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THE IMPLEMENTATION OF THE GAMBIAN RANGELAND AND WATER DEVELOPMENT PROJECT: LESSONS FOR SOUTHERN AFRICA

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This article examines the conception, design, implementation and monitoring of The Gambian rangeland and water development project based in Niamina Dankunku and Niamina West districts of the country. It attempts to make a management evaluation of the project, gaining an insight into the nature of the development problem and the approach adopted by the project for its solution. It then seeks to examine the lessons that southern African countries could learn from this experience in the light of similarities in socio-economic circumstances. The conception of the project was sound in so far as it attempted to tackle the problem of environmental degradation by a system of controlled management of scarce range resources. However, the question of increasing cattle off-take which could have also reduced grazing pressure on range resources was not addressed. The project's initial focus on the relatively well off category of cattle owners was corrected by incorporating a food-aid component to address project's concern for the poorer segment of the society. While it was a good idea, the use of food-aid took away the expected financial contribution of the local community to project management and financed a significant part of project activities. The paper welcomes the conception of the income generation components but finds their introduction rather arbitrary. The project's flexibility and its approach of participatory management are recognised as its main strength, which could assure sustainability of project achievements. In addition, the project is a good example of strong co-operative involvement of a number of development agencies in jointly solving the development problem and co-ordinating development assistance.

DIE IMPLEMENTERING VAN DIE GAMBIESE WEILAND- EN WATERONTWIKKELINGSPROJEK : LESSE VIR SUIDER-AFRIKA

Hierdie artikel ondersoek die konsepsie, ontwerp, implementering en monitering van die Gambiese weiland- en waterontwikkelingsprojek in die Niamina Dankunku en Niamina-Wes distrikte van die land. Daar word gepoog om 'n bestuursevaluering van die projek te doen en sodoende insig te bekom in die aard van die ontwikkelingsprobleem en die benadering deur die projek aanvaar vir die oplos daarvan. Dit poog dan om die lesse wat Suider-Afrikaanse lande uit die ervaring kan leer te ondersoek in die lig van soortgelykhede in sosio-ekonomiese toestande. Die konsepsie van die projek was gesond in die sin dat dit gepoog het om die probleem van omgewingsageruitgang deur 'n sisteem van beheerde bestuur van skaars weibronne aan te pak. Die moontlikheid vir toenemende beesomset wat ook kon help om weidingsdruk op weidingsbronne te verlig, is egter nie aangespreek nie. Die inisiële fokus op die relatief welaf kategorie beeseienaars is reggestel deur die inkorporasie van 'n

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voedselhulpkomponent om die projek se betrokkenheid by die armer deel van die bevolking aan te spreek.

Hoewel dit 'n goeie idee was het die gebruik van voedselhulp die verwagte finansiële bydrae van die plaaslike gemeenskap tot die projekbestuur laat wegval. Die artikel verwelkom die konsep van die inkomste-genererende komponente, maar bevind dat hul invoering taamlik arbitrêr was. Die plooibaarheid en benadering van deelnemende bestuur in die projek was die sterkste punt wat die volhoubaarheid van projekprestasie kon verseker. Hierbenewens is die projek 'n goeie voorbeeld van 'n sterk samewerkende betrokkenheid van 'n aantal ontwikkelingsagentskappe om die ontwikkelingsproblematiek gesamentlik op te los en ontwikkelingshulp te koördineer.

1. INTRODUCTION

The tragedy of the commons dominates the literature in explaining livestock problems in Africa. Though there are controversies about its ability to fully explain livestock development problems especially in the developing world, a number of livestock development projects have been based on this hypothesis. These include a number of projects in Kenya (Davis, 1971 and Oxby, 1981); other East African countries (Bennett, 1984); some West African countries (Riddell, 1982); Botswana (Lawry, 1983). Botswana introduced the Tribal Grazing Land Policy in 1975 (Republic of Botswana, 1985) to deal with the same problem of overgrazing and overstocking in communal areas. As a result, tribal land was leased to large cattle owners who were given exclusive rights on the communal land to own ranches. These projects have sought to change communally held land to those held by private individuals or some defined groups. They have been characterised by pervading sense of failure (Vink & Kassier, 1987). It is against this history of widespread failure that this paper discusses the case of GAM/86/006, a Gambian rangeland development project considered by many as being successful.

Livestock production in The Gambia, like the rest of agriculture, is still largely traditional, exhibiting limited evidence of commercialisation as livestock is kept mainly as a store of wealth and for other socio-cultural reasons. The age-old system of transhumance is adopted, with low productivity, permitting a slow but occasional gradual increases in livestock numbers insufficient to catch up with the human population growth rate of about 3,4 percent per annum. High population growth rate combines with endemic poverty resulting in uncontrolled consumption of natural capital.

