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Prime Minister's Office

**High Commission for Niger Valley
Development**



AFRICAN DEVELOPMENT BANK

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**“KANDADJI” ECOSYSTEMS REGENERATION AND NIGER VALLEY
DEVELOPMENT PROGRAMME**

(KERNVDP)

DETAILED POPULATION RESETTLEMENT PLAN

EXECUTIVE SUMMARY

February 2008

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Acronyms and Abbreviations

ADB:	African Development Bank
ADF:	African Development Fund
BOAD:	West African Development Bank
COFO:	Land Committees
ESIA:	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
HCAVN	High Commission for the Development of the Niger Valley
IDB:	Islamic Development Bank
EIG:	Economic Interest Group
LDP:	Local Development Plan
NGO:	Non Governmental Organization
PAP:	Persons Affected by the Programme
KERNVDP:	Kandadji Ecosystems Regeneration and Niger Valley Development Programme
RP:	Resettlement Plan
SMIG	Minimum Guaranteed Wage

Project Name : **“Kandadji” Ecosystems Regeneration and Niger Valley Development Programme**
Country : **Niger**
Project Number : **P-NE-AA0-017**

Summary of Detailed Population Resettlement Plan

1. Introduction

1.1 The “Kandadji” Ecosystems Regeneration and Niger Valley Development Programme (KERNVDP), originally known as the “Kandadji Dam Project”, has always been considered as a major programme for Niger. In the 1990s, when Niger’s authorities became aware of the serious environmental degradation, they reviewed the previous over-ambitious options for the Kandadji site, and made the site play only the role of regulating the Niger River.

1.2 More recent appraisals show that the proposed objectives can be achieved by a small structure with less negative environmental and social impact on the area upstream. Consequently, the feasibility of the structure had to be determined in light of the socio-economic context and achievement of the proposed goals. Taking into account these priorities, the Government of Niger requested and obtained financing from the African Development Bank Group (ADB) in 1998 to conduct a feasibility study on the Kandadji Dam.

1.3 Under the study, an environmental and social diagnosis, as well as an initial environmental and social assessment were also conducted. The findings were presented in October 2002 at a donors’ roundtable, which approved them. Subsequently, a detailed environmental and social impact assessment (ESIA) including, a Population Resettlement Plan (PR) and a Local Development Plan (LDP) was conducted, with ADF financing, to deepen the results of previous studies. The final design of the dam was prepared with IDB financing, and that of 2000 ha irrigation areas with BOAD financing.

1.4 This document is the executive summary of the Population Resettlement Plan, including a Local Development Plan. In addition to this introduction, the document comprises the following sections: 2) a description and rationale of the Kandadji Programme; 3) potential impacts of the Programme on the human environment; 4) organizational responsibility; 5) community participation and socioeconomic studies; 6) identification and description of persons affected by the programme, and integration with the host communities; 7) analysis of the legal framework, including conflict resolution and appeal mechanisms; 8) institutional framework; 9) eligibility ; 10) loss evaluation and compensation; 11) identification of possible resettlement sites, selection and preparation of resettlement sites; 12) environmental protection; 13) implementation schedule, costs and budget; 14) monitoring and evaluation of the RP, and lastly 15) conclusion.

It should be noted that the LDP was prepared to enable affected communities to better adapt their economic activities to the new realities, and enable them to become the main beneficiaries of the opportunities created by the KERNVDP. The RP and LDP

are consistent with the Poverty Reduction Strategy of Niger since they aim at enabling affected persons to regain, and possibly improve, their standard of living following the implementation of the Programme. These two plans will help to improve the KERNVDP by transforming some negative and, in principle, highly disruptive impacts into development opportunities. They are inter-related, and their full implementation is required for achievement of the social and economic objectives of the KERNVDP.

1.5 The main objective of the RP is to ensure that the communities that must leave their living environments and lose part of their property as a result of the implementation of the KERNVDP are treated in an equitable manner and enjoy their share of the programme benefits.

To that end, the RP aims at the following objectives:

- as much as possible, minimize involuntary resettlement and the expropriation of land, by exploring viable alternatives during the project design ;
- ensure that the persons affected are consulted and have the opportunity to participate in all the key stages of the formulation and implementation of activities relating to involuntary resettlement and compensation;
- determine compensations on the basis of the impacts suffered to ensure that none of the persons affected by the programme is disproportionately penalized;
- establish a system of equitable, transparent, effective and reassuring compensation;
- assist affected persons in their efforts to improve their livelihoods and standard of living, or at least to restore them in real terms to their level before displacement or implementation of the programme, depending on which is more beneficial for them;
- design and carry out involuntary resettlement and compensation activities in terms of sustainable development by providing adequate investment resources to ensure that persons affected by the programme have the opportunity to share the benefits; and;
- pay special attention to the needs of the most vulnerable of the affected persons.

2. Description and Rationale of the Kandadji Programme

2.1 Niger, a country that straddles the Sahel and the Sahara, is ranked as the 22nd largest country in the world with an area of **1,267,000 km²** on which an estimated **12 million inhabitants** live. It is bounded to the north by Algeria and Libya, to the east by Chad, to the south by Nigeria and Benin, and to the west by Burkina Faso and Mali. The Niger River (3rd longest in Africa), at the extreme west of the country, is the only permanent waterway in the country. Only **550 km** of its total length of **4200 km** pass through the country, and it flows from the Malian border to the confluence of the border with Nigeria and Benin. With very low annual rainfall and in view of its geographical location, Niger has been experiencing severe droughts since 1970. Over the same period, the average annual yield of the river has diminished by over 30% as a result of climatic changes. The populations are vulnerable to such climatic changes. Farm lands

have decreased steadily and their fertility has diminished due to the combined effects of the drought and population pressure. To remedy the situation, the “*Kandadji Ecosystems Regeneration and Niger Valley Development Programme (KERNVDP)*” was chosen as a priority sector programme of the Government by Decree No. 2002-217(a) of 22 August 2002.

