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DEREMA FOREST CORRIDOR: EAST USAMBARA MOUNTAINS

RESETTLEMENT ACTION PLAN FOR FARM PLOTS DISPLACED FOR BIODIVERSITY CONSERVATION IN THE DEREMA FOREST CORRIDOR

PREPARED FOR CONSIDERATION OF COMPENSATION FUNDING
BY THE WORLD BANK

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TABLE OF CONTENTS

TABLE OF CONTENTS (cont'd)

List of Tables

Figure:

List of Annexes:

Map

FINAL DRAFT

RESETTLEMENT ACTION PLAN FOR FARMS DISPLACED BY ACTIONS TO PROTECT AND GAZETTE THE CORRIDOR

In northeast Tanzania 1128 farmers living on the steep slopes of the Eastern Usambara Mountains were told in mid-2002 that the crops in their small fields within the forests outside their villages would have to be eliminated in order to conserve the forests. The new "Derema Corridor" would provide a link between two protected forest reserves, and continuity of the habitat for hundreds of bird, reptile, insect and plant species that are rare and in some cases threatened with extinction. The villagers were given compensation for the crops in a three-meter boundary strip around the corridor that was demarcated by slashing the existing vegetation. Their crops inside the boundaries – high value cardamom, cinnamon, cloves and black pepper, along with some fruit trees -- were counted and inventoried for later compensation.

Farmers stopped tending their crops. The budget available to pay out the compensation, however, was far less than was needed. By 2004 Tanzanian authorities asked the World Bank to help finance a substantial portion of the compensation money. Finally in 2006, the government decided to make a formal request to reallocate money within a Bank-supported forestry project to provide the balance of the compensation funds needed.

This Resettlement Action Plan provides the full details of the case, and is the documentary basis for decision-making by the Bank. The case turns out to be more complicated than simply topping up the envelope of compensation funds.

Introduction: The Setting

1. The East Usambara Mountains are part of the Eastern Arc of isolated mountain blocks located southeast and then southward from Mt. Kilimanjaro in northern Tanzania. Since the late 1980s, the Tanzanian Ministry of Natural Resources and Tourism has moved to protect and conserve the Eastern Arc Mountains because of their high biodiversity values, their value of their rainforest microclimates as sources of high value agricultural products, and their potential to add to Tanzania's ecotourism resources.

2. The East Usambaras were for many decades the subjects of changing vision and policy. Successive periods saw exploitation of the mountainsides for coffee, timber, and tea; gazetting in small blocks as national forest reserves; and the encouragement of local residents to develop specialized livelihoods based on the special characteristics of their climate and ecology.

3. The current period of commitment to conservation has seen continuous effort to reconfirm gazetted forest boundaries, add new forests to those already protected, and upgrade the scientific management of biodiversity resources within the forests. Through support from the Government of Finland from the 1980s and supplementary efforts from many international and Tanzanian environmental organizations, the East Usambaras are emerging as one of the most highly regarded natural treasures of the country. They have a higher ratio of endemic plant and animal species per area than any other site in the world. Designated by the Man and the Biosphere Program as an area to be highly protected, and

then supported further in the early years of the current decade by the Global Environment Fund (GEF), the East Usambaras are a core focus area of the wider Eastern Arc program. The Amani Nature Reserve (ANR), created in 1997 after long planning, is the centerpiece of conservation effort. At 8329 hectares (including a tract of land belonging to a neighboring tea plantation and covenanted to ANR for preservation), ANR is the largest forest zone under unified management in the Eastern Arc, and its dedication as a nature reserve (the first in the country) gives it a special mission in national conservation commitments.

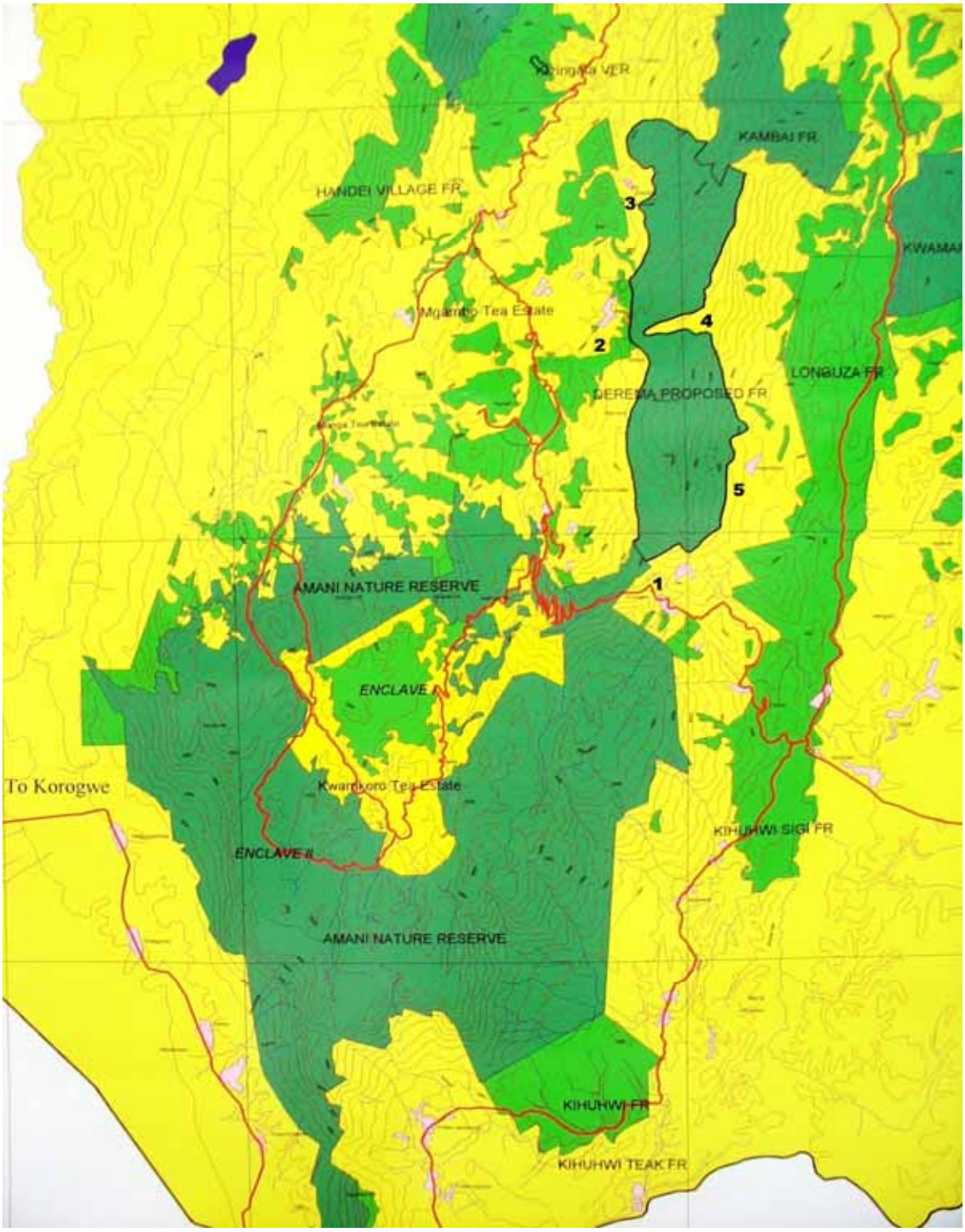
4. A key part of conservation planning for the East Usambaras is the gradual linking together of some twenty-four separate forest reserves in the mountains and the adjacent lowlands, covering 32,352 hectares in all. ANR already includes six of these prior Forest Reserves, 7265 hectares or 22 percent of the total area. That these forested areas are separate reserves is a reflection of the fragmentation of the earlier continuous forest belt which covered the mountains. Continuity is broken by belts of population along the valleys and mountain roads, and areas carved out and planted to tea and commercial forest. In turn, the increased fragmentation of the forests leads to biodiversity loss. This is not just a proportional reduction in numbers of animals or plants from the spaces lost, but a reduction in the biodiversity itself, in the number of different species present in the forest, according to both ecological theory and the observations of long-term scientific observers in these forests. In time, continuing pressure on,[1] and loss of, species could radically disturb the ecological balance in this limited bio-region. The long-term program to reconstitute as much continuous forest as possible is thus directly linked to biodiversity preservation.

5. The first additional link to be done is the Derema corridor. At 790 hectares, it will preserve forest cover that has been steadily diminished, between ANR and the next gazetted forest to the north, Longuza (north). Derema is almost all forested, 60 percent of it on steep hills and the rest in the lowland slopes below 850 m altitude. Together, Derema and Longuza add 2643 hectares to ANR, expanding the area under continuous forest by over one-third.

6. Derema is currently not a gazetted national forest reserve, but the ungazetted property ("public forest reserve") of the five villages around its edges (see map next page). Almost all (86 percent) of it is classified[2] as being in "cultivation under forest" status by an earlier researcher, K. Hyytiäinen. The status means that the forest cover has been preserved, but that the imperfect aerial photography available at the time showed at least scattered cultivation of crops under the canopy. It does not mean that the whole understory of the forest is filled with crops, and indeed the tree and perennial plantings within the forest were scattered through it, though concentrated near the subvillages (small hamlets) just outside the forest areas (areas of habitation were not included in the forest counts). The Derema forest was and is the "back yard" of the villages, from which firewood and other non-timber forest products have been extracted.

[1] The Eastern Arc is home to 35 endemic vertebrates (known nowhere outside these mountains), and to 42 other species found in the Arc and a few nearby areas. The East Usambaras are home to 4 endemic vertebrates, and notably to the wild "African violet" (*Saintpaulia spp*.), the origin of so many potted varieties popular as house plants.

[2] This and other data here on the names and sizes of reserves and their forest cover come from Stig Johansson and Richard Sandy, Protected Areas and Public Lands: Land Use in the East Usambara Mountains, Technical Paper 28 of the East Usambara Catchment Forest Project, Forestry and Beekeeping Division and Finnish Forest and Park Service and National Soil Service, Dar es Salaam and Vantaa, 1996. Areas and percentages are best estimates from mapping exercises in the early 1990s; there are few definitive recent surveys.



