

SUMMARY

Evaluation of the project "Development of people's socio-economy and environment of the Nusa Penida Island" (Bali Province, Indonesia)

(implemented by the Daya Pertiwi Foundation
with financial support from the EZE Germany)

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List of abbreviations

DM	Deutsche Mark (German currency)
EZE	Evangelische Zentralstelle für Entwicklungshilfe
IDR	Indonesian Rupiah
NGO	Non-governmental organisation
SHG	Self Help Group
TOR	Terms of Reference
YDP	Yayasan Daya Pertiwi (Daya Pertiwi Foundation)

1. Introduction

1.1. Background and objectives of the evaluation

Since more than a decade, the Daya Pertiwi Foundation (Yayasan Daya Pertiwi – YDP) assists the people of Nusa Penida island in their socio-economic development. Several initiatives were jointly undertaken in the field of agriculture and livestock development. The positive outcomes of these efforts encouraged YDP to formulate, in 1996, a project proposal and to submit it for funding to EZE (Evangelische Zentralstelle für Entwicklungshilfe), a German NGO. EZE reacted positively to this request and agreed in December 1997 to fund the project under number 970333 G, and with the following title: Support for villages through animal husbandry, additional income and drinking water, Nusa Penida. Project implementation started in 1998.

This document presents the result of the end-of-project evaluation of this project called "Development of people's socio-economy and environment of the Nusa Penida Island". The project was implemented in the period 1998 – 2000 and its cost amounted to 1,987,012,745 IDR, or approximately 226,000 €¹. EZE contributed 302,833 DM of this amount (68.5 % of the total expenditure), the remaining part being contributed by YDP. Moreover, there has been an important local contribution, which has not been included in these figures.

The evaluation has been implemented by two local and one international expert in close co-operation with project staff and population groups concerned and taking the terms of reference presented in annex 1 as a guideline. A participatory approach was adhered to (see point 1.2. below). The field visits lasted for three days; a mission calendar is presented in annex 2.

As mentioned in the terms of reference, the evaluation had several objectives. First and most importantly it aimed to assess in-depth the main results achieved by the project and to account for the use of the project funds. Further, the evaluation results were supposed to endorse the on-going reflection process with regard to a new and broader programme that will, among others, build on the development momentum achieved on Nusa Penida island.

1.2. Evaluation methodology

The entire evaluation exercise lasted for nearly one week, reporting excluded. As a first step, the international expert, who has been in charge of short yearly monitoring missions, prepared a proposal for the evaluation methodology on the basis of the documentation available and his knowledge of the project. The evaluation as such started with an extensive briefing by the project leadership on the project achievements

¹ During the project implementation period, the Indonesian Rupiah (IDR) fluctuated heavily against the US \$; we have taken the exchange rate of 10,000 IDR = 1 US \$ and 0.88 US \$ = 1 € of this and subsequent calculations in this document.

during the last period. On the basis of this report, the draft evaluation methodology was discussed and slightly adapted ².

The field visits of the evaluation team lasted for three (long) days of intensive work. No more time was needed as the project is concentrated on a number of villages that are easily accessible and at close distance from each other. Moreover, the project disposes of a well elaborated monitoring system which the evaluation could make fully use of.

The fieldwork started with a planning meeting with the local staff. All project components were firstly presented and analysed in detail. This allowed the evaluation team to define, for each component, a series of specific points of attention for the field visits, that started at the end of the first day. The next two days were nearly exclusively devoted to fieldwork. Various sources of information gathering were used such as analysis of administrative records and reports, group and individual interviews with staff, groups leaders, group members and representatives of public services, and site visits (to cows being raised by the groups members, fields planted with trees, to so-called "cubangs" ³ constructed by the groups, etc.). The evaluation framework served as a guideline and check list during these visits.

At the end of the field visits a concluding meeting was held in which both project staff and evaluators summarised their findings through a concluding assessment along the major evaluation criteria (relevance, effectiveness, efficiency, impact and sustainability). The outcomes of both groups were then compared and discussed to come, if possible, to an overall agreement on the project performance. The summary assessments of both groups are presented in annex 4.

Throughout the evaluation, bahasa (the Indonesian language) was used as working language. During a few group visits, the local language (very similar to Balinese) was used, which both local evaluators could speak. The international consultant was responsible for producing a first draft report of the evaluation (in English), which was then commented upon and completed by the YDP staff and both local evaluators. The final version of the evaluation will be translated into bahasa.

As is largely demonstrated in the previous paragraphs, the evaluation had largely an internal character. It tried to combine both the objective of enhancing the learning process at the level of YDP and the groups it is co-operating with, and assessing as objectively as possible the project performance. Both project staff, group members and other parties involved co-operated openly with the evaluators and were able to look critically at the project's performance. The evaluators therefore think they succeeded in achieving both objectives in a fair way and hope this evaluation will assist all parties concerned in further improving their performance.

² A copy of the main document related to the evaluation methodology is presented in annex 3.

³ A "cubang" is a traditional system of water catchment.

1.3. Structure of the report

This report is structured as follows. The next chapter will provide a short description of the context of the project. The global characteristics of the project will be described in chapter three and project implementation in the fourth chapter. The major project results will be presented in the following chapter and these results will be assessed in chapter six. Chapter seven will present the overall conclusions and recommendations.