2.2 The general area of the study comprises all the districts adjacent to the Niger River from the Malian border in the north to the Nigerian border in the south. However, for the purposes of project impact assessment, a detailed study area was defined in terms of territories that run the risk of being the most affected by the project. With this definition, the detailed study area with the major impacts covers a region of approximately 4,500 km² comprising: the area for the future reservoir to be created by the dam, an adjacent area of variable width bounded to the north by the Malian border, a strip of land downstream the dam about 10 km on either side of the Niger River and with an approximate length of 80 km, as well as a second strip further downstream 2 km on either side of the River up to Tillabéri. A map of the areas studied is given in the Annex.

2.3 The Kandadji site is recognized as a suitable location for the dam because the river bed is quite narrow at that point as a result of the presence of a rocky hill on the right bank at Ourouba that towers over the neighbouring landscape by over 100 m. The site is also appropriate for the location of the dam in view of the rocky nature of the river bed that can support sizeable concrete structures, and the presence of an island that will facilitate the diversion of the river during the construction phase. This site is close to the village of the same name: 61 km downstream the Malian border and upstream the Niger portion of the Niger River, 187 km north-west of Niamey. A few kilometres upstream the site, the Gorouol river flows into the Niger widening the valley considerably, and thereby increasing the capacity of the proposed dam. The relevance of the choice of the site was confirmed by the geotechnical studies conducted as part of the final design of the dam.

2.4 The Kandadji Programme is mainly intended to improve the living conditions of the communities by ensuring food security through the integrated development of natural resources, the control of desertification and environmental degradation, regeneration of the natural environment, and satisfaction of energy needs. The objectives of the Programme are to: (i) increase the water level and reduce environmental degradation, (ii) ensure the sustainability of irrigation and water supply, and (iii) produce electric energy by creating a reservoir of sufficient capacity. The programme will help to meet the following needs: (a) supply of drinking water to urban communities; (b) supply of water to rural communities; (c) supply of water to livestock; (d) supply of water to industries; (e) irrigation; (f) contribution to the country's electricity supply; and (g) increase in the resilience of ecosystems to climate change.

2.5 The main activities of the programme are as follows: (a) construction of an 8.4 km dam made of an earth dyke equipped with related structures and with a capacity of 1.6 billion m³ of water and a regulated discharge of 120 m³/s in Niamey to provide water for drinking purposes and various socioeconomic uses (drinking water, irrigation and energy); (b) construction of a 130 MW hydroelectric plant and a 132 KV high voltage line between Kandadji and Niamey over a distance of 188 km; (c) development of the first phase of 6,000 ha irrigation scheme mainly for the benefit of communities

affected by the Programme, with a medium-term target in 2034 of 45,000 ha out of an irrigable potential of 122,000 ha; and (d) implementation of the environmental and social management plan (ESMP) and the Resettlement Plan (RP) for the people to be displaced (5,290 households).

2.6 Preparatory works to be undertaken prior to the construction of the dam will consist in the construction of the following: (i) access roads to individual housing areas and borrow pits; (ii) a bridge over the Niger to provide access to the right bank; (iii) the living quarters of the contractor and project owner; and (iv) cofferdams for the first phase of the river regulation. An emergency phase of the ESMP and the RS, which will start at the commencement of the preparatory works and spread over a six-year period, up to the end of construction of the dam, will entail the following activities: (a) the construction of reception facilities for the displaced populations (such works must begin from the second year and be completed before the priming of the reservoir); (b) the displacement and resettlement of populations residing within or around the dam area, borrow pits, access roads and dwelling places to be constructed; (c) the development of irrigation schemes on an estimated area of 2,000 ha for communities to be affected by the initial displacement and those whose farmlands will be rendered unusable; (d) other community amenities for the affected populations; (e) activities of the environmental component to be undertaken under the construction management sub-programme, the impact mitigation sub-programme and the consultation sub-programme.

2.7 Other activities to be undertaken are as follows: procurement of the lands earmarked for expropriation, implementation of the compensation package, construction of facilities for the affected populations, deviation of the RN-1, and removal of vegetation in the works zone.

3. Potential impacts of the project on the human environment

3.1 Significant impacts are expected on the human environment. The impacts will appear during the preparation, construction and operational phases. In particular, during the preparation phase, the project will expropriate land for public utility. Consequently, a compensation process will be put in place, and the initial compensations will be granted to eligible persons. The major negative impacts of this phase are related to the expropriation of lands, as well as displacement and resettlement of populations. These activities will lead to the involuntary, but concerted, displacement of about 35,000 persons (based on the November 2005 count). However, despite their disruptive nature, the involuntary displacement and resettlement will also generate tangible benefits. The compensation process will help to secure the lands allocated in compensation, and thereby officialize the property rights. Compensation will also be given to affected persons by providing them with alternatives to regain and even improve their standard of living.

