

WATER USER ASSOCIATION AND SCHEME MANAGEMENT DEVELOPMENT UNDER THE TRANSFORMING IRRIGATION MANAGEMENT IN NIGERIA (TRIMING) PROJECT

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ABSTRACT

The paper is intended to present efforts deployed to critically reform and strengthen the Participatory Irrigation Management (PIM) in public irrigation schemes under TRIMING project (pilot) intervention in Nigeria. This is done through a technical assistance program for the Water User Association and Scheme Management Development to ensure sustainability of Operation, Maintenance, and Management (OMM) of large scale Public Irrigation Schemes that are currently performing far below expected efficiencies. The paper is a response to sub-theme 2.3 “Promoting public-private-partnership and participation of WUA in the irrigation development and management for irrigation sustainability (i.e to improve water efficiency and to reduce water conflict)” in the 3rd World Irrigation Forum (WIF3). The TRIMING Project is a seven year collaborative effort of the Federal Government of Nigeria with the World Bank to diversify the economy and create significant welfare improvements for the Nigerian citizens; the Federal Government of Nigeria (FGN) desires to achieve sustainable growth in agricultural production and productivity. Amongst TRIMING Project Development Objectives is to strengthen institutional arrangements for integrated water resources management.

Keywords: Strengthened Participatory Irrigation Management, Water User Association and Scheme Management

1. INTRODUCTION

Nearly all public large irrigation schemes in Nigeria commissioned some four (4) decades ago (1970s to date) are requiring major rehabilitation works as a result of poorly operated or maintained/ fairly to completely damaged/ vandalized or looted irrigation infrastructures and equipments due to lack of project ownership by the beneficiary community. These beautifully constructed schemes were at some point brand new, but critical components necessary for sustainable management especially in the aspect of operation and maintenance, including the inability of scheme managers to recover OMM costs were missing at the inception and still grossly inadequate and responsible for the deterioration of the critical components/infrastructures of irrigation and drainage schemes due to the absence/poor/weak Participatory Irrigation Management (PIM). Other identified reasons responsible for the failure these schemes and indeed their unsustainable performance include but not limited to weak capacity and institutions, unproductive government bureaucracy and sometimes inconsistent government policies, occasional lack of political will to implement policies, and lack of necessary legislative/operational/regulating frameworks, social and cultural orientation of the beneficiaries towards ownership of the schemes as well as that of stakeholders occasioned with lack of adequate funding provision for OMM.

The non-inclusiveness/inputs of local opinion especially the farmers in the design of these schemes which was basically top-bottom rather than bottom-top approach has critical implication as well. Currently, farmers' roles are highly limited and, in most

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cases, are reduced to using water and paying for it (sometimes when they wish) as water is seen as a free gift from God, so is government services.



Figure 1: Map of Nigeria showing location of the Project

1.1 Historical Development Of PIM/Wu as In Nigeria

The PIM concept had been introduced in some schemes in the past, for example, Kano River Irrigation Project (KRIP) and Lower Anambra Irrigation Project (LAIP) sometimes in the early 1990s; however, it was only in 1998, at the sitting of the National Council of Water Resources (NCWR) in Sokoto, that all irrigation agencies in Nigeria were mandated to adopt the PIM concept in all their OMM (Haruna et. al 2015).

Haruna et. al (2015) reported that the PIM concept so far is understood and implemented by some of the RBDAs, through the establishment of WUAs and their involvement in the maintenance of the tertiary canals and drainage network only. They have been active in the collection of water charges. Apparently they have not been assigned any management responsibilities and still operate as farmers cooperatives

2. TRIMING PROJECT

The TRIMING Project is a seven year collaborative effort of the Federal Government of Nigeria with the World Bank to diversify the economy and create significant welfare improvements for the Nigerian citizens through improving access to irrigation and drainage services and strengthening institutional arrangements for integrated water resources management and agriculture service delivery in selected large-scale public irrigation schemes in Northern Nigeria.