The rangelands in The Gambia are communally owned. There is no evidence of strict enforcement of their use as individual livestock owners adopt own grazing practices with little adoption of controlled systematic grazing strategy resulting in over-grazing. Associated with this is the regular occurrence of bush

fires initiated by the traditional practice of slash and burn cropping technique and that of game hunting through bush burning. The problem of the commons is not just one of overstocking. Lyne & Nieuwoudt (1990) suggest that in the absence of property rights to grazing land, stockowners also lack the incentive to upgrade pastures and herd quality. In a Sahelian country that experiences significant fluctuations in rainfall and suffers from recurrent drought, the lack of adequate watering facility for livestock could pose a major obstacle to economic optimisation. River water is unsuitable for livestock consumption in some parts of the country and of the project districts because of high salinity. In The Gambia, the processing of livestock products is highly under-developed, employing simple rudimentary techniques. So is the processing of other products.

It has been estimated that there were between 30 000 and 40 000 heads of cattle in The Gambia in the 1930s (The Gambia, 1992a). It is also reported that this rose to 340 433 heads in 1991. McCarthy Island Division is the leading region of the country in terms of livestock production. In 1990, Cattle Population in this Division was estimated to be 123 764. The districts of Dankunku and Niamina West where GAM/86/006 was located accounted for a substantial proportion of this number. A baseline survey (The Gambia, 1992a and Senesi, 1990) estimated that there were 9 499 heads of cattle in the Districts of Niamina Dankunku and Niamina West in 1987 increasing to 11 228 in 1991.

Confronted with communal grazing land with open access, the government of the Gambia could address the problem of overstocking by adopting some of the following options suggested in the literature:

- (1) land privatisation,
- (2) introducing cattle taxes and
- (3) introducing quota restrictions on the number of cattle permitted on the common.

Runge (1981) contended that under conditions of open access and strict individual dominance, privatisation of grazing land is the only stable solution to overstocking. The need to increase off-take rate and stabilise cattle population were emphasised in both the first and the second five-year development plans of The Gambia (1975/76 - 1979/80 & 1981/82 - 1985/86). The Economic Recovery Programme (ERP) implemented later (1985-1990) emphasised the promotion of private sector participation in the productive sectors of the economy including livestock especially by breaking the external marketing monopoly of the state-owned Livestock Marketing Board (LMB). With endemic poverty among the greater part of the Gambian populace, the

first two options proved unacceptable to policy makers. Their introduction, it was feared might lead the electorates to switch political alliances away from the ruling party. The third option based on moral suasion guided the formulation of GAM/86/006. Orthodox solutions are usually considered unacceptable to policy makers. As a further example, a 1967 stock limitation legislation introduced in KwaZulu Natal, RSA was discontinued in 1988, and the attempt to introduce a cattle tax in the area was rejected (Lyne & Nieuwoudt, 1990).

The first section of the paper reviews the background to the project GAM/86/006. The objectives and achievements of the project are discussed with the participatory style of project management in the second section. The main income generation components are detailed in section three. The last section discusses some vital lessons to be learned from the experience of GAM/86/006 by southern African countries where rangelands are also fast disappearing (Darkoh, 1996).

1.2 Cattle population in the project area

Table 1: Cattle population by composition

| | Niamina Dankunku District | | | Niamina West District | | |
|-----------|---------------------------|-------|----------|-----------------------|-------|----------|
| | 1987 | 1991 | % change | 1987 | 1991 | % change |
| Bulls | 880 | 916 | 4,1 | 773 | 864 | 11,8 |
| Cows | 2 316 | 2 504 | 8,1 | 2 977 | 3 193 | 7,3 |
| Weaners | 418 | 462 | 10,5 | 395 | 440 | 11,3 |
| Sucklings | 641 | 720 | 12,3 | 691 | 836 | 20,9 |
| Oxen | 178 | 186 | 4,5 | 230 | 243 | 5,7 |
| TOTAL | 4 433 | 4 788 | 8,0 | 5 066 | 6 440 | 27,1 |

Source: The Gambia, 1992a

1.3 GAM/86/006 - the rangeland and water development project

At the time of conception of GAM/86/006, there was only one borehole/watering point in Dankunku and Niamina West Districts providing an inadequate amount of drinking water for the Districts' herd requirement. The rangeland around the watering point was badly degraded, bush fires were also an annual occurrence, the health of the animals and hence of human population inhabiting the Districts was also poor. As a result, GAM/86/006 was formulated with the objective of preventing desertification and ameliorating the condition of degraded rangelands as well as re-establishing

pasture feed supply in abundant quantities, around the boreholes and livestock watering points, in the districts of Niamina Dankunku and Niamina West, an area of 27,000 hectares, covering 54 villages.

