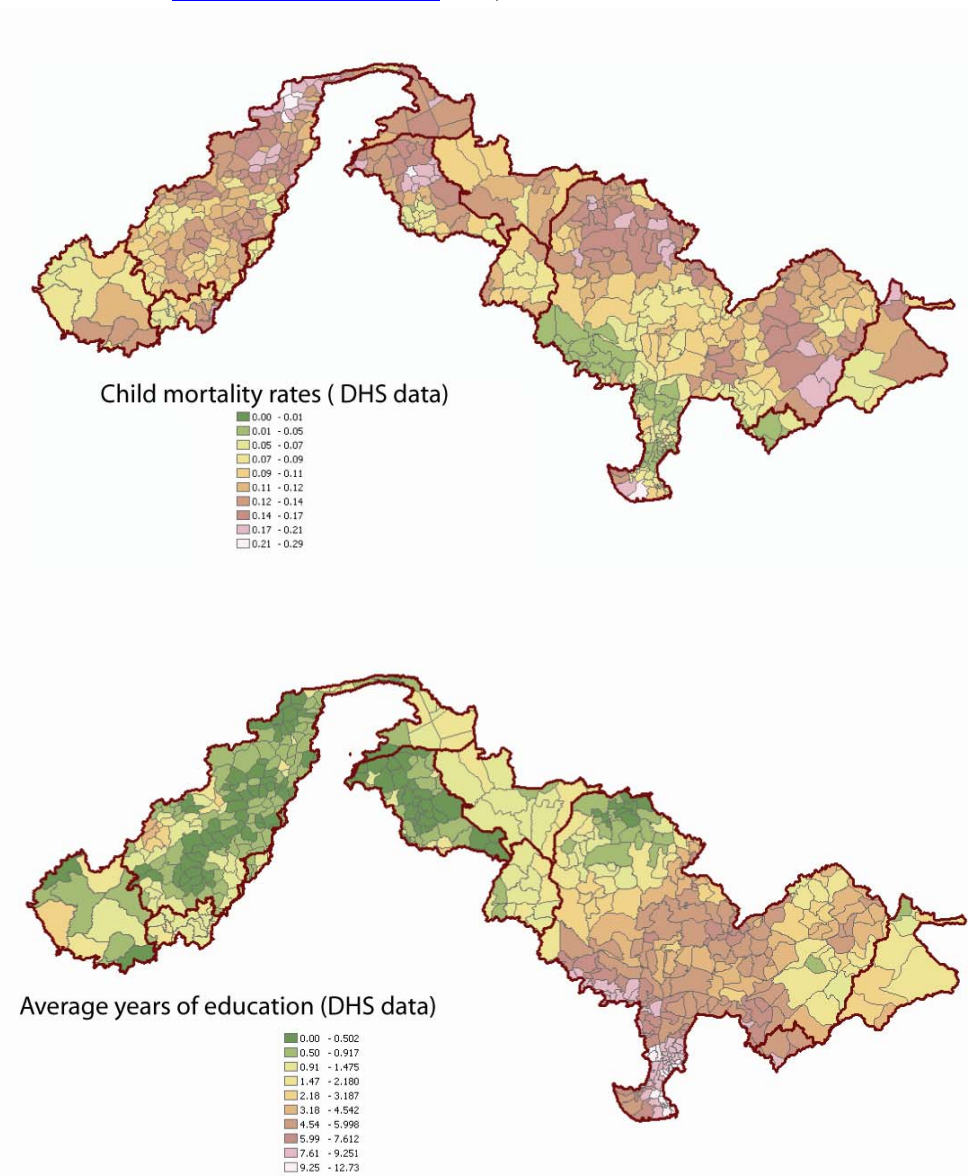
OUTPUTS:

Available or forthcoming (2008) outputs (the full list of outputs is available in project Gantt chart):

WP1:

- Final draft of literature review relationship between water availability, productivity, water access facilitators and poverty/vulnerability due shortly
- Selected GIS layers depicting particular variables relating to poverty (cf. fig. 2). We are attempting to build these with high resolution (i.e. at the 3rd Administrative division level)
- Statistical analysis indicating significant explanatory variables relating to the spatial distribution of poverty and the relative coefficient weighting due in August

Figure 2: Selected GIS layers depicting poverty variables in the Niger River Basin (excluding Chad). CSIRO from www.measuredhs.com data)