3.2 During the construction phase, the impacts on the human environment will concern the various construction activities and priming of the reservoir. These activities will result in the loss of about 8% of productive farmlands in the flooded area and destruction of wood and fodder resources, particularly bourgou. To mitigate this impact, it is recommended that the production potential of pastures be improved by planting adapted wood and fodder species and by developing lakeside pastures between Firgoune and Koutougou. Moreover, major heritage sites will be lost as a

result of the priming of the reservoir. Even though archaeological excavations on the construction and borrow pit sites have not yielded significant finds, this impact can only be partially mitigated. It was proposed that archaeological surveillance be conducted during the works. Other significant residual impacts will include an increase in the incidence of STI/HIV AIDS and tuberculosis. A vast information, sensitization and public health education programme was therefore proposed. It will also be more difficult for people and livestock to cross the river, and the land use in the area to be flooded will be modified. To mitigate this impact, and apart from the dam which will be eventually used as a bridge for crossing the river, appropriate canoes will be proposed to the riparian populations. Some positive impacts are expected during this phase, namely the creation of business opportunities, mainly for the farmers, stockbreeders and fishermen who will supply labour; job creation for the construction of all the structures and tree clearing; development of new skills; reduction of seasonal rural exodus and idleness of youths; the discovery of heritage sites and cultural artefacts on the construction sites; positive migratory trends in the area, as well as beneficial effects associated with the tree clearing that will sustain fish yields and provide wood resources to the displaced persons.

3.3 Many positive social and economic impacts are expected during the operation phase. The impacts include access to regular water source upstream and downstream the dam; improved standard and quality of life of displaced persons; improved standard of living of the populations both upstream and downstream the dam; improved nutritional status of persons affected by the programme; improved health status of resettled populations as a result of adequate water infrastructure; opening up of the Gorouol district; development of new skills; reduction of the seasonal rural exodus and idleness of young people; decreased workload of women and increased civil society participation. At the economic level, the expected benefits include increased agricultural and pastoral productivity, better supply of inputs and improved access of farm, livestock and fishery produce to markets, economic development as a result of the new opportunities created by the programme; development of secondary and tertiary sectors, diversification of economic activities; economic development as a result of the electricity production and reduction of the country's energy dependence; as well as the creation of new infrastructure and services.

4. Organizational Responsibility

4.1 Implementation of the Resettlement Plan (RP) will be the responsibility of the High Commission for the Development of the Niger Valley, which will report to the Steering Committee of Donors on the results obtained. Under the authority of HCAVN, there will be four departments, namely a Technical Department, an Administration and Finance Department, an Environment and Ecosystems Management Department, and a Social and Economic Affairs Department, reinforced by two units: the Communication and Public Relations Unit and the Studies, Planning, Monitoring and Evaluation Unit. An International Advisor Committee (panel of experts) and a Steering Committee comprising representatives of technical and financial partners (TPF) will also be created.

4.2 The structures responsible for the implementation of the RP will carry out the following functions:

- The Social and Economic Affairs Department will coordinate all the RP activities, particularly the compensation of affected persons, the displacement, development of reception sites, or resettlement;
- These services will accurately define the location of the reception sites, and plan their development as well as all the displacement and resettlement stages, and oversee the implementation of all the planned activities;
- They will collaborate with the land committees (COFOs) whose main mandate will be to support the land committees responsible for establishing the customary property rights recognized in the Rural Code
- The Social and Cultural Affairs Division will compensate the affected persons in accordance with the compensation principles and process defined in the RP;
- The Communication and External Relations Unit will be responsible for all communications between the organizations in charge of implementing the KERNVDP, as well as with both male and female citizens of the affected districts and council areas;
- A legal assistance unit will be put in place to respond to the legal requests of affected persons;
- The KERNVDP village committees will serve as “link” between the HCAVN and the affected communities.

5. Community Participation and Socio-economic Studies

5.1 The preparation of the RP is based on two socioeconomic surveys (an inventory of capital goods and census of the affected populations) and consultations with the authorities and populations concerned. Conducted in May and June 2005, the inventory of capital goods entailed visits to 300 different sites, even though 124 of them had collective amenities. The major administrative sites have the largest number of collective amenities. In the hamlets, the amenities were generally limited to a mosque and one or two cemeteries. The Yassane Police and Yasane Gorou hamlets were exceptions because they have a military border post and a customs office.

5.2 In October and November 2005, a census of the affected communities targeted 255 sites and identified 5,754 households representing about 38,000 persons. Of these sites, 241 will have to be displaced since they fall below the established minimum 230 security level. These sites include the Daya Peulh grouping, the major site of 15 administrative villages, 133 hamlets and 8 camps belonging to the Alsilame, Malagazen I, Malagazen II and Misgaderan II tribes.

5.3 It is difficult to establish with certainty the location of 9 hamlets close to the Niger-Malian border, because the border has never been demarcated accurately close to the river (no boundary marker on the right or left bank). It is recommended that the Government of Niger should clarify this situation with the Malian authorities as soon as possible. However, irrespective of the final decision, the people in these hamlets have been included in the RP since they are persons affected by the programme (PAP).

5.4 Overall, it is estimated that 5,290 households, with 34,710 persons, will be displaced. The displacement will occur in two phases. First, residents on sites close to the dam will be moved to make way for the construction of the dam, and then

persons on the flood risk sites will be moved prior to the priming of the reservoir. The first wave of displacement will affect 508 households, and the second 4782 households.

5.5 First of all, the consultations helped to orientate the proposals presented in the RP towards addressing the major concerns of the PAPs. They also provided the opportunity to gather comments on the provisional versions of the RP and the LDP. Finally, a validation workshop specifically on the provisional versions of the PR and LDP was organized by HCAVN on 20 and 21 July 2006 in Tillabéri. The workshop brought together all the stakeholders, including the Ministries concerned, the NGOs operating in the project area, administrative authorities and traditional leaders, as well as the major donors.