There were two aspects to the project: the first concerning institutional building in the Ministry of Agriculture through the establishment of a rangeland and forage production Division within the Department of Livestock Services. The second component was that of project implementation which sought to use GAM/86/006 as a model for replication in The Gambia and elsewhere.

The activities of GAM/86/006 followed up on a previous project UNSO/GAM/82/X03 entitled "Rangelands Development and protection of land around livestock watering points". Funded by the United Nations Sudano-Sahelian Office and executed by the United Nations Environment Programme (UNEP), it constructed 28 boreholes and water points, purchased associated equipment at a total project cost of US\$ 229,772. Its activities covered a greater number of districts in the McCarthy Island Division than those of GAM/86/006.

2. PROJECT OBJECTIVES AND ACHIEVEMENTS

The following is a discussion of the project's objectives and its achievements.

1. A fully staffed and functional Range and Forage Production Division was established in the Department of Livestock Services headed by a University graduate working with some assistants. Four extension staff were sponsored for overseas training in Animal Husbandry, conservation and treatment of crop residues, forage production and utilisation and small scale milk processing.
2. The Livestock Owners Association in the project area was re-organised and strengthened to form the local project management committee which facilitated local people's participation in the project and centralised management of project facilities and rangeland. The project also organised a number of seminars and workshops to train local herdsmen in livestock management
3. It was planned to establish three blocks of degraded rangeland, about 1 000 hectares each in size, for fencing and rehabilitation. In the end, the project protected 3200 hectares of degraded rangeland in two blocks of 2050 and 1150 hectares each. These were used to demonstrate the effectiveness of regeneration methods such as selective bush clearing, re-

seeding, conservation and deferred grazing. The blocks were managed in a system of rotational grazing allowing for pastoral regeneration during the dry season and preventing excessive grazing during the rains. The project also encouraged villagers' own-initiatives to conserve crop residues for utilisation as complementary dry season feeding and to assure greater community participation in project management. This resulted in significant reduction in feed deficit.

4. Three watering points of 16 hectares each were fenced and equipped with water tanks and drinking troughs as well as undergoing the process of afforestation. One borehole was re-habilitated and another constructed to improve water availability necessary to encourage rotational livestock grazing. Sixteen cattle access bridges were constructed in the process, linking grazing areas with the swamps, thereby increasing dry season livestock drinking sources. The Livestock Owners Association was to contribute towards maintaining the running costs of the facilities.
5. In order to prevent accidental bush fires, it was planned to establish 42 kilometres of firebreaks (though only 29 were completed) around the rangeland re-habilitated sites and watering points. The fire-breaks were established using imported machinery initially, followed by a progressive handing over of their maintenance to the villagers who were encouraged to cultivate and crop the breaks using traditional methods for ease of application, project acceptability and sustainability. The villagers were sensitised to the deleterious effects of bush/grass fires and encouraged to set up organisational structures to prevent fires during the dry seasons. To assure the immediate detection of bush fire, a watchtower was constructed in Dankunku.
6. The project maintained the three already established pasture and seed multiplication sites in Yundum, Yorro Beri Kunda and Giroba Kunda for future pasture seed multiplication. In addition, new seed multiplication sites were established in Dankunku and the afforestation areas were supposed to be interplanted with native grass Andropogon gayanus. Re-seeding activities were carried out on annual basis during the rainy season consistent with recommended procedures.
7. An integrated rangeland, water and livestock development scheme was hence instituted which would serve as a model for other districts.
8. As the project implementation progressed, it became clear to project management that the acute level of poverty among members of the

Livestock Owners Association might be a strong obstacle to participatory involvement in project implementation and may have serious repercussion for project success and sustainability. A decision was hence taken in 1987 to amend the project document slightly by incorporating potential income generation components. A Dairy Plant fully equipped with pasteurising equipment, batch pasteuriser boiler and cooling system using solar facilities, basic milk collection facilities, manual standardisation, butter making and quality testing facilities was established to process raw milk into Yoghurt, Ghee and Cheese. The Unit became fully operational in March 1991. A Rest House was also constructed in Dankunku as the second income generation component.