2.1 Project Objective

The Project Development Objective (PDO) of the TRIMING Project is to support and improve access to irrigation and drainage services and to strengthen institutional arrangements for integrated water resources management, with the overall aim to support agricultural productivity improvement including value chains with active involvement of the stakeholders in selected large-scale public schemes in Northern Nigeria. (Project cost: USD 560.30 million). This is with the view to ensure sustainability at project level without recourse to government for annual budget releases in the area of operations and maintenance (Project Appraisal Document PAD of the TRIMING Project 2014)

2.2 The Project Is Implemented Under Four Major Components Namely:

Component 1- Water Resource Management and Dam Improvement;

Component 2 - Irrigation Development and Management;

Component 3 – Enhancing Agricultural Productivity and Support to Value Chains Development;

Component 4 – Institutional Development and Project Management;

The Subcomponent 2.2: Improving Irrigation Management of the project; will address the daunting challenge of ensuring the long-term viability of the irrigation and drainage services delivered on public irrigation schemes developed by the Federal Government over the past 30 years. The approach will be to implement a progressive management transfer to users' regulated bodies in the form of WUAs and to autonomous professional operators, either public or private. The investments under this Subcomponent would support the development of a detailed training strategy with associated learning materials to re-align existing WUAs and establish new ones to achieve a transformed institutional structure for effective water management.

2.3 Project Transformation Strategy

The project strategy for the establishment of autonomous irrigation management structures at scheme level is to define contractual arrangements involving the RBDA, the WUAs, and where appropriate, a professional third party to formalize performance of the irrigation and drainage services, and ensure financial accountability on funds contributed for O&M. To achieve this, three (3) fundamental principles becomes imperative, if sustainability of OMM is to be realised:

- i. Autonomy at the Scheme Level to ensure full O&M cost recovery; funds collected (in the form of water charges or irrigation services fees) remain with WUAs and not paid to the Government accounts, with expectations that these funds will come back to the scheme through regular Government budgetary allocations. In most of such cases, these budgetary allocations never returns to the schemes for OMM
- ii. Participatory Irrigation Management to empower Water Users Associations (WUAs) organizations and ensure accountability on the use of the funds collected from the users; and
- iii. Enhanced support to farmers' productivity

2.3.1 Four Key Principles/Conditions Are Required For The Proposed Project To Be Able To Succeed In Its Expected Transformational Role:

- Government commitment to financial sustainability and institutional reforms;
- Accountability of irrigation agencies to farmers; this includes a commitment from agencies to provide satisfactory services;
- Participation of water users through empowered Water User Associations, which set and collect fees and also make spending decisions; and
- Farmers' willingness and ability to pay O&M fees.

2.4 The Subcomponent 2.2 Of The TRIMING Project

The subcomponent is targeted at strengthening the capacity of WUAs in the schemes where they already exist and developing one where non exists. Developing an

effective and functional WUAs with the capacity of self-governance and ultimate objective of Scheme Management and Administration requires identifying/mapping the challenges with the view of seeking the best solutions. Improving Irrigation Management of the project is expected to address the daunting challenge of ensuring the long-term viability of the irrigation and drainage services delivered on public irrigation schemes developed by the Federal Government over the past 30 years.

The approach adopted is the implementation of a progressive management transfer to users' regulated bodies in the form of WUAs. The investments under this Subcomponent would support the development of a detailed training strategy with associated learning materials to re-align existing WUAs and establish new ones to achieve a transformed institutional structure for effective water management". This approach is currently being implemented through a number of activities in some of the Schemes under TRIMING intervention namely; Bakolori Irrigation Scheme (BIS) and Middle Rima Valley Irrigation Scheme (MRVIS) both in the Sokoto Rima Basin (SRB), while Kano River Irrigation Scheme (KRIS) and Hadejia Valley Irrigation Scheme (HVIS) are both in Hadejia Jama' are Komadugu Basin (HJKB) and . For the purpose of this paper, more emphasis is on the schemes under the HJKB (KRIS & HVIS).

3. BRIEF ON KRIS AND HVIS

Kano River Irrigation Scheme (KRIS) is located about 30 km southwest of Kano, the capital city of Kano State. KRIS is divided into two commands; East and West Branch. These are further divided into 49 irrigation sectors for ease of management, of which 39 sectors are completed and the remaining 10 are at various stages of development. Of the total completed sectors, 25 are located in West Branch and 14 are located in the East Branch (KRIS West and KRIS East respectively). Each Sector is equipped with relevant structures such as canals, access roads, and drainages along with associated water control structures.

The Hadejia Valley Irrigation Scheme (HVIS) is located about 150 km east of Kano City in Auyo LGA of Jigawa State. HVIS is comprised of the Hadejia Barrage, the Feeder Canal (FC), North Main Canal (NMC), head works, and origin of the South Main Canal (SMC). This also includes the first two sectors, which take water from the FC, and one sector at the end of the NMC.