5.6. Participation of the affected persons: In addition to informing the PAPs, the RP proposes to consult them and involve them in all the major decisions of the RP, be it the selection of reception sites, the estimation of compensations, or the planning of displacement and resettlement. More specifically, but not exclusively, the participation of affected persons and/or their representatives will be directly required for the following activities:

- identification of reception areas to be studied in detail;
- selection of reception sites;
- preparation of parcelling plan;
- estimation of compensations granted to affected persons;
- validation of development plans of reception sites;
- formulation and implementation of displacement activities;
- planning and implementation of initiatives aimed at facilitating resettlement;
- creation of management committees for the new infrastructures; and
- monitoring of settlement activities.

6. Identification and description of persons affected by the Programme and integration with the host communities

6.1 For the purposes of the KERNVDP, eight PAP categories are considered:

- i) PAPs who have incurred the loss of one or more compounds and/or urban lands;
- ii) PAPs who have incurred the loss of one or more residential buildings and associated facilities (latrines, showers, etc.);
- iii) PAPs who have incurred the loss of farm, tree or other lands in rural areas;
- iv) PAPs who have incurred the loss of farm, utility or other buildings,
- v) PAPs who have incurred the loss of pasture lands, passage corridors or access to watering points for livestock;
- vi) PAPs who have incurred the loss of access to natural resources used in generating income or as a means of subsistence;
- vii) PAPs who have incurred the loss of temporary or permanent incomes; and
- viii) PAPs who have incurred the loss of community capital goods (infrastructures, utilities or community property).

6.2 In the majority of cases, the PAPs incur different types of losses (houses, farms, pasture lands, natural resources, cultural resources, etc.). Among them, there are so-called vulnerable persons who will be paid particular attention. Such persons may have needs relating to land or access to services or various resources that are different from most of the affected persons, or needs that are not related to the quantity of lands made available to them.

6.3 Vulnerable affected persons include:

- persons belonging to a household headed by a single woman, namely a widow, a divorcee or unmarried woman, who is hard put to meet the needs of her dependents due to lack of means of production or skills to engage in income-generating activities;
- old people and orphans whose subsistence may depend on other persons (children, brothers, cousins, uncles, etc). It is therefore important not to break the existing dependency ties;
- men and women who, for physical or cultural reasons, cannot take part in production, consumption or live with others in a household;
- landless persons, be they men or women, who do not, on a regular basis, engage in non-farming economic activities or who do not live in a household that enables them to cater for their needs.

In light of the above criteria of vulnerability, the number of vulnerable persons identified during the census stood at 9,419.

7 Legal framework, including Conflict Resolution and Appeal Mechanisms

7.1 This section presents the major laws and decrees that define ownership in Niger. The legal framework describes practices in Niger concerning compensation and expropriation for public utility. It also outlines the policies of international donors with regard to involuntary displacement. In order to implement the KERNVDP in accordance with the laws in force in Niger and the safeguard policies of international donors, some legal or regulatory measures need to be taken.

7.2 The main legal measures to be taken are as follows:

- issue a declaration of public utility and identify the properties affected and those that could be affected (the reception sites);
- amend the public investigation procedures to make them more advantageous for the affected populations, and define the implementation schedule of the programme taking into account the time frames for the official identification of customary rights (by the COFOs);
- delegate the powers of the Ministry of Finance to the COFOs with regard to authorization for investments in the affected area;
- clearly define the eligibility deadlines, and the process for becoming eligible after the said deadline;
- improve the participation and information process for affected persons in Niger laws so as to meet the requirements of international donors;

- enhance the possibilities of legal challenge by eliminating current restrictions on the reasons for appeal and the value of compensation, as well as by increasing the time for appeal;
- issue a decree specifying the compensation programme and process in accordance with the proposals contained in the Resettlement Plan, and making the necessary budgetary allocation for its implementation as required by the laws of Niger;
- specify in a decree the conditions and arrangements for displacement and resettlement of populations.

7.3 Compensation process: The compensation process is based on a consultative approach involving the conclusion of agreements and mediation. Firstly, it is important to disseminate the process, and consult the affected populations on the compensation principles and eligibility criteria. In the estimation of individual and collective losses, it would be advisable to update the census and calculate compensations for the property owned and activities carried out just before the displacement. Subsequently, the estimated losses will be presented in detail to the concerned persons for them to determine whether the estimates are accurate or not.

7.3.1 Where an affected person accepts the estimates made, an agreement will be reached and payment of the compensation should be made before the expropriation or displacement. Where the estimated compensation is not accepted, a mediation process will be initiated to find a compromise. Where no agreement is reached, the dispute will be submitted to an expropriation judge for ruling. Where the affected person does not accept the decision of the judge, he may file an appeal with the Judicial Bench of the Supreme Court.

7.3.2 Since compensation follows a formal process that will be a novelty for the affected persons, the RP provides for a campaign to explain the various stages of the process and inform the affected persons (PAPs) of their rights. Moreover, given the importance of the compensation process for the PAPs and the lack of resources to defend their rights, legal assistance service will be established.

7.4 Displacement and resettlement: Displacement and re-settlement must be accompanied by constant interaction with the affected persons (displaced populations and, where applicable, the host communities), so that they can be involved in all the stages of the process. The populations should be informed, at least one month in advance of the date and procedures of the displacement to give them enough time to prepare. It is proposed that the displacement should be planned in a sequential manner, as and when the new sites are ready to receive the displaced persons.