9. The project's success contributed towards an 18 percent increase in cattle population in the two districts between 1987 and 1991 as shown in Table 1. This may be partly due to the success achieved in protecting the rangeland and assuring all year round water supply encouraging immigration of cattle from adjacent districts as well as encouraging the purchase of additional heads of cattle by new or current owners.
10. Finally, the project took into consideration the health and nutrition of the population living around the project site as a result of which it provided clean safe piped-borne water for human consumption at Dankunku veterinary station. This served to prevent the occurrence of water borne diseases in the project districts

2.1 Project management style

The project was nationally executed and implemented contrary to the prevailing norm in the UN system at the time. The implementing agency undertook traditional roles including preparing and submitting annual workplans, budgets and requisitions quarterly and other financial reports. It also executed the workplans. National execution was favoured for its advantage in imparting a sense of national belonging to an otherwise Donor funded project. In addition, if successfully implemented, the project could augment national human resource capacity or build one where none previously existed. GAM/86/006 was executed by the Ministry of Agriculture, co-ordinated by the Permanent Secretary. The government provided the national professional project support staff through the Department of Livestock services whose Director served as National Project Director. He was assisted by an internationally recruited technical adviser with specialisation in rangeland development. In addition, a United Nations Volunteer (UNV) specialist in agricultural economics was recruited to oversee the socio-economic and other

aspects of project implementation. Later, a UNV Dairy technologist was also recruited. It was initially envisioned to employ the services of an Associate Expert in water engineering to liaise with the Ministry of Natural Resources and Environment and assist in overseeing the take-off of the water development aspect of the project. On the basis of unsuccessful preliminary contacts with Donors, this idea was shelved and not reactivated through out the project life.

The Ministry of Agriculture was to establish close co-operation with the Ministry of Natural Resources and Environment for the smooth execution of the natural resources component of the project. A programme steering committee was to be instituted comprising all Heads of Department of the Ministries of Agriculture and Natural Resources and Environment. The project co-operated with the Food and Agriculture Organisation of the United Nations (FAO) which provided a rangeland management expert and backstopped all technical assistance personnel. The World Food Programme (WFP) provided food for work in all project activities. Co-operation was to be maintained with the Department of Water Resources for drilling boreholes, the Department of Forestry, local NGOs and the local community.

The initial funding by the United Nations Development Programme (UNDP) was US \$200,000, government inputs in kind 143,000 *Dalasis* and Livestock Owners Association (LOA) inputs in kind 87,320 *Dalasis*. Over a period of six years the original UNDP input was increased to US \$1,180,769. The project was expected to have a 14-month duration, terminating in 1988. This duration was rather short, overly optimistic and might have been dictated largely by considerations of the financial limitations of the funding agency. The duration was extended to 1989 and again to 1990; but a tripartite review meeting in December 1990 recommended that in view of the substantial progress made, the project be extended for a further period of one (1) year to consolidate activities. During the consolidation phase new components, viz. a rest house at Dankunku, solar electricity supply, tsetse monitoring and control, and water supply for human consumption were incorporated in the project activities. 1992 saw the process of progressive withdrawal of technical assistance to the local community in order to allow for necessary adjustment to post-project lack of technical support.

2.2 Participatory project management

Popular participation in development projects is widely advocated by international development agencies (UN 1975; 1976;1981). They emphasise the importance of training local leaders and creating opportunities for public

consultation and the expression of popular opinion. And as Nkunika (1987) pointed out, the participation of local people in development programmes is very crucial in ensuring successful implementation. He cites the example of the gravity-fed rural piped water supply project introduced to the Chingale area, south of Malawi in 1969. Though water was a critical problem in the area, it was found that mere introduction of the technology was not going to assure success unless it was preceded by a series of consultations between project officers and the local people. The project was implemented on the basis of frequent consultation with local people, and the formation of a number of committees that were involved in project activities.

GAM/86/006 assisted in organising a local project management committee, 11 men and 4 women, comprising of livestock owners and herders within the project districts. This committee became the focal point for local level project decision making, and later managed such project facilities as concerned with watering, fire control, the rehabilitation and maintenance of reserve pastures. Their progressive involvement in own-resource management was positive and served to bring a grassroots approach to project management. To assist the working of the committee, the project provided a multi-purpose building to serve as the forum for frank discussion and an exchange of ideas.

The inclusion of women in the committee stems from the broader focus given to the project around 1988 to consider the whole community as the project target group. The inclusion of women into the committee, although gave the project some functional flexibility also introduced an element of internal conceptual contradiction. Initially, the essential focus was on promoting range protection and rehabilitation. It was hence originally designed to benefit cattle owners who constitute the richer section of the population at the exclusion of most of the poorer small stock owning population, largely female farmers. In the project area, the few women that own cattle usually leave such under the management of male members of the family or a herdsman. This oversight in the choice of target group was rectified by the inclusion of WFP assistance and the conception of the income generation components.

It is however to be said that the inclusion of women in the Committee did not improve women's involvement in project management. A great number of women in the districts only knew of the income generation components particularly the Milk Processing Unit which is seen as an important source of financial empowerment as opposed to the range management component with which they are less identified occupationally. Women were hence only marginally involved in project activities as well as in decision making.