MAP 1. AMANI NATURE RESERVE, DEREMA CORRIDOR, AND THE FIVE AFFECTED ADJACENT VILLAGES

1 = KISIWANI 2 = MSASA IBC 3 = KWEZITU 4= KWEMDIMU 5 = KAMBAI

7. It is important to understand that the living conditions for the people of the Usambaras have been strongly conditioned and frequently reordered by policy decisions made outside the local lives of the villages. The German period, from the 1890s to the First World War, saw the heavy exploitation of the Usambara forests, with strong restrictions against local peoples' access to forest resources. Large tracts of land were taken for coffee production. Later these lands were changed to tea production at the higher altitudes and sisal plantations in the lowlands. A railway from Tanga to the Usambaras provided the means to evacuate the timber, and clear-cutting led early to the fragmentation of the remaining forests. Both the deforestation and later replanting provided labor opportunities, and outsiders came into the lands of the indigenous Shambaa (or Shambara, from which Usambara, the place of the Shambaa, takes its name) in the mountains and to the lowland areas around the mountains where the related Bondei lived. The conversion of timber and coffee areas to tea provided hundreds of labor opportunities in the mountains, though the Shambaa were apparently never very keen to take up these low-paying jobs. Both the timber trade and the later attempts to save the forest remnants led to displacement of villagers or restrictions on access to the forest, for which there was rarely any compensation. Tanzania's villagization program from the late 1960s regrouped housing, while the steep decline of the industry from the late 1960s (exports would drop by 90 percent, from 200,000 tons per year to less than 20,000 tons) drained wage labor opportunities from the whole area. A botanical garden and nursery founded originally by the Germans in 1902 for the reforestation efforts led, by the 1980s, to government encouragement of high-value spices and their rapid spread into the forests. Cardamom, the most valuable, grows well only in the moist and shaded conditions of the forest. Black pepper vines climb existing shade trees, while clove trees grow in either village or forest settings. Cinnamon is largely a village tree. From the 1970s, these four valuable spices (cloves were illegal to take from Zanzibar island, but began to be planted anyway) gave new impetus to household incomes in the East Usambaras. As environmental conservation issues grew more important during the 1990s, the forests, and the villages, were again the subject of policy shift, as regeneration of indigenous forest biodiversity became the watchword of government commitments in the area. Finally, in the early 2000s, Tanzania's overall urbanization, the reawakening of sisal as a provider of natural fiber (and bio-fuel), and the growing value of the adjacent lowlands for new fruit, nut and food crop farming are all providing fresh incentives for Usambara families, this time to think about re-centering their economic activity away from the mountains. In short, village families have been subject to a history of changing fundamental conditions for their making a living, and have come to realize that every twenty years or so some new economic or policy shift requires them to reevaluate their livelihood strategies. The demand that farmers give up their lucrative spice crops in forest plots is just the latest of these shifting foundations.

The Project

8. The Tanzania Forest Conservation and Management Project was approved in February 2002 as a successor to an earlier forest sector project supported by IDA, and became effective in May 2002. The blended GEF Eastern Arc Forests Conservation and Management Project was approved in July 2003 and became effective in May 2005. The global objectives of the two projects are to:

(i) strengthen Tanzania's capacity to coordinate and lead forest biodiversity conservation interventions,

(ii) support an integrated community-based pilot intervention in a priority conservation area to achieve sustainable impact related to both biodiversity and human development,

(iii) improve the institutional mechanisms and capacity to undertake forest biodiversity conservation, and

(iv) develop and implement, on a pilot basis, a sustainable financing mechanism for conservation activities in the Eastern Arc forests.

9. There is no activity in the two Bank-supported projects that invests directly in the protection and expansion of the Amani Nature Reserve, nor more broadly in physical interventions in the Usambaras. The wider IDA Forestry Project has activities that support the establishment of the Tanzania Forest Service and improve forest and woodland management capacity; strengthen support for the reformed management of industrial woodland plantations; and support the elaboration of sustainable management and financial strategies for conservation of the Eastern Arc. There is no direct investment in forests. The Eastern Arc project, financed by the GEF through the Bank, supports institutional reforms for forest biodiversity conservation, and assists in establishing an Eastern Arc Mountains Conservation Endowment Fund with start-up funding of $7 million. Related activities in a UNDP-executed GEF project contribute to an integrated Conservation Strategy for the Eastern Arc Mountain Forests and to forest conservation interventions with communities in the Uluguru Mountains south of the Usambaras. Other donors support forest guards in the East Usambaras and income diversification/livelihood activities in mountain villages, but none has been directly supporting the enlargement of the ANR since Finnish (DIDC) assistance to the East Usambaras ended in 2003.

10. It was under the three-phase Finnish-supported East Usambaras Catchment Forestry Project (EUCFP, later the East Usambaras Catchment Management Project, EUCAMP) that planning for the expansion of conservation was done. Researchers and forest managers together developed the inventories, mapping and some of the scientific basis for the concept of reserving ecological corridors to link the reserves and therefore enlarge the areas under continuous protection. EUCAMP also provided the resources to do the demarcation and slashing of the Derema boundaries and the evaluation of the crops to be eliminated from within the corridor.

11. To understand the current problems of the compensation process for the crops in the Derema corridor, it is necessary to look back at the process by which compensation was paid for the crops slashed when the boundary of the corridor was established on the ground. Under Finnish support of EUCAMP, no international standards for compensation were used, despite Finland's adherence to OECD guidelines on resettlement and compensation which have been in effect since 1991. Instead, Tanzanian law would be used.

12. In early 2001, based on plans approved within EUCAMP, the boundaries for the Derema Corridor were surveyed. The surveyed boundary was 27.226 kilometers, and the area within was 956.34 hectares. In September the crops within a three meter-wide strip demarcating the boundary were counted and slashed. Of the individual crops (all spice and fruit trees) in the 8.1 hectares slashed, 92.5 percent were cardamom plants, and 6.5 percent were bananas. Almost immediately a problem developed with the method of calculating compensation due to the affected farmers. Until the new Land Act was passed in 1999, the method for payment was based on the Land Acquisition Act of 1967 and periodic updates of a schedule of crop values, the latest of which was in 1997/98. Simple arithmetic provided a crop loss evaluation, and for the perimeter crops a supplementary amount was added to the 1998 crop schedule to get the boundary settled. The new Land Act, and the Village Land Act and Village Land Regulations, however, prescribed a more complicated new method of evaluation of losses, and on October 15 the project was formally advised by the PS of the Ministry of Lands that the "Annual income per crop approach" set out in the new land act would have to be used for the Derema instead of the old Crop Schedule approach. The new method was then used, and by November 7 the new method determined that instead of the

9.31 million Tanzanian shillings cost of compensation expected for the boundary slashing under the old method, the total would come to 138 million TSh, later revised to 113.77 million TSh, over a 12-fold increase. The use of the new law had not been foreseen, and the new method clearly introduced confusion and delay into the process: most importantly, the huge difference in the values that the law would produce were a surprise to all concerned, and negotiations to fix a total administratively (the Ministry of Lands had proposed a total of not more than 50 million TSh in November 2001) failed in the light of EUCAMP's decision to follow out the full implications of the new law. It was not until the end of March, 2002, that the payments were finally made to the 172 boundary crop farmers, from EUCAMP's budget.

13. Even then, EUCAMP advisers misunderstood the implications of the arithmetic. In anticipation of the evaluation of the "corridor" crops (those within the boundaries), they estimated "conservatively" that if 127 farmers got 113 million TSh for the boundary demarcation, then compensating 1090 farmers within the boundaries at the same per capita cost might require a budget of 800 million TSh. This informal arithmetic neglected the obvious fact that the difference in the area cropped would also matter enormously, and the difference was 8.1 hectares in the boundary to 956 hectares within them. Not nearly all of it was cropped, but much more than a three-meter corridor was.

14. On the ground, the farmers saw the central lesson more simply and more completely, and they still repeat it. In the full evaluation for the boundary crops using the new law, each cardamom plant had been valued at 28,800 TSh, on the principle that that was the value of three years' lost production until new plants could be developed to maturity at new sites. That would mean a huge cash bonanza for farmers within the corridor, and some of them, the number and precise actions of whom are impossible to determine at this point, set out immediately to plant new cuttings of cardamom and other plants before the evaluation of the crops inside the corridor began. The stage was set for the evaluation of crops within the corridor boundaries.

15. Methods for inventorying and evaluation of the crops within the corridor were at least clear. The new law would be used; the same firm of professional evaluators who had carried out the boundary evaluations would be used, after competitive bidding had led to their re-selection. The counting of crops would be done in May and June 2002, and a report with the full evaluation was to be readied by the end of June. The fieldwork was duly done, and then in turn the following key events transpired:

► A third and "final" draft report on the "corridor crops" was submitted by the consultants on August 8, 2002, with total compensation calculated at 3.261 billion TSh.

► It was decided to have an "independent appraisal" (review) done of the evaluators' report by a team of lawyers, selected from the Ministry of Lands which would have to approve the evaluation and from the International Union for the Conservation of Nature (IUCN). The two-member team carried out its work in the first half of February 2003. The Ministry's appointed member was the legal adviser to the Minister of Lands, and would eventually also be required to accept or reject the appraisal. Whether he should have been called an "independent" reviewer is open to question, since the final costs of compensation would in the appraisers' own view color the perception of what the government had done in creating the new evaluation methods, especially as this was the first time they had been put to the test. The adviser would thus be both the advocate of the final proposal, as the "appraiser," and one of its judges, in his ministry role.

► In any case the team praised the evaluators' field work in counting the crops, found many small errors in their analysis of the results, and was especially concerned at the lack of justification for the evaluators' estimates of crop yields per plant, volumes actually delivered to market, and prices achieved.

► The team did not propose alternative yields or prices, awaiting further materials from the evaluators. Nevertheless, the team stated in its report and to the evaluators that "The Independent Appraisal Team has been given to expect that the overall crop valuation will ultimately be approximately one-third of the current amount," or, in another place in its reporting, ""The Independent Appraisal Team has been given to expect the total to decrease (possibly to about 30% of the current valuation. This will be an important consideration not only in determining the amount and nature of compensation, but more importantly in determining whether the process can go forward at all." No source is given in the report for this "expectation," but it clearly did not come from new research, any reanalysis of the data on plant numbers, yields, marketed crops, some alternative proposal for technical evaluation methods or an alternative understanding of what the laws implied. Nor was the suggestion very realistic that the process might have to stop if the lowered evaluation was not proposed in a new draft. The appraisal team knew fully from its own fieldwork that farmers had stopped cultivating their plants or harvesting the spices and fruits once their crops had been counted nine months earlier. It appears that, as in November 2001 when a "settlement" of 50 million TSh was proposed by the Ministry's adviser, the Appraisal Team had also proposed a lawyerly settlement of the case rather than a revised evaluation.

► The evaluation firm was not fully responsive to the report of the Independent Appraisers except in the one crucial element. It simply turned in another draft of the evaluation, without additional corrections or justifications of its methods of analysis. It did not change the date at the end of its report, July 31, 2002. But on the same page as this old date, it provided a different total for the compensation, village by village. Overall the total was 1.161 billion TSh, a drop of 2.1 billion to 35.6% of the earlier amount. Without further comment, the Government Chief Valuer approved the appraisal on July 23, 2003.

