

**Project Review of**  
**Rama Integrated Rural Development Programme,**  
**Tigray, Ethiopia**

**Implemented by**  
**The Ethiopian Evangelical Church, Mekane Yesus,**  
**supported by Norwegian Church Aid**

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## **1. Introduction**

The Rama integrated rural development programme was initiated in 1993. The main objectives of the to increase local food production on a sustainable basis, decrease vulnerability of rural households, and minimize labour out-migration. The main activities of the project are promoting irrigation, improve animal husbandry, environmental rehabilitation, income generation, human resource development, and improved health care.

Rama Integrated Rural Development Project has been reviewed by Noragric teams in 1994 and in 1995. The reports from those reviews explain the project background, its local context, organisational affiliation and funding mechanism (the SSE-Programme), as well as objective and project components.

Previous reviews have pointed to certain project weaknesses, notably lack of qualified field staff, long distance to coordination office, poor integration with

local authorities and line ministries, and finally insufficient community involvement. Although already the second review found signs of improvement, we considered it essential to pay particular attention to these issues.

While visiting the project it was already evident that this year's harvest is going to be seriously affected by drought. We heard estimates of yields ranging from 15 to 25 percent of a normal harvest as a general average for all of Mereb Leke Woreda. Some individual farms have complete crop failure. Since the area is not food self sufficient in a normal year, these crop losses will cause a famine disaster in the near future unless substantial food supplies are brought to the area. This drought was not known when this review was planned and TOR drafted. Obviously the consideration of food security and pay-back-ability by those who have been given credit is seriously affected by this dramatic situation.

The needs in the area are overwhelming. The project budget of around 1,4 million NOK/year limits the activities to a minor part of the Woreda, it can reach only a fraction of the people, and it can address only a few of the most important constraints. In this situation the project must make hard priorities. We found it appropriate also to discuss those priorities and how they are made.

## **2. Staffing and coordination**

Professionalism is necessary at field level (in Rama), at the Coordination office (in Mekelle), at the Headquarters of the Church (in Addis Ababa), and in the Norwegian Church Aid's office in Addis Ababa.

Since the last Noragric review, the Field Manager has been joined by professional staff covering all major project professions, and all with a diploma level education. Those include

- Two agriculturist, All diploma graduates from Awassa College of Agriculture,
- Home Agent, Diploma in home economics from Awassa College,
- Agroforester, Diploma in forestry from Wondo Genet.
- Two water technicians trained at the Arbaminch Water Technology Institute

With this employment the project is endowed with necessary qualifications in the field. They are all competent, active, motivated and enthusiastic about their jobs. We feel confident that the project is now in good hands.

All professional staff, including the Home agent, are men. This is a reflection of a problem that can not be solved by this or other similar projects. For various reasons women are severely underrepresented at high schools, and

almost completely absent from many of the post high school educational institutions. At Awassa College, which is one of the most relevant educational institution for this kind of rural development, intake of women has for many years been extremely low, and attrition rate for women extraordinarily high, resulting in graduating batches with around 1 or 2 percent women. In home economics which is supposed to be a women oriented profession, number of graduating women has been zero in most batches of the 1990s. When NORAD recently negotiated a support project for both Awassa College and Mekelle University College, an article that insists on efforts to increase intake of female students and employment of more female teaching staff, was entered into the agreement. Both Colleges have seriously followed up this. At Awassa College the efforts include intake arrangement and special tutorial and psychological support for the female students ("be assertive, not timid or aggressive!"). As a result women proportion of the two last intakes has risen to around 20 percent and girls' dormitories are full.

While this development may make it easier to find female project staff in the future, it is currently next to impossible. A project like the one in Rama has no choice but going ahead with male staff and try to accommodate women issues without the benefit of having women among its professional field staff.

The 1995 review of the project demanded the strengthening of the office in Mekelle and the employment of a highly competent coordinator, preferably with a Master degree. This is done. The Mekelle office is operational and has brought the coordination reasonably close to the project area and also close to the Regional authorities. The coordinator has an MA in social anthropology from Addis Ababa University.

As mentioned in the 1995 report, the Development Office at the Church Headquarters was strengthened with the employment of one graduate from the MSc-programme in management of Natural Resources at Noragric/NLH. Since that time there has been a reorganisation of the NCA Project Support unit. Also that Unit has highly competent professionals with extensive and relevant experience.