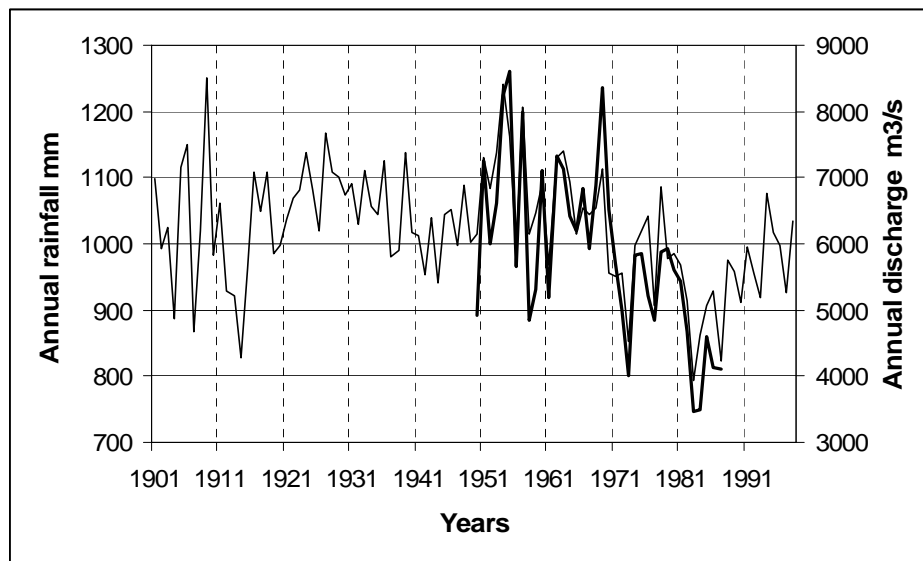


WP2

- First report on the data collection and inventory for the whole River Niger due in October
- Results of the hydrological modelling for the Nigerian tributaries to the River Niger due end of September.
- Results of the arsenic sampling in Nigeria by mid-December. The sampling should take place by the end of October.

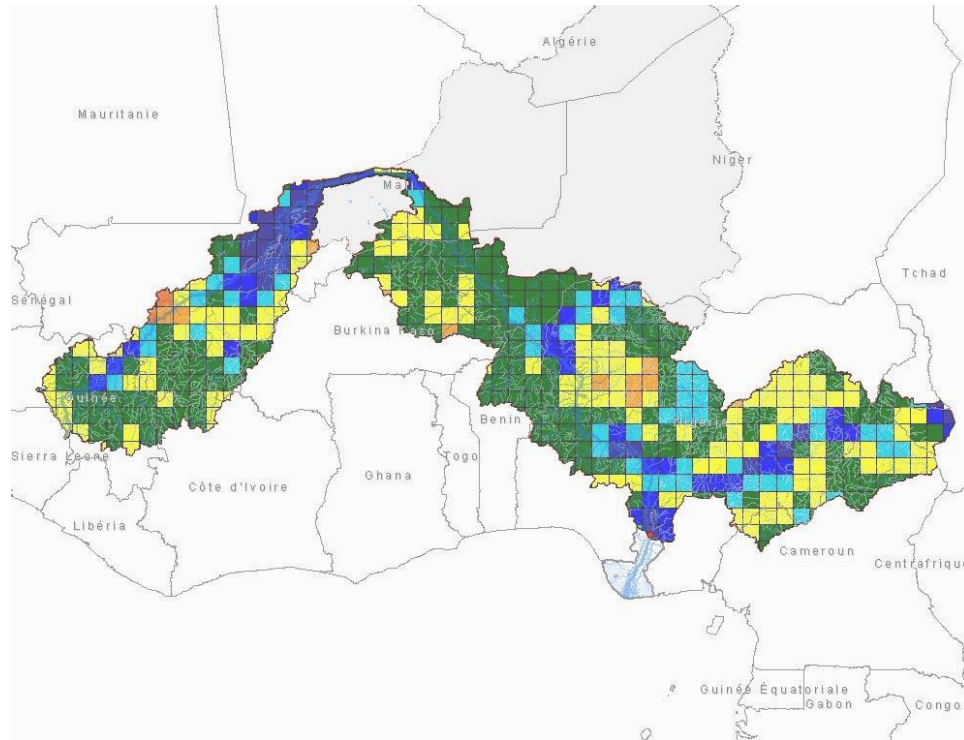
The figure 3 displays the annual time series of rainfall and discharges for the River Niger at the Onitsha station in Nigeria, which is the closest to the mouth of the basin.