► The EUCAMP project, meanwhile, was coming to a close. After three phases of support from the Government of Finland starting in 1987, the project was closed out in December 2002. The completion report by the Programme Manager and the Chief Technical Adviser concludes: "The new land law has affected significantly the exercise of Derema reservation. Prices for crops compensation raised for more than five times, and therefore the allocated money for compensation was not enough any more. If compensation fails, local community will loose confidence to the government and this may affect conservation activities in the East Usambara due to possible conflicts, which may arise."[3]

► The Completion Report pleaded that "a substantial amount of money is required for the entire process of compensation, gazettement and, later on, preparation of practical management plans. Failure to secure additional support outside the contribution of the GOT will not only result in failure of gazettement and the loss of investment, but also in conflicts within and between local communities, policy makers and the conservation institutions in the Tanga region." Once EUCAMP closed, various partial sums of money became available for payment of the compensation approved by the Chief Valuer's decision (and the gazettement, management and maintenance of the area would become a goal supported by the GEF-supported Eastern Arc Mountains Conservation Endowment Fund). In 2004 the Government committed 100 million TSh to the compensation exercise. Finland offered € 160,000, which is still pending the resolution of a general cover agreement with the Government of Tanzania covering Finnish assistance. In March 2005 the Conservation International (US) Global Conservation Fund committed a grant of $ 350,000 for

[3] East Usambara Conservation Area Management Programme: Completion Report Of The Phase III (1999-2002), Administrative Report 40, Ministry of Natural Resources and Tourism, Tanzania (Forestry and Beekeeping Division), and Ministry for Foreign Affairs, Finland (Indufor/Metsähallitus Group), Tanga, December 2002, p. 49

compensation. Finally, the Critical Ecosystem Partnership Fund (of the WWF) has promised $ 150,000 to pay for facilitation of the compensation process, the gazettement of the corridor, and the development of a Joint Management Agreement with communities and initial monitoring. These sums add up to about $ 650,000 for compensation, plus the supporting CEPF $ 150,000. Still, by April 2005, only 64.8 million TSh (about US $ 53,000) were in the relevant compensation bank account in Muheza District.

► In June 2004 the Ministry of National Resources approached the Bank (and related GEF) forest project Task Managers to request funding to top up the funds available in order to make good on the compensation approved in 2002. The primary response of the Bank, after further discussion, was to ask for a Resettlement Action Plan in fulfillment of the requirements of Operational Policy 4.12 of the Bank, and the present document is submitted toward the end of meeting the Bank's requirements.

► Meanwhile, as the October, 2005 presidential race in Tanzania heated up, authorities became concerned about the resentment growing in Muheza District over the long delays in compensation payments (questions were put in Parliament). Whatever the cause, a new move at least to begin the payments was mandated, and the Ministry of Natural Resources and Tourism forwarded 50 % of the amount due (about TSh 600 million). After verification of the payment schedules village by village, payment of 50% of the compensation determined in the 2002/2003 process was made to each affected villager between October 3 and October 10, 2005. (The election was to be on October 30, but was postponed to and held on December 14.) This was three and a half years after the crops in the corridor had been inventoried.

16. With respect to Derema compensation, by mid-2006 there were a number of questions needing adequate response, and this Resettlement Plan was commissioned to consider them:

(a) Was the evaluation agreed within Tanzania in 2003 in conformity with the governing World Bank resettlement policy (OP 4.12)? If not, what revisions to the 2003 compensation determination (and/or other measures) are required?

(b) With the passage of time since crops were inventoried, is a new evaluation, or some form of interest, due that is beyond the compensation sums agreed in 2002 and 2003? How should any such addition be calculated?

(c) Will the World Bank consent to the reallocation of funds within the TFCMP project to compensation for the Derema Corridor? Will the Bankwide Land Committee also assent to such reallocation, under the requirements of OP 6.00, Annex A of April 2004.

Project Impacts

17. The Bank-supported TFCMP has not included investments or other interventions in the Derema Corridor, nor has it been responsible for the situation there.

18. Ongoing conservation strategy and work since the early 1990s determined that an attempt should be made to prevent the further fragmentation of the East Usambara forests, and where possible to reconstitute continuous forest, and thereby protect this important biodiversity site, by establishing corridors or additional national reserve lands. Once the Amani Nature Reserve was created in 1998 by joining six existing forest reserves and a stretch of forest owned by the neighboring East Usambara Tea Company under a protective covenant, the next most important action was to demarcate, protect and gazette the Derema Corridor.

19. To do so, Derema boundaries were sketched out and then surveyed in 2001. Farmers in the adjacent villages were consulted as to options for co-management through a "mosaic" of village forest reserves, but chose instead a strategy of having a national Forest Reserve and having the villages be designated a buffer area that would receive various incentives for "jointly" managing the forest. There was precedent for this status – sixteen villages around ANR formed its buffer zone, and were to get a share of ANR revenues and other benefits.

20. Five villages were involved, three on the west side of Derema and two on the east (see Annex 1 for a map of Derema), Kisiwani, Kwemdimu, Msasa IBC (named for a logging company that had operated in the area from the 1950s to the 1980s), Kwezitu and Kambai. Not all the farmers were cultivating in Derema, and while most had one plot in the forest, a few had two or more. The following table shows the population, number of affected farmers, and number of affected farm plots in each village.

Table 1

Derema Corridor: Village Populations, Affected Farmers, Plots Taken

Village	*Population (2006)*	*Farmers Affected*	*Farm Plots Taken*
Kisiwani	689	59	74
Kwemdimu	1617	244	265
Msasa IBC	2200	570	744
Kwezitu	2311	216	420
Kambai	1061	39	44
Totals	**7878**	**1128**	**1547**

Sources: Populations from village secretaries; affected people from Proper Consult Evaluation 2002

21. **Minimizing impacts**. The World Bank resettlement policy, in parallel with good environmental practice, calls for deleterious impacts to be avoided or minimized. In the case of Derema, the ecological analysis had shown that the corridor needed to be gazetted and conserved, that the farms within the corridor needed to be expunged, and that only limited taking of minor forest products could be permitted in the future. Several alternative options were considered. First, it was suggested to the villagers at meetings in 2001 that the area might be managed through a series of "village mosaic reserves" involving intravillage regulation of farming: for reasons not recorded, this option was reported to have been rejected in favor of full protection of the corridor as a national forest reserve. Second, the 956 hectares of the planned reserve might have been cut back as a narrower corridor, affecting fewer farms. Third, the boundaries of the reserve might have been shifted somehow to include less of the farms, at the expense perhaps of tea plantation land. In the event, none of these mechanisms to avoid impact was chosen. In any case, no physical relocation of residences was required, as the boundary was "notched" in the northeastern area of the tract to allow the village of Kwemdimu to remain where it was without disturbance to residences or food farms on non-forested land.

Affected People

22. **Socioeconomic studies**. The attention being paid to the ecology of the East Usambaras has been paralleled by concern with the surrounding communities. In particular, the WWF has financed two social impact studies of the impacts of conservation efforts at the Amani Nature Reserve and the proposed Derema Corridor.

23. The first, entitled Conservation and Poverty: A Case Study of the Amani Nature Reserve,[4] was a study of three villages in the boundary areas of the newly created ANR. It examined the effects of the 1997 creation of the ANR, and found many of the problems that would later recur in the approach to adding the Derema Corridor. A buffer zone was established around the ANR which required that several hundred farmers give up farm plots, but only about 20 – 25 percent of the compensation due was ever paid, in part because some crops were called "non-compensable." Not all non-timber uses of the Reserve were covered in the village agreements -- people complained about the restrictions that the buffer zone agreement put into place, but more generally about the lack of information. Some new land out of the Amani area was promised, but it turned out to be not nearly enough to accommodate the affected farmers. Over half the local people felt that they had benefited least among stakeholders in the creation of the Reserve. The authors of the study conclude that "the situation is that the demand of the local population and of the national and global guardians of biodiversity is in conflict" (p. 38). The resentment that is reported for the Amani villages in the mid-1990s is now also true of the Derema villages in the 2000s.

24. The second study was of the social impacts of the Derema Corridor itself, done *before* the reserve boundaries were surveyed or the crop losses were evaluated. From a structured questionnaire and focus group discussion with some 300 villagers and village leaders, the study analyzed socioeconomic characteristics of the peoples who would be affected in the five villages at the edges of the Corridor, their perceptions of the likely impacts of the loss of the corridor to their farming, and the issues they raised about the proposed gazettement of the reserve.

25. **The mountains' people**. People in the Eastern Usambaras come from many places. Virtually all except a few traders, teachers, and wage workers live from own-holding agriculture or wage labor in agricultural enterprises supplemented by their own holdings. Only about 56% of the people in the five villages were born there. A third of the population came from within the district, either from other mountain villages or from the lowlands surrounding the mountains. A tenth come from other districts in Tanga region, and the last one percent come from elsewhere in Tanzania. Most of the in-migration was attributed to job opportunities available in the mountains, earlier in logging (legal and illegal) and later in the tea plantations. Since Bondei, the language of the plains, and Shambaa in the mountains are mutually intelligible, and since in any case virtually everyone speaks Swahili, there are no great sense of tension or occupational or other differentiation in the area. Muslims and Christians live intermixed, even within families. Fully 97% of the population has partial or complete primary education, increasingly less valuable in today's Tanzania.

26. There is a strong sense of membership in each of the five villages' subvillages, which are strung out a few scores of meters apart along paths or roads at the base of the steepest mountain forest slopes. Some subvillages are hamlets inhabited by lineage groups formed around a single elder male. Other subvillages are larger units built on wider kinship relations or simple geographic contiguity among people exploiting the scattered open farming sites on the lower hillsides. One to three roomed thatched wattle-and-daub houses are the norm; only a few have metal roofs. Each subvillage's sense of its own lands is that it

[4] George Jambiya and Hussein Sosovele, Conservation and Poverty: A Case Study of the Amani Nature Reserve, Research on Poverty Alleviation (REPOA) report 0.5, 2001, Dar es Salaam.

has claims to land stretching from the residential area back to, and then into, the forests. Derema corridor is not (yet) gazetted, and is the upland part of these five villages.

