

POLICY ON PRIVATE SECTOR PARTICIPATION IN IRRIGATION DEVELOPMENT AND MANAGEMENT

1. Introduction

1.1 Agriculture remains the mainstay of Nigeria's economy, in spite of the dominant role of the petroleum sector as the major foreign exchange earner. The agricultural sector contribution to Gross Domestic Product (GDP) increased from 40.7% in 1999 to 41.2% in 2002. The sector recorded a growth rate of 5.4% in 2002 while an estimated growth rate of 7% was recorded in 2003. The potentials of the agribusiness sector, as a major employer of the growing labour force and earner of foreign exchange have also been undermined due to policy inconsistency. As a result, two-third or 66.6% of the population, who live in rural areas remain poor. Hence, the National Economic Empowerment and Development Strategy (NEEDS) has recommended a vigorous pursuit of agricultural development programme with the aim of achieving the following targets: minimum annual growth rate of 6% per annum; three billion dollars (\$3 billion) earning in agricultural export by 2007; drastic reduction of food imports from 14.5% of total imports to 5% as well as developing and implementing a scheme of land preparation services, to increase cultivable arable land by 10% annually; and also to foster private sector participation through incentive schemes in order to attain food security, poverty alleviation and sustainable livelihood.

1.2 The Forum for Agricultural Research in Africa (FARA) set the goal of achieving and sustaining a 6 percent annual growth rate, which has since been endorsed by New Partnership for Africa's Development (NEPAD). However, FAO indicated that 75% of the future agricultural growth required in Nigeria by 2030 will have to come from **intensification** (yield increases and higher cropping intensities), with the remaining 25% coming from arable land **expansion**. As a prerequisite for intensification, irrigation and drainage development will clearly be a major means for agricultural growth, poverty reduction and sustainable rural livelihood.

1.3 Nigeria is endowed with irrigation potentials of over 3.14 million hectares out of which less than 800,000 ha are currently exploited, mostly through informal and subsistent methods (flood recession, wetland and inland valley bottoms). Meanwhile, the nation has a total active reservoir capacity of more than 31 billion cubic metres intended to irrigate more than 500,000 ha, but so far about 105,000 ha of land have been developed while currently only about 60,000

ha are actually being irrigated. The balance of about 440,000 ha require either rehabilitation (45,000 ha) or full complement of irrigation infrastructure in order to derive fully the benefits of the huge investment in the dams.

1.4 The NEEDS initiative on agriculture emphasize promotion of all season farming through rain-fed and irrigated farming with emphasis on fadama agriculture as well as implementation of the programme for the massive production of higher value crops, and improved farming patterns, in order to generate attractive returns to capital. The African Water Vision and NEPAD envisage the doubling of the irrigated area most of which would come from formal irrigation and increasing water productivity from agriculture to meet the urgent basic food needs. The *Comprehensive Africa Agriculture Development Programme (CAADP)* prepared jointly by NEPAD and FAO drew attention to climatic uncertainty inherent in rainfed agriculture, especially in Nigeria where population already exceeds the carrying capacity of its land resources when cultivated at low levels of technology, and called for US\$38 billion of new investment in the sector by 2015 to rapidly expand the area under sustainable irrigation.

1.5 Investment in irrigation development has declined considerably over the past two decades. Several reasons have been advanced for this decline, but the main concerns have been over the disappointing performance of past investments in terms of returns to investment and sustainability of the schemes. There is also increasing scepticism about the returns to the huge public investment in irrigation development that was witnessed in the 1970s. On the other hand there are serious concerns about food insecurity and rural poverty. Meanwhile, private sector involvement in (formal) irrigation development has been limited, and this has given rise to promotion of private sector participation in irrigation development and management. Consequently, urgent policy attention is required on private sector investment in irrigation development, the strategy for which should be within the framework of the NEEDS/NEPAD Land and Water management and Infrastructure Development programmes.