8. Institutional Framework

At organizing level, the RP recommends the following:

- resort to professionals with the relevant experience and using safe transport equipment (private contractors, EIGs and/or NGOs);
- monitor, at all times, the personal effects of displaced persons;
- organize rites of passage before departure and on arrival;

- arrange for a personalized host to identify the problems that could occur in the new compounds and new buildings;
- provide professional psychological support in the event of adaptation difficulties; and
- where necessary, set up management committees to ensure sustainability of the new infrastructures.

(Cf. section 4 relating to responsible structures).

9. Eligibility

9.1 The eligibility criteria for compensations recognize all types of owners, be they holders of official deeds or customary property rights. The users of lands to be expropriated also have rights as users. Affected persons who own several plots individually or through inheritance will be invited to share the said plots among the rightful claimants so that official title deeds can be issued in their names. In this way, the lands of women and grown-up children can be secured. However, the consultations indicated that it would be difficult, if not impossible, to issue land certificates during compensation in the name of spouses, male and female, because even though this does not violate the laws of the country, it was deemed to be out of step with local culture and traditions.

9.2 All the people identified in October and November 2005 were deemed to be eligible for compensation, and will therefore be compensated for the loss of property and/or incomes. Persons settling in the affected area after November 2005 will not be eligible for compensation, unless this was authorized by the competent communal land committee.

9.3 It is recommended that the census data be updated about six months before the displacement of the populations. This is essential since the beneficiaries will be compensated only for property they owned in 2005, especially if their displacement would take place only in a few years. They should be able to continue to invest and increase their assets without being penalized. The proposed approach aims at avoiding economic stagnation in the study area pending the implementation of the programme, while at the same time discouraging the speculative migration of the populations as often observed in similar circumstances.

10. Loss Assessment and Compensation

10.1 The compensation of PAPs will be in cash, in kind and/or in the form of assistance. Even though the type of compensation will be decided by the affected person, efforts will be made to highlight the importance and advantages of accepting compensations in kind. Indeed, the payment of compensation in cash in rural or peri-urban areas raises questions about the capacity of the recipients to manage relatively sizable liquid sums, especially when they are confronted with serious debt problems (either personally or in terms of family obligations). Moreover, compensation in cash raises concern at three levels, in terms of inflation, the security of the beneficiaries, and the conduct of operations.

10.2 It is proposed that the estimation of compensations should comply with practices in the country as well as with international donor requirements. The rules for calculating compensations depend on the types of losses incurred. These various losses mainly concern: (1) capital assets; (2) compounds, residential houses, buildings and other structures; (3) plots of land owned; (4) plots of land farmed; (5) trees; (6) natural resources; (7) temporary loss of revenue; (8) losses incurred by vulnerable persons; and (9) any other loss.

- i) All community capital goods will be compensated in such manner as to ensure that the quantity does not decrease, while the quality will improve thanks to the principle of brand new replacement. Moreover, it is proposed that some services be improved to ensure compliance with the country's standards. At the educational level, it is recommended that a sufficient number of classrooms be constructed to cater for all the children of school age in the village. Furthermore, a literacy centre will be provided in all the villages with 100 households or more. For the youths, the RP provides for a youth centre and a football pitch in each host village. Drinking water will be supplied on the basis of 20 litres/inhabitant/day, and simplified water supply systems will be provided in villages of 2,000 or more inhabitants. Sanitation will be in the form of individual latrines in all the compounds. Lastly, some health facilities will be strengthened to meet expected increasing demand in some areas following the creation of the reservoir.
- ii) The RP proposes to replace all the compounds and fixed structures on the new reception sites. The buildings will be reconstructed with equivalent quality materials without any depreciation. Cash compensation will be possible only if the compound and buildings are not used, and the compensation will be equivalent to 75% of the estimated replacement cost based on strict security and durability standards.
- iii) Compensation in kind for land is preferred to cash compensation. Thus, whenever possible, compensation in kind will be proposed first. However, the geography and biophysical conditions in the area limit land replacement possibilities and the populations have clearly indicated that they do not wish to leave the area. Consequently, lands that cannot be compensated in kind will be compensated in cash or by providing other investment opportunities.

Cash compensations for lands are based on Ordinance No. 99-50 of 22 November 1999 fixing the rates for alienation and occupancy of Government lands in the Republic of Niger. This law stipulates that the price of alienation of land in a rural council area is CFAF 50/m² or CFAF 500,000/ha. For the calculation of compensations, the expropriated lands have been divided into three categories, namely:

- lands considered to be of high to very high agricultural potential representing 13 713.3 ha of those to be expropriated;

- lands of low to average agricultural potential representing 18, 631.1 ha of those to be expropriated;
- lands of no agricultural potential representing 1,436.8 ha of those to be expropriated.

During the RP validation workshop, it was recommended that the compensation stipulated in Ordinance No. 99-50 be increased by 20% for lands classified as being of good to very good agricultural potential. Consequently, the owners of lands in this category who cannot be compensated in kind will receive CFAF 600,000 for each hectare owned. For lands considered to be of low to average agricultural potential, the cash compensation will be CFAF 500,000 per hectare where compensation in kind is not possible. Lastly, it is expected that all lands of no potential will be compensated in kind.

As for lands in urban areas, they will preferably be compensated in kind. Where the urban plot is built, it will necessarily be replaced with an equivalent plot on the reception site. If it is not used, cash compensation will be provided on the basis of CFAF 200 /m² in residential areas and CFAF 500 CFAF/m² in commercial areas as stipulated in Ordinance N° 99-50. However, it is not expected that owners of unused lands would opt for cash compensation since the plots on the reception sites will gain in value after the implementation of the KERNVDP.