27. Farm sizes range from 1 to 40 acres, counting plots both inside and outside the forests. All but 3 percent of the farmers say they "own" their farms, either by inheritance (about 37%), through own effort in unclaimed lands (40%), by purchase (about 20%), or by allocation under the Ujamaa villagization schemes after 1967. Five percent of the population say that they earn supplementary income from wage labor, about 15 percent say they engage in petty trading, and a few individuals have shops or local beer shebeens. For cash, most of the farmers claim to have one of the four major cash crops (cardamom, cloves, black pepper and cinnamon), but only 20% (a figure roughly consistent with the later inventories in the demarcated corridor) said that these fell within the forest. Farmers claimed very high incomes from these crops: while there was strong variation among the five villages, on average each farmer claimed to be earning 1.4 million TSh from cardamom, 165,000 TSh from cinnamon, 84,000 from black pepper and 21,000 from cloves. The later formal inventories would cast doubt on these self-reports, given at a time when people already knew that there would be takings of their forest plots.

28. Farmers know the environmental and tourism benefits that would accrue from protecting the corridor – most Tanzanians in the mountains seem especially aware of the importance of their lands as water catchments. Nonetheless, they were thorough in anticipating the losses they would suffer from the closure of Derema to farming. They would suffer permanent loss of income from their cash crop area in the forest, a few food crop farms, and the land in the forest that at the time belonged to the villages and the families. They feared they would be denied access to non-timber forest products, including fuelwood, building poles, wild vegetables, and to water sources and vital pathways that link villages and farms. They knew the loss of income would impair consumption, their ability to pay health and school fees, and taxes, and their capacity to save for big items like marriages and family emergencies. They feared that as social security decreased, tension and vulnerability would increase: women and children would lose disproportionately. For their own part, women pleaded with the researchers to help ensure that firewood and minor forest products not be denied them once the corridor was gazetted. Aside from the enumeration of benefits and losses, farmers in the soon-to-be affected villages resented government interference and the income drop that would follow.

29. Looking beyond the losses, villagers wanted to know how to access new land. They know that some villages in the mountains, and many in the lowlands, have undeveloped lands beyond their needs. Some such land is sold, at high prices in the mountains and less expensively in the lowlands. Even Kambai and Kwemdimu, among the villages along the corridor, have land available. Most villagers anticipated that compensation money, if it were sufficient, would be spent on land. Finding land in other villages or downslope in adjacent lowland areas is a sign of necessity, but also of the experience of these villagers, whether born in the mountains or not, that another generational turn in their fortunes is at hand, and that new families being formed, better-off families, and families running out of land in the Derema area will need to seek further opportunities away from "home." Many farmers indicated that they knew there were abandoned sisal estates (and estates licensed but never developed), and that government had discussed making it available to the Derema farmers.

30. In the Jambiya and Sosovele study of Derema, farmers were asked their concerns about the anticipated closure of the corridor and the associated compensation. Of course they wanted more information, and a participatory process of evaluation. Given what had happened with the gazetting of Amani Nature Reserve, they wanted assurances that compensation would be timely and fair. Women wanted careful preparation by the

authorities so that men would not waste compensation money if opportunities to use it wisely were delayed. Everyone wanted improved transport and agricultural services, to get on to the post-taking phase of their lives.

31. To summarize, the five villages to be affected by Derema were studied to provide a baseline as well as to provide guidance for Derema planners. People in those villages, mostly Shambaa and Bondei small farmers, knew first-hand how significantly national or local policies and plans periodically affect their lives in significant ways. Their villages lands, neighbors and livelihood possibilities have been strongly constrained by timbering, land allocation to plantations, villagization policies, agricultural outreach with high-value spice crops, and conservation efforts. Derema farmers know what happened to people affected by the creation of ANR. They were anxious, and many were resentful, about the forthcoming effects of their crop losses, which provided the great majority of their cash income. They wished to make certain that new opportunities were provided them so that they could start to move on.

Legal framework

32. **Tanzanian law.** At the end of the 1990s, land legislation and regulation was significantly overhauled. Land had for many decades been divided into "registered land" governed under modern (colonial and post-colonial) law, and village land governed under customary usufruct. Ujamaa socialism from the period of Nyerere's presidency had given government, in the Land Act of 1967, a variety of powers to take assets for public purposes, to allocate unclaimed lands, and to reorganize land use for development purposes. By the turn of the century, the new market-oriented policies of post-Nyerere Tanzania demanded the revision of land law. Two Acts were passed, the Land Act No. 4 of 1999, covering registered land, with regulations published in the following two years, and the Village Land Act (No. 5 of 1999) with associated Village Land Regulations, 2001, published under Government Notice No. 86 of 4.5.2001. A new Forest Act was promulgated in 2002, but does not conflict on questions of land regulation or public taking with the two Land Acts of 1999.

33. The Derema corridor is village land, governed by the Village Land Act and Land Regulations. Regulations 9, 10, and 13-18 set out the basis and procedures for compensation of village land (and other assets) taken for public purposes. Compensation is prescribed for loss of interest or value in unexhausted improvements, and loss of profits of all enterprises including crops. Disturbance, transport, and accommodation allowances are also to be paid where applicable: for unoccupied land such allowances and losses of profit are defined as inapplicable. The loss of profit (Regulation 15) is to be established by audited accounts where necessary and applicable, and is calculated as the net monthly profit of the business carried out on the land. Peasant crops are to be assessed in the same way, to establish the income stream lost until new crops are established mature to the point of being able to replace the income from the crops lost. This was a decisive departure from the older system under the Land Act of 1967, which mandated a schedule of crop values to be periodically updated, with the underlying basis for the prices not especially transparent. It was this difference, redefined at the moment when Derema compensation was under consideration, and yielding values far beyond those of the old methods, that proved so debilitating to the completion of Derema compensation exercise. When the Ministry of Lands informed the EUCAMP project on October 15, 2001, that it was to use the new law and regulations, it was obviously convinced that the new law would provide full and fair compensation in a way that the old schedules had not done.

34. **Evaluation methods**. The method for calculating "lost profit" is not prescribed in the regulations, but is left to public and private licensed valuers to determine, subject to the approval of the Government Chief Valuer. As for other assets, crops can be valued under

income and production methods. This is no easy task in Tanzania, as rural production and marketing are not closely scrutinized, and no audited accounts of ordinary small farm enterprises are available. Nor are there agreed schedules of yields from individual plants under village conditions. To calculate profits for the fruits and especially the spice crops concerned, it was necessary to know how much product farmers actually sold to middlemen in the export trade, and to know that in terms of the average marketed product sold per plant. Average prices per kilo for these crops are tracked by district crop officers, but this record provides no information on individual crops or farmers. Farmers keep records neither of their sales nor of their input costs, of which their own (family) labor is the biggest component. Other law allows village councils to collect a local tax [cess] for crops sold, but has proven difficult to implement. Village authorities have little idea of how much production from their villages is marketed or what profits are gained.

35. In lieu of direct sales and input information, profits could be calculated on the basis of the average crop yields per production unit, average input prices, and knowledge of average crop losses before sales into the marketing chain. Rural production varies enormously in terms of many local conditions, and the Derema case would turn out to be the first time the new Land Acts were used to compute rural compensation. As a consequence, the valuers (chosen by competitive bidding to carry out the exercise) felt it appropriate to count crops and assign at least some of them to various qualities of production, from newly planted to declining maturity, and from well-tended to marginally cared for. For the crops thus counted and calculated, departures from mature well-tended individual plants were assigned reduced values for productivity and input costs. The productivity of mature crops could be calculated by consulting producers and village buyers, but not the difference between production and actual volumes marketed. However, in the case of the spice crops very little crop produced is lost in the marketing chain, because all four -- cardamom, cloves, cinnamon and black pepper -- are simply sun-dried and then sold to traders, mainly buyers who live in or arrive at the villages ready to buy.

36. In the case of Derema, it was the EUCAMP project, managed under the Ministry of Natural Resources and Tourism (MNRT), that set up the taking. It created the contract with the valuers. When the values derived proved to be large multiples of what was expected, it hired the "independent appraisal team" to review the valuation and offer further advice. It submitted the final valuation report[5] to the Government Chief Valuer (see para 15 above). EUCAMP staff and advisers later organized the requests to other donors for contributions to pay the compensation approved, including the approach to the World Bank-funded forestry project, also supporting the Forestry and Beekeeping Division (FBD) of the MNRT.[6]

37. **World Bank policy on takings, and a comparison with Tanzanian law.** The World Bank Operational Policy 4.12 on Involuntary Resettlement prescribes many of the same principles for displacement from economic assets that are contained in Tanzanian legislation and regulations. These include:

- ► The fundamental requirement of full, fair, and prompt compensation

[5] "Report on Crop Counting and Valuation of Standing (Inbound) Crops within Proposed Derema Forest Reserve," prepared by Proper-Consult (T) Limited, Dar es Salaam, 31 July 2002.

[6] EUCAMP was the project supporting the Tanga Catchment Forest Office (TCFO) of the Forestry and Beekeeping Division. TFCO has the mandate to control the Catchment Forest Reserves in the Eastern Usambaras (which lie in two Districts of Tanga Region). It has been responsible for the creation and/or reorganization of several forest reserves, including the Amani Nature Reserve. The ANR, however, reports directly to the Director of the FBD, independently of the TCFO.

- ► The inclusion of various costs in computing compensation, paid through allowances for the indirect costs associated with replacing assets (disturbance, transport, etc.)
- ► The requirement that crop compensation be computed as the total cost of lost production during the period in which replacement activities meant to restore income

39. Tanzanian law requires less full treatment of displacement than the World Bank policy in the following respects:

- ► OP 4.12 requires that all aspects of the taking, including the action plan for compensation and asset replacement, be planned in advance and be fully transparent to all those affected
- ► It requires that assets be compensated at full replacement value
- ► It requires that people who lose assets be afforded the opportunities to improve their living standards and their ability to replace their productive capacity, or at least to replace them.
- ► It requires that action planning be done in a participatory manner, in which those affected by a project fully understand what actions will be taken throughout the compensation process
- ► It requires that accessible and affordable mechanisms for resolution of disputes be made available

40. It is not anticipated that any steps will be taken, in relation to this project, to revise Tanzanian law and regulation to meet the requirements of OP 4.12. Instead, the Ministry of Natural Resources and Tourism (MNRT), in seeking World Bank financial assistance in resolving this case of compensation, agrees to implement this Resettlement Action Plan (RAP) in accordance with the Bank OP. In any aspect of the process for which Tanzanian and Bank requirements differ or diverge, the MNRT agrees to follow the stricter of the two policies and sets of procedures. Where the Bank policy is silent on a particular point, the MNRT will seek no objection from the Bank to implement this RAP according to Tanzanian regulation and practice.