The conclusion is that there has been a substantial, and satisfactory advance in professionalisation of the involved organisations and of the project staff. It may be added here, that when the SSE-programme started in the late 1980s, a portion of the total budget was allocated for research institutions in order to promote required competence building. Christian Michelsen Institute in Bergen became involved in the establishment of a MA-programme in social anthropology. The coordinator in Mekelle is a graduate from that programme. Noragric became involved in institution building at Awassa College where most of the professional field staff in Rama are educated, and one key staff in the Church Headquarters has his MSc-from Norway. These

efforts and investments now pay off in progressive development work in areas with a degraded and drought-prone environment.

### **3. Involvement of authorities and communities**

The project has a Technical Committee with head of Woreda administration as chairman and representation of relevant line ministries. Thus local authorities are fully informed and are involved in discussion of all project activities. There is also a Steering Committee with representatives from communities.

It is our impression that relations to both authorities and communities are well catered for in the formal structure of the project. More important, however, is the communication and day to day relations between staff and people in the area. We got the impression that these relations are excellent. People now know that the project brings critically needed investments and assistance and that all activities are planned and implemented in close collaboration with both authorities and communities.

## **4. Project components**

### **4.1 Irrigation**

The project has organised 9 irrigation cooperatives and provided each cooperative with a motor pump on credit basis. There are in total 98 members of the irrigation cooperatives. The credit period is 3 years and payback is generally proceeding according to schedule. The project has some doubts about the long-term sustainability of motor-pumps and will therefore not provide any more motor-pumps and instead develop irrigation based on irrigation.

The project is planning to build an irrigation facility based on gravity irrigation. The dam is intended to be able to irrigate between 50 to 70 haa throughout the year. The total cost of the irrigation facility is not yet known but estimated between 500 000 to 1 000 000 birr. Can this investment be justified economically? Many factors are unknown, but if we assume a moderate yield increase of 4 t/ha and year (2 harvests), 55 ha of cultivated land and wheat price of 2,5 birr per kg of grain, the additional gross income from the irrigated area will be 550 000 birr. Even though if running costs are subtracted, the figures indicate that the irrigation facility is economically viable. The pay back period for the investment will be less than two years. Even if we assume a additional yield increase of only 1 tonn/ha and year, the investment has a good rentability. In this case the gross income will be 137500 birr. A tentative calculation of the rentability of the project based on the net present value method was undertaken. The calculation was based on the following assumption: additional grain harvest of 3 t/haa and year, grain

price of 2,5 birr kg, 55 ha of land, investment cost of 750 000 birr, 20 year time period, annual running cost of 100 000 birr. This gave an internal interest rate of 42 % which indicate that the project is highly economical. The investment cost of the project is not yet known. The highest investment cost when the project is profitable based on a 15 % interest rate is 1 930 000 birr ( based on above assumptions). It is possible to further increase the rentability of the project by growing more high value crops.

In order to reduce the problem of siltation of the future dam, it will be necessary to establish area closures in the watershed.

#### **4.2 Animal husbandry**

The project has provided goats, sheep and chicken on a credit basis. In 1996 credit was allocated to 12 women, each 435 birr and to be repaid in two years. There has been problem with animal disease which has effected the programme. Shortage of feed is another serious problem.

There is obviously a need to strengthen the access of poor families animals. The initiative taken by the project to provide animals on credit basis is a sound approach. However, the credit scheme in its current form is too modest, only benefiting very few people. The project should therefore seek ways to expand the credit scheme and establish a revolving fund. The project should examine the possibility for developing a more intensive animal production based on credit.

#### **4.3 Environmental rehabilitation**

The rangeland in the area is seriously degraded due to overgrazing. In 1996 the project enclosed 3040 haa of land. Furthermore, 41 km of hillside stone bunds were constructed and 8000 microbasins established. The stone bunds and the microbasins retain water. The micro basins are 1-2 meter wide oval shaped stone bunds used for establishing trees. A total number of 14076 trees for enrichment were planted in 1996.

The project is paying for guards for the first years after the establishment of the area closures, but thereafter the project plans that the involved communities will take the responsibility for protecting the area. The project has so far no experience with this.

A clear difference could be observed between areas which are closed and those which are not closed. Trees species which were rare in the area in recent years are re-establishing and springs which were dry are reappearing which is an indication that the run-off from the area is decreasing. The animal life in the area is increasing and the review theme observed a fox in one the area closures.