- iv) Non-land owning farmers will be entitled to compensation equivalent to one year of harvest if they lose their crop lands as a result of the expropriation. Moreover, they will be given priority for new income-generating activities outlined in the LDP.

Fixed assets on lands and harvests lost during the displacement will also be compensated. Lastly, a compensation of CFAF 10,000/ha will be grants to cover the cost of clearing the lands provided as compensation, if such lands have not been cultivated.

- v) Any lost tree will be replaced with a new plant. In the case of fruit trees, the production lost until the new tree bears fruit will be compensated in kind or in cash. Furthermore, lost community trees will be replaced with plantations estimated at 5 ha per reception site on average.
- vi) The main natural resource to be lost following the priming of the reservoir is the bourgou. A fodder deficit is expected in the short term, until the bourgou areas regenerates. Thus, compensation in fodder will be provided for all the animals owned by persons living near the river and the Gorouol stream. The compensation will be equivalent to 1 tonne of dry matter per year for each equivalent transhumant TLU and 0.5 tonnes of dry matter for each equivalent transhumant TLU. Cash compensation of about CFAF 15,000 per tonne of dry matter will also be provided. Compensation will be spread over two years.
- vii) For other natural resources that will be lost and which are used by the communities for self-consumption or generating incomes, a fund will be put

in place to finance the purchase of such resources or their replacement until they become available again in the area. No firewood deficit is expected.

- viii) Any compensation for the loss of temporary income will be based on the minimum wage applicable in Niger (SMIG), which was approximately CFAF 30,000 FCFA per month in 2006. Projected income losses correspond to:
 - two weeks for economically active persons whose incomes depend on their daily activities (petty traders, craftsmen, etc.);
 - six months for persons working in the tourism industry;
 - twelve months for fishermen and those (male/female) who process fishery products, following the temporary decline in catches.
- ix) Persons considered vulnerable will, in priority, benefit from the income-generating activities proposed in the LDP. Moreover, the RP proposes a specific fund for vulnerable persons to assist them to adapt to the new living conditions in the event of a general price escalation or if they are unable to adjust, in order to ensure their survival or that of their dependents. These funds will be accessible in cases of emergency.
- x) The programme will cover the total costs pertaining to the displacement exercise, estimated at CFAF 20,000 per household.

Compensation will be provided to all owners of small canoes who wish to adapt them to the new navigation conditions. The addition of freeboards should help to stabilize the small canoes.

It should be noted that conditions will be defined for the management of cash compensations. Firstly, the RP recommends that the payment of compensations be entrusted a recognized and reliable financial institution which will be obliged to open local offices and provide technical assistance in portfolio management and investment. Another recommendation is that disbursements be monitored by referring to the basic needs of beneficiary households. Any higher disbursement should be justified and used for developing income-generating activities. Lastly, it is proposed that male-female co-management of the funds be encouraged. However, in communities where such an option goes against local customs and traditions, it is suggested that the spouses of the beneficiaries should autonomously manage part of the compensation funds.

10.3 Assessment of losses and compensations: Assessment of losses and compensations by category resulted in the following:

- i) The replacement cost of all capital assets existing in the localities to be displaced is estimated at CFAF 5.32 billion;
- ii) About 10.411 ha of lands deemed to be of high to very high agricultural potential cannot be compensated in kind. At the rate of CFAF 600,000/ha, the compensation for these lost lands is estimated at CFAF 6.25 billion.

Approximately 18,631 ha of lands considered to be of low to average agricultural potential should be compensated in kind. Of the lands earmarked for compensation, about 12,941 ha are probably lands used for pastoral purposes. Thus, the communities of stockbreeders should be compensated accordingly for the loss. At the rate of CFAF 500,000/ha, the compensation amounts to CFAF 6.47 billion.

- iii) The expected losses for fixed assets on lands to be expropriated are estimated at CFAF 40.9 million, and the total cost of preparation of lands given in compensation but which have never been farmed is estimated at CFAF 129.4 million;
- iv) The area of land required in urban areas for the establishment of reception sites is about one thousand hectares. All the lands currently owned on inhabited sites will be compensated in kind. Since there are approximately 914,000 m² of undeveloped lands, the total compensation in cash could stand at CFAF 182.8 million. However, this amount is not expected to be paid;
- v) Compounds, houses and other structures will all be compensated in kind, unless the owner specifically requests compensation in cash. Only properties that are not used can be compensated in cash. New replacement for compounds and houses will cost a little over CFAF 18.9 billion according to estimates based on the census data and unit costs provided by the relevant Ministries;
- vi) The cost of replacement of trees owned by individuals amounts to nearly CFAF 7 million, while compensation for the loss of production of fruit trees is CFAF 1.2 billion. Estimated costs of new plantations on the reception sites are contained in the ESMP;
- vii) Replacement of fodder (bourgou) that will be lost as a result of the creation of the reservoir will cost CFAF 887 million over a two-year period. Moreover, the sum of CFAF 37 million will be provided to compensate for the loss of other natural resources by financing the purchase of alternative products and natural resources on the market;
- viii) Loss of incomes by farmers is of two types: harvest losses during displacement and loss of farmed arable lands resulting from the expropriation. Compensation for the former is estimated at CFAF 1.9 billion, while that of the latter is estimated at CFAF 1.77 billion.