41. **Bringing the Eastern Arc under World Bank policy.** The IDA-supported Tanzania Forest Conservation and Management Project has as major components the support of the FBD's capacity to manage and conserve national biodiversity including forest reserves, and to support conservation in the Eastern Arc mountains. At the time the project was presented for approval by the World Bank, it was stated that:

> "Government has agreed that in the unforeseen event that involuntary resettlement becomes necessary in the course of project implementation, a detailed resettlement plan s will be completed and subject to IDA review well in advance of any resettlement actions."

This request to approve a RAP to support Derema gazettement and compensation constitutes such a contingency. In asking for support of the investment program in the Eastern Arc, the MNRT also commits to submitting RAPs for any further displacement and compensation in any part of the Eastern Arc program, in line with the OP 4.12 requirement that "This policy applies to all components of the project that result in involuntary resettlement, regardless of the source of financing" (OP4.12, paragraph 4). This is a vital requirement so that protected area management in the Eastern Arc, as it builds corridors and reserves to reconstitute larger forest blocks, does not again incur the displacement of farmers under the same uncertain conditions that have taken place in the Derema case.

42. A paper from the GEF – UNDP project identifies areas of the Eastern Arc that need protection.[7] The paper identifies eleven areas that "need to be" gazetted, adding up to more than 76,000 hectares. These include forests in Mwanga District (Kamwala I and II, Kiverenge, Mwala, Kamwenda), Muheza District (besides Derema, there is Bamaba/Kwamgumi/Segoma/Kwamtili), Kilosa District (Mamiwa-Kisara North and South), Mpwapwa District (Kiboriani), Kilolo District (Kitonga and Kimala), and an area on the Rubeho Mountains. Second, it identifies corridors for connectivity that are important to reducing critical fragmentation of various forest areas: these include Bunduki gap between Uluguru North and South, and the Matundu-Uzungwa scarp gap in the Udzungwa Mountains. Third, it recommends upgrading the status of various reserves to Nature Reserve or National Park, which could have the effect of making all human use of such areas illegal.

43. These areas are identified here simply to point out that any of them may be land in which human uses are significant, and indeed where local people may claim ownership. The argument to reserve them or upgrade existing designations may be compelling, but such action will not be taken without a full review, including expert analysis, of the potential human costs of such actions, and without taking full account of any such costs in the gazettement process. In the context of this RAP, it is important for the life of the project that consistent policy is used.

Displacement from the Corridor:

44. **Tanzanian institutional responsibility.** In Tanzania there is no agency with key oversight of all resettlement activities. The Land Act 1999 the Village Land Act 2000 and other, sectoral regulatory legislation set out the rules for land taking and the resolution of land disputes, but leave administration of the acts to local and national governments and the courts. The principal agency to be involved in the implementation of this Resettlement Action Plan is the Forestry and Beekeeping Division of the MNRT. See the section below on the Organizational responsibilities for the implementation of this RAP for more on the institutions involved.

45. **Eligibility for compensation.** Eligibility for compensatory measures for the loss of farm plots in the proposed Derema corridor is a simple matter. All those who had farm plots are eligible. Meetings over several years, led by the ANR, the District, and other conservation advisers had prepared the villagers for the eventual taking. In May and June 2002 a team led by the valuers, but with Muheza District crops, land, and agricultural officers, forest officers, and four field assistants from the affected villages went through each of the villages in sequence. Villagers were called out to their fields, and farmers and village leaders verified the bounds and ownership of each field. Each crop was counted, plant by plant, and a leaf was cut or bent to indicate inclusion in the count. Each farm was assigned a code number, and each farmer was photographed at his farm in front of a tree bearing the farm code. Crops were identified on the spot by level of maturity and level of crop husbandry. The counts were recorded on claim forms and signed by the farmer and the District land officer. The farmers were told to record their farm codes and the number of plants counted, but were not given a copy of their form on the spot. Copies of the crop forms were promised to each village Chairman, but apparently were not provided. From earlier expectations, estimated at the time the "boundary crops" were counted and slashed (when the 3-meter boundary of the corridor was cut and compensated the previous year), it was estimated that there would be 648 farms, but when the counting was completed the

[7] Neil Burgess and Felician Kilahama, How Much of the Eastern Arc Mountains is Protected and What Needs to be Done to Complete the Protected Area Network? Conservation and Management of the Eastern Arc Mountain Forests Project, Report No. 2004/3, p. 3.

actual number of farms counted was 1547. Some of this large increase was no doubt due to rapid plantings once the counting was announced, and it is clear that there were higher increases in the villages counted later. Nonetheless, the estimates even of established farms had doubtlessly been low, and in any case farms once established would be productive later on. In the absence of prior photography or some other survey of farms to establish a cut-off date for eligibility, the project and government have had no choice but to confirm the eligibility of each farm counted. No data were collected on the gender, age or other social characteristics of the enumerated farmers, so only their names identify who was affected. (Inspection of the listed names suggests that perhaps five or ten percent were women.) After the counts were completed, a EUCAMP forest officer remained in the villages to attend to a small number of problem cases including farmers who were not available on the days given to the counting and disputants to the ownership or inheritance of a farm. Cases were quickly resolved, perhaps because not many farms were more than a few years old. There is no further issue about eligibility: all farms were counted, and farmers were correctly identified.

46. **Valuation and compensation for losses: the 2002 exercise.** The valuation method has been described above. The crops in question were cardamom, black pepper, cinnamon, clove, avocado, banana, coconut palm, cocoyam, coffee, guava, kweme (*Telfairea pedata,* a vine whose seeds are used for oils and for food for nursing mothers and small children), jackfruit, lemon, s. malayensis, mango, oil palm, orange, passion fruit, papaya, pineapple, and sugar cane, 21 different crops in all. All of these are tree crops except for cardamom, cocoyams, and pineapple, which are low plants set out singly with generous spacing, making them easy to count; black pepper, easily counted as a vine growing up host shade trees, and sugar cane. There has been no objection whatsoever to the reliability of the counting of the plants, either by farmers or by the independent appraisal team which reviewed the valuer's report.

47. Each plant was assigned to a category representing the productivity of the plant, from newly planted to declining maturity, and the apparent quality of its production, from well-tended to marginally cared for. For example, cardamom, the single most important crop by far, was divided into three maturity categories, from new planting (called "day old seedling" but for cardamom in reality a new cutting from the rhizome with a stalk and one young leaf), to "sapling" which was a young plant several months past planting but still not yielding seed capsules, to mature productive plant. In addition, mature cardamom were divided into three categories by quality of care, roughly well-tended, average, and below average/partially abandoned, the last of these recognizing aging plants at the end of their productive cycle, and "saplings" were divided into two categories, younger and older. Bananas (actually plantain) were similarly divided into two categories of mature plants two categories of immature plants, and new cuttings. Most other plants were similarly categorized into one or two levels of mature plants, and usually one category of immature plant plus a level of new planting. The full categorization as used by the valuers is reproduced in Appendix 1: this Appendix is the original version produced by Proper Consult, with limited revisions (see below).

48. For each crop, the next step was to calculate operating costs. These included labor costs from plot clearing to transport and drying, and limited input costs (mainly for seedlings, because no fertilizers or pesticides are applied to crops in this area). An estimate of the domestic consumption of each relevant crop was also made.

49. Independently of this evaluation of the crops on the ground, estimates of the sales prices of mature crops could be calculated by consulting producers and village buyers. That left a gap between the calculated production of each category and quality of plant on the one hand (the production at farm "gate"), and the quantities actually put into the marketing

chain. These were not known, and could vary substantially between the spice crops, very little of which is lost in the sun-drying and marketing chain (crops are mainly sold to buyers who live in or visit the villages), and more perishable crops like oranges or guava. Nonetheless, with limited observations and field studies, Proper Consult did the best it could to estimate the marketed production from each crop, by maturity and quality of husbandry.

50. The concept of compensation built into the Tanzanian Village Land Act is to pay the value of lost production until new crops can be established and can grow to the point at which they are producing the same quantity of product as has been lost, so that there is no net loss of income over time. The law adopted an "average" length of time to crop maturity, set at three years, and the valuer therefore calculated the monthly production of each mature crop and multiplied by 36 to get a total value for the crop. For non-mature crops, it estimated each year's production and reduced the factors put into the calculation of the 36-month period accordingly. This logic does not hold for the case of Derema, however. Especially for cardamom and black pepper, the plots in the forest cannot be replaced. Forest shade and moisture provide essential field conditions for the production of cardamom, the single crop that accounts for 74 percent of all compensation, and black pepper also thrives in shade. The other trees and field crops have varying affinities for forest conditions. Also true, however, is that three of the villages (Msasa, Kwezitu, and Kisiwani) are running out of land for any crops. A few fruit or spice trees may be planted in these villages, but there is simply not the space to re-establish the lost crops in the numbers that were planted in the forest.

51. **Valuation and compensation for losses: World Bank (OP 4.12) requirements for crop and tree losses.** The basic principle of compensation under the World Bank policy is that people should be paid the full replacement value for assets lost. The policy is specific about crops and economic trees: like the new Tanzanian policy, it requires that a computation be done of the full value of lost production until such time as new plantings achieve the same level of maturity and productivity as those that were taken. In the circumstances of Derema, the following considerations apply:

- Crops were not slashed by the authorities after the valuation. But people were told that their crops would be paid for within six months (as the law required), that is, by the end of 2002. Like people everywhere in the world, farmers started to disinvest in their farms by harvesting what was available and then giving up any further husbandry. In the climate and circumstances of the forest, that meant that vermin began to attack plants, and the forest started to grow back, within months. Recent visitors to farm sites confirm that they have been abandoned.

- Farmers did not get alternative land or seedlings to plant on whatever free land there might have been for those crops that might have grown in the villages.

- Farmers therefore will have lost the value of their production for 2003, 2004, 2005 and 2006.

- In addition, by not having been paid (until the payment of late 2005), they lost the value the money might have had if it had been delivered on time, before crops were given up. The money that will now be paid has suffered from inflation, and had the farmers received it, they would have earned interest even if they had left it in a bank account. In fact, it is likely that they would have invested in low-risk enterprises (crops or livestock or land) which would have been more inflation-proof than savings accounts.

- Had they been paid the production value of their farm plots each year, they would have received a payment which would have started to be invested at the time of the payment. Each year's loss, by not being paid, has suffered from inflation starting after it might have been paid.

52. **A revised calculation based on World Bank norms**. The Terms of Reference underlying this report required a full reanalysis of the compensation due the farmers, and the World Bank made it clear that this exercise would have to meet World Bank standards if the Bank was to be able to assist the Government in the revised compensation scheme.