The team also observed that some of the stone bunds were not properly maintained. It is the responsibility of the local baito to maintain the structures, but this responsibility was not taken seriously in one of the village visited.

#### Comments and suggestions:

Stone bunds were constructed in the area closures by the use of cash for work. The main effect on revegetation of the area closures is to protect the area from grazing and the additional effect of the stone bunds is probably very limited. Grasses will soon be established once the area is closed and grasses are very efficient in controlling soil erosion. The stone bunds will speed up the regeneration process but the end result will probably be the same. The cost of establishing stone bunds are high and it is doubtful that the construction of stone bunds can be justified in the area closures. It is probably better to spend scarce project funds on for the farmer more remunerative activities. Stone bunds are much more needed on agricultural land. On extremely degraded land on steep slopes, stone bunds can still be justified.

It is not always necessary to plant trees in the area closures as revegetation will also occur spontaneously. However, in some cases supplementary planting can be required. It can be of special importance to plant fodder trees. It is the experience from the WAG project that the survival rates of the trees will be better if the trees are not planted in the first year after the establishment of the area closures because run-off will be very high before the grasses has established. Supplementary tree planting should therefore take place 2-3 years after the establishment of the area closures. At time it also easier to judge where supplementary tree planting is required.

The project should give the communities training in the management of the area closures. A plan with regard to the management of the area closures should be developed. This is important because the communities will have to be convinced that they are really benefiting from the are closures if new area closures are to be established. An example of a sketch of such a plan is outlined in figure 1. The range land in divided in three parts. Area 1 is protected for the first 4 years. From the fifth year controlled grazing or a zero grazing system is practices. In area 2, common grazing is allowed in years 1-4, while from year 5-8 it is protected area and from the 9 year it is under improved management. Area 3 is used has a traditional grazing area in the first 8 year, thereafter is under area closures for 4 years and from the 13 under improved management. The time under protection be reduced to 3 years if experience shows that this is sufficient.



Area 1 Protected area Year 1-4 Improved management from year 5	Area 2 Grazing area year 1-4 Protected area year 5-8 Improved management from year 9	Area 3 Traditional grazing area year 1-8 Area enclosure year 9-12 Improved management from year 13
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Such progressive development of the area closures allows that all the rangeland surrounded the village is put under improved management within a twelve year period. Such an approach will allow that village always will have some grazing area and that there is a continuous expansion of the managed area. The proposed length of the period of complete protection is 4 years. However, if the regeneration process proceeds rapidly, it may be possible that only three years of complete protection is needed. Improved management will imply that there are restriction with regard to utilisation. The village should reach an agreement with regard who has the right to utilisation and how the fodder and timber materials are to be utilised.

#### **4.4. Agricultural extention**

The project is giving training to farmers both in the project nursery site and in the farmers fields. Training in the nursery has its advantages, but the project should consider giving increased emphasis to training in farmers own fields. Training is often more realistic if it is undertaken in undertaken on farmers fields. In demonstration sites water is more assured, and there is easy access to fertiliser, pesticides and agricultural tools. Such condition do not often prevail in farmers fields.

Farmers own experimentation could be an important element in the training. Such experimentation could be conducted on tillage methods, soil and water conservation, introduction of fodder trees, use of soil fertility enhancing methods including fertiliser, introduction of new varieties etc. Farmers and project staff should meet frequently to share and discuss findings. Such an extension system has had great success in the Philippines.

#### **4.5 Education**

The project has supported the construction of one block and toilet for Dafa school with a total cost of 40 000 birr and two blocks with six rooms for Rama Junior school with a total cost of about 250 000 birr. The government is now in charge of running the schools. The Dafa school has actually about 320 pupils and of these are about 70 girls. Teaching is given in the grades from 1 to 7. It has been difficult to recruit teachers with a diploma.

#### **4.6 Small scale economic activities**

As reported in the internal preliminary impact assessment report; the training in appropriate off-farm technology has had very limited success. The problem has been access to credit to take up new activities and the project should therefore consider to offer credit in relation with the training program. This is in line with the current thinking in the project.

#### **4.7 Women activities**

The project has recently provided 5 grain mills to women cooperatives on a credit basis. The price of the mills are subsidies with 50 %. It is the poorest women who have been allocated this credit. The cost of the mill including the motor is 41000 birr. The users of the mill pay 10 birr per 100 kg of grain. The capacity of the mill is 800-1000 kg/day. This capacity is believed to be too small. According to project staff, the project will not provide more mills.