2. Main Challenges and Issues of Public Irrigation Schemes

2.1 To create the necessary condition for profitable agriculture, policies are required that would encourage improved farming practices, strengthen access to credit, input and output

markets and reform irrigation management agencies so that they can respond more effectively to the full range of private sector needs, but most especially that of smallholder farmers.

2.2 *A history of dependency on public institutions*

2.2.1 Most public irrigation schemes are managed by parastatals of government in a paternalistic manner that precludes the beneficiary farmers from making any entrepreneurial or management decisions. It thus reduced them to functioning as workers on their own land, such that in some project all the farmers did was to weed, move irrigation pipe around and possibly harvest. They did not deploy much working capital; and even the marketing of the pooled produce was in some cases organised by the parastatals - deducting their expenses before turning the residual proceed over to the farmers. Consequently, the management arrangements perpetuated a history of dependency.

2.2.2 In the light of the foregoing the first public irrigation reforms entailed the drastic curtailment of the functions of the RBDA (agencies responsible for development and management of public irrigation schemes). This led to the withdrawal of state management of certain functions on the schemes, which left the hitherto dependent and impoverished farmers without the necessary capacity in its wake.

2.3 *Insufficient credit, inputs, and output markets*

2.3.1 The public irrigation beneficiary farmers were also faced with difficulties in obtaining credit, which further compounded their problem of taking over management responsibilities of their scheme. As a result cropped areas in many schemes dropped gradually following government withdrawal, as farmers could not raise capital to hire tractors, buy seed and fertilizers and obtain other services including paying the irrigation water fees to the RBDAs.

2.3.2 Many of these schemes are located in remote areas away from the markets, which make it difficult for individual smallholder farmer to procure good quality seeds and fertilizers or to market their produce. The withdrawal of RBDAs in the management of the on-farm activities left a huge institutional vacuum.

2.3.3 Although as a result of the micro-finance these past few years, many innovative financial institutions and financial service products have emerged, however, many lenders still have to go through traditional practices and products that are more appropriate for commercial banking than for development finance. Federal Government would have to gently steer the development

financing institutions to adopt more appropriate reforms and financial service products. In addition, FGN should use its powers to sensitize borrowers and lenders of the need to create a progressively self financing capacity over time, so that subsidy in irrigation can be phased out. This would check the influx influential opportunists who frequently benefit from subsidisation more than the targeted group.

2.4 *Insecure water rights and land tenure*

2.4.1 The smallholder farmers on most public irrigation schemes also suffer from the disadvantages of communal land ownership, amorphous water rights and insecure tenure.

The arrangements that prevailed did not provide incentive to uninterested farmers to sell out and for interested and capable party to acquire and expand their holdings. This kept the schemes underutilised and constrained them from achieving their full productive potential. What was more glaring than the absence of ownership was the lack of clarity among the farmers and farm-plot owners of their land and water rights. Consequently, even those that own the land were unable to offer the land as collateral for obtaining credit.

2.4.2 In addition, because of fragmented land ownership, farmers who work plots smaller than one hectare depend on a variety of sources for their livelihood. This reduced their stake in self-management of the system and their willingness to commit time and resources to it. Meanwhile, the plot holders are often still interested in keeping the plots - as a form of security - rather than working them to their full productivity potential. Beside, these smallholder farmers are generally risk averse and therefore would rather go with a low-input, low-output system, than the high-input, high-output system required for intensive irrigated agriculture that comes with higher risk.

2.5 High transaction costs

2.5.1 The cost of management of an irrigation system - like most service systems - tend to increase rapidly with the number of customers rather than the volume of business. On most public irrigation schemes - with their large number of small holders - the invisible 'transaction costs' associated with fee collection, responding to complaints, delivering water to each user, extracting consensus on key decisions, and applying sanction to violators of regulations vary directly with the number of irrigations. For instance, a 23,000 ha system that serves 25,000 irrigators would cost much more to manage than a similar system that serves 23 large farmers or even 230 medium size farmers. Most

significantly, it is a lot easier for 23 or 230 farmers with a lot at stake to come together and agree to the rules of self management than for 1,000 or 25,000 small holders to do so.