3. THE DANKUNKU DAIRY PLANT OR MILK PROCESSING UNIT

The Project's Technical Adviser observed in 1988 that cattle in the project area was producing a substantial quantity of fresh milk estimated at 1000 litres per day. He requested the conduct of a feasibility study under FAO supervision of milk processing in the project area. On the basis of a consultancy fielded, it was estimated that between 500 and 600 litres of milk per day would be available for processing all the year round for marketing within the vicinity of project site (Duchatel, 1989).

A UNV Dairy Technologist was subsequently recruited to design and implement a village milk processing Plant based on the continuous application of simple easily transferable technology. As a result, the Dankunku Dairy Plant was constructed (13m by 9m) with a side boiler room (4m by 3m) and equipped with locally manufactured boiler and batch pasteuriser, solar powered refrigeration system, basic milk collection equipment, manual standardisation, quality control and butter making implements. It started operation in March 1991, commercial operation in August and attracted a lot of socio-political visibility that His Excellency, the former President Sir Dawda Jawara presided over the ceremony to declare it open in September 1991. After a year of operation, March 1991 - March 1992, it was reported that a total of 9000 litres of fresh milk were processed (UNDP, 1992a). This is equivalent to a daily processing of less than 30 litres of fresh milk falling far too short of the level estimated in the feasibility study.

The Plant's main product is yoghurt which is sold in the vicinity of the project at the price of US \$0.4 and in Banjul (about 300 km away) at an attractive price of US \$0.6. Sales in the local market accounted for about 25 percent of the total made directly from site of the Plant in Dankunku whereas the sale in Greater Banjul is made to the United Nations Missions, Agencies for International Development, Government Institutions and to the Supermarkets. The project reported a profit of D14,122 (US \$2,017 at US\$ = D7). An evaluation report (UNDP, 1992) shows that this profit is not real and has come about at an unprecedented level of Government, Donor and private subsidy. It is sufficient to note that the activities of the Dairy Plant accounted for an increased proportion of direct project cost in 1990 and thereafter. The milk Plant hence became the project's most critical component and acquired the status of the potential guarantor of project's sustainability.

The establishment of the Dairy Plant had a hidden objective of initiating and promoting the cautious introduction of livestock commercialisation around the project site and directly improving the financial capability of the livestock

keepers to operate and maintain project outputs and thereby ensuring post-project sustainability. As said earlier, other measures like instituting land reform, which could have, given rise to a land market to achieve agricultural commercialisation were not adopted.

An understanding was signed in 1991 with the United Nations World Food Programme (WFP) by the project staff and Management Committee to institute a profit sharing scheme whereby; 30 percent of the profit is given as bonus to milk producers, 45 percent would be kept as reserve fund, 15 percent would be allocated to the maintenance of range infrastructures, 5 percent for miscellaneous expenditures related to the operation of the Dairy Plant, 3 percent would be kept for distribution as prizes to the best milk producers, 2 percent of the profit was to be given to the project staff to complement remunerations given in kind.

The modality for arriving at the profit sharing scheme is rather arbitrary. It however shows the importance attached to the operation of the Dairy Plant which hitherto is the only income generating component of the project. It was argued that the system of bonus distribution would instil a sense of project belonging to beneficiaries and serve to encourage others to be associated with the project.

3.1 The rest-house

This is the project's second income generation component. Information concerning its conception and operational activities are not well documented. The idea behind the construction of the Rest House stems from the perceived need to locate on-site project officials to enable them take daily responsibility for its management. Although, this idea was never realised, largely due to the reluctance of officials to live in a rural setting lacking the most basic of modern amenities, the construction of the Rest House progressed notwithstanding.

The Rest House was equipped with solar refrigerator and lighting equipment and was also designed to be equipped with solar fans. It was completed and became fully operational in November 1991 with UNDP's financial contribution of US \$8,000 covering the cost of procuring associated equipment. Labour was contributed by the local community and paid for in kind with WFP food ration.

The construction of the Rest House was highly unconventional and as a result no proper architectural Plan was followed. The design of the House followed the dictates of semi-informed local officials though the procurement of appropriate equipment was the responsibility of project personnel. The result

was that the Rest House was constructed against the direction of the wind. In a tropical environment, this has meant that the interior of the house could be extremely hot and humid. The project also experienced difficulty procuring the aforementioned solar fans further compounding the problems of staying in the Rest House and limiting its comparative advantage over other neighbouring Guest Houses. It later served as temporary accommodation for tourists, international personnel and Gambian nationals at a fee of approximately US \$6.00 for non-Gambian and US \$1.5 for Gambian nationals.