According to the internal evaluation report there has been organisational problems in some of the cooperatives.

#### **4.8 Nurseries**

The nursery is providing fruit trees to farmers at a highly subsidised price. We recognise the need for this in a transitional period, but the project should as soon as possible train some farmers having access to irrigation in how to run a fruit nursery. The scale of nursery should be scaled down gradually. This will make the eventual transition of the nursery to the Ministry of Agriculture more realistic.

#### **4.9 Monitoring and evaluation**

The project will need to develop a system for monitoring and evaluation. Indicators for food security and environmental rehabilitation should be developed. This system should be as simple as possible, and it should not represent a too heavy burden of project staff and project beneficiaries.

#### **4.10 Collaboration with Research Institutions**

The team noticed that the project already has established a collaboration with Mekelle University College in relation to development of the irrigation schemes. This collaboration could be further developed. Collaborative research on tillage methods and milk production on goats could be undertaken.

## 5. Future challenges within agriculture

### 5.1 The tillage system

Traditionally the soil in northern Ethiopia is tilled by the use of oxen. However, as a wealth ranking exercise in the REST project area revealed, many households have no access to oxen. The RIRD personnel informed that the same is the case in the RIRD area. Especially there are many female headed households which are in this situation. These are also the poorest household. Many female headed households have only chicken. In order for the female headed households to get their land ploughed, they need to hire a pair of oxen and the man who ploughs get a share of the harvest. The share the oxen owner gets vary between the different regions, but it is common that when the oxen owner both provide the seeds and the oxen, he will take 75 % of the harvest and only 25 % is left for the owner of the land. The oxen owner will in addition take the straw. However, as Fekadu Wondimagegn from Mekelle University College write in the proceedings on "Rural exploratory studies in the central zone of Tigray, Northern, Ethiopia", the land can also be prepared by the use of hoe, but the farmers do not even consider using the hoe.

There are numerous problems with the current oxen ploughing system

- small scale farmers have to pay a high share of the harvest to the oxen owner
- oxen are mainly kept for ploughing and treshing and for small scale farmers it is expensive to keep animals for that reason
- fodder resources are scarce and it is probably better that the fodder resources are used for milking goats and fattening of goats and sheep than using the fodder resources for oxen which is used for 1-2 months per year

Introduction of cultivation by hoe will be advantageous for the following reasons:

- the main reason for introducing the system is that the households which have no access to oxen can keep all the harvest for themselves.
- the poor farmers can also retain the straw for themselves for feeding sheep or goats
- sowing is often delayed for the poorest farmer because the oxen owner gives priority to his own fields. This implies that the fields

- are left without a vegetation cover early in the growing season which will increase soil erosion
- it has generally been observed in other parts of the world that ploughing generally increases soil erosion. The reason being that ploughing often breaks the clods which make the soil more susceptible to soil erosion
  - the scarce fodder resources can be reserved for more productive animals
  - introduction of technology which can increase yield will be more easy because the poor farmers can retain all the harvest for themselves

A bottleneck with regard to the introduction of hoe cultivation in Ethiopia will be the labour requirement. Another problem in relation to reduced tillage can be weeds.

Introduction of cultivation by hoe may challenge the current power relations in rural Ethiopia. The current system gives the oxen owner a very strong position in the society by being able to claim a very high share of the harvest. This is only possible because there are no alternatives to the oxen cultivation. Introducing cultivation by hoe can also have the effect that the oxen owner will need to reduce the share they can claim because that there are alternatives to oxen tillage.

The oxen system ploughing system could probably be justified in the past when land holdings were bigger, population density lower, there were few female headed households, and fodder resources were more easily available. Today population is growing with such a rate that it would be impossible that each household have a pair of oxen. Average size of the landholding in Tigray is less than 0,5 haa and that size of land is possible to cultivate by the use of hoe.

Introducing hoe cultivation in Ethiopia will not be an easy task as tillage by oxen is firmly rooted in the mind of the Ethiopian farmer, but sometimes even the cultural values will have to change in order to obtain progress.