2.5.2 The foregoing points to the need for implementing policies that would encourage improved farming practices that is profitable while creating non-irrigation services that would attract and maintain WUA membership such as supply of fertilizers and seed, tractor hire, land preparation, marketing assistance, and purchase of crops for transport and sale.

2.6 Legal Status

2.6.1 The RBDAs' are the creation of the statute. This may constitute an impediment towards smooth application of some options of Public-Private Partnership (PPP). Most often investors prefer to do business with corporate entities so as to operate within rules of the corporate world and take commercial initiative and decisions without any encumbrances. In addition, the extant Act establishing the RBDAs require them to only develop the land and hand them over to the owners (farmers). Consequently, very rarely is part of the developed land owned by the RBDAs, in almost all cases they do not have legal documents on even these land. It therefore follows that the following stakeholders must have to be consulted to guarantee viability of the partnership:

- a) The community where the project is located
- b) Local government
- c) State government
- d) Other stakeholders where necessary.

2.6.2 There are several Acts and policies that are in conflict with one another especially in relation to exploitation of water and land in Nigeria. More specifically, there are several sub-sectoral policies with inherent conflicting provision in the National Inland Waterways Authority Act and Water Resources Act, and between the Agricultural Policy of fisheries and the RBDAs Act. These are however being examined in the on-going exercise to fashion out comprehensive Water Resources Policy, which would facilitate the review of the Acts to bring them into harmony.

3 Rationale for Private Sector Participation

3.1 Increased private sector participation in irrigation development and management is part of a broader reform process intended to resolve some of the foregoing macroeconomic crisis.

But there are two more immediate reasons for the renewed interest in private participation: dissatisfaction with performance of public irrigation has reinforced the attractiveness of the proposition as a way to inject greater efficiency, and secondly because while public investment has declined there is increasing evidence of positive experience with private sector supported irrigation development but which are not well accounted for in official statistics. The consensus is that at least some functions related to the development and management of irrigation services be entrusted to the private sector. It is therefore estimated that nearly three-quarters of the investment needed would consist of private commitments. To achieve this government intend to remove all known obstacles to enhance potential role of the private sector. In this context, government recognises the peculiar characteristics of water sector.

3.2 Irrigation water distribution is a natural monopoly that is uneconomical to duplicate at a location. In order to protect consumers against abuses of monopoly powers, regulation would be put in place. Furthermore, formal irrigation development is capital intensive and the ratio of investments in fixed assets to tariff revenue is higher than in the provision of other services. It also has important externalities especially those related to public health, rural development, poverty reduction, food security and environmental effects. As a result, government will continue to promote sector investments over and above what can be mobilised from private sector because the socioeconomic benefits are significantly higher than the apparent financial benefits.

3.3 The private sector has had to contend with considerable institutional and technical barriers to their entry. In particular they have had to contend with inaccurate information regarding investment opportunities, absence of clear rules and provides, lack of dependable supporting infrastructure, and uncertain regulatory framework. These have inhibited competitiveness and profitability, the cornerstone of private sector involvement.

3.4 The private-public sector partnership is required especially on the development of markets, provision of enabling environment for private sector investment and participation in irrigation. Markets however, do not just happen because public sector downsizes, it requires concerted action to promote private sector engagement and interest. The policy will therefore provide useful strategies creating an enabling environment that would promote private sector interest, participation, and investments in irrigation development management.

4. Opportunities for Private Sector Participation

NEEDS is a veritable tool to plug sources of public sector leakages to achieve macroeconomic stability as well as to support a more efficient private sector use of resources to jump-start and grow the economy. This shall be vigorously pursued through the following path:

4.1 ***Areas with high irrigation potentials but yet to be developed.*** This includes the Niger-Benue River Valley in which there are several projects that have been studied and could be review and developed. The national disposition of the projects, are as contained in the Schedule attached to the document.