2. Short description of the project context

Nusa Penida is a sub-district that belongs administratively to Klungkung district, Bali province. It comprises three islands: Nusa Penida, Ceningan and Lembongan. The project is concentrated on Nusa Penida, the main island. The sub-district has 19 villages (desa/kelurahan) and a population of 46,705 people (1999) spread over 203 km². The sub-district can be roughly divided in two areas, a relatively better off coastal area and the poorer inland.

Although they form part of relatively prosperous Bali province, the islands lag considerably behind as far as their development is concerned. They have not the same cultural and ecological richness as Bali and, hence, have not benefited from the tourist development on the main island. Contrary to Bali, Nusa Penida is an unfertile and dry area (rainfall of around 800 mm in 42 days only; dry season of six months). It is a hilly island where irrigation is not possible and land degradation has become widespread because of intensive cultivation and poorly adapted agricultural practices. No irrigation exists and water is very scarce in the dry season. The lack of economic perspectives has led to considerable migration to Bali and other parts of Indonesia.

Economic activities are most developed in the coastal areas where the economy has expanded over the last years. Agricultural is the major economic activity on Nusa Penida (main activity for 82 % of the population); the main crops are corn (3,800 ha), cassava (2,400 ha) and groundnuts (1,250 ha). Fishery and, more recently, seaweed cultivation are the major activities for the coastal population. Before YDP set up an integrated rural development project with the local population, very few secondary economic activities existed. This has now changed and alternative economic ventures have been developed (livestock, cottage industries, social forestry, handicrafts, processing of agricultural produce). Nusa Penida is also known as an important cattle growing area and many cattle are brought to "mainland" Bali. The government has a stringent policy to protect the island against cattle diseases prevalent on neighbouring Bali island and forbids import from other islands. Notwithstanding the importance of this livestock production, an important part of the population (mainly those not disposing of enough land) does nevertheless not dispose of enough resources to ensure their livelihood.

The population of Nusa Penida has decreased for a long period, as out-migration was prevalent because of lack of economic perspectives. Since 1999, there has however been a relatively sharp increase as a consequence of the East-Timor crisis, which forced so-called "transmigrants" to return to their region of origin. Schooling is at a low level, but most people have basic reading and writing skills. The island has only two secondary schools. Only 8.2 % of the families have access to safe drinking water.

The position of women is less advantageous than in Bali. Women are still subordinated to their husbands. The situation is however rapidly changing and there are already notable differences between families living in the coastal areas (and more subject to external influences) and families living on the hills. Women engage increasingly in economic activities (cottage industries and petty trading, for instance) which they control entirely.

On the basis of the outline presented above, the major problems of Nusa Penida can be summarised as follows:

- limited natural resources with a limited potential, on which the population is too heavily depending because of a lack of alternative economic ventures;
- high level of dependency on short-term and often unreliable (erratic rain-fall, market evolutions) economic activities;
- ecological imbalance because of unsustainable agricultural practices;
- overall lack of water in the hilly areas leading to temporary migration in the dry season;
- low level of education and lack of institutions for the development of local human resources.

3. Presentation of the main results of the project

3.1. Target groups that have effectively been reached

The following table summarises and characterises shortly the population that has been effectively reached by the project till February 2001.

Table 1: Overview of target groups reached

Type of activity	Nr. of groups	Nr. of members	Men/Women
Cattle breeding and/or fattening	16	234	M
Perennial crops	15	234	M
Water supply	14	213	M
Mat weaving	4	49	W
Coconut oil production	2	40	W
Wood carving and carpentry	1	10	M

It is important to note that the groups included in the cattle breeding/fattening component benefit also from two other project components: perennial crops and water supply. These three activities are actually implemented in an integrated way; differences in the total of groups or members reached relate to an implementation delay and to the fact that not all members necessarily participate in all activities. The four mat weaving groups consist of women whose husbands are members of male groups involved in the other programme components.

Groups are located in 7 of the 19 villages of the island; except for the two coconut oil producing groups, all groups are situated in the hilly part of the island. On the basis of the average family size on the island (5.2) and eliminating double counting, the project has *directly* reached 3.2 % of the population of Nusa Penida. The number of people reached indirectly (participation in the cattle vaccination, use of water from the reservoirs, demonstration effect of perennial crops, ...) is difficult to estimate.

As mentioned earlier, it is very difficult to provide in-depth data on the socio-economic status of the groups reached. The following can nevertheless be put forward:

- the population of Nusa Penida is generally poor; all villages belong to the type with the lowest development level in the government's classification system of three types of villages;
- the project is concentrated in the hilly villages that are poorer than the coastal villages;
- nearly all project beneficiaries are farmers; other social groups that are mostly better off (civil servants, traders) are virtually absent of the groups;
- the type of activities promoted and the relatively low output they are able to generate imply that only poor people are interested to join the project;
- by promoting a group approach, leaving it to the people to select their members, it could not totally be avoided that in certain cases relatively better off people benefit whereas poorer farmers might have been left out;
- one important group of poor people has however remained untouched by the project: the fisher folk (be it that some of their wives are engaged in coconut oil production).