3.1 Status Of Wu as Before The On-Going TRIMING Project Implementation In KRIS And HVIS

A number of challenges were identified during the development of the Terms of References(TORs) for the procurement of the Technical Assistance(TA) for WUA Development and Scheme Management, as well as the TA for the Elaboration of Regulation of WUAs, These challenges/gaps were also confirmed by the Capability Assessment Survey of key stakeholders existing capacity in the operation, maintenance and management of the schemes by the Consultant, to enable conducting a gap assessment that will form the basis for preparing bespoke training for sustainable reforms in the operations, maintenance and management of the irrigation schemes. The identified challenges include amongst others things, weak organizational structure, poor corporate governance, no strategic plans, good legal status, but poor financial stability,

3.1.1 Lack Of A Coherent Irrigation Subsector Development Policy And Legal Framework, Exacerbated By Piecemeal Planning And Political Interference In Their Management".

Recent field visits to the Apex WUAs indicate that the current situation on the ground is as follows:

- The Apex Water User Associations were previously registered with their respective States as co-operative societies.
- There are 10 executive members, and the executive meets once a month while the whole association meets once seasonally; once in the rainy season and once in the dry season (twice a year).
- The Apex WUAs have an operational bank account with a reputable bank.
- The Apex WUAs do not have a detailed register of members and do not have a good idea of how many farmers they have as members.
- The Apex WUA has a constitution, and according to them, the members elect a new officer every 4 years, however many executive members have been in office for many more years.

3.1.2 Most recently, the Apex organisations have upgraded their registrations to national NGOs and registered with the national NGO regulatory body, the Corporate Affairs Commission. (WNLD Interim Report on TA WUA and Scheme Management Development for KRIS and HVIS, 2019).

3.2 On-Going Implementation Of Trimming Project Intervention

A wholesale change to the Irrigation Institutional and Management Framework are proposed and currently implemented under the TRIMING Project intervention, including but not limited to reorganization of Sector WUAs and formation of Water User Groups (WUGs), as clusters around hydraulic infrastructures, and introduction of a Scheme Executive Council that will be the main coordination and decision-making structure balancing the interests of the farmers (as water users) and the RBDA (as bulk water providers). Interventions targeted at strengthening the WUA organizational structure, legal status, financial sustainability, accountability, financial management, performance management processes, operations management including human resource management etc. This has started by ensuring that the WUA structure and process aligns with the draft WUA Constitution, WUA Framework etc.

3.2.1 Gis Land Survey

The accurate representation of land ownership within the schemes is a critical factor in identifying and targeting farmers for the implementation of the training of the WUGs/WUAs, and in the ultimate restructuring and transformation of the agricultural irrigation sector. The average landholding of farmers in most schemes in most public irrigation schemes in Nigeria is between 0.5ha to 1.0ha, the smallholder nature of farm holding is mostly as a result of inheritance. Inheritance is amongst the ways of land ownership under Nigeria land laws. Children inherit from their deceased parents and the landholding keeps fragmenting generations after generations, this creates challenges in the management of the farmer register visa-vis ownership. To address these challenges, a Cadastral Survey and WUA Registry was developed.

It is expected to amongst other things enable WUAs to manage their updated register accurately. An up-to-date register will also facilitate the tracking of members within the WUA hierarchy, assisting with the assignment of roles and responsibilities, and the assessment and collection of relevant area-based irrigation service fees. The GIS survey was first undertaken within the pilot area to establish the process for developing the land cadaster of WUA members, before rolling-out to the entire areas of the KRIS and HVIS proposed Landholding Survey. The Karfi sector within KRIS

was selected as the pilot area, covering approximately 1,480 ha, with a total of 3,522 plots.



Figure 4: Satellite Imagery of the Entire Boundary of Karfi Sector (50cm resolution)

The scope of work involved the following key tasks:

- Detailed landholding survey of all plots/farms within the Karfi Sector
- Generation of GIS data base and linked to a full register of farmers in MS Excel or other available software
- Creation of cadastral geo-database of the Landholding Survey
- Production of cadastral map of the pilot area.