► First, the counts, crop quality classifications, and productivity for all the crops (with one exception, see next point) were borrowed from the Proper Consult valuation. There had been general agreement, by the report "appraisal" team and from the villagers met in the course of this RAP preparation, that these numbers were right.

► Cardamom accounted for 74 percent of the value of all crops lost, according to the valuators' figures. Fieldwork for this action plan therefore concentrated on the values for cardamom. It reviewed production of green and dry product in the villages, with growers and traders, both those affected people with a stake in the outcome, and those without. It found that the 2002 analysis overestimated cardamom production *per plant*. ***It therefore revised the figure for production from a single plant, per year for its three productive, downward from 5 kilos of dry cardamom to 3 kilos.***

► With that change, the original compensation calculated by Proper Consult in the first drafts of their report (before the changes required after the "Independent Appraisal Report") have been accepted as to production, yields (at different plant maturities, volumes, and market values (with minor corrections of errors). The farmer-by-farmer files prepared in 2002 by Proper Consult were then revised accordingly, and are available in project files in the MNRT/FBD to be used for purposes of payment.

► Tanzanian inflation from 2003 to 2006 will be added to the payments due, to remediate the loss suffered by the farmers' not having actually received their payments at the end of 2002. Values for accumulated inflation are available from the President's Office, Planning and Privatization, as follows:

Table 2
INTEREST RATE STRUCTURE AND INFLATION: TANZANIA
(in percent)

	2003	2004	2005	2006[/2]
Commercial Banks:				
Deposit rates - Domestic currency				
Savings	2.5	2.4	2.6	2.6
Fixed (3-6 months)	3.5	4.3	4.4	4.4
Real interest rate [/1]	-1.0	-1.9	-1.9	-3.2
Inflation (annual average)	3.5	4.3	4.5	5.8
Cumulative inflation Jan 2003 - Dec 2006				**18.1**

1/ Derived based on the deposit interest rate on savings offered by the commercial banks.
2/ December 2005 figure is taken assuming it has remained the same in 2006.

Source: President's Office - Planning & Privatization, The United Republic of Tanzania, The Economic Survey

► The figure for the cumulative value of inflation was then added to all the payments due from 2002 (without subtracting the payment of late 2005).

► The following table gives the results for each village, by crop. A companion table for all crops and villages, is in :

TABLE 3

TOTAL REVISED COMPENSATION DUE BY END 2006 FOR ALL CROPS INVENTORIED, BY VILLAGE (T Sh)

VILLAGE	CROPS						TOTAL
	CARDAMOM	BLACK PEPPER	CLOVE	CINNAMON	BANANA	ALL OTHERS	
KISIWANI	4,610,910	1,319,975	1,003,200	96,242	3,351,270	**1,691,963**	**12,073,560**
KAMBAI	6,025,191	186	685,140	2,300	200,021	**435,611**	**7,348,449**
KWEZITU	356,439,969	103,465	6,289,940	321,747	12,983,802	**4,944,736**	**381,083,659**
KWEMDIMU	445,802,740	1,572,243	1,406,260	143,959	9,108,422	**3,084,343**	**461,117,967**
MSASA IBC	1,230,348,512	2,492,447	72,571,626	3,655,427	84,669,044	**23,709,766**	**1,417,446,822**
TOTAL	**2,043,227,322**	**5,488,316**	**81,956,166**	**4,219,675**	**110,312,559**	**33,866,419**	**2,279,070,457**
TOTAL WITH INFLATION							**2,730,326,407**

Source: Recomputation based on 2002 crop counts and classifications

53. Inflation adds 19.8 percent to each of these figures, to each farmer's compensation, and therefore to the total due. **The total compensation, including inflation, due by the end of 2006 is T Sh 2,730,326,407, or US $ 2,184,261 at US$1 = TSh 1250.** Some further discussion of this table is warranted. The total amount due is somewhat less than Proper Consult's original calculations, due overwhelmingly to the reduction in the productivity of cardamom made during the current recomputation exercise. Paying inflation violates neither Tanzanian law nor Bank rules. It provides for completing the payment of the "fair" compensation that is the basis of international comparative law nearly everywhere. Paying inflation is a better mechanism than paying Tanzanian bank savings rates, as is also shown in Table 1, as savings interest has lagged inflation. It should also be remembered that the villagers' labor has been used elsewhere over this period four crop years since the crops were taken, and so it is also fair to have deducted labor and other input costs from the value of the crops raised, as has been done in the calculations.

54. **Income restoration measures**. Compensatory measures are required that enable the affected farmers to recover their incomes. Given the lack of available land in the five villages, there are two major sets of measures that will be taken. The first of these is the ongoing and expanding set of more intensive agricultural enterprises that have been introduced into the villages around Amani Nature Reserve, or to all the villages in the area, as part of NGO projects or as explicit actions to improve incomes in the buffer zone of the ANR. The second line of action that will enable income recovery and improvement is the active allotment of lands in the ex-plantation areas in the lowlands to the east of Derema.

55. As the ANR was created in 1997, its management concluded arrangements with eighteen villages around it to become a buffer zone operating an ongoing Joint Forest Management plan. This built on the efforts of the IUCN in the 1980s to carry out

"conservation-based rural development."[8] The idea has been to reduce pressures on the forests by improving agriculture in the neighboring areas. With ANR creation, income generation activities, environmental education, and village forest reserves were made parts of the plan to assist the villages. Reciprocally, villagers have also agreed to limit firewood collecting in the forest to twice a week, to collect medicinal plants by permission only (with some effort to allow only traditional healers to collect the relevant materials), and to cooperate with researchers, foresters, and the conservation effort. Incentives are explicit: not only are there the income activities, but also the eighteen villages share 20 percent of the entrance and research fees of the ANR and a share of the sales of illegal timber confiscated by village action. Lately this income sharing has amounted to about 2.6 million TSh, or about 145,000 TSh per village per annum. Derema village leaders expect that they will be included in the local share-out, once Derema is gazetted.

56. The income generation activities have been diverse. They are all directed at individual villagers, to take up the innovations according to their own sense of opportunity, interest and capability. All Amani villages participate in these programs, including While there is some criticism that individual programs have been offered to politically well-connected villagers, the range of programs available now extends across the villages. Among the programs being offered are these:

- *Allanblackia* seed harvesting. The Tanga Forest Catchment Project has been working with the UNDP's Growing Sustainable Business unit, the International Center for Research in Agro-Forestry (ICRAF) and Lever UK, which buys the large seeds of the *Allanblackia stuhlmannii* tree for use in soap and cooking oils. Adaptive efforts are being made to raise the tree within village conditions, including grafting to reduce maturity times to 5-6 years. 200 tons were bought in the early 2006 harvest from 645 farmers, yielding the average collector about US$ 400, and a total of 300 million TSh to the area.

- Butterfly farming. In 2005 a net 32 million TSh were earned by 250 farmers in a program set up by the Tanzanian Forestry Conservation Group and with assisted by Conservation International (through the Critical Ecosystems Partnership Fund), World Vision, the McKnight Foundation and others. Farmers collect and feed the larvae of certain species of butterflies until they pupate, at which time the project office collects the cocoons and sends them by courier to buyers in the United States and Europe.

- Beekeeping. A new program has offered modern beehives to villages to increase honey and wax production. So far only about 20 hives have been set up, but there is enthusiasm to take up this activity.

- Zero-grazing dairy cows. A small-scale dairy development project in Tanga, with support from Heifer International, has been promoting zero-grazing dairy cows and milk collection in the Amani area. So far two stainless-steel coolers have been set up, and some hundreds of farmers bring milk in each morning. The milk goes to the dairy farmers' cooperative in Tanga, and is sold to TangaFresh, mainly for yoghurt production.

- Fish ponds. So far there are 6 fish ponds in operation, producing about 30 kg. of fish each three months. There is little animal protein in the Amani villages, so the fish sell at good prices.

55. Other activities have included the encouragement of spice farming on existing farms out of the forest, the production of improved adobe blocks for building construction, training in anti-erosion techniques especially for food crop fields, the possible use of lemon

[8] An account of these schemes is presented in Heini Vihemäki, "Politics of Participatory Forest Conservation: Cases from the East Usambara Mountains, Tanzania," Journal of Transdisciplinary Environmental Studies vol. 4, no. 2, 2005, pp. -16. On the Web as http://www.journal-tes.dk/

grass on contours as a water retention technique, and others. As well, several school-leavers from the villages near the Amani guest house have been trained as nature guides. They get $ 30 per day of guiding, of which 20 percent goes to ANR administration to help keep up several nature trails. Finally, ANR has a strict policy of offering employment in all its activities to people from the buffer zone villages.

56. **Land allocation**. The ancillary activities described above are useful additions to farmers' cash incomes, but they are not as lucrative as the forest plots, and some cannot reach beyond a limited number of adopters or the various markets will soon be saturated. Much more important is access to alternative land in parcels large enough to provide sites for agriculture that would at least fully replace the land lost to the forest. As part of this RAP, the government has committed to making such land available.

57. In March 1999 the Ministry of Lands decided that Muheza District lands that had once been allocated to sisal plantations but were either never fully developed or had failed should be given back to the authority of the village governments to make available to ordinary farmers. Each village was requested to prepare a list of interested farmers, and the Ministry of Lands urged that Districts ensure that land be subdivided in such a way that roads could be made available for evacuating crops (see Annex B for the text). A list of the estates was provided, together with the villages to which the estates were allocated. None of the Derema villages was on the list, but estates downhill from the Derema villages were. In early August 2001, the Muheza District Commissioner (DC) wrote to the Divisional secretaries to extend the availability of land to villagers in the Amani area, in part because some of the villages to which plantation land had reverted has plenty of land of their own. The DC set out the terms for such allocations, stating that three-acre parcels should be created, that each such parcel should be given to allocatees for a registration and boundary confirmation fee of 3500 TSh, and that no compensation be paid to anyone who claimed any of this plantation land. The land in question is at Mkwajuni and Misozwe villages. (See Annex C for the Swahili text of this order.) Very quickly some 438 farmers from seven of the villages around Amani, of which two are Derema villages (Msasa IBC and Kisiwani), signed up for this allocation process. (See Annex D for the text). It is not clear whether the three other Derema villages were solicited for interested villagers.

58. Once these lists were made up and sent to District headquarters, however, little further action took place. Villagers in the Derema area claim that they did not follow up because they were waiting for the compensation process to take its course. Even if they had the small amount to secure their allocation, they did not have the money to develop the land they might get, and they thought they could lose the land again if they did not develop it within a short period. That does not explain why non-Derema villagers signed up but did not follow through, as they were not expecting compensation for land at the time. It is more likely that a major reason there was little result of this initiative is that the authorities did not further facilitate the process by brokering realistic contacts between villagers and the village authorities in control of the land.