4.2 ***Schemes with only headworks constructed i.e without downstream facilities.*** There are several schemes in this category, including Zobe in Katsina State, Dadin Kowa in Gombe State, Doma in Nassarawa State, Alau in Borno State, Ikere Gorge in Oyo State, and Oyan Dam in Ogun State to mention a few. Others are as shown in the schedule.

4.3 ***Developed Projects with some land belonging to RBDA.*** These categories of project are rare because of the extant RBDA Act, but some projects that were developed before 1987 like Bakolori has about 3000 ha belonging to RBDA.

4.4 ***Schemes where some farmers are disinterested:*** In such situation incentives should be provided for such farmers to lease their land to interested party without losing their title to the land.

4.5 ***Schemes that requires rehabilitation and improved farming practices:*** Several schemes are in a state of dilapidation requiring not only physical changes but institutional reforms to ensure improved farming practices for greater performance.

4.6 ***Agri-business-farmer partnership:*** Agribusiness could partner farmers through out-growers scheme and in providing support services like credit, tractor hire, fertilizers, improved seeds, etc.

5.7 ***Provision of irrigation technology:*** Practically all infrastructure and machinery used in irrigation are imported. Agri-business to produce small pumps, sprinklers, gates etc are needed. This would further encourage research to adopt these technologies to our peculiar needs.

4.8 ***Credit facilities to farmers:*** Irrigation require high-input to ensure high-output. Currently farmers are unable to raise collateral required to benefit from normal banking facilities. Consequently, an agribusiness and farmer partnership may work better.

4.9 **Insurance:** In the backdrop of future risks or unforeseen hazards, a reliable and functional insurance framework has become very essential.

4.10 **Enhancement of National Food Security:** There is the need for the intensification of farm level productivity so as to achieve the envisaged irrigable agricultural land area of 500,000 hectares in the country.

4.11 **Irrigation and post harvest activities:** Marketing, processing and storage are areas where post harvest losses could be substantially reduced, thus enhancing profitability of the irrigated agriculture. The private sector would be required to operate most especially in the provision of downstream irrigated infrastructures (canals, drains, water control structures, etc), land preparations, production and supply of fertilizers, storage and processing of agricultural produce, production of grains and other cash crops, research, development and extension services in harmony with the Agricultural Policy of the nation.

5. Policy Objectives

5.1 The overall goal of the policy is to provide the enabling environment for the private sector to invest and operate in irrigation for poverty alleviation, food security and socio-economic growth. The private sector would be required to operate most especially in the provision of downstream irrigation infrastructures (canals, drains, water control structures, etc), land preparations, production and supply of fertilizers, storage and processing of agricultural produce, production of grains and other cash crops, research, development and extension services, in harmony with the Agricultural Policy of the nation.

5.2 The most important objectives of private sector participation in irrigation are:-

- To ensure improved management and inject higher efficiency in the operation and maintenance of existing schemes;
- To mobilise private sector resources to expand and rehabilitate irrigated farmlands;
- To encourage and strengthen public-private-partnerships including water users' associations;
- To acquire the capital needed for investments to make all of the foregoing possible.

6. Scope

6.1 The concept of private sector participation in irrigation development and management embraces a wide range of policy approaches. The different types of private sector involvement that are considered are:-

- At one end of the spectrum is outright privatisation or the transfer of ownership and control from public to private sector, involving asset sales.
- Private entities or community taking over full or partial management of existing public irrigation scheme - in the form of leases, concessions, divestiture, irrigation management transfer (IMT), participatory irrigation management (PIM), as well as outsourcing and service contracts are such examples.
- Private investments and participation in the creation of new facilities and the expansion/upgrading, rehabilitation and modernisation - build-operate-transfer arrangement (BOT), build-own-operate (BOO) and rehabilitate-operate-transfer (ROT), are such examples;
- Emerging/spontaneous market linkage initiatives such as provision of support services, peri-urban irrigated agriculture, out-grower schemes/contract farming, irrigation technology development and dissemination, as well as mass production and distribution.