The hoe practice and other tillage methods such as tillage with cows or donkeys should be tested among some female headed household which have no access to oxen. In the beginning, only a part of the land should be cultivated by the use of the hoe. This testing should preferably be undertaken by a group of female headed household which could frequently come together and share their experiences.

Hoe cultivation will be especially adopted to cultivation of pulses and grain crops such as sorghum, maize, barley and wheat. Hoe cultivation will not be well adopted to the cultivation of teff, because this crop has very small seeds which require more tillage of the soil. In order to facilitate weeding, hoe tillage may require that seeds are sown in rows compared to by broadcasting as it is now currently the case. Sorghum and maize can be particularly well adopted to hoe cultivation because these crops can be sown with 0,5 to 1 meter row distance. This will be an additional advantage, because crops sown in rows will generally be less vulnerable to drought as compared to crops sown by broadcasting.

## **5.2 The animal production system**

Milk production in the area is mainly based on cows. However, milk production is very low because of lack of fodder resources. Animals are also causing overgrazing and the current production of pastures are very low. The project should therefore explore the possibilities for establishing a more intensive animal production system based on zero grazing or controlled grazing. Milk production based on goats could be an interesting alternative and more adapted to ecological condition of Tigray than milk production based cows. There are several reasons for this. The body size of the cow is high which implies that considerable fodder resources are required if the cow is to produce any milk. If the fodder resources are too short, the fodder resources will only be used to meet the energy requirement for maintenance and no milk will be produced. Milk production based on cows normally requires that there are high quality pastures available which is generally not the case in Tigray. In Africa, it is normally assumed that 0.5 ha of pastures should be available per milking cow. As rainfall is very limited in Tigray, it must be assumed that up to 1 ha of pastures must be available per cow. As average size of cultivated land allocated to each household in Tigray is about 0.5 ha, it appears that there is not much room for milk production on cows in Tigray. Cows are also the first animal to succumb under drought condition.

The calving interval is a very important factor limiting milk production and the interval between the calves is much increased if the fodder resources are scarce as often is the case. Calving interval can also be prolonged because oxen are not available. The RAMA project is currently providing oxen for breeding purposes.

Milk production by the use of goats will be a much more robust and sustainable animal production system because goats are much less

vulnerable under drought conditions. Goats are able to utilise a wider range of fodder resources. Especially are goats adopted to use fodder resources from rangeland such as shrubs. The terrain in Tigray is very rough making it difficult for the cow to make full use of the area. The goat production system is also much more flexible than cow production system. The current fodder resources in Tigray hardly allows each family to keep one cow whereas it will be possible to keep several goats. Under condition of stress (drought) it will be possible to sell some of the goats. If the cow is sold a major part of the animal production asset is gone. The stock of goats can also much easier be build up again if the stock goats is disseminated for one reason or other. As goats can utilise a wider range of fodder resources than the cow and because fodder requirement is lower of goats than on cows it is less likely that lack of fodder will influence the interval between each birth. It also much simpler to keep a buck than an oxen.

In order to improve the goat milk production it would be advantageous to use a cross between the traditional Ethiopian goat and the European race (the European race has probably its origin in Nubia).

## **6. Priorities of the project.**

Considering needs in the area and possibilities with available budget means, the project faces hard priorities. Government budgets do not reach very much beyond the mere maintenance of public services at a minimal level. Additional public or private investments are most places totally absent. Demand on a project bringing development funds are therefore enormous. In an extremely poor district of more than 80 000 inhabitants a budget of 1,4 mill. NOK does not reach far.

Project activities are related to three categories: (1) Public services, (2) Community managed services, and (3) Investments for productive purposes.

Public services include schools and health facilities. Community managed services include protection and management of communal areas by area closures, construction of terraces, and reforestation. It could also be water supply. Productive investments could be irrigation schemes, grinding mills, agricultural development services, and miscellaneous petty investments that are funded through the saving and credit scheme.

Since the project budget does not allow meaningful involvement in all of this all over the area, the project must make choices. It is the opinion of this review team that funding agencies (NORAD and NCA) should not impose

priorities, but rather ensure that priorities are set locally in consultation with communities and authorities, and based on thorough information about local conditions and needs as well as of feasibility and realism in the various contemplated project components.

A case in point is construction of school buildings. Only 35 percent of children attend primary schools and the regional state of Tigray has set the modest target of raising school attendance to 50 percent. We saw a school that had been built by project means and met community representatives who explained the desperate needs for more school buildings. This could consume all available project means for a long time.