Figure 3: annual rainfall (thin line, 1901-1998) and discharges (bold line, 1950-1987) for the River Niger at the Onitsha hydrological station in Nigeria.



The annual average rainfall over the basin over the 1901-1998 period is about 1024 mm, and the PE is about 2090 mm over the same period, according to the CRU data. The annual average discharge over the 1950-1987 period is about 5870 m³.s⁻¹, for an annual rainfall average of 1017 mm during the same period, and a PE of 2086 mm (Penman-Monteith formulae). The soil Water Holding Capacity (according to the FAO soil map of the world, maximum values) is about 216 mm, which represents an average for the whole River Niger at Onitsha. The basins surface is 1 249 217 km², so the average runoff coefficient for the whole River Niger is of 14.5%. The basin surface is considered as the active part of the basin, thus excluding intentionally the Gourma endorheic area in the East of Mali, and all the fossil network of the Saharan left bank of the River Niger. For more details the River Niger basins characteristics are downloadable for free at the <http://www.hydrosociences.fr/sierem> website, under Arcview format. The figure 4 illustrates the kind of files available, for the WHC.

Figure 4: Niger river basin at Onitsha. Map of Water Holding Capacity for half degree squares, from the SIEREM base of 360 West African river basins (after FAO max data (1995)).



WP3:

- Draft literature review (concepts and indicators, rainfed crop WPr, irrigated crop WPr, animal production and water, fisheries and water) and review of major databases regarding yields of major grain crops due in August

WP4:

- Final draft of the concise literature review on robustness of SES related to water resource management due shortly
- First drafts of the monograph associated with the Talo Dam case study expected shortly: the first one at the beginning of August, and the second at the end of August

WP5:

- Interim report and 5 page summary for atlas due august
- Existing IWMI reports on the irrigation potential in Niger Basin and other major basins of Africa, an overview report on Niger Basin (compiled for CPWF) and various documents and papers related to Office du Niger in Mali available

WP6:

- The database structure and the website application to use it available to share with other BFP Programs
- First Basin GIS layers available on website

The BFP Niger poster for the CPWF competition will also be available in August

FINANCIAL STATEMENT

See attached status of expenditure and certified financial statement.

APPENDIX MONTHLY PROGRESS REPORTS

Month: February 2008	Basin: NIGER
Report	Action
(What happened)	(What next?)
<p>Overall Virtual meeting held with WP leaders BFP1-BFP2 workshop held in Cali Inception workshop organised by JCC and AO Supporting documents for MOUs partially received, under review by JCC and AO.</p>	<p>Inception workshop planned for March 23-March 26th 08 in Bamako, Mali MOUs to be finalised at Workshop</p>
<p>1 Water poverty John Ward and team (Anna Lukasiewicz and David Kazcan) finalising MOU documents Reviewing poverty documents Organising basin tour</p>	<p>WP1 undertake Basin Tour in Mali and Niger in March</p>
<p>2 Water availability Gil Mahé assisting project partner (Gaston Lienoux) in Cameroon/Nigeria to set up office (purchase laptop etc, local logistics) Gil Mahé organising recruitment of Nigerian student GM finalising MOU documents, organising travel for workshop</p>	<p>Data collection for Benoue River by Gaston Lienoux starts Kirby et al. WEAP assessment for BFP Niger reviewed by team to see how to integrate/improve the model with available data</p>
<p>3 Water productivity Bruno Barbier allocating tasks and responsibilities within this large WP. Specialists identified for fisheries, irrigation, husbandry and rainfed agriculture. BB in Niamey and Bamako to meet project partners, allocate tasks and identify available data Workplan by issue and scientist under review by BB and team Finalising MOU documents, organising travel for workshop</p>	<p>BB finalise task, workplan and budget allocation within WP</p>
<p>4 Institutional analysis Armelle Caron organising recruitment of additional resources/students Finalising MOU documents, organising</p>	<p>Finalise MOU documents</p>