Another loss of income concerns economically active persons who work for daily incomes and will lose an estimated equivalent of CFAF 15,000 during the displacement and resettlement. Since about 6,500 persons belong to this category, the compensations will amount to CFAF 97.3 million approximately.

For workers in the tourism industry, individual losses are estimated at CFAF 180,000 per person, and total losses for all workers at CFAF 6.1 million.

Lastly, income lost by fishermen and people (male or female) who process fishery products is estimated at CFAF 790.6 million, or CFAF 360,000 for each of the 2,196 persons affected.

- ix) Emergency funds to assist vulnerable persons were determined on the basis of CFAF 150,000 per vulnerable person in case of need. Since the

number of vulnerable persons is estimated at 9,419 persons, the total amount stands at CFAF 1.4 billion;

- x) Cost estimates for the adaptation of small canoes to navigation in the reservoir amount to CFAF 129.2 million, corresponding to an average of CFAF 70,000 per canoe.

10.4 Total compensations amount to CFAF 45.30 billion. Preference will be given to compensations in kind.

10.5 Local Development Plan (LDP): The LDP is an integral part of the RP, since it is indispensable for the restoration, and possibly improvement, of the living conditions of the persons affected by the KERNVDP. Its areas of intervention include agriculture, livestock, fisheries, silviculture and agroforestry, conservation, packaging and produce processing, renewable energies and new technologies, tourism, community amenities, income-generating activities including trading and handicraft, micro-credit and marketing, capacity building, and the planning of transport infrastructure, as well as improvement of four potential development areas.

10.6 All the activities proposed in the LDP mainly target the most vulnerable persons, especially persons who do not possess land, to ensure their survival. Since women also constitute a target group, it is proposed that a portion of the funds be reserved for them. The LDP is divided into two concurrent implementation phases: the first of 5-year duration and the other of 10-year duration. A summary of the LDP is appended to this document.

11. Identification of possible resettlement sites, selection and preparation of site(s) and resettlement

11.1 The key selection criteria for identifying the reception areas reflect the requests made by the communities during the consultations, as well as some technical constraints. Firstly, all the proposed reception areas are located above the 230 security level established, and outside the reservoir area to be developed for agricultural or pastoral purposes. The areas proposed are generally at the same latitude as the existing villages, and this would minimize displacement distances as well as enable resettlement close to water. Virtually all the areas proposed are inhabited areas, and this would minimize problems of integration. The regrouping of hamlets within villages to which they are attached is encouraged to ensure that the best public services can be provided. Special attention has been paid to the maintenance of family ties by giving preference to displacement to village within the district of origin.

11.2 However, reception areas have been identified to provide the affected populations various options. Such areas do not necessarily meet the previously-defined criteria; these are reception areas close to the future irrigation scheme downstream the dam and areas located near the four potential development areas described in the LDP. Reception areas on the right bank of the river have also been identified, even though few people have expressed interest in settling on that bank. Constraints in terms of availability of lands could prompt some households to choose reception areas on the right bank of the river.

11.3 The main stages of selecting the reception sites are as follows:

- consultation of local authorities, and where possible the communities, to prioritize the potential reception areas by presenting both the advantages and disadvantages of each one;
- detailed engineering studies of the areas selected to determine whether they have the requisite features, such as access to drinking water, soil stability, sufficient natural resources, etc.;
- presentation to the local authorities, and where possible, to the communities, of the advantages and disadvantages of the areas selected as priority on the basis of the engineering studies;
- selection by the local authorities of the main location of their village and their reception site, based on the results presented;
- presentation to the households, on an individual basis, of the resettlement site options, indicating the site chosen by their authorities;
- selection by each household of their reception site.

11.4 Development of reception sites: This will be based on permanent consultation with the affected communities, possibly including the host communities. The KERNVDP village committees will be the preferential consultative body and serve as a link between the communities and the development managers. The committees will be consulted on issues that can impact on the living habits of the populations, such as the location of public services.

11.5 To ensure that the Government services involved in the management of public infrastructures work in collaboration with the Planning Service and contractors in charge of executing the works, a task force made up of all the entities involved will be formed. The task force will coordinate development activities pertaining to public service delivery so as to ensure that all the developments meet established standards and that resources for the running of the services are properly planned and have adequate budget allocations.

11.6 The Planning Service will prepare a development plan for each selected site so as to optimize land use by mapping out residential quarters, at least one commercial quarter, and areas reserved for animals and planting of trees. The development plans will include sites for water access, passage corridors and at least an area for future development (migration and young adults from the village). It is expected that the development of compounds on the reception sites will be in line with current development, particularly closeness to water. Lastly, the construction of reception sites will be entrusted to local contractors under the supervision of development experts and the KERNVDP village committees.

12. Environmental Protection

The main impacts of the RP on the environment relate to construction and transport activities. To mitigate these impacts, contractors in charge of the construction, displacement and/or demolition works would be compelled to use the appropriate work methods. Indeed, the most of the potential negative impacts can be managed by making appropriate provisions in the contracts with the contractors and ensuring compliance with them.

13. Implementation Schedule, Costs and Budget

The budget for the implementation of the RP, including the LDP, amounts to CFAF 71.8 billion or US\$ 138.8 million over a twelve-year period. An estimated 75% of the RP budget will be earmarked for compensations in kind and in cash to persons affected by the project.