But we also saw degraded lands, and we saw places where such land were again becoming productive after successful investments in soil and water conservation. Rehabilitation of degraded land is an enormous task, but possible.

Almost all people depend on an agriculture that currently does not produce enough to feed its people. But we saw irrigation projects and other contributions to agricultural development that potentially could increase production and income. Vast resources are waiting for productive investments. Where should the project put its money?

The opinion of the project staff seem to be that increasing productivity must be the first priority. That means environment rehabilitation (protection of the production resource base), and productive investments tied to small scale credit. Since this seem to be an opinion that is based on knowledge of the area and professional competence as well as on discussion with local people and authorities, we are inclined to support this view. We assume, however, that major investments in irrigation projects are preceded by careful feasibility studies.

## **7. Phasing out strategy**

While EECMY may have the intention of long term or permanent presence in the area, the project components clearly fall within the mandate of line ministries or within the natural responsibilities of communities or farmer groups/individual farmers. For such project components it does not make sense to start activities that depends on permanent technical and economic support from outside. Realism of phasing over plans therefore need to be considered.

Project components that naturally belong to line Ministries include school buildings and health stations. Nurseries for supply of seedlings for reforestation may also belong here or to community organisations.

Activities that need to be taken care of by communities include communal soil and water conservation measures, such as area closures and terraces, and wells.

Activities that could be privatised, either to groups or to individuals, include irrigation projects, grinding mills, and miscellaneous other credit-funded activities. Nurseries for production of seedlings for which there are a price in the market, i.a. fruit trees and certain trees for agroforestry purposes, may also be privatised.

### **7.1 Public services**

School buildings and clinic facilities are relatively easy to phase over. Contributions by the project are limited to basic investments. Low-cost and appropriate technology is applied so that local authorities are able to maintain and manage what has been provided.

The nursery in Rama supplies seedlings for both reforestation and on-farm tree plantings. It also has experimental and demonstration plots. The nursery therefore serves purposes which may be considered differently when phasing out is discussed. Reforestation is obviously a public responsibility. Currently neither the Ministry nor the communities (Baito) have the means of funding such programmes. Reforestation therefore still depends on technical and financial support from outside the area. Eucalyptus, fruit and other trees for agroforestry purposes (i.a. fodder trees) are commercially interesting for farmers. With increasing awareness and demand it would probably be possible to privatise the production of such tree seedlings. Needs for experimental and demonstration land are limited, but clearly justified as long as the project has the kind of agricultural activities as it has. Conclusion: While production of certain tree seedlings may be privatised and taken over by interested farmers (i.a. farmers with access to irrigation), the nursery as such will either have to be taken over by MoA or be closed down when the project phases out.

### **7.2 Community managed services**

Area closures are the responsibility of communities, but are supported by the project (contribution to guard salaries). We assume that needs for support is limited to an establishment phase of a few years and that communities (Baito) will be able to assume full responsibility for protection as well as exploitation of such areas when a new forest vegetation is established.

Terraces are some places constructed on communal lands for the protection of catchment areas. Also terraces need to be maintained, and also that must be



the responsibility of the local community. This does not always function satisfactorily and need to be addressed as a prerequisite for support.

Water supply has been provided in the form of assistance to the digging of well and instalment of water pumps. Project support is limited to investments. Communities take responsibility for both management and maintenance.

### **7.3 Privatisation**

Irrigation may sometimes require basic investment beyond local financial capability. As a contribution to economic development, however, such investments are critically needed. In case of gravity irrigation it may require very expensive dam construction, but phasing over only requires ability by the users (cooperative farmer groups) to assume responsibility for maintenance and management. But the area is still so economically constrained that farmers can not raise the necessary means for such investments. Since irrigation brings considerable opportunities of earning additional income, this is likely to prove economically viable. Ownership and responsibility rest with receiving farmer groups.

Grinding mills are, like irrigation pumps, given on credit but for a subsidised prise. There are also other credit funded activities. While the economic viability of these investment targets can be discussed, responsibility is in each case transferred to the loan taker and does therefore not leave any long-term responsibility with the project.

Nurseries are less easy to privatise. Certain tree seedlings are, however, commercially attractive. As long as the project gives seedlings for free or for a subsidised prise, there is no incentive for individuals to start production of seedlings for sale. The project could consider privatising production of certain tree seedlings and retain project production of other seedlings. We assume that the project must retain a nursery as long as the project is operational and thereafter hand it over to BoA.