Last but not least it is important to mention that women are heavily underrepresented as *direct* project beneficiaries. This statement should however be put into perspective:

- cattle rearing is actually a family business; even if the project directs itself to men, women and children are equally involved and will benefit from the activity. Men are not allowed to decide unilaterally on the sale of animals. The project has however missed the opportunity to include women more systematically in the action (for instance in technical training);
- women and children are actually benefiting most from the construction and rehabilitation of water reservoirs as they are responsible for water provision;
- the project has tried to identify and develop income generating activities for women; the possibilities in this regard are however limited, mainly because of the strong competition from Bali island.

3.2. Achievements at the level of the project outputs

The major achievements at the level of the project outputs can be summarised as follows.

- **Cattle breeding and fattening.** Till the end of February 2001, 234 cattle (of which 223 cows) have been distributed to the same number of farmer families. 107, 159 and 196 head of cattle received regular medical treatment (vaccines, de-worming, anti-flies spray) during the first, second and third project year respectively. By February 2001, 123 calves have been "repaid"; 53 of these animals have been provided as a loan to new farmers and the remaining 70 have been sold as they did not meet the desired quality standards. 43 farmers have cleared their debt entirely by paying back two off-springs. Since the start of the system, 2 animals died; in both

cases the farmer was not responsible for the death of his animal and got another one.

No in depth analysis of the growth and health status of the animals was conducted during the evaluation. However, according to the data provided by the personnel of the livestock department, the cattle that is part of the revolving fund is of better quality of the average cattle on the island, grows faster and is healthier.

- **Construction and rehabilitation of water reservoirs.** In total 20 new “cubang” have been constructed and 142 others rehabilitated. Farmers declared that up till now, the water available in their “cubang” has allowed them to bridge the dry season⁴ while ensuring the fulfillment of the needs of their family and animals. In many cases, water could be sold to others. No indication was found of serious deficiencies in the newly constructed or rehabilitated “cubang”. Site visits revealed however that some of them have minor cracks that need to be repaired rapidly.
- **Planting of perennial crops.** In total 13,578 trees have been distributed and planted by groups members: 3,257 teak trees, 1,767 jack fruit trees, 1,834 mango trees and 6,720 sonokeling trees. The project has not undertaken systematic efforts to assess the survival rate of the trees. Discussions with the project staff and groups led to the following estimation. Around 85 – 90 % of the trees of year 1 have survived; for the second year, this figure is around 55 – 60 %; the trees in year 3 were just planted at the moment of the evaluation. The low figure for year 2 can be explained by the late arrival of the seedlings (in the middle of the rainy season) and, more importantly, by the fact that the seedlings were washed over by salty seawater during the transport from Bali to Nusa Penida.
- **Coconut oil production.** Around 40 women, organised in two groups, have continuously or temporarily engaged in the production of coconut oil; they were able to repay the loan provided by the project. The activity has provided a fair income to the producers for a certain period. Recently the price of coconut oil has drastically decreased, reducing the producers’ possibilities to get a reasonable income from the activity. As a result, one group has, at least temporarily, stopped the production.
- **Mat production.** Four women groups have started up mat production using a type of grass that is abundantly available. The groups produce the mats on a regular basis and sell them to traders who come to the village. The mats are in high demand, but their price is low. This is partially due to the low quality of the mats and the monopoly position of the middlemen who buy the mats from the groups.
- **Wood carving and carpentry.** One group has got a loan for the purchase of some equipment that increases productivity but needs electric power. Electricity was provided by a generator in the village owned by a third person. This generator has however broken down and has not been repaired yet. The group is now looking for other possibilities to use its equipment. Up till now, nothing tangible has been achieved yet.

⁴ There has however not been a severe dry season since the start of the project.

- **Group autonomy.** All groups function in a fairly autonomous way and are able to solve most of the problems at their level. At the same time, they request additional support from the project (or YDP in general) to undertake additional activities to further enhance their social and economic well-being. Groups consider themselves mainly as functional entities – people that join the group for a particular short-term purpose - and few of them have a vision on how they should develop in the longer term.

3.3. Achievements at the level of the project purpose and general objectives

The project purpose is to increase the income of the population of Nusa Penida while preserving the natural environment of the island. This is expected to contribute to more welfare and a more egalitarian society on Nusa Penida.

At the moment of the evaluation, the income of most people reached by the project has not yet increased significantly. This is understandable when one considers the characteristics of the major project activities, i.e. the cattle breeding and the planting of perennial crops. By their nature, both activities only generate income on the medium or long term. At this moment, both project components now lead to asset creation, not yet to income increase. They are however expected to do so as marketing prospects for both cattle and most of the wood species planted are very good. Group members are very well aware of this situation and seem basically satisfied with the achievements up till now.

Those activities that are supposed to generate an immediate income (wood carving and carpentry, coconut oil production, mat weaving) have indeed contributed to do so, but only on a limited scale. The price of the produce is that low that income increase is rather small, but nevertheless much appreciated by the women who have no alternative sources of income.

It is very clear that the project's activities have contributed to the preservation of the natural environment of the island. Indeed, without exaggeration it can be stated that the landscape of Nusa Penida is rapidly changing. The island is loosing its drought prone character by the massive planting of trees, fodder grasses and other plants, not only by the group members, but by the population in general. The project, and YDP in general, have undoubtedly played a key role in this process, be it that other factors have also be important.