Provisional estimates showed that the Rest House was a profitable venture though the magnitude of possible profit to be generated would be insufficient to assure the sustainability of other components of the project (UNDP, 1992a). The largest single operating expense was incurred paying the salary of the general service staff, a lady who handled its day-to-day maintenance. The initial management condition of the Rest House was unfortunately very poor and it was not very clear what justified the continued retention of the above-mentioned staff other than family connection with the traditional Chief of Dankunku. The total receipts also seem to be rather low or at best under-reported for various reasons. It was very easy to observe that the management of the Rest House saw the operation as a means of augmenting personal income especially at a time when the country was undergoing profound macro-economic adjustment. Attempts to improve project's financial management was at best resisted or ignored and the little that was done was ad hoc, designed to satisfy Donor insistence.

3.2 Lessons to be learned from GAM/006

It is important at this stage to assess whether there are any lessons to be learned from the conception, formulation and implementation of The Gambian Rangeland and Water Development Project. There is no doubt that the development problems are complex with no quick-fix solutions. It is also evident that there are climatic, economic and farming systems similarities between The Gambia and many nations in the southern Africa region. In addition, there are important cultural similarities between these countries in their approach to the implementation of development assistance. It is therefore useful to examine what lessons other nations could learn from the way and manner this project has been implemented.

1. There are major flaws in the design of the project. These relate to the wrong selection of target groups and inadequate provision for monitoring. It has been mentioned that the initial project conception was targeted to benefit those who were already well off, at the exclusion of

the most needy part of the population. This is rather inconsistent with UNDP's Poverty Alleviation mandate even though the attempt to protect the rangeland is consistent with its concern for natural resources and the environment. The inadequate provision for monitoring is attributable to the insufficiency of funds for project backstopping (FAO, 1993) leading to the undertaking of an underfunded analysis of the feasibility of the project's major component i.e. the Dairy Plant.

The 14-month duration specified for the project proved to be too short. The various outputs and associated activities of the project are ones that cannot be implemented over a short duration especially those involving the procurement of equipment from overseas, installation of such equipment and the development of local rural capacity to handle them on a sustainable basis in a post-project situation. It must also be realised that institution building endeavours take time to accomplish and to successfully organise the livestock owners into a functional local management committee is not an undertaking that can be achieved in a matter of days. As a result, the project saw progressive extension on annual basis to permit the accomplishment of vital aspects of project objectives. Unfortunately, these extensions were rather *ad hoc* and short-term in nature, imposing severe restrictions on project workplans, which were also short-term in nature and less visionary. This also meant that the project could not benefit from long-term planning of project activities with the result that some of the activities were hurriedly undertaken and others abandoned due to the uncertainties surrounding project future.

2. The project has been implemented with substantial donor assistance. It became highly popular in the country and overseas because of its income generation components. As a heavily subsidised intervention, it will be very difficult to implement a non-subsidised intervention of a similar nature in these or adjacent districts. This has the potential of creating or reinforcing a culture of donor dependency in an area of activity where the minimal donor intervention would have otherwise been needed.
3. Participatory local involvement in project management was useful in imparting a sense of local project belonging and could guarantee sustained local involvement in post-project activities. It is however important to assure a democratic local management committee with broad representation that does not exclude any section of the society.
4. Involvement of the World Food Programme. There are disagreements on the inferences on project results that one could draw with regards to the

participation of the World Food Programme. The 1992 in-depth evaluation of the project reports that the food for work support to the project had been commendable, particularly as it acted as an additionality in mobilising farmers' participation. The mission did not see any negative impact of food for work on farmers' attitude to volunteer to work or changes in their consumption habits; neither was there any indication that food for work had any negative effects on food production in the area. The report of the evaluation however argues that the incentive to work might have been greater if the food component had been monetised and the remuneration had been given in cash rather than in kind.

On the other hand, the FAO (1993) acknowledged that food-aid played a significant role in supporting the activities initiated by the project but faulted the evaluation mission in not quantifying the outputs directly attributable to the use of food-aid. In addition, the report's assessment of the dependency and dis-incentive effects of food-aid provided to the project is somewhat contradictory. The FAO argued that the WFP's food assistance inadvertently transferred the responsibility of the local herdsmen/cattle owners to finance the labour requirement of project activities to WFP. The importance of local community contribution had been underscored in the project document as having the potential of generating local appreciation of important infrastructural developments and is a way of assuring post-project sustainability. Since the responsibility was transferred to WFP and relied heavily on food assistance for their realisation e.g. the maintenance of fencing, construction of fire breaks etc., the sustainability of these labour demanding tasks is open to question once food assistance is terminated unless the communities perceive sufficient benefits to themselves from these activities.