### **8. Summary**

The Rama Integrated Rural Development (RIRD) project was initiated in 1993. The annual budget for 1997 is about 1 400 000 birr. The project was reviewed in 1994 and 1995.

A major weaknesses that was pointed at in the previous reviews was lack of qualification of the staff. This is not the case any more as the quality of the project staff has greatly improved. The establishment of an office of the Mekane Yesus Church in Mekelle, staffed with a well qualified coordinator has improved the coordination of the project. The project has established a Technical Committee with the head of the Woreda Administration as coordinator and line Ministries as members. This ensures that the project is

in line with the priorities of the Wereda administration. The project is further more based of the needs and priorities of the local population. This is insured through frequent meetings between the concerned communities and the technical committee.

Major emphasis of the project has been increasing crop production, animal production, environmental rehabilitation, income generation, well construction, education and improving health conditions.

The project has organised 9 irrigation cooperatives and each irrigation cooperative provided with a motor pump on credit basis. There are in total 98 member of the irrigation cooperative. The credit period is 3 years and payback is generally proceeding according to schedule. The project has some doubts about the long-term sustainability of motor-pumps and will therefore not provide any more motor-pumps and instead develop irrigation based on gravity. The review team undertook a tentative economic assessment of the planned irrigation system based on gravity. The planned irrigation facility will be able to irrigate 55 ha benefiting about 300 households. Based on the assumptions made, it was found that the planned irrigation facility will give a good return to the investment. The internal interest rate was found to be 42 % which is well above the 15 % internal interest rate often judge as necessary in order for a project to be commercially attractive.

The project has established 3040 ha as area closures. As compared to unprotected area, the vegetation cover in the area closures has greatly improved. The project has constructed stonebunds within the area closures, but the review team is not convinced that that is necessary. The regeneration of the vegetation the vegetation will take place anyway. A major challenge for the project will be to transfer the responsibility for managing the area closures to the local community. The project should assist the communities in establishing a management plan for the area closures and discuss how the area closures can be expanded to include all the rangeland. In relation to the area closure the project should explore the possibilities for developing and intensive (zero-grazing) milk production based on goats. Honey production could also be an option which could be explored.

The project has established a credit scheme for providing animals to poor farmers, especially women. These are farmers which have no access to animals. The size of this project component has so far been very limited. This is an activity which could be expanded because having access to some animals is of vital importance for food security in the area. The project should examine the possibility for developing a zero grazing milk production based on goats from the area closures.

The project has established a plant nursery in Rama town. The nursery is working well, but resources demanded to run the nursery are so high that it

will be difficult for the Ministry to assume the responsibility of running the nursery. The review team supports the recommendation in the "Internal impact assessment report" that the project should encourage individual farmers to engage in seedling production. Community nurseries is another option which could be explored.

RIRD P has provided 5 grain mills to women cooperatives on a credit basis. The mills bought have not been of the type requested by the women.

The project has constructed 6 hand dug wells in 1996. There is a strong request from the community to build more wells and the project should seriously consider fulfilling some of these requests. The wells reduce the women burden for collecting water and decrease the incidence of water born diseases.

Poor families have often no access to oxen which makes it necessary for them to hire somebody to plow their land. The oxen owner can take up to 75 % of the harvest if he also provides the seed. In order to reduce the share the oxenowner can claim, it is important to develop alternatives to oxen cultivation. The review team believe it is both unrealistic and bad utilisation of the forage resources that each household has access to a pair of oxen. Alternatives should therefore be explored. Alternatives may be cultivation with hoe or animal traction based on donkeys or cows. If it very essential to address this problem if the poverty problem in the district is to be solved. Unless poor families are able to retain a higher part of their harvest they will always be very poor.

The project has financed the building of a elementary school. The running cost for the school is paid by the Ministry of Education. In 1997 there are 324 pupils enrolled. The project has in addition build a kindergarten in Rama town. The project has no plans to engage in new projects this field.

RIRD P has rehabilitated a clinic in Rama town, provided a microscope, electric generator, and a motor cycle. The project has also established a revolving fund for medicine. The clinic is now working at full capacity.