The completed survey and register will provide the basis for WUA membership and area-based irrigation services. The survey maps and register will be a critical tool used on a continuous basis for planning and management of irrigation operations. This is currently ongoing in HJKB (KRIS & HVIS) but completed in SRRB (BIS & MRVIS). At the intervention in SRRB is about 100% completed with Cadastral Maps containing Parcel IDs and Coordinates of Plots added to WUA registries. Other successes in the intervention in HJKB are the regular conduction of co-management meetings with Scheme Management and Apex WUAs, Intensive Trainings on Draft WUA Contract, Draft Irrigation Agreement and Cropping Patterns amongst many successes. The same result is expected at the end of the intervention in HJKB.

Similar challenges implementation challenges exist in the two basins of i) working with WUAs, including Apex WUAs, Sector WUA Initiative Committees, and tertiary-level Water User Groups (WUGs), in anticipation of enactment of the Water Resources Bill and issuance of new regulation on WUA and Scheme Management; ii) Preparing Agreements and other Documents for Irrigation Co-management based on the draft regulations and carrying out pilot implementation on a simulated or partial basis; iii) Registration of WUAs as cooperative on an interim basis and establishment of WUA bank accounts and arrangements for irrigation infrastructure transfer to WUAs by RBDA; iv) A waiver from Treasury Single Account (TSA). (WUA Training Report No.7: Technical Assistance for Water User Association and Scheme Management Development in Bakalori and Middle Rima Valley Irrigation Schemes, 2018).

Under the TRIMING Project intervention, a series of Study Tours were organized for the WUAs and Scheme Managers to countries in the sub-region where similar intervention were successfully tested. A project called "Societed' Amanagement etd' Exploitation des terres du Delta (S.A.E.D)" in Senegal was a perfect choice for the

tour as it offered the participants the opportunity to share in the experience of farmers in S.A.E.D haven partially managed the scheme sustainable well long after the completion of the intervention.

3.2.2 Legal Arrangements For Organizational Restructuring

The WUA structure in the TRIMING schemes has three tiers: Unit WUAs which are organized around tertiary canals; Sector WUAs organized around secondary or distributary canals; and an Apex WUA, which is a federation structure that covers the whole scheme, or the major supply zones (e.g. Kura and Bunkure, East and West Branch Canals in KRIS).

Unit WUAs are centered around the tertiary level canal irrigation water supply. The intention was that they would be responsible for the Operation & Maintenance and Management of the tertiary and field channels and related drainage systems. The leadership of each Unit WUA represents the farmers at the Sector WUA level, which corresponds to the secondary or distributary canal system. The farmers who are part of the Unit WUA are meant to collaborate on water management activities, including: maintenance and cleaning of the tertiary canals and drains; water scheduling and monitoring of distribution; fee collection; and conflict resolution, among others. Extensive evaluation of the WUAs conducted during the TRIMING feasibility studies and through the Capacity Assessment Surveys shows these organisations to be very weak or non-existent. Currently, the Hadejia Jama' are River Basin Development Authority (HJRBDA) is responsible for the overall management of the irrigation schemes, which it implements through three Project (Scheme) Offices at Kura, Bunkure, and Hadejia. (WNLD Interim Report on TA WUA and Scheme Management Development for KRIS and HVIS, 2019).

Going forward, TRIMING has proposed and is currently implementing a new structure with in which the following organisations and institutions would play an integral role in ensuring the effective irrigation water supply for farmers on a cost recovery basis, using the following institutions:

- **Water User Groups (WUGs):**

The Water User Groups (WUGs) is a new innovation of the intervention, before now the composition in terms of numbers of farmers in sector WUAs were quite unevenly distributed because of the sizes of the sectors, in some schemes, sectors sizes of between 100ha to 200ha exist while within same scheme some are above 2000ha depending on the hydraulic layout. The intention of TRIMING is to reorganize the group of farmers sharing the tertiary canal (Unit WUAs) into Water User Groups (WUGs) to streamline establishment, training and future organizational functioning. TRIMING is hopeful that the anticipated legal provisions in the forthcoming WUA regulations being developed under provisions in the National Water Resources Bill will give the appropriate legal backing. The WUGs will not be separate registered legal entities, and will derive their legitimacy from WUA registration at the higher sector level. The WUGs will have elected representatives at the Sector Level.