travel for workshop	
5 Intervention analysis Regassa Namara finalising MOU documents, organising travel for workshop	Finalise MOU documents
6 Knowledge base development JF Boyer presenting WP6 proposal (website, database, Google Earth interface etc) at Cali and discussions with Norbert re IDIS JF Boyer and Claudine Dieulin working on BFP Niger website conception JFB creating forms to validate database entries Claudine Dieulin advising WP1 leaders on available GIS data JFB finalising MOU documents, organising travel for workshop	
Workshops / Conference BFP1-BFP2 workshop held in Cali. JCC, AO and JF Boyer attended. J Lemoalle represented BFP Niger at BFP Fisheries workshop also in Cali.	Inception workshop planned for March 23-March 26 th 08 in Bamako, Mali
Impact Assessment JCC and AO attended Impact Pathways workshop in Cali, where IP was drafted. Document reworked by AO	Document to be submitted to Boru & Sophie for comments before inception workshop, where it will be finalised with the WP leaders
Other Discussions with WRCU and receipt of official letter of support from WRCU Invitation sent to NBA re: Workshop attendance (both by mail and fax via our IRD representative in Niamey). 3 rd correspondence with NBA in 2008 – still awaiting a reply Meeting with Agropolis representatives re: additional funds for restitution/valorisation (bilingual Atlas) JCC and AO meetings with IRD finance department to organise advance of funds, pending reception by CPWF	JCC and AO to finalise administrative, financial and logistical issues for inception workshop.

Month: March 2008	Basin: NIGER
Report	Action
(What happened)	(What next?)
<p>Overall (further details in sections below) Inception workshop held in Bamako, Mali 23-26.03.08 MOU and Project Documents required by LOA finalised with WP leaders (except WP5) And sent to CPWF Phone meeting with NBA executive secretary about project</p>	<p>MOUs to be signed by respective institutions and finalised by IWMI WP5 Meeting in person on 2nd May to be organised</p>
<p>1 Water poverty WP1 Basin Tour : Meetings held with local and international NGOs. Interviews with villagers of four ethnic groups in Mali in Sahel region, Dogon country and inner delta. 4 day Burkina Faso field trip to conclude rapid basin tour. Literature review commenced Methodology finalised. Presentation of methodology at Bamako workshop MoU finalised at Bamako workshop</p>	<p>Literature review of poverty analysis methodologies specific to water governance Compilation and assessment of spatial data sets in preparation for analysis</p>
<p>2 Water availability GM Finalised the recruitment of two local assistants Local assistant in Cameroon started gathering data for the Benue River Gil Mahé works with WP6 staff to choose available GIS layers from SIEREM HSM Database review to select time series for the project. Presentation of workplan at workshop MOU documents finalised</p>	<p>Local assistant in Nigeria begins work April 1st Local assistant in Cameroon concludes data gathering for the Benue River</p>
<p>3 Water productivity Bruno Barbier hired a local assistant to study water productivity concepts and indicators. BB allocated tasks and responsibilities within this large WP. Specialists identified for fisheries, irrigation, husbandry and rainfed agriculture. Outside partners identified. BB in Niamey and Bamako met project partners, to allocate tasks and identify</p>	<p>In April BB will contract partners in the Niger River Basin</p>

<p>available data Workplan by issue and scientist reviewed by BB and team Finalising MOU documents, organising travel and attending inception workshop</p>	
<p>4 Institutional analysis Armelle Caron : Reception and supervision of an additional research assistant Finalising the recruitment of an additional research assistant Pursuing grey and academic documents collection, review and analysis Finalising MOU documents (task, workplan and budget allocation within WP) Travelling and participating to the launching workshop Meeting and initiating collaborations with the others leaders and team members of the others WP and with local partners</p>	<p>Reception and supervision of an additional research scientist</p>
<p>5 Intervention analysis Barry Boubacar represented WP5 at the workshop, replacing Regassa Namara. Project proposal reviewed to take into account budget & time restrictions. Under review by IWMI</p>	<p>To agree on project proposal (Budget etc) asap</p>
<p>6 Knowledge base development JF Boyer presenting WP6 proposal (website, database) at Bamako and worked with all WP leader to schedule the data exchange between WPs and WP6 and explain the metadata requirements of DB JF Boyer and Claudine Dieulin working on BFP Niger website conception and launch the forum part of the website Claudine Dieulin works with WP2 leaders to select available GIS layers from SIEREM JFB finalising MOU documents, organising travel for workshop</p>	<p>Finalise the open access website pages and populate it</p>
<p>Workshops / Conference Inception workshop held in Bamako, Mali from 23-26 march 2008. Presentation of</p>	