5. The promotion of inter-agency co-operation/co-ordination in project implementation. The project was successful in getting a significant number of United Nations Agencies to be involved in its implementation. The FAO provided technical support and professional backstopping of personnel and consultant, the WFP provided food-aid to support project activities whereas the United Nations Volunteer Agency was responsible for providing the services of the UNV Agricultural Economist and the UNV Dairy Technologist. The overall funding was provided by the United Nations Development Programme. The project therefore provided a unique opportunity for development partners to be jointly associated with the solution of complex development problems. This also

assisted in promoting the long demanded co-ordination of Donors development efforts. The employment of United Nations Volunteers was particularly advantageous due to its cost-effective nature. UNVs are very highly competent individuals whose commitment to development principles are manifested in their spirit of discharging development assistance purely on a voluntary basis and at low cost.

6. Income Generation Components. The realisation of the possible negative effect of poverty on local participation in project management and sustainability was central to the introduction of the income generation components. The idea was *nouvelle* and visionary. However, no adequate feasibility study was carried out of various options of income generation activities before deciding on the most suitable for the districts. Hence, the choice of the milk processing unit and the construction of the Rest-House were rather arbitrary and motivated largely by non-economic considerations. Little wonder that the 1992 evaluation mission found the Milk Processing Unit an investment failure and unsustainable as an economic operation. It is however questionable whether the evaluation of an operation established on considerations of non-economic nature should have been undertaken using standard economic tools more especially as the evaluation report completely ignored the potential of the Milk Processing Unit to engineer social cohesion and a sense of social identity. It is however important to mention that overall, the contribution of the project to promoting social unity is nearly always invisible and is apt to be forgotten especially in a community where a substantial number of less well-off people perceive 'large' sums of money emanating from the income generating components changing only in the hands of the very important few to the exclusion of a large majority.
7. National Project Execution. It has been discussed earlier that the concept of national project execution has its advantages especially where the capacity exists for such project execution modality. In the case of GAM/86/006, a close scrutiny of the composition of the project management team and their assigned responsibilities will reveal that the project has only been superficially nationally executed. The implementation of the range component has been essentially an FAO activity realised through the services of the range management expert and the United Nations Volunteer (UNV) Agricultural Economist. The Milk Processing Unit was also established with the skills of the UNV Dairy Technologist and some backstopping by the FAO. The same can be said of the construction of the Rest-House. Overall, the extent of skilled national expertise involvement in the implementation of GAM/86/006

has been acutely weak and it is very unclear whether sufficient national capacity has been built to implement post-project follow-up action.

The absence of skilled national expertise in vital project components will also call to question the wisdom of designating the project for national execution and will convey the impression that if any experience has been gained by the nationals in the implementation of the project, it is only in knowing the means of procuring equipment, making periodic reports and in being associated with project implementation. This is all the more so when one realises that the workplan for the first three years of the project was prepared by the range management expert (supposedly in close consultation with the National Director) and the periodic reports prepared by the project have been made with minimal national involvement.

The aspect of financial reporting of the project was weak. As a result, the 1988, 1991 and 1992 Audit reports of the project were consistent in pointing to anomalies in financial management. Large purchases of relevant items were made in cash without the authority of the local purchase order nor the consent of the project Director, and the project has been consistent in not maintaining financial records of cash receipts and disbursements. The 1992 Audit Report also found difficulty in ascertaining the total expenditure on the Rest-House since 1991.

Some of the problems encountered by the project were also due in part to the manner of its execution. The fact of a major change made to the project objectives to expand the target group to cover the whole community was not properly documented and is difficult to justify within the same project. It is however consistent with perceived pattern of national project execution in which officials normally prefer that all immediate development problems should be solved once and for all within the same project.

It is also important to stress that there can be real difficulties getting national institutions to work together to solve common development problems without joint control of the project and especially that of the budget. The close co-operation which GAM/86/006 was supposed to establish with the sister Ministry of Natural Resources and the Environment and its respective departments was never fully realised. This line Ministry objected to being used just as input supply agency without being involved in the decision-making aspect of the project. No special effort was made to solicit due co-operation of this Ministry which

in fact perceived a misplaced institutional arrangement of the project in that the protection of degraded rangeland and the provision of water for livestock ought to have been the responsibilities of its Departments of Forestry and Water Resources respectively as these functions fall within their assigned mandates. The result of the lack of collaboration with the relevant Ministry was that the required technical skills for certain activities of the project could not be tapped from sister national institutions. One of the two Dams was hence constructed on an unsuitable site with the wrong soil type and has become an embarrassing failure. In addition, an element of institutional jealousy was developed as the Department of forestry made every attempt to discredit the project's strategy of campaign against bush fires and has been unappreciative of its success preferring to ascribe success in combatting incidence of bush fires around the project site to its own nationwide campaign which was conducted at about the same time.