If the target groups succeed in keeping the assets obtained through the project, the project will have contributed to more welfare and a more egalitarian society. Most project efforts are indeed concentrated on the villages in the hills that are much poorer than the coastal villages.

4. Assessment of the project achievements

The assessment of the project achievements will be conducted on the basis of the generally applied evaluation criteria: relevance, effectiveness, efficiency, impact and sustainability. If necessary, a distinction will be made between the different project outputs.

4.1. Relevance

Relevance is here defined as the extent to which a project intervention is appropriate and can be considered as a useful and positive contribution to nationally and locally perceived development needs.

The relevance of the project as a whole and of its particular components is rated as high to very high. The relevance of the major project components – cattle breeding and fattening, water provision and promotion of perennial crops – is beyond any doubt. Cattle rearing is one of the few potentially viable economic activities of the island, it fits with the natural resource endowments (availability of fodder and grazing land), the cultural values and skills of the people. It helps also to solve bottlenecks in agriculture production (need for rapid ploughing in view of the short rainy season, provision of manure). Moreover it is in line with the regional and national development plans and, hence, can make use of the technical services available on the island.

The relevance of improved water provision is evident. Additional positive points in this regard are the use of a locally known technology and a design that takes into account the different needs for water.

Perennial crops have the potential to make good use of and to preserve the natural environment. They will also be able to respond to increasing demands on the market and, hence, provide an important income to the farmers. Minor points are the fact that the activity only produces long term results and contributes to an increased competition for the use of scarce land ⁵.

The activities to increase the added value of agriculture and forestry production are considered as relevant as they aim to diminish the island's dependency on agriculture and forestry and diversify the people's sources of income; moreover they are able to provide an income for women in lean periods. Minor points are the relatively complex nature of the activities (as compared to the people's skills), the dependency on middlemen for marketing and the strong competition from producers in neighbouring Bali.

The relevance of the project's objective to increase the autonomy of the groups is obvious in view of the sustainability of its benefits and the overall development needs on the island. To that it can be added that local people are acquainted with groups as an institution for joint action.

Summarising, it can be stated that the project's relevance is high. A minor point of concern is that, as a whole, the project will mainly produce effects on the longer run,

⁵ Many perennial crops are however planted on so-called "critical land" that is not suited for agricultural production.

whereas most short-term needs, with the exception of water availability, are not directly addressed. This might put some pressure on the people to sell off their assets (cattle, trees) prematurely in case of urgent cash needs.

4.2. Effectiveness

Effectiveness is here defined as the degree to which the project is able to implement its stated goals and achieve progress towards its objectives.

At output level, the effectiveness of the project can be considered as acceptable to high:

- In total 234 heads of cattle have been distributed compared to 240 initially planned; the slight difference can be explained by the fact that, at the moment of the planning, YDP thought it would receive more funds from EZE than it actually received (see below). In order to be able to reach the target, the project has shifted its distribution system from buying (expensive) adult and often already pregnant cows to calves of 6-8 months. This measure slows down the rotation of the fund but allows nevertheless reaching a higher number of people with the same capital.
As far as the qualitative aspects are concerned (improvement of the breed, rapidity of growth), no detailed assessment could be made; competent resource persons indicate however that the quality of the cattle distributed by the project is higher than average. The health status of the cattle is good, whereas the mortality rate is low (around 1 %). The problem of lack of high quality fodder during the rainy season has not been resolved yet in a satisfactory way, leading to a slow down of the growth of the animals during this period.
- The number of "cubang" constructed or rehabilitated firmly exceeds the initial provisions. This can be explained by both the project's decision to concentrate on the rehabilitation of existing water reservoirs and the very high local contribution.
The "cubang" constructed and rehabilitated are able to fulfil the people's domestic needs for the moment being. Problems might however arise when these needs will increase, as a result, for instance, of the increasing number of cattle or changes in the pattern of water consumption. The project could have done more also to ensure the quality of the water; a few cases were met where the risk of contamination of the water was quite high. In a few cases of collective "cubang" (belonging to more than one family), the issue of ownership was not always well settled, which might lead to problems in the future.
- The number of perennial trees planted meets the targets. The survival rate of the trees is excellent for the first year, but too low for the second year. As mentioned before, in this second year the seedlings arrived too late in the rainy season and were washed with salty water during the transport by ship to the island. This happened because of poor management by the forestry department that was responsible for the provision of the seedlings. The project should however have reacted differently by not distributing the seedlings immediately but keeping them at a central place till the next rainy season.

The farmers' care for the trees is at an acceptable level but could have been better, which on its turn could have led to a faster growth of the trees.

In a few cases, farmers planted trees on land they do not own. The actual owners of this land have in most cases migrated and it is not expected that they will claim back the land immediately. The project should however have encouraged the farmers to conclude a formal agreement with the owners and facilitated in this process if necessary.