<p>the CPWF requirements/ideology, of each WP's workplans, finalisation of MOU docs, discussion between WPs to determine cooperation between WPs (joint visits, inputs across WPs, data needs etc)</p> <p>The Executive Secretary of the Niger Basin Authority delegated Mr Pascal Kaboré to attend the conference as Mr Dessouassi the Basin coordinator was "too busy". Mr Kaboré did not come with any information as to how the NBA views their role in project, and did not have necessary tools (laptop, notepad) to work. All the key documents were given to him on USB key.</p>	<p>Mr Kaboré to provide summary to NBA on conference and explain how they intend to collaborate on this project.</p>
<p>Impact Assessment</p> <p>Documents submitted to Boru & Sophie and feedback received. Documents reviewed in light of feedback and of the WP and Basin Coordinator's work plans.</p>	
<p>Other</p> <p>Phone meeting obtained with Niger Basin Authority Executive Secretary, Mr Mohammed Bello Tuga. Very receptive and interested by the project but not aware of lack of response from his employees/basin coordinator. Accepted to meet us in person in Niamey on May 2nd to discuss project, cooperation etc.</p>	<p>Confirm appointment and organise attendance at meeting in Niamey</p>

Month: April 2008	Basin: NIGER
Report	Action
(What happened)	(What next?)
<p>Overall Literature review and data gathering (definition of basin country data population, water/agric data Aquastat etc) Coordination team with WP6 defines standard data/forms for WP to ensure homogeneity (GIS basin contours, country boundaries, administrative regions etc) to be posted on website Installation of 2 interns in MPL (collaborating on WP4 and WP6). Definition of case study location and organisation of logistics. Coordination team organises meeting with NBA Executive Secretary on May 2nd 2008. MOU signing delayed due to WP5 (IWMI) finalising MOU</p>	<p>Proceed to MOU signatures Meet with NBA Executive Secretary Finalise WP4 intern's case studies in Mali/Guinea Continue lit review / data gathering to set standard data for all WPs Consider conception of poster for final restitution</p>
<p>1 Water poverty – CSIRO Completion of basin tour to Burkina Faso, looking at micro irrigation dams, land degradation and water scarcity issues. Continued collation of datasets for landscape model. Formatting and manipulating collected GIS layers for later statistical analysis</p>	<p>Continued collation of datasets for landscape model. Manipulation of some of the more complicated GIS data layers, application of simple spatial analysis to extract variable values of use. Commence literature review into methods of water poverty analysis and Mali case study.</p>
<p>2 Water availability – HSM Formalities going on for the venue in Montpellier of the partner from Lagos University. Partner from Cameroon gathering data for the Benue River. WP leader visiting partners in Niamey</p>	<p>Nigerian partner travel to Montpellier scheduled in mid-May. Partner from Cameroon to travel to Garoua by beginning of May to gather data for the Benue River.</p>
<p>3 Water productivity – CIRAD No report received from WP leader</p>	
<p>4 Institutional analysis – AgroParisTech ENGREF Supervision of two additional research assistants Pursuing grey and academic documents</p>	<p>Meeting in Montpellier (WP4 partners) Second draft of the concise literature review on robustness of SES/water resource</p>

<p>collection, review (literature on institutional context/water access and productivity ; literature on robustness of SES/water resource) and analysis. First draft (work in progress) of a concise literature review on robustness of SES/water resource)</p> <p>Supplements to the identification of relevant cases study (Niger and Guinea)</p>	<p>Supplementary literature review on the links (or causal paths) (a) between wealth or wealth inequality and resilience of institutional arrangements (common-pool resources) (b) technological change and water resource management institutions Data bank (consulted literature) Case study preparation Local assistant recruitment (Mali)</p>
<p>5 Intervention analysis – IWMI Negotiations have overrun with IWMI and we are waiting to hear IWMI’s definite response (can they provide the required input considering the available budget) in order to finalise MOU.</p>	<p>MOU to be signed by respective institutions</p>
<p>6 Knowledge base development – Jean-François Boyer and team Enhancement of the BFP Niger web site: first documents such as metadata forms and GIS layer of the entire basin available for download Completion of the special management pages and function of the database. Definition of the standard basin contours (and basin sections) with Camille Marquette, Claudine Dieulin, Gil Mahé and Andrew Ogilvie to provide standard GIS layers to other WPs Purchase of the domain name www.bfpniger.eu</p>	<p>Continue GIS layers definition , contact the WP leaders and CPWF for the launch of the forum Install in the DNS server the IP resolution for the domain name www.bfpniger.eu Setup the internet server to move the web site from armspark.msem.univ-montp2.fr/bfpniger to www.bfpniger.eu Define the training subject course for the database website links</p>
<p>Workshops / Conference Article for XIII WWC (Volta basin) submitted to CPWF Article for IFWF2 in preparation</p>	<p>Continue work on IFWF2 article</p>
<p>Impact Assessment Discussions with Boru on IP. Project progressing towards IP strategy (wide range of partnerships, meeting with NBA Executive Secretary planned, WRCU interested to collaborate, additional funding from Agropolis and IRD under negotiation</p>	