- **Sector WUAs:**

These will be determined by the hydraulic layout of the irrigation system. Currently, the sector WUAs coordinate between the RBDA and the farmers, however, going forward, it is intended that the Sector WUA will be "an autonomous organizational group with full legal standing, responsible for its own administration, finances, operations, and maintenance. These WUA-employed personnel will operate and maintain infrastructure under their control, and manage member lists and bank

accounts under the direction of farmers in coordination with RBDA. The WUA Regulations will provide for inclusion of all of the farmers in the lower level WUGs where representatives of the WUGs will elect the (sector-level) WUA leadership. Similarly, the leadership of the (sector-level) WUA will elect the WUA Apex body members who sit on the Scheme Executive Council with RBDA representatives”

• **Apex WUAs:**

Currently the APEX WUAs appear to be established as an apex umbrella organisation registered with the national Corporate Affairs Commission, currently representing all farmers/water users in matters relating to the scheme. Going forward under TRIMING, the APEX body may not have a separate legal standing, but will consist of an elected group of representatives from the Sector WUAs, who elect from their membership representatives to sit on the body known as the ‘Scheme Executive Council’. It is hoped that substantive provisions to provide for representation, definition of roles and functions, and fee setting will be set out in the anticipated WUA regulations subsidiary legislation. TRIMING had expressed the view in the Consultant’s terms of reference that the Apex WUAs registration, as Co-operatives without appropriate legislation, would not be adequate because among other reasons, “i) membership of co-operatives is not compulsory, ii) legal provisions for operating government-owned infrastructure and collecting fees are unclear, iii) the legal basis for enforcing non-compliance is weak.

• **Scheme Executive Council (SEC):**

The intention is for the WUA regulations to create a new body known as the Scheme Executive Council (SEC). “The SEC will be the main coordination and decision-making structure balancing interests of the farmers (as water users) and the RBDA (as bulk water providers). The SEC will have executive responsibilities in regard to fee-setting, operations and management at

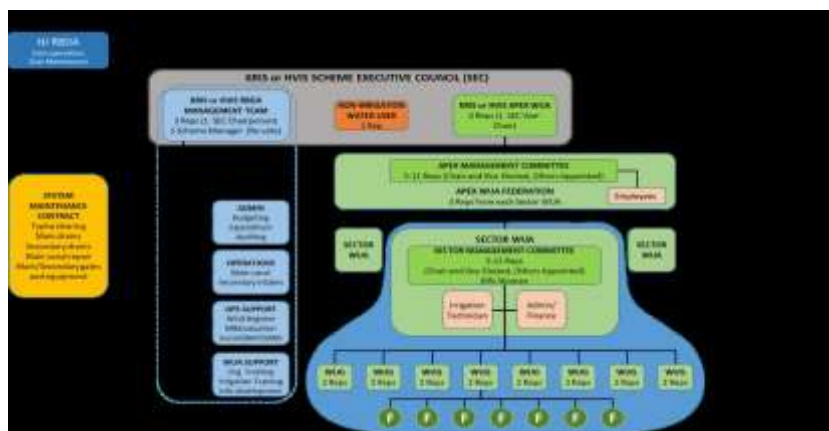


Figure 5: Proposed Irrigation Organizational Structure for KRIS and HVIS

main canal level, as well as address wider scheme issues that may arise, such as water conflict, farmer communication and coordination on mass”

• **RBDA:**

The RBDA role in the draft Water Resources Bill will be “to operate and maintain dams and the primary canal system and provide water to irrigation schemes and other water users on a cost-recovery basis. On TRIMING schemes, the RBDA will provide irrigation water services to the (sector-level) WUAs on the basis of a services contract. Regulatory provisions in relation to fee-setting will be addressed in the WUA

Regulations in order to balance the interests of the RBDA (with incentive to increase fees), the Federal Ministry of Water Resources (who have interest to ensure maintenance of government-owned infrastructure), and the WUAs (who will want the lowest irrigation services that is possible).

• **Maintenance Contractor:**

The maintenance responsibilities for the supply and main canals will be outsourced using competitive bidding processes to private sector entities, with costs covered by the irrigation service fees (paid by water-users/farmers), and with oversight from the Scheme Executive Council. It is anticipated that a performance based contract arrangement will be established with a combination of performance monitoring from farmers, (sector-level) WUAs and the SEC.