- The project output to increase the added value of agriculture and forestry products has only partially been reached. The number of groups involved in this type of activity is less than expected and, more importantly, the added value created is low. This can be explained partially by market factors (for mats and coconut oil) that are at least partially outside the producers' and the project's control, partially by poor quality of the produce (mats and, to a minor extent, wood carving) and poor planning of the activity (wood carving and carpentry). It is however important to mention that the coconut and mat producing groups remain quite satisfied with the (low) income received as they have no alternative economic ventures to engage in.
- The groups have undoubtedly reached a certain level of autonomy as far as their capacity to manage the on-going activities is concerned. The existing potential is however underutilised as the project has not undertaken any effort to promote the groups as institutions for village development. In this regard it can be deplored that the project has not paid attention to the savings and credit activities, which are taken up spontaneously by virtually all groups. More in general, the project has lacked a clear underlying concept on how groups should develop and eventually play a role in the global development process on the island and the empowerment of the resource poor farmers.

At project purpose level, no clear indicators had been formulated during the project planning stage. It is obvious that the project's effect on the income of the farmers supported has still remained quite limited. However, assets have been created that are highly valued by the people (cattle, trees, cubang) and will lead to an income increase on the medium and longer term. It is further clear that the project activities have contributed to stop the environmental degradation on the island. Trends have clearly been reversed and there are indications that this influences the local eco-system (more regular rains, check to erosion).

4.3. Efficiency

Efficiency is here defined as the extent to which the project is able to maximise the use and the potential of its resources, and optimise their effect and impact. As such, efficiency can involve issues of means and costs, organisation and management and the methods employed by the project to implement its activities.

As we will demonstrate hereafter, the analysis of the efficiency of the project leads to a picture with a lot of nuance. The project scores excellent with regard to some aspects, but is weaker in other domains. The major issues in this regard are presented hereafter.

- From a technical point of view, most activities as such have been set up and implemented in a fairly efficient way.
 - The cattle component uses the local breed called “sapi Bali” (Bali cow) ⁶ that is adapted to local circumstances. The revolving fund approach ensures that the project means will be revolved and that in the long run a considerable amount of people will benefit. Monitoring by the group leadership and project staff ensures that minor problems (health, ...) are immediately tackled. All farmers take care of their cattle in a responsible way. The repayment of the loans is well organised and transparent; no cases of defaulting have occurred yet. Good co-operation with the livestock department ensures a steady provision of the necessary vaccines and other drugs and an increase in quality of the livestock. A minor element is that the activity immobilises a relatively high amount of resources for a relatively small number of beneficiaries. This disadvantage is however inevitable if one opts for cattle breeding.
 - The choice for “cubang” to ensure water provision is undoubtedly efficient. This technology is well known on the island, easy to implement and allows a high level of local inputs. A minor point is that the uniform pattern of implementation (each group got the same amount of funds to spend) did not sufficiently take into account the different needs existing at the level of the groups.
 - The promotion of perennial crops has been conducted in an efficient way. The species planted are adapted to local circumstances and of good quality. Local inputs have been maximised and groups were well organised to implement the activity. Minor points were that not enough attention has been paid to the care of the trees (leading to a growth below potential) and that the market potential of some of the species grown (sonokeling, mango) might be limited.
 - The guidance of the groups involved in the creation of added value of agriculture and forestry produce was not comprehensive enough to ensure maximum effects. Technical aspects have been underscored (mat weaving) and not enough attention has been paid to the marketing aspects.
 - The guidance of the groups lacked a long-term concept that should have allowed the project staff to consistently focus on groups strengthening.
- The internal organisation of the project can be considered as efficient. Office space and equipment were simple but appropriate; an additional means of transport (besides the two motor bikes available) would have increased the project outreach. Local staff are well motivated. Their technical competence is however limited compared to the broad range of activities undertaken. This constraint has been partially dealt with through good co-operation with competent government services. Skills in the economic and financial fields and in group building were however lacking to an important degree. This led, among others, to deficiencies in the organisation of the “creation of added value” component and, more importantly, in the role the project “forgot” to play in marketing and the way groups were accompanied (see

⁶ It is not allowed to import cattle from other islands to Nusa Penida, to preserve the island from cattle diseases.

below). This could have been avoided by creating better linkages between this project and other YDP initiatives (focusing on small-scale enterprise development) where the necessary competence on economic and financial level is available.