<p>Other Discussions with IRD to support restitution efforts Discussions with Agropolis regarding atlas and restitution efforts Discussions with WRCU to reinforce collaboration and promote restitution</p>	
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Month: May 2008	Basin: NIGER
Report	Action
(What happened)	(What next?)
<p>Overall WP5 MOU finalized after lengthy negotiations All MOUs currently reviewed by IRD legal team Gil Mahé (WP2) replaces JC Clanet in Niamey, Niger to meet with NBA executive secretary. Executive secretary is absent but delegates meeting to basin coordinator. Prolific meeting with basin coordinator, who agrees to collaborate on programme notably through data exchange and hosting the final restitution. Also admits to lack of input in recent months due to other engagements. Organise reimbursement of expenditure for Pascal Kaboré (representative of Basin Coordinator) at Bamako Inception Workshop. No report received from NBA following workshop. Management of two BFP interns (one working on defining standard GIS layers for BFP, other working with WP4). Organise scientific content and logistics with IRD Bamako for fieldwork in Guinea. Reroute fieldwork to Mali, as current political situation in Guinea is no longer conducive to fieldwork Training on reference manager (end note) to facilitate importation of WP references and writing of final report</p>	<p>Accelerate procedure and advance to signature of MOUs</p> <p>Work with WP6 to enable direct import from reference manager to WP6 database & vice versa</p>
<p>1 Water poverty Continued collation of datasets for landscape model. Commenced building maps based on datasets, including Demographic and Health Surveys. These include child mortality, access to water, total available renewable water resources, distance from administrative centers. Formatting and manipulating collected GIS layers for later statistical analysis. Literature review underway, summarizing</p>	<p>Continued collation of datasets for landscape model. Continued manipulation of some of the more complicated GIS data layers, application of simple spatial analysis to extract variable values of use. Begin preliminary data analysis. Continue literature review into methods of water poverty analysis and Mali case study.</p>

<p>both poverty in the region and methodology suitable for measuring it.</p>	
<p>2 Water availability Nigerian partner traveled to Montpellier at the end of May Partner from Cameroon traveled to Garoua to gather data for the Benue River and the Lagdo dam WP Leader visit to Niamey, to meet local partners and identify additional data sources. Data collection for the whole Niger basin and for the Rep. of Mali</p>	<p>Nigerian partner to begin his work in Montpellier : Data inventory for the Nigeria, and hydrological modeling for the Niger river in Nigeria. Cameroonian partner to make the inventory of data available for the Benue river in Chad and Cameroon. First assessment of available data for the study of water resources availability at the scale of the Niger river basin, before the tour in West Africa for collecting additional data during the summer</p>
<p>3 Water productivity Literature review on water productivity methodology (continuing) Collection of references regarding water productivity in the Niger basin</p>	<p>Mission to Niamey to collect data in ABN and Agrhymet and ministries Literature review of water productivity in the Niger basin, and references uploaded to WP6 Analysis of the ARID database regarding 14 irrigated schemes</p>
<p>4 Institutional analysis Supervision of one additional research assistant Pursuing grey and academic documents collection, review (literature on institutional context/water access and productivity ; literature on robustness of SES/water resource) and analysis. Second draft (work in progress) of a concise literature review on robustness of SES/water resource) 27th of May : Meeting in Montpellier (WP4, Coordination and WP6 partners) to discuss GIS/mapping issues, WP content and report structure) and finalise field work content for intern. Due to recent political unrest in Guinea, had to abandon the idea of carrying on any study case in this country. Will now concentrate on relevant case study in Mali : the African Development Bank's Talo Dam project on a tributary of the Niger named the Bani River. Skype Meeting with Boubacar Barry (WP5) on the identification of</p>	<p>Supplementary literature review on the links (or causal paths) (a) between wealth or wealth inequality and resilience of institutional arrangements (common-pool resources)(b) technological change and water resource management institutions (c) institutional indicators at the Niger Basin countries level Second draft of the concise literature review on robustness of SES/water resource Preparation of interns' field study Data bank (consulted literature): work in progress</p>