6.2 The policy considers different types of irrigation and water use, including smallholder subsistence agriculture, cultivation of profit-oriented high-value crops and industrial agricultural farms. Furthermore, it considers various elements of the enabling environment that may increase the private-sector role. In particular five groups of enabling conditions are considered:

- a) Profitability;
- Rights;
- Sources of finance;
- Intra-community relationships;
- Technical and organisational support.

7. Strategies

7.1 *Improved farming practices and profitability*

7.1.1 Federal Government (FGN) realise that the first and most essential requirement for unsubsidised private-sector activity in irrigation is to ensure its profitability. Accordingly, private-sector irrigated agriculture would be encouraged to focus on higher-value crops, export-crops and improved cropping patterns, in order to generate sufficiently attractive returns to capital. Government also recognises that profitability in agriculture requires that improved farming practices be encouraged. Consequently, FGN shall vigorously promote bringing in private-sector in contractor modes, as suppliers of support services, high-value seeds, expand the systems for extension and technical support. Government shall also facilitate efficient and accessible market facilities in the cities, provision of good roads to link the farms to the markets, introduce systems of quality control and labelling to help exporters, as well as establish in partnership with private sector efficient delivery chains and cold storage facilities. Meanwhile, FGN would continue to invest in smallholder technologies and would elaborate and harmonise the land tenure arrangements.

7.1.2 FGN would also strengthen private sector particularly smallholder access to markets through promotion of collaboration with agri-business. This shall include incentive to private agri-business to replace middlemen and government agencies in providing outlet for smallholder and with provision of some of the support services on credit.

7.1.3 Government shall also foster healthy collaboration between agri-business and smallholder through sustainable contract farming by applying sanctions to discourage default on commitments by both farmers and agribusiness. In addition, government shall redesign farm equity schemes to enable smallholder to develop stable alliances with input suppliers and output marketers.

7.2 *Secure rights and General Provisions*

7.2.1 FGN is aware that investment depends largely on feeling secure about the future of land tenure and water rights. Secure rights to land and water would be facilitated for new facilities for a time period that is at least sufficient to recover initial outlay and encourage investments in water-saving technologies. Furthermore, security of management of irrigation systems would be facilitated. To remove any fear by private sector into venturing into expansions of existing public irrigation systems, FGN may where feasible and expedient, consider devolving control of operational management or developing any irrigation infrastructural works through a third party

who shall thereafter have the management responsibility for utilisation of such works. However, when the said works could affect the hydrological regime or hydraulic of the watercourse or storage areas belonging to the nation or state or involving drilling of wells, a permit will be required under the terms to be specified by the Honourable Minister of Water Resources (HMWR). On the other hand, the Federal Ministry of Water Resources (FMWR) or its parastatals shall continue to construct public irrigation infrastructure under investment programs for which it is responsible, in keeping with its mandate. Upon request, it shall also build works that are fully or partially financed with resources that do not come from the Federal Government in partnership with interested parties.

7.2.2 In the event that an investment is fully or partially financed from public resources or that the infrastructure is built with government backed loans, FMWR shall within sphere of its mandate and competence, and where necessary in collaboration with other arms of government, establish standards, characteristics and requisites for its implementation and supervision. In all cases, however, FMWR shall issue the necessary regulations, rules and norms to guide such development. It may where necessary include the supervision of the construction of the works, and may in any event introduce corrective measure that are deemed necessary in order to guarantee the optimum performance of the scheme. It shall also establish standards or take necessary steps to prevent the construction or operation of any works that would adversely alter the hydraulic condition of a water course or endanger human lives or property.

7.2.3 The FMWR shall administer and enter into suitable agreement on behalf of Federal Government upon receipt of written request of the investor, concessionaire or grantee, for the support and technical assistance for the development, operation, rehabilitation, modernisation and or management of the irrigation works. The FMWR in collaboration with other government ministries shall also provide the necessary support and technical assistance requested of it for the proper development, operation, improvement and maintenance of the scheme for self-sustained management under specific programs that guarantee effective water and land conservation in cooperation with user organisations, the communities, local and state governments.