- Co-ordination, monitoring and financial management by the YDP-office in Denpasar Bali and the head office have been of good quality but relatively expensive. This can be partially explained by the isolation of Nusa Penida and the fact that two YDP offices had to ensure management tasks in a quite small and simple project.
- Lack of clarity, at the level of YDP, on the support that EZE would eventually make available, has hampered project implementation. Initially, a budget of 595,000 DM was agreed upon, of which EZE would contribute 510,000 DM (86 %). This budget was made in 1996 and used an exchange rate of 1 DM = 1,500 IDR. After the economic crisis started mid August, the IDR depreciated heavily and EZE suggested to extend the initial project period by 6 months⁷. According to YDP, EZE never made clear which amount YDP would receive finally. The volatile currency rates and the fact that there has been a change of staff at EZE level might be major explanations for this situation. Finally, YDP would receive DM 302,833, which is 59.4 % of the amount initially planned. YDP coped with this budget decrease by increasing its own contribution and reviewing some budget items.
- The option to develop a group approach (as opposed to individual guidance of farmers) has obviously produced a positive influence on the project's efficiency. The group approach has indeed been beneficial in many ways: local co-ordination of activities, mutual control among members, etc. Training of group leaders and members has in most cases laid down a basis that allowed groups to take up a number of tasks effectively and efficiently. But the groups' guidance lacked a clear concept; once the practical skills to manage the on-going activities had been transferred, there was no agenda towards further group strengthening. This has impacted negatively on the project's efficiency in at least two ways:
 - The stop in the handing over of skills and responsibilities to the groups implied that much of the monitoring remained the project staff's responsibility. This led to a situation where the project rapidly reached its maximum outreach, because project staff was obliged to devote a major part of their work to the time consuming⁸ follow-up of *individual* farmers (cattle, trees), a task that could have been transferred easily to the groups' leadership.
 - Groups have kept an "inward looking" perspective throughout the entire project period. It can indeed be justified that priority has been given to internal group strengthening in the starting period. At a certain moment however, groups should become the initiators of local development and their impact should go beyond the group's boundaries. This has not happened, which is unfortunate considering the high level of interest for the project's programme and its excellent reputation on the island.

⁷ Sources within YDP indicated that this was also due to the fact that, in that period, EZE's partners in the South had much more financial needs than EZE could cover.

⁸ Many farmers have planted their trees and/or keep their cattle at a considerable distance from the village; in many cases the staff had to walk to reach these locations.

4.4. Immediate and long-term impact

Immediate impact (or effect) is defined as the immediate tangible and observable improvements or change(s) in people's lives, which have been brought about as a direct result of project activities.

Long-term impact concerns the long-term and sustainable changes brought about by a development project; this impact can either be anticipated in relation to the project's objectives or unanticipated.

This evaluation did not aim at assessing the impact of the project. It is obviously far too early to (try to) assess its long-term impact. Moreover, time and resources lacked to conduct an in-depth assessment of the immediate impact of the project. Nevertheless, a series of indications can be provided in this regard:

- The combined effect of several project components (cattle rearing, water provision, tree planting) seems to have contributed significantly to reverse the negative spiral of environmental degradation, decrease of income, lack of economic perspectives and emigration. People now seem to believe firmly that they can ensure a decent living on the island and are motivated to invest in their land and environment. The degree of integration in agriculture and livestock has increased (cattle used for land ploughing and manure, trees providing fodder for cattle, increased availability of water for cattle and seedling, planting of green manure species as fodder for the cattle, prevention from erosion) and so have employment opportunities.
- The project activities in the above mentioned fields have clearly produced a demonstration effect and, hence, increased its impact. This is most evident in the field of the planting of trees, an activity that can be easily conducted without any external support, and in providing vaccines and medicines to cattle on a regular basis.
- More in general, these positive evolutions have increased the self-confidence of the people. They now feel able to cope with the constraints and are even proud of what they have achieved. Their progress leads to increased economic activities and social investments (in Hindu temples and schooling of the children, for instance), which in turn favor social cohesion.
- The project's ambition to create an additional but stable income via increased added value on agricultural and forestry products has not materialised yet. In this regard, YDP faces a dilemma. On one hand, it is strategically important to diversify the economy of the island and to prevent that it remains a cheap provider of raw material for the Balinese economy; on the other side, the comparative disadvantages of the island prevent it from successfully competing with producers in Bali.
- Another constraint is the weak bargaining position of local producers when they want to market their produce. The organisation of the producers (at group level and among groups) is a pre-requisite if one wants to avoid that most of the profits will be skimmed off by better organised and informed middlemen. Such an organisation

does not yet exist, because of the project's lack of attention for marketing and the lack of perspective in group development.

- A few cases of social envy have been reported, especially towards beneficiaries of the cattle breeding programme. This is understandable in the sense that the project only has reached a minor part of the population and that many other farmers desire to join the programme.
- Through its long standing co-operation with the local population and instances, YDP is now considered as a competent and reliable partner for the island's development. This image is reinforced by the fact that is has been, for the last ten years, the only development institution that has been present on the island. The interest in YDP's activities is further illustrated by the more than 40 written requests for support that have been introduced by groups that are not supported yet by the organisation.

4.5. Sustainability

Sustainability is here defined as the potential of a project to continue its developmental momentum, to maintain and to produce benefits, which are valued by its beneficiaries in the long-term.

The issue of sustainability has been analysed in depth during the evaluation; the major results of the analysis are presented hereafter.

- The sustainability of the results of the cattle breeding and fattening programme is quite good. At the level of the farmers, many factors support this statement: Nusa Penida is a strategic location for cattle breeding so that the continuity of technical back-up services is ensured; the quality and sophistication of these services might even increase in the future (by availing, for instance, artificial insemination). Moreover do farmers dispose of the necessary skills and is the area suitable for cattle rearing. The increased availability of fodder ensures that an increase of the number of cattle can be coped with without any negative effect on the environment. Marketing is not a problem, be it that much remains to be done to ensure that farmers get a fairer price.