<p>another relevant case study in the Inner Delta (Mali) and comparative perspective with the Talo Dam case study Skype Meeting (28th of May) with Abdramane Traore (Expert - Project Development Officer US African Development Foundation - Malian partner) for local assistant recruitment (Mali)</p>	
<p>5 Intervention analysis</p> <p>No report received</p>	
<p>6 Knowledge base development Search for GIS administrative boundaries for Niger river basin countries (at country, region and prefecture level). Production of base GIS layers for each section of the Niger river, disseminated to WP via website. Constant updating of BFP Niger website (www.bfpniger.eu)</p>	
<p>Workshops / Conference N/A</p>	
<p>Impact Assessment Significant step forward in communication with Basin coordinator (NBA), thanks to recent meeting. He confirmed interest in project and desire to host final restitution effort. Details to be arranged Basin junior scientists supported through WP2 and soon WP4</p>	
<p>Other Review report on Water use accounting – Niger basin for Myles Fisher/Mac Kirby Discussions ongoing with IRD and Agropolis re publication of atlas and final restitution Ongoing reflection on water productivity definitions and calculations, notably with BFP Volta/Lemoalle. Contacts made with France Telecom to instigate project on remote sensing of nomadic herds in Inner Delta of Niger river, looking at reducing conflicts and promoting multiple uses of water</p>	<p>Correction of Jacques Lemoalle paper on water productivity on aquatic systems</p>

Month: June 2008	Basin: NIGER
Report	Action
(What happened)	(What next?)
<p>Overall Negotiations and meetings with WP3/CIRAD to amend MOU and simplify financial/legal arrangements. Provide logistical support to WP4 interns in Mali Continue background reading to support WPs and identify common data sources (population increase, climate scenarios etc) Meeting with WP6 team to discuss content, layout, structure and confidentiality issues for online database Continue lobbying with Echel Eau for funds for final restitution and atlas production Additional discussions to submit proposal for final restitution and atlas to European Union within SPLASH project (http://splash-era.net/) Substantial database on the Niger river received from IRD Bamako (Luc Ferry). DB now needs to be adapted to WP6/CPWF confidentiality requirements Discussions on content of poster for IFWF2/Addis. In parallel, discussions held to produce documentation on BFP Niger for basin stakeholders</p>	<p>Proceed to signatures</p> <p>WP6 to develop tool to import bibliographical references from software such as EndNote</p> <p>Draft proposal to be submitted in July 08</p>
<p>1 Water poverty Continued collation of datasets for landscape model. Refinement of water access and availability variables – these are central to the analysis. Continued constructing of maps, based on FAO data and Demographic and Health Surveys Continued formatting and manipulating GIS layers for later statistical analysis. Compiling manipulated variables into form ready for modeling. Literature review underway, introduction approaching completion. Summarizes both poverty in the region and methodology</p>	<p>Begin preliminary data analysis based on variables collated so far. Continued manipulation of some of the more complicated GIS data layers. Add to and refine the variables. Attempt to fill outstanding gaps in the data. Continue literature review into methods of water poverty analysis and Mali case study.</p>