The project has had a positive impact on food security in the area although the project still be considered to be in an early phase. Factors which has contributed to increase food security area the area closures, soil and water conservation on agricultural land, and water development. The project lack a system for monitoring changes in the food security situation. The need are enormous in the project area, and with the current project staff it is probably possible to increase the size of project.

## Annex 1. Intinerary of project review team

Date	Visits
24.10	Arrival in Axum. Visit school in Dafa. Irrigation cooperative, Meeting with Woreda Administration. Project headquarters
25.10	Visit: area closures, planned micro-dam, soil conservation structures, metal workshop, marked in RAMA, project nursery and demonstration site
26.10	Discuss finding with project staff, Departure to Mekelle

Annex 2



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## **TERMS OF REFERENCE FOR THE REVIEW OF RAMA INTEGRATED RURAL DEVELOPMENT PROGRAMME IN TIGRAY.**

### **1. Background - Project objectives**

The Norwegian Church Aid's "Rama Integrated Rural Development Programme" in Tigray, is implemented by the partner organisation the Ethiopian Evangelical Church Mekane Yesus. The project has as the main objective to improve the living conditions of the people in the project area through measures both to rehabilitate the environment, increase agricultural productivity and development of human resources and the health status. The main components include water resource development, (irrigation), soil and water conservation, forest development, agricultural credit, credit for womens groups, improved health services and schools.

Since the project started up in 1994 the project has had some problems in staffing, planning and management of the activities. Noragric has reviewed the project twice, the first time in 1994 the second in 1996, the main conclusions were as follows:

Supervision by the EECMY has also been insufficient due to the great distance from the nearby offices and there was not enough contact with local authorities and or local population.

The project management has the recent years reported that the food security situation has improved. Previously 100 % of the population needed annual supply of food, whereas as by the end of 1996 it was recorded that only 50% needed supply of food aid. It is not stated whether this was only due to the development activities but also to adequate precipitation and other factors.

A baseline survey was undertaken with NCA support in 1995. In addition NCA has provided training and upgrading of staff and facilitated exchange visits between projects.

## **2. Project Review**

Noragric undertook a review of the Rama project in 1994 and 1996. The main conclusions were the following :

A review has now been proposed both to assess the follow-up of the last Noragric review and to obtain an overall impression of the progress made.

## **3. Issues to be covered**

The more detailed issues to be covered would be :

### **Food security activities**

A review of the different activities implemented to improve the food security situation should be undertaken, such as improved agricultural technology, agricultural extension and horticulture/irrigated agriculture.

A discussion on how to assist in improving the assessment of the impact the project activities on food security situation should be done.

### **Environmental Rehabilitation**

A review of the tree-planting, nurseries, terracing activities should be given.

### **Focus on Gender**

The Programme's focus on gender and the approach chosen on how to reach women in the area should be reviewed

### **Input supply and Credit systems**

A review of the input supply and credit systems should be reviewed.

### **Project management and Phasing Out Strategies**

The team should obtain an overview of the organisation and management of the project and its collaboration with local authorities.

The team should also review the current, Planning and Reporting, Monitoring and Evaluation as well as impact assessment systems.

A discussion on how to facilitate a phase-out of the different project activities should be started.

#### 4. Scope and methodology

The team will review relevant background documentation such as annual reports and the evaluation report. During its field visit it will discuss with core project staff, the local population and the local authorities.

#### 5. Composition of team

The team will comprise :

##### **Jens Aune (Team Leader)**

Responsible for the review of the food security and natural resource management activities.

Main responsible for reviewing the issues regarding project planning and reporting, impact monitoring.

##### **Trygve Berg**

Responsible for reviewing the phase-out strategy in relation to local authorities and population.

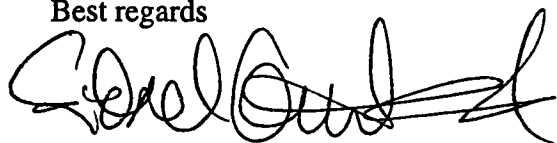
#### 6. Timing and deadlines of review work

The field visit will take place in the period 9th October to the 12th October 1997. The final practical arrangements for transport etc will have to be clarified through direct communication with the team leader and NCA-Ethiopia.

A debriefing of the teams main conclusions will take place with the project staff before the departure.

The team will write a short report from the review which will be submitted to the NCA-Norway and NCA-Ethiopia for comments before final submission to NORAD.

Best regards



Sidsel Grimstad  
SSE-Coordinator

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