At the level of the project, YDP aims at setting up a sustainable revolving fund. This implies that the income from the fund should be sufficient to cover all its costs (for training, technical advice and follow-up, medical treatment of the animals and global co-ordination). Up till now, the cattle revolving fund has not been managed as a separate unit, which makes it difficult to assess its chances for sustainability. The following can nevertheless be stated:

- YDP has not yet defined the modalities of the future revolving fund. Basically two models can be conceived: either set up a "centralised" revolving fund owned and managed by YDP (or a YDP controlled institution), either "decentralise" the fund by transferring the ownership and management to the groups. YDP seems now inclined to go for the "centralised" option, because it will allow to more easily use the fund for new groups and to better organise some key services, such as the monitoring of the health status of the animals.

- The lack of clarity with regard to the set up of the fund has prevented the project (and YDP) from managing it in an economic way. Hence, no indicators and follow-up mechanisms related to the financial viability of the fund have been developed yet, nor have activities been explicitly been designed for that purpose. A quick calculation on the basis of incomplete data reveals however that the income from the fund does not cover yet entirely the expenses. It might be indicated to change some of the parameters of the present programme, for instance requesting farmers to keep the calves for a longer period before they are given to the fund as repayment of the loans. This would allow the fund to get a better price for the calves that are sold. For the same reason it is important that the fund has a better position when marketing the calves. Presently, the average price obtained is too low because of the monopoly position of some traders on the island.
- The sustainability of the “cubang” is to a major level guaranteed as they are crucial to ensure the water provision for the families’ needs and use a locally well known technology. There are however a few weaknesses that need immediate attention in view of sustainability:
 - Quality of construction and rehabilitation is relatively low. This is not a problem as such, as it allows the construction and/or rehabilitation of a far bigger number of reservoirs. Cubang owners do however not have a clear “culture” of maintenance of the cubang, nor a mechanism to put aside funds to cater for future rehabilitation works. Minor cracks are not repaired and in case of major problems, the cubang are often simply left. Owners might be tempted to address themselves again to YDP, as the present project has repaired a considerable number of “cubang” ...
 - In a few cases, the ownership status of the cubang has not been clearly arranged yet; this might in the long run affect the access to the water for those who do not own the land where the cubang is located.
 - Compared to piped or pumped water, the “cubang” can be considered as a backward technology with a lower water quality. As such, it might happen that the cubang will be given up for better technologies in the long run. It is however expected that this will not happen in the immediate future.
- The sustainability of the benefits of the tree planting component is high. The cultural value attached to trees is steadily increasing and so does their market value because of the strong Balinese economy and the generalised lack of timber in Bali and Java. The species planted do further not need much care and tree diseases are rare on the island. Other dangers (big fire) are limited. The only real “danger” is that farmers might be tempted to sell their trees too early when they are in need of cash and/or market prices are very high.
- The sustainability of the benefits related to the promotion of activities aimed at an increased added value of local produce will very much depend on the developments on the market, which are beyond the control of the local producers. It is very hard to make forecasts in this regard. The market for coconut oil, for instance, might very well become attractive again, but it is also possible that other oil products will push

coconut oil out of the market. More in general do Nusa Penida producers find themselves in a disadvantaged position compared to those located in Bali.

- The sustainability of the groups will very much depend on their ability to (re-)define their role and function. In the older groups, most of the present activities do not request that much group co-ordination. As such, they are insufficient to ensure the relevance of the groups for the members. Higher relevance can be achieved in many ways: by engaging in new activities, by providing the groups a broader role or by strengthening activities that do presently not get the attention they deserve (such as the traditional savings and credit schemes).

If all the activities develop as can reasonably be expected, the project will lead to a sustainable increase of the income of the farmer families. The level of this income increase will very much depend on the ability of farmers and groups to strengthen their bargaining position when selling their products. This in turn requires a co-ordinated action at group level and among groups; at this moment, the conditions for realisation of this requirement are not yet fulfilled.

5. Conclusions and recommendations

5.1. Conclusions

This end-of-project evaluation of the project "Development of people's socio-economy and environment of Nusa Penida island" has been conducted in April-May 2001 and has been able to globally assess the performance of the project.

The outcome of the evaluation is globally positive. The achievements of the project clearly outscore its weaker points. The major strong points of the project can be summarised as follows:

- The project has developed a limited number of well chosen and interrelated activities, which took the local potentials and constraints fully into account and were able to diminish the people's vulnerability. Hence, the project has made a large contribution to the people's renewed conviction that they can make a decent living out of their resources. As such, the project has contributed to a reversal of a negative trend that was notified a few years ago and could have led to an increased ecological imbalance and, hence, a lack of economic opportunities and emigration.
- Effectiveness and efficiency of the project have been acceptable to good. The project has attained most of its targets while preserving the quality of the action. Activities have been globally implemented in an efficient way, with a major concern for the appropriate use of the project's resources.
- The major achievements at the farmers' level have a clear potential for sustainability, even if YDP might not continue its efforts and the farmer groups might disintegrate. This conclusion is based on the fact that farmers, at their level, are able to manage all major aspects of the activities and do not depend on outside institutions in this regard.