suitable for measuring it.	
<p>2 Water availability Nigerian partner installed at Montpellier, working on data and river basins delineation. Training for future Arsenic sampling on river Niger at the chemistry lab of HSM. Partner from Cameroon gathering data and documentation for the whole basin. Also preparing for his basin tour during July and August : Mali, Burkina-Faso and Niger (NBA, AGRHYMET) Gathering data at HSM Montpellier: water availability and access for Mali, at the village scale. Private data for demonstration only, no copy authorized. Obtain authorization to work on an integrated model of the Niger river inner delta: MIDIN, formerly developed by an multidisciplinary team of IRD in Mali in 2000.</p>	<p>Nigerian partner to begin hydrological modeling for the Niger river in Nigeria on selected basins. Cameroonian partner to travel to Mali in July. Work with Malian authorities for hydrology and Tossaye dam. Work with WP6 on developments of the MIDIN model for use in the BFP Niger program.</p> <p>WP2 et al to present to coordination cell MIDIN functionalities – 1st functional model on water uses in Inner Delta</p>
<p>3 water productivity Literature review on water productivity methodology (continuing) Collection of references regarding water productivity in the Niger basin Mission to Niamey to collect data at ABN, Agrhymet and ministries (ARID) Translation of the water productivity literature in French Analysis of the ARID database regarding 8 irrigated schemes Jacques Lemoalle visit to Nigeria Inland Freshwater Fisheries Research (NIFFR at New Bussa on Lake Kainji) Nigeria (May 31-June 8) and to Institut d’Economie Rurale (IER), Mopti (Inner Niger Delta) Mali, 10-16 June. To discuss on fisheries resilience (CP 72) but also to collect data and info on fisheries and fisherfolk for WP 3.</p>	<p>Analysis of a typical Nigerian farm with the Olympe software regarding productivity measures Finishing Literature review of water productivity in the Niger basin Analyzing the APPIA / ARID database regarding 8 irrigated schemes</p>
<p>4 Institutional analysis Supervision of one additional research assistant Pursuing grey and academic documents</p>	<p>Final draft of the concise literature review on robustness of SES/water resource Supplementary literature review on the links (or causal paths) (a) between</p>

<p>collection, review (literature on institutional context/water access and productivity ; literature on robustness of SES/water resource) and analysis.</p> <p>Third draft (work in progress) of a concise literature review on robustness of SES/water resource)</p> <p>Supplements to the investigation of the African Development Bank's Talo Dam project on a tributary of the Niger named the Bani River (Bamako - Mali : interviews; grey literature and official reports collection).</p> <p>10 June : EndNote Software tool training to facilitate transfer of references to WP6 (training provided by the Cemagref information unit – Clermont-Ferrand)</p> <p>13 June : Meeting in Clermont-Ferrand between WP4 and WP6 partners to discuss potential of GIS for WP4 needs and basic training on GIS</p>	<p>wealth or wealth inequality and resilience of institutional arrangements (common-pool resources)(b) technological change and water resource management institutions (c) institutional indicators at the Niger Basin countries level</p> <p>Data bank (consulted literature): work in progress</p> <p>First stage analysis of water related conflicts in Upper Niger/Inner Delta region. In addition to existing conflict between rainfed Office du Riz de Ségou and irrigated Office du Niger de Mopti, 3 additional structures are set to increase the strain placed on water resources (weirs at Talo and Djenne in Mali for irrigation, Fomi dam in Guinea for hydroelectricity). First case study on Talo weir by WP4 assistants.</p>
<p>5 Intervention analysis</p> <p>Literature review has been started and relevant documents are being compiled</p> <p>The collection of secondary data required for running PODIUMSIM model has started. For the riparian countries of the Niger Basin data on cropping pattern, crop production statistics and area cultivated, irrigated area, livestock population, food consumption, human population is in progress.</p>	<p>The immediate next plan of action is to start gathering information on possible technological and institutional water related interventions.</p>
<p>6 Knowledge base development</p> <p>Continued the GIS layer definition.</p> <p>Meeting in Clermont-Ferrand with WP4 leader to train her on GIS functions and acquire preliminary data.</p> <p>First meeting in Montpellier with some WP Leaders and coordination cell to define a first draft of Website/database structure and functions.</p> <p>Website development</p>	<p>Website development follow up</p> <p>Meeting to set website structure and functions</p>
<p>Workshops / Conference</p> <p>N/A</p>	

<p>Impact Assessment Working on IP reporting sheets provided by Boru.</p>	
<p>Other Attended ESRI ArcGIS level II training Ongoing discussions and teleconference with France Telecom/Orange representatives re project on remote sensing of nomadic herds in Inner Delta of Niger river, looking at reducing conflicts and promoting multiple uses of water Discussions with Mutsa Masiyandima (IWMI-South Africa) on EU project “Enhancing the role of wetlands in integrated water resources management for twinned river basins in EU, Africa and South-America in support of EU Water Initiatives”, to create interesting synergies between projects.</p>	<p>Prepare 6 monthly progress report</p>