59. The 2001 initiative to induce Amani area villagers to relocate at least part of their production to the lowlands came to little. However, the last five years have seen the growing value of arable land in the lowlands. With the continued growth of the Tanzanian (and other East African) economies in the last five years, available land on the coastal plains between Dar es Salaam and Tanga is becoming more and more attractive to investors. Citrus, groundnuts, cashews, and beans, are enjoying a period of rapid market growth. Sisal, which had nearly died as a viable crop by thirty years ago, is making a comeback as a natural fiber alternative to plastics, and as a possible source of biogas-derived electricity from the waste. Tanga orange growers have quadrupled their incomes in the last five years through cooperative marketing and aggressive entry into Nairobi markets. Input supplies,

nursery stock and marketing chains are being built for each of these crops. A large number of research, input supply, microfinance, marketing and processing institutions, companies, and projects are working to commercialize more of Tanzania's food crop agriculture.

60. There is, in short, a renewed set of opportunities to be realized in the lowlands. This, coupled with the termination of forest spice farming, has sent clear messages to Derema farmers. A few of them (from Kwezitu and Kwemdimu, for example) have already found land on their own initiative, and are growing oranges, coconuts, and maize. What is needed for the affected Derema farmers is a concerted plan to make the alternative land possibilities a reality for those who want them.

61. One of the core purposes of buffer zone management is to reduce pressure on the Nature Reserve. As Jambiya and Sosovele pointed out with respect to the ANR itself,

> "The promotion of land-use practices in Tanzania that maintain low human density on adjacent lands is probably the most desirable long term strategy. However, while this is desirable, the main problem is how exactly to maintain low populations in such areas? …In areas such as the Eastern Arc Mountains, population pressures are considerable."[9]

62. While ANR establishment in 1998 stated that "the [conservation] goal should be reached in such a way that living conditions of local people are ensured and their activities…have a sustainable basis," the endogenous pressure of human population growth is a long-term issue. Often this question is seen to be immutable, to assume that populations have ancient roots in a locale and that their out-migration or relocation does violence to history and identity. Discussion above shows, to the contrary, that in Tanzania generally,[10] including the Eastern Usambaras, changing political and market constraints have continuously "rewritten" the livelihood strategies of the villagers. A move of economic activity, and later perhaps of residences, down to the lowlands in a period of reduced tension with neighboring populations but increased frictions with the conservation goals of the government, is less an act of violence than a recurring feature of Shambaa peoples' history and outlook.

63. It is to be noted that the availability of land in the lowlands, and its allocation to Derema villages, is not a resettlement plan in disguise for the villagers who will take it up. There is no need for housing to be relocated. Few families will move downhill away from their close relatives. No additional schools or other social facilities are needed at the resettlement sites, which will have at most some temporary shelters for work to be done during the peak agricultural season. The farm plots at Misozwe and Mkwajuni are not the prior property, or parts of, the receiving villages themselves, since the land they have been assigned was taken for plantation development from the large amount of unclaimed land decades ago. That explains why the government has been careful to say that only a registration fee will be due to the adjacent villages, and why it further stated that no compensation was due for this open land to any party. In terms of the Bank's Involuntary Resettlement Policy, no treatment of the area is needed as "host communities" receiving new investor/arrivals into their midst.

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[9] George Jambiya and Hussein Sosovele, Conservation and Poverty: A Case Study of the Amani Nature Reserve, Research on Poverty Alleviation (REPOA) report 0.5, 2001, Dar es Salaam, p. 13.

[10] For a view from the Western Usambaras, see Christopher A. Conte, "Colonial Science and Ecological Change: Tanzania's Mlalo Basin 1888-1946," Environmental History, April 1999. Conte shows how young men in the nineteenth century saw the threats to their agricultural systems and adjusted continuously: "they demonstrated a willingness to experiment and improvise in response to a multitude of changing ecological, demographic, and economic conditions. No European observer appeared to understand that the changes over two generations of contact represented both continuities and breaks with past practice."

64. **Organizational Responsibilities.** Responsibility for implementing this RAP is lodged in a number of bodies that have already been working together for the conservation of the Eastern Arc and on the compensation issue over several years. Fortunately they work closely and collaboratively. The major tasks of the RAP are threefold:

a) Organize and pay out the cash compensation, including all the associated record confirmation and file keeping
b) Re-start and follow through on the allocation of land to affected Derema villagers, in the first instance affected farmers but also others
c) Ensure the extension of "buffer zone" and other rural development rules, activities, and privileges to Derema villages

65. Compensation payment. There are two major steps needed to complete the actual compensation process. First, disclosure of this RAP and the proposed revisions to the previous compensation policy and payments must take place in the villages and to District and Regional leadership. Village leadership and affected people, having been subjected to various payment proposals in the past and having raised strong objections to the "fifty-percent payment" idea of October 2005, need to know and react to the proposals being made under the influence of the World Bank policy now covering this process. To undertake this step, the RAP will be translated in an accessible version into Swahili, and then workshops and presentations will be held with the affected villages. The Critical Ecosystems Partnership Fund-supported team in WWF Tanzania is willing to carry out this step. That team is extremely well-placed to do so, given its decade-long involvement in ANR monitoring and impact studying.

66. Second, the payment process must take place. For this step, TFCMP, working through the Catchment Office in Tanga, has already established mechanisms for payment during the exercise of part-payment in October 2005. FBD officers, with the cooperation of village government officials, reconfirm balances due to farmers, confirming lists of payments due with signed forms from the farmers. Both the District Commissioner and the Regional Commissioner then sign the schedules (Land Form 23). Payments are made by check, drawn on a branch of the National Microfinance Bank (NMB) of Tanzania in Muheza town, which has an established Derema compensation account with an ongoing balance. .A day is set up for payments, village by village. With security for the checks and the process in place, NMB, District, village, and FBD officers are in place, confirm the identity of the recipient, and turn over the checks. A record of this transaction is signed by both parties with copies for both. It records the amount paid with a transparent farm loss record underlying the payment, and the date of the transaction. The NMB will cash the checks without charge, upon presentation of proof of identity, but of course farmers can deposit checks to other accounts they may have. The WWF Participatory Development team may also monitor the work.

67. Land acquisition. The 2001 land allocation directives from the central government and the District, described above, are still in place. What is needed is a dedicated action plan to arrange visits to the designated areas by prospective farmers, carry out or facilitate the applications for and documentation of land allocations, and ensure that the appropriate legal transactions are concluded. In addition, contacts with suppliers (of research, extension, inputs) and buyers (cooperatives, companies and individuals) are needed at the home village areas to enable farmers to judge in advance what investments they might want to make, what demands on their time and money would be involved, and what outcomes they might expect. For most crops that may be developed at the new sites, it will probably not be necessary to move residence "downhill" to the new farms, but for some crops the peak labor demands or the high value of the crop nearing maturity may require at least a temporary shelter at the new site. On the other hand, some people – especially young

farmers who control little land in the home villages, are starting new families, and have no chance of reviving spice crops for cash -- may sooner or later move "downhill" more permanently.

68. This activity would need professional guidance through a period of two years, until the routine is well enough established for later "adopters" of the opportunity to follow the lead of their peers. A "compensation and development coordinator" would be contracted to work in the office of the ANR conservator for two years. He would act as an advocate for the Derema farmers – not only those displaced from the forests, but also other members of the villages. He would start as soon as possible, at the latest when there is agreement between the FBD and the World Bank that it will finance the compensation and development activity. There is little sense beginning the core of the program until the dates for full compensation payments are announced in the villages: only then will there be people with the means to act on their current motivations. The program would include the following steps (a program budget is included below in the Budget section of this RAP).

Figure 1: Actions to enable land acquisition in the lowlands for Derema farmers

Activity	Facilitator	Coordination with:	Dates
Reconfirm District commitments to land allocation, *with priority to 5 Derema villages;* agree that farmers may get up to two 3-acre plots	'Compensation and Development' (C&D) coordinator in office of ANR conservator	RC, DC, DED, District Forestry, Lands, and Local Government officers, Divisional Officers for plantation areas, and 'host' village officials	Start 3 months before compensation is due to be distributed; reconfirm to WB with commitment letters from DC and host villages
Facilitate subdivision of estate lands into 3 acre plots	C&D coordinator with District Min Lands officers	Surveyors(?), host village governments	Start when revised compensation plan is agreed with WB Bank
Visit each village for preliminary explanations of steps to be taken: assemble lists of those seriously wanting land	C&D coordinator	Village government officials in the Derema villages; farmers	Start when revised compensation plan is agreed with World Bank
Workshops in each village or at ANR HQ on advantages, disadvantages and costs of each lowland crop; financing; sources of stock, markets, (2 days?)	C&D coordinator with District Agric/Crop officers	ANR, crop buyers and agro-processors in Tanga, input suppliers, representatives of projects and research/extension stations	Start when money for all compensation is confirmed to be in Muheza bank account
Organize visits of interested farmers by bus to subdivided areas	C&D coordinator	Host village government officials, District lands officers and crop officers	Start when subdivision plans show actual plots, and money is in Muheza bank account
Coordinate preparation of applications for specific plots, and payments	C&D coordinator	Ministry of Lands, host villages, others?	Start after compensation funds are given to affected villagers
Ensure preparation and delivery of titles or certificates of land transfer to new holders	C&D coordinator	Ministry of Lands, host villages, land registry	Once applications are accepted

Ensure timely delivery of agri-food information, inputs, marketing contacts	C&D coordinator, with whole array of agri-food actors/ stakeholders	Ministry of Agric, donor projects,	Balance of two years of contract of C&D coordinator

69. Buffer zone and alternative livelihoods initiatives. The C&D coordinator will work for the Conservator of the ANR, who already has on his staff a deputy conservator for Research, Training, and Community Development. Some of these activities run with support from outside actors, but the deputy conservator has a full plate with the growing volume of conferences and research at ANR. The C&D coordinator will be well-placed to share some of the Community Development/livelihood responsibilities. He/she will coordinate with the large array of supporters of ancillary community-based activities around all of Amani (including proponents of new projects, of which several propose to use NTFPs (e.g., beetles, medicinal plants) like the Allanblackia, with potentially variable effects on the ANR itself. He/she will in effect help co-manage the development aspects of relationships with the buffer zone villages.