8. It has been suggested earlier that development problems are quite complex. A successful attempt at combatting one development problem invariably introduces the emergence of another problem to tackle within the same vicinity. The effort of the project to provide an all-year round supply of livestock feed has meant a focus at woodland habitat regeneration, increasing the incidence of biting flies in general and tse-tse flies in particular. The same can be said of improved access to swamp lands which, although provides safe passage of cattle from uplands to drier swamp lands as well as improved access by women rice growers, also provides a fertile environment for the development of flies and an avenue for hyena to trap stray cattle particularly at night.
9. Project management By Remote Control. Success in rangeland protection and the dissemination of the grazing management technique was achieved quite easily around 1989. Since then, most of the project activities concentrated on the setting up of the Dairy Unit, constructing the Rest-House and maintaining project infrastructure including transferring management skills to the Local Management Committee.

In addition, it was also felt that the remaining project personnel in the form of the two UNV Agricultural Economist and Dairy Technologist should be used to provide institutional support to the Department of Livestock Services which had been observed to be weak in terms of skilled human resource capacity. This meant that project management had to go back on an earlier decision to base reluctant project personnel on project site to facilitate daily supervision of project activities. The

implication of this was that project supervision became *ad hoc*, and implemented from a distance of about 300 kilometres on occasional basis subject to availability of funding for official travel.

The necessary supervision which the project ought to have received in the construction of the Bansang Dam was therefore only partially implemented with difficulty, same as in the construction of the Rest-House and its eventual management. What also became evident is that it is not possible to achieve a great deal of success managing a project by remote control. The institutional support aspect of the project also ought to have been separated from its rangeland management/income generation activities. As a matter of fact, addressing the institutional weakness of the Department of Livestock Services ought to be focused within the framework of a separate project.

4. CONCLUDING REMARKS

The basic motivation for keeping cattle goes beyond only economic considerations in The Gambia as a whole and is certainly the case in the McCarthy Island Division where the project GAM/86/006 was located. The consequence of this is that cattle numbers are excessive leading to overstocking which over stretches the grazing resources on existing rangelands with attendant environmental degradation and incidence of feed deficit. The conception and design of GAM/86/006 were informed by the perception that the most appropriate means of addressing this development problem is by the controlled management of scarce range resources for the benefit of the livestock owners in particular and the rural community in general.

The project did not attempt to address the question of increasing cattle off-take and as a matter of fact, an augmentation in cattle numbers has been seen as one of the indices of its success. Addressing the issue of cattle off-take would have been a more appropriate means of commercialising the sub-sector and offer better income-generation possibilities for the economic development of the districts of Dankunku and Niamina West. This would have reduced grazing pressure on range resources and improved the carrying capacity of the land.

However, simply reducing the stocking rate (i.e. by increasing the off-take) alone will not address completely the entire problem of environmental degradation more especially if the degradation has already occurred. The potential for success of an otherwise complex project might have been enhanced if other reform measures were also implemented including land reform and the creation of a land market, and having secure property rights for individuals.

GAM/86/006 focused on controlled management of range resources and has demonstrated the advantages of improved grazing management. The approach of participatory involvement in project management by the eventual beneficiaries ensured that participants recognised the economic advantages of improved grazing management and are committed to protecting it. Hence there has been a reduction in the incidence of bush fires backed by an early warning system to spot places where accidental fires are starting. The result is the encouragement of new owners to go into cattle production, in-migration of animals from adjacent districts and improved health and nutrition of animals and the resident population.

GAM/86/006 has been implemented in a highly integrated manner incorporating a number of flexible components with time even though some are not consistent with the original as well as the modified design of the project. The flexible implementation should however be seen as one of its strengths in that it answered to the felt needs of the target community and was not restrained by the usual rigidity characteristic of many project documents. In this vein, the supply of pipe borne water for human consumption of the project districts should be welcomed.

The conception and introduction of the main income generation sub-components were arbitrary and not motivated solely by economic considerations. The Dairy Unit is non-sustainable as an economic operation and as a matter of fact, it will be incorrect to describe a Unit processing less than 30 litres of milk per day as a Plant. At best it could be described as a milk collection point. It has also been suggested that although the Rest-House appears to be sustainable, the level of operating profit is insufficient to assure long-term sustainability of other components of the project. The Rest-House management will also need to be improved.

Overall, the activities of GAM/86/006 have been implemented with substantial Donor assistance. It is hence likely that this will have re-enforced the culture of Donor dependency rendering it very difficult to implement non-subsidised interventions in these or adjacent districts in future.

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