The major weaknesses of the project relate to:

- The lack, within the project, of activities that are able to successfully generate substantial income on the short run. Such activities, which are probably hard to identify and implement, might have constituted a welcome complement to the present programme, which only generates income on the medium and longer term.
- Weaknesses in the guidance of the farmer groups, because of limited number of the staff and, more importantly, the lack of long-term concept on how groups should develop and take up broader functions. This has led to a rather limited outreach (staff being too busy with tasks that could have handed over to the groups) and to "inward looking" groups with a limited effect on their social environment and without any ambition to take up a role in broader village development.
- The project's "blindness" to the crucial role of marketing in many of its components. This has adversely influenced the income of some activities (such as the processing

of agricultural produce) and will increasingly do so in the future, when timber and cattle will be marketed, if not adequately tackled.

2.2. Major recommendations ⁹

The following major recommendations can be put forward on the basis of the analysis presented in the previous chapters.

General recommendations

1. **Future of YDP's involvement in Nusa Penida.** YDP should continue its involvement in Nusa Penida and this for different reasons. Despite the progress made, the degree of poverty is still high. Moreover, YDP should make full use of the knowledge it has acquired and the confidence it has gained among the local population and institutions. As such, a programme can be set up that build further on the results achieved so that a major effect can be reached with relatively limited inputs.
2. **A more balanced programme.** Future efforts of YDP should try to be more balanced in a double sense:
 - By promoting activities that increase the income of the farmers both in the short and the medium or longer term. This implies that the present programme should be completed with activities that generate income more rapidly; the present processing activities (coconut oil, etc.) seem not to have the potential to reach this purpose.
 - By offering a programme that ensures a balanced involvement of both men and women. The past project evolved mainly the interests of men, be it that women benefited also from it. A better balance should however be obtained in the future.

A combination of both strategic directions suggested above implies that, in first instance, income generating activities for women should be identified. During the field visits, it was suggested several times to set up a revolving fund for pig raising, using a similar approach as the existing cattle scheme. At first sight, pig raising seems indeed to offer a potential (good market, relatively easy to raise, local skills and knowledge, presence of veterinary support services), but more analysis is obviously needed.

Last but not least, it is obvious that this recommendation implies a better gender balance at the level of the composition of the project team.

3. **An enriched group development concept.** YDP has to review and enrich the group concept as it is presently applied in Nusa Penida. A clear strategy should be defined that implies the gradual development of groups towards local development institutions that serve broader interests than those of the members alone. Such a concept implies that an operationalised approach of group guidance be implemented, including concerted efforts of training and capacity building and a

⁹ We limit ourselves here to *major* recommendations. A series of punctual and often technical recommendations can easily be derived from the analysis presented under chapters 5 and 6.

gradual handing over of tasks and functions to the group leaders and members. Groups should also be encouraged and enabled to play a role in village development and to participate, for instance, in the decision making process related to village funds that are increasingly made available by decentralised government structures. Such an approach will also allow that the project staff cover a bigger amount of groups.

Specific recommendations

4. **Cattle breeding and fattening.** This activity should undoubtedly be maintained in future development efforts on the island. The set up presently followed can be basically maintained; a few modifications are however suggested. Most importantly, YDP should take develop appropriate measures to really manage in a separate way the revolving fund built up by this project. First of all, this implies that a clear decision should be taken on the status and nature of the fund (fund owned and managed by YDP in a centralised way, or devolution of the fund to the group level). The option for a "centralised" fund might indeed be appropriate, provided that YDP commits itself towards the donors and the local communities that the fund will be entirely used for the development of Nusa Penida. Whatever option taken, a separate administrative and financial entity should be created, which makes it possible to assess the funds' performance separately. Moreover, indicators should be developed to closely assess the performance of the fund (related, for instance, to the speed of the rotation of the cows, the evolution in the price of calves, etc.). As such, the information can be provided to manage the fund in a more strategic way. As an analysis has proven that, from an economic point of view, cattle fattening is more viable than breeding, YDP should increase its efforts to promote this option. It will also allow a higher rotation of the fund and, hence, an increased number of beneficiaries.
5. **Water provision.** This activity should also be maintained. The cubang option has proven viable and seems the best solution to solve the water shortage in the hilly part of the island. It is however important that the future approach includes efforts to ensure the sustainability of the cubang. Groups should be encourage to set up mechanisms to ensure regular maintenance and a financial provision for major rehabilitation works. Moreover, where appropriate, clear arrangements should be made on the ownership of cubang that are used by several families.
6. **Perennial crops.** This is another activity that should be continued without any doubt. The policy to encourage farmers to plant different species should be maintained and efforts to look for additional species that are suitable to be planted on the island and have good marketing prospects should be stepped up. Most probably, it is indicated to concentrate on wood species. Fruits (such as mango) might be difficult to market at an advantageous price in the future. The possibility of promoting bamboe species (in high demand on the island) should be analysed. In case farmers participating in the activity do not own land, an arrangement should be concluded with the landowners prior to the planting of the trees. The

technical guidance in the post-planting phase should be increased in intensity and quality.

7. **Processing of agricultural and forestry produce.** Research should continue to identify viable activities in this area, well knowing that they might only be able to provide an additional income to the farmer families.
8. **Second level organisation.** Any future project should liaise with existing groups and create new groups in line with the perspective presented under recommendation 3. above. On the medium term, the creation of a second-level organisation of farmer groups such be envisaged. Such an institution could take up roles on the sub-district level and be able to engage in a dialogue with district development authorities and YDP.