• **Federal Ministry of Water Resources:**

Currently, the Federal Ministry of Water Resources is the main overall authority for water resource management and service delivery in Nigeria. The Federal Ministry of Water Resources has a Department of River Basin Operations and Inspectorate (RBOI) as a Technical Department that was created in August, 2010. It was meant to coordinate the activities of the RBDAs that were hitherto scattered in the various Departments of the Ministry and give the RBDAs' operations better Sectoral policy direction and priority focus. The mandate included monitoring and examining the long- term impact of the RBDA projects on the rural economies, the state of the nation's food security and food production, and the implications of these activities on the political, socio-economic life of rural Nigeria. This mandate also provides a further basis for the Ministry and the RBDAs to operate within the current legal framework, including the following:

3.2.3 National Water Resources Bill

The discourse has given fruition to the National Water Resources Bill (2016), which was re-drafted to include a robust legal basis for the establishment of self-financing and sufficiently autonomous WUAs with re-defined roles for the RBDAs as water-resource infrastructure developers and bulk water providers. The schemes have previously relied on the less-than-ideal co-operative legal framework for WUA establishment and development, however, TRIMING intends that implementation progresses on the basis of the much stronger legal provisions set out in the Bill and the accompanying detailed WUA regulations. The draft Bill also provides a mandate for the development of detailed WUA regulations which are part of the comprehensive legislative reforms being undertaken nationwide, and which are aligned to international best practices in Integrated Water Resources Management (IWRM). These include decentralization of necessary powers and responsibilities to the scheme level.

3.2.4 Elaboration of WUAs Regulation under TRIMING Project/Draft Roles and Responsibilities

Furtherance of the need to ensure appropriate legal framework for the TRIMING Project, particularly the transfer of scheme management functions WUAs, the Federal Government issued, through the FMWR, the Statement on Nigeria Irrigation Sector Strategy for Public Irrigation Schemes as well as the Delegation of Authority to gradually transfer On-Farm Irrigation and Drainage Facilities to registered Water User Associations. These instruments have the cumulative effect of empowering RBDAs to engage with the WUAs as required under TRIMING Project but their legal impact will be analysed and where necessary strengthened. The project engaged an International Water Law Expert to provide assistance and advice in connection with the development of a suitable legal framework for WUAs and RBDAs service

delivery/scheme management. This Expert was supported by the a National Water Law Expert engaged by TRIMING Project Office with the specific task of providing input into the drafting of necessary Regulations and other instruments. The Experts essentially guided the farmers in formulating the regulations during the mission. This initiative is expected to drive the processes of OMM of the schemes as the farmers virtually formulated their own rules which gives them overall sense of ownership and autonomy which the intervention wants to achieve. (Inception Report of TA for the Elaboration of Regulation of WUAs for TRIMING Project, 2016).

3.2.5 WUA Development Plan

The intention of the TRIMING Project is to facilitate a streamlined WUA organizational structure with a water-centric mandate and decentralized O&M. The transformation process must address the antecedent perceptions of the WUAs, noting that they are weak, variously established, and not well understood by farmers; for example, WUAs currently cover both agricultural and water functions, a mixed mandate that is cause for confusion, and there are confusing legal issues in relation to their establishment, such as conflicting requirements for compulsory membership. The mixed mandate will be fundamentally changed in the new arrangement, however, agricultural development and organisational support will be supported through value-chain based farmer associations or co-operatives, working in parallel with the WUA development process under a separate Component 3 of TRIMING, and implemented under separate consultancies.

The WUA Development Plan is based on all work carried out previously (review of existing information, field visits and consultations, capability survey and gap assessment, policy and legal review, review of water pricing framework, and WUA Toolkit Audit) and is comprised of a detailed implementation plan for the remaining rollout of the project. The plan includes detailed schedules for the various activities with descriptive text, description of tasks, staff assigned with expected timeframes, and several other components; in other words, a fully detailed implementation plan to the completion of the project.

4. RECOMMENDATION AND CONCLUSION

The TA for WUA Development and Scheme Management is essentially the Social reorientation aspect of the TRIMING Project. The sustainability of the project greatly depends on the transformative and reformative success of this activity. Like most transformative/reformative intervention, the TRIMING Project if faced with a number challenges which thwarted initial effort of the government in promoting the full potentials of the PIM. This effort however let to the introduction/formation of WUAs. The most critical of the challenge is the resistance of the concept by some stakeholders. The apprehension informed by the wrong impression for the eminent job loss/change of job schedules resulting from the developed capacity of the WUAs to effectively, Sustainably manage and develop the scheme. This wrong impression needs to be corrected through consistent and continuous engagement and sensitization of all the stake holders specifically addressing and enlightening them on the potentials of strengthening of WUAs capacity.

5. REFERENCES

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