7.2.4 FGN shall offer incentives to prospective investors including granting of Pioneer Industry Status. Furthermore, where public-private partnership option is utilised, such ventures shall enjoy a high level autonomy to operate in accordance with market forces, but special attention would be paid to accommodate the incentives and status in subsequent fiscal policy changes.

7.3 *Reform Irrigation Management Agencies*

7.3.1 FGN would as much as is practicable divest itself of direct involvement in service provision and restrict itself to creating enabling environment, bulk water allocation, environmental management and other residual roles. To facilitate this transformation, FGN would continue to encourage the formation of farm-centred models of Water User Associations that have broader mandate and capacity to provide credit, supply inputs, maintain the system and with strong institutional links with agri-businesses. These farmer organisations shall be allowed adequate gestation period to cushion the effects of withdrawal of government irrigation agencies from managing public schemes.

7.3.2 To facilitate greater efficiency and reliability in the delivery of water, FGN shall alter the relationship between service-providers and their users such as to increase the users' confidence while enhancing service-providers' performance. In particular, it would require irrigation management agencies to issue binding level-of-service declarations, accompanied by some statements of compensation that will be payable to system users if the terms of the declaration are not fulfilled.

7.3.3 FGN shall seek at all times to build institutional reform on the existing informal mechanisms of local cooperation, ability and conditions, including functional specialisation arising from the peculiar natural endowment of the project location. Furthermore, collaborative arrangement between the investor, local and state governments including the local community and farmers shall be encouraged to ensure harmony and optimise production. Federal Government shall strengthen measures that address inequity, by increasing transparency of management, putting in place procedures for effective dispute resolution and giving voice to landless participants.

7.3.4 FGN shall gradually reduce the scope of government irrigation agencies from the current executive function to regulatory roles to ensure compliance with some set of rules of organisational and financial behaviour. In particular, the River Basin Development Authorities would act as the source of documented water rights and would form stakeholder forum or council in advisory capacity to protect and guarantee attainment of greater public interest.

7.4 *Relating Environmental Issues to Irrigation Projects.*

- 7.4.1 Government should be able to ensure that Environmental Impact Assessment (EIA) be carried out before and after the irrigation projects, to forestall degradation of the Biological resources and water quality of the river systems.
- 7.4.2 Government will realize that improved food production would not mean increased devastation of the natural ecosystem by chemicals introduced into the wetlands and watersheds by the private sector projects.
- 7.4.3 Government would continuously monitor the public health implications of water resources development projects such as dams and irrigation schemes.
- 7.4.4 Government will ensure improved management technology including the safe disposal of waste water, waste water reuse and recycling.
- 7.4.5 Government will adhere to the use of sustainable River Basin concept in water management.
- 7.4.6 Government will insist that environmental standards are maintained by regular monitoring of the projects as provided by the National Policy on Environment.

7.5 Private investment in Federal Irrigation Projects

7.5.1 The users of public irrigation systems are mostly not affluent people, therefore the promotion of private investment to create new irrigation facilities would depend on access to external financial resources. Banks and other types of investors would be encouraged to play a role in this. Use of Water User Association's with the support of community groups to guarantee personal repayments, rather than demanding collateral, would be facilitated to enhance seasonal crop investments. Accessibility of banks in the rural areas would be improved, and returns on investment in irrigation would be made as secure and as competitive as the available alternative through improved security of rights and in the marketing facilities mentioned above. To that effect the FMWR may enter into contract with private or corporate individual for execution of public works and services under the principles of cost recovery, with the possibility of such third party assuming full responsibility for management of the works under the terms to be agreed for:

- a) Total or partial concession to operate, conserve, maintain, rehabilitate and expand the infrastructure built by the FGN and or rendering of such other services as may be specified;
- b) Total or partial concession to construct, equip and operate the federal irrigation schemes and rendering of such other services as may be specified.