14. Monitoring and Evaluation

Monitoring and evaluation activities aim at ensuring compliance with the measures proposed in the RP and LDP within the specified time frame. Furthermore, they must assess the results so that correction can be made, where necessary. The results will be reviewed in relation to indicators for monitoring improvements in the standard of living and living conditions of the persons affected compared to their situation before the implementation of the programme. The data collected during the census will serve as reference data (point of comparison), while recent data will be collected during construction and operation through sampling or control groups.

15. Conclusion

15.1 To meet the objectives of KERNVDP, the following alternatives were examined based on the principles of the World Commission on Dams: institutional changes and policy reforms, improvement of the efficiency of existing systems in energy production, supply of surface and underground water, alternative energy sources, dam options on the Niger River, and non-dam option. The KERNVDP component is the only option that meets all the set objectives, namely maintain the minimum water level and mitigate environmental degradation, ensure sustainability of irrigation and water supply, and produce electric energy. Furthermore, the option of developing a multipurpose regulation structure under the KERNVDP was incorporated into the Rural Development Strategy of Niger, which aims at operationalizing several objectives of the country's Poverty Reduction Strategy. The KERNVDP also forms part of the development priorities of the Niger River Basin as a structuring programme of the shared vision of the Niger Basin Authority, comprising the nine member countries of the active basin.

15.2 The Kandadji Ecosystems Regeneration and Niger Valley Development Programme will generate significant spin-offs in the study area and for the entire country. However, several positive impacts will be offset by negative impacts that can be mitigated, but are unavoidable. The implementation of the ESMP, the RP and the LDP will mitigate the negative impacts of the programme and enhance the positive impacts. However, considering the significant changes in the lifestyle of the affected communities arising from the implementation of the programme, the implementation of the LDP will be as important as that of the ESMP and the RP. Lastly, in line with the recommendations of the World Commission on Dams, for resettlement to facilitate the development of the people displaced, the process must involve all the political and institutional stakeholders. It must also draw on the effective participation of the communities, as well as the accountability and commitment of the Government and promoter.

Annex 1. Local Development Plan

1. The implementation of the Kandadji Ecosystems Regeneration and Niger Valley Development Programme (KERNVDP) will involve the involuntary displacement of populations following the construction of a dam near Kandadji. A Resettlement Plan (RP) has been formulated, and is aimed at ensuring that these displacements, unwanted by the populations but needed for achieving the goals of the KERNVDP, are conducted in a manner as to disrupt the lives of the affected persons as little as possible, and improve their living conditions. In support of the RP, a Local Development Plan (LDP) is being proposed. The plan aims at enabling the affected persons to regain a standard of living equivalent to or higher than what obtained before implementation of the programme.

2. An environmental analysis has shown that the study area has considerable potential. However, some severe biophysical and socioeconomic conditions often place the populations in difficult conditions.

3. The main weaknesses observed are: highly variable climate conditions, loss of best lands following priming of the reservoir, soil erosion, low agricultural, pastoral and fishery productivity, production geared towards self-subsistence, non-collective marketing of produce (producer versus trader), inadequate reception facilities (accommodation, catering) for tourists, and remoteness of the right bank north of the Goroul stream.

4. The main strengths observed are the following: significant water availability due to the presence of the reservoir/river, a young and dynamic population, a highly developed primary production sector, proximity to major urban centres (Tillabéri and Niamey) that facilitates the marketing of produce, proximity of neighbouring countries (Mali and Burkina Faso) for the marketing of produce, several historical sites and tourist attractions (architecture, biodiversity, etc.), and many projects and NGOs operating in the area.

5. Based on the weaknesses and strengths identified, an LDP was prepared. This comprises two components, a short-term programme (Phase I) and a medium-term programme (Phase II). The LDP-Phase I, for 5 years, aims at supporting communities in the Kandadji Dam area, an estimated 3,600 persons to be displaced to allow for the construction of the dam. It aims at protecting this population in a relatively short period of time and enabling them to pursue or start economically profitable activities, and thereby contribute to the sustainable economic development of their communities.

6. The LDP-Phase II, for 10 years, aims at developing available resources in order to enhance the capacity of the environment to meet the needs of the persons to be displaced to allow for the priming of the reservoir; the persons are estimated at 31,100. It will mainly support the development of the primary (agricultural, pastoral, fishery, forestry), secondary (processing plant, handicraft, etc.) and tertiary (tourism, etc.) sectors with good development prospects.

7. The main areas supported by the LDP are: agriculture, livestock, fisheries, silviculture, agro-forestry, conservation, packaging and processing of products, renewable energies and new technologies, transport infrastructure, cultural and tourist activities, and income-generating activities. Development sectors aimed at the optimal operation of the reservoir are included in the LDP.

8. The LDP will be implemented by the High Commission for the Development of the Niger Valley, which will report on the results achieved to the Steering Committee and the donors. The Social and Economic Affairs Development Department will be responsible for coordinating the implementation of all economic development activities and all the adaptation measures specified in the LDP to assist the affected communities to regain or improve their standard of living. This Department will supervise the work of specialized services commissioned to manage specific areas of the LDP, such as land use planning and development, support to sub-sectors and marketing, as well as support to local initiatives and capacity building.

9. The LDP–Phase I budget amounts to nearly CFAF 1.9 billion, equivalent to a little over US\$ 3.6 million. Over 55% of this amount will be devoted to agriculture, livestock and fisheries. All the costs relating to the establishment and functioning of the Social and Economic Affairs Department, together with its various specialized units, were charged to LDP–Phase II.

10. The budget of LDP–Phase II amounts to about CFAF 8.1 billion, equivalent to US\$15.6 million. About 65% of this amount will be devoted to the agricultural, livestock and fisheries sectors.

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