7.5.2 FMWR shall establish procedure, duration, regulation and expiration of the concession referred to above, and the same conditions shall apply as those for exploitation, use and development concession for landed properties. The existing users of the public irrigation infrastructure shall however be given preference when such concessions are being granted.

7.5.3 FMWR in consultation with appropriate government agencies shall stipulate the minimum conditions for participation in competitive bidding to obtain the concessions under the terms of regulations that may be established, In each case the bidder proposing the rates that conform to the criteria set by government shall be selected. The successful winner shall be issued licence.

In keeping with existing Environmental Impact

Assessment criteria for granting the concession must:

- g) Favour efficient use of water and adequate rationalization of consumption patterns, and where pertinent discourage activities that make excessive demands on water;
- h) Provide for adjustments of variable costs, in keeping with known and measurable indicators to be stated in bidding conditions that would be established by government;
- i) Consider suitable duration of the concession that may not exceed 50 years but shall not be less than the period required for the investor to recover his capital cost or such other performance criteria of the financial obligation acquired with the concession.

7.5.4 Government may require the concessionaire to present suitable guarantee. Such guarantee shall be required to cover a period that may not exceed a tenth of the total time for which concession is granted. During this period, should the concessionaire fail to maintain the infrastructure in good condition, FMWR shall name inspector that shall supervise or take charge of the maintenance and rehabilitation of the infrastructure so that the functioning of the system is not impaired.

7.5.5 Where applicable, the total or partial recovery of the private investment shall be by means of water supply to the investor under the terms of the extant laws. Furthermore, to ensure sustainability of public irrigation schemes, government shall require all users of the system to pay appropriate charges for the use of the said schemes. Such charges shall at least cover the cost of operation, conservation and maintenance of the scheme, to be established on the basis of historical evaluation of such costs under conditions of economic efficiency. Government shall however also give consideration to financial capability of the entity or individual that is provided the services.

7.5.6 Users shall pay for the exploitation and use of national waters, including groundwater and for facilities administered by any Federal Government agency. Similarly, the exploitation or use of public reservoir that have no downstream irrigation facilities or the discharge of wastewater shall also require payment of fees. Such payment shall not however, absolve the beneficiary/polluter from the need to comply with the relevant provisions of existing. Act regarding pollution prevention , environmental protection, general health and water quality control.

8. Follow-up Action for Sustainability of Private Sector Participation

8.1 To consolidate the policy, it would be complemented with several other actions that would:

- a) Harmonise the various conflicting Acts and policies governing land and water resources exploitation, development and management, especially establishment of a clear and secure system of documented water rights;
- b) Provide regulatory framework for the policy that would elaborate and promote PPP aimed primarily at effective service provision through active participation of all citizens of this nation;
- c) Improve the design of projects and ensure greater commitment to attainment of the desired goals. Poorly designed private sector arrangements for participation in public irrigation scheme would have serious consequences for other projects and could even erode credibility of government and deter investors;
- d) Establish stakeholder-councils for each RBDA, which will among their duties supervise water-rights allocations;
- e) Enact a law defining the status, governance, scope and financing of WUAs or irrigation farmer organisations, with a small regulatory unit in each RBDAs to provide them with skill training in aspects of management especially communication and record-keeping, thereafter to oversee their compliance with set standards of organisational and financial behaviour.
- f) In public irrigation schemes, establish clear definition of ownership and responsibilities, especially in regard to the utilisation of physical facilities and water rights;

- g) In larger existing systems where government agencies will continue to operate the main-system facilities, establish a clear level-of-service declaration, with penalty for failure to deliver the specified level of irrigation service;
- h) Promote on-farm to market linkages through good transport links and cold storages to be provided through private investment.
- i) Provide advice in relation to export markets to small holder irrigators.
- j) Sustain favourable economic environment through reduction of inflation, halt falling real incomes, reduce unemployment and reforms to alleviate poverty and reduce income inequality which would endanger sustainability.