70. **Community participation**. Participatory development has been a watchword of the reformation of conservation in the East Usambaras from the beginning. The early Finnish engagement in the area to the 1980s had still been based on commercial forestry. Pressure both in Finland and from conservation experts and groups in Tanzania moved Finland to shift toward ecologically-based conservation, and from 1992 the IUCN saw the Finnish- and EU-supported Eastern Usambara Conservation and Agricultural Development Project (EUCADEP, later EUCAMP) as a test case for collaboration for biodiversity protection combined with the needs of local people. Participatory Rural Appraisal was used to work out arrangements with the (16) buffer zone villages around the ANR at its creation in 1998, and to organize some of the on-farm activities that supported conservation. An advisory board for the ANR was constituted with different stakeholders as members, including government officers, the tea companies, and two representatives of local communities (it would turn out, however, that the board was called to meetings only infrequently). As the subject of the Derema corridor was raised, PRA and consultations with the five villages that would possibly be affected were carried out, with one interim result being the rejection by the villages of a strategy of village forest reserves as the management tool for Derema.

71. When it was decided to gazette Derema as a reserve and therefore to remove cultivated farms from the area, the villages were consulted all along the way. The Social Impact Assessment summarized earlier in this document provided extensive details about the Derema project and the impacts that concerned those likely to be affected. The demarcation of the boundary was done with full collaboration by the villagers, who both worked on the slashing and, if they were directed affected, got the compensation. The inventorying and enumeration of crops provided weeks of direct contact between villagers, village authorities, District officers and the valuers.

72. From mid-2002 until mid-2006, that is from the point at which the valuation was done until the period in which the present report was written, contact between villagers and the authorities in charge of this exercise has been intermittent, and increasingly sensitive in overall tenor. The “independent appraisal” team visited the ANR and government officials in Tanga and Muheza in February 2003 in connection with their work, but did not hold village meetings. In June 2004 a World Bank supervision mission for the TFCMP (a large team including UNDP, Danida, Finland Foreign Affairs Ministry, NORAD, WWF, and a number of senior Tanzanian government officials) visited the area and heard loudly from Msasa IBC villagers how annoyed they were by the payment delays. By June 2005 WWF consultants

were advising Regional and District officials of "the anger and frustration of the local communities including their lack of understanding on how the values for compensation were reached. Communities were also concerned …whether [adequate compensation] will ever be made."

74. In August 2005, when the Ministry of Lands agreed to add enough money to the compensation account for Derema to make half the payment, the Tanga Catchment Forest Office began work to reconfirm the crop inventories and get farmers' signatures that the money they would receive was valid. This period quickly turned very tense. Villagers began to request interest for the period of three years that had elapsed since the valuation, *and more importantly they rejected the values assigned to their crops*. In Kwezitu less than 50% of the villagers turned up to verify the values assigned. In Msasa IBC villagers forced the team to stop the verification exercise, and police had to 'rescue' the team. In Kambai no farmer turned up at all for the verification. Letters from villagers complained about the values and the interest issue, and the Member of Parliament for Muheza District and the District Commissioner stepped in to try to intervene with the MNRT but also to calm the villagers. It was agreed that the payments would be accepted by the villagers, but without their agreeing that the payments represented 50% of the sums due. For farmers whose total payments were to be very small, it had been proposed to pay the whole sum due in one check, but farmers quickly realized that they might then be listed as having been fully paid, so they demanded to get paid like the others and to stay on their case. Verification of the counts was then completed in a central location away from the villages (at Zigi Station, the gateway to the ANR), and both there and when payments were effected at the bank in Muheza in October armed policemen were brought in to keep order.

75. Fieldwork for this action plan was undertaken in mid-June, 2006. Each village was visited, with a long visit to explain that the government had requested assistance from the World Bank forest project to resolve the long-standing compensation question. Villagers registered their objections to what had happened, and discussed what their losses meant for the four years since their crops were inventoried and abandoned. They expressed their hopes about what would be done for a final resolution of the situation. In one village there was an incident of rock-throwing at one of the visiting vehicles, but otherwise the meetings were orderly, and the farmers were fully engaged.

76. **Grievance redress mechanisms.** The World Bank's policy requires that there be mechanisms for resolution of disputes that may arise from any aspect of the compensation and development process. The mechanisms are to be "affordable and accessible," and third parties independent of the implementers should be available at the appropriate point in the process. In Derema there is, as has been narrated, long-term grievance with the way in which the crop takings have unfolded. There will have to be a good deal of mutual compromise between authorities and villagers to enable resolution of the current impasse, but it is not imagined that a spirit of wanting to complete the action will be sufficient to still all grievances.

77. Because it is widely agreed that the crop counts were accurate and fair, few quarrels with the original counts are likely to be lodged. Disputes are more likely to arise over (a) missing records for a whole field, (b) the categorization of plants into various stages of maturity and the quality of husbandry, or (c) the values established for each type and category of crop. Of these, there may be a few cases of missing records (item (a)), and by checking the tables, records forms, and photographs it should be possible to clear these exceptions without extensive dispute resolution processes being needed. Item (b) is an issue for which no alternative evidence has been kept by the valuers (there are no photographs of individual trees or plants, and it is unlikely that villagers can document that their plants were at a higher stage of maturity or were better cared for than is indicated by

the valuers' categorizations, which were done immediately upon finishing the field counts. In disseminating the results of this RAP process, RAP implementers should indicate that there is not likely to be any retroactive adjustment unless clear evidence can be shown. Finally, item (c) is a RAP-wide issue, and will be deemed to have been settled with the approval of this RAP and then communicated to the affected villagers.

78. In short, disputable cases should be few, even if there is generalized dissatisfaction with the delays in the overall case. At the time this resettlement plan is approved and individual compensation contracts are signed, affected individuals will be informed in village assemblies of the process for expressing dissatisfaction and to seek redress. The grievance procedure will be simple, administered in the first instance at the local level to facilitate access, flexible and open to various proofs taking into account the need for speedy, just and fair resolution of their grievances. The process for resolving individual grievances will be as follows.

79. The Compensation and Development Coordinator will establish case files, including copies of the original agricultural counts and claims forms, the original photographs taken during the valuation process, and the Excel files of compensation due. He will be available to review these records with individual farmers.

80. The C&D Coordinator will receive any complaint, in writing, about any part of the process affecting the individual farmer. He will respond by clarifying the data at his disposition, but saying if need be that any complaint about crop numbers, classification or values requires specific evidence about the case.

81. Where evidence is presented, the C&D Coordinator will convene a meeting between himself as adviser, the Village authorities of the Complainant's village, and the complainant to seek resolution. Village authorities may call other parties and witnesses in order to be review fully the details of the case: this step will pay respect to traditional and informal mechanisms of dispute resolution in the area. The village authorities will render a judgment in writing as to their opinion, and the judgment will be copied to the Coordinator for action or referral to others who may follow up with action to satisfy the judgment of the Complainant.

82. If the complainant is not satisfied by the opinion of the majority of village officers, he may appeal his complaint to the District level. The C&D coordinator will set up a meeting of a District land officer and a crops officer, chaired by the District Executive Secretary or his designee. The ANR Conservator will sit as a member of this committee. The coordinator will not participate, except to state what prior steps have been taken. The aggrieved farmer will present his case, and may be assisted by others. This body may also call other witnesses. It will render its judgement in writing, with copies to the complainant and the Coordinator, who will follow up if action is to be taken.

83. Any judgment in favor of the Complainant will be satisfied within two months, or within one month if the judgment is simply a question of the award of money. If the complainant is not satisfied with the judgment of this District committee, the complainant may utilize the court system for further complaint. Records of the actions to satisfy judgments will be kept by the District lands office and by the C&D coordinator for the ANR.

84. These mechanisms will be subject to review after one year of the start of payment of the final compensation payments. The ANR Advisory Board, sitting with the Village Chairmen and Secretaries, will receive a briefing from the C&D coordinator on the effectiveness of the grievance mechanism, and will take appropriate action as needed.

85. **RAP Monitoring and Evaluation**. The arrangements for monitoring this RAP will be coordinated with monitoring and evaluation plans for the TFCMP overall. The system for

doing this monitoring is currently being revised. The objective of monitoring arrangements will be to:

► to ensure that all compensation due is paid within six months of the approval of this activity a supplementary activity of the TFCMP;

► to be able at any moment to report on grievances that have been filed and are either in process or resolved;

► to ensure that the process of securing and allocating lands in the lowland areas is done expeditiously and effectively for Derema farmers willing to take them up;

► to take steps with the ANR to undertake a final evaluation to determine if the people who were affected by the taking of the Derema corridor have been able to, or are moving to a position in which they can, restore their income earning capacities and their standards of living[11]

86. Among the verifiable key performance indicators (KPIs) of the status of the compensation and development issue are the following. The C&D coordinator will manage the KPI system while his contract is in place. Thereafter, the system will be maintained by the Conservator, ANR:

- Compensation accounts paid, by number and percentage of all accounts to be paid
- Grievances recognized as legitimate, and grievances resolved, by number and by percentage of grievances registered
- Lists of affected farmers and others in Derema villages who want lowland farm plots, and number and percentage of those actually getting permits and starting development of those plots
- Number of such farm plots ready for registration, registered as taken by Derema affected farmers, other Derema farmers, and other ANR buffer zone residents, and others
- Log of known investments in supplementary livelihood strategies, by type and location of those receiving <200,000 TSh compensation, 200,000 <500,000, 500,000<1 million, >1 million TSh in compensation
- Secondary school enrolments in families from five Derema villages, before and after compensation
- Gender-differentiated responses to surveys on before/after compensation issues
- Other measures as may be defined in workshops on this subject, or with the WWF-funded team that has carried out the two Social Impact Studies of the Derema area

87. **Implementation Schedule.** The schedule for implementation of this RAP depends on the availability of funds to address the well-defined program that will be carried out. It is expected that funds will be available around November 2006, but the schedule that follows identifies the steps in that program on the basis of a non-specific start date:

[11] To begin a long-term tracking system, the C&D coordinator will add files to the compensation records that track uses of the compensation money to increase participation in other cash-earning opportunities, for instance in the acquisition of new lands whether in the designated lowland areas or elsewhere, in ANR related "buffer zone" projects, or in new businesses. It is realized that the baseline does not exist for extensive following up of the cases of all affected people, but enough information will be available to understand what affected people are able to do to replace the lost spice/fruit lands in Derema.

Figure 2: Implementation Schedule for RAP

Date	Activity	Assumptions
Month 1	Hire Resettlement and Devel- opment Coordinator (RDC)	Identification of candidates has proceeded as soon as RAP is approved; vehicle and other facilities are made available to enable work to start
Month 2	1) Reconfirm payment schedules and amounts, subtracting 2005 amounts paid from totals due 2) Transfer all funds to Muheza compensation account 3) Publicize new/final payments program in each village	TFCMP assigns staff to work on schedules until RDC is on board. Financial transfers are made promptly RDC and WFP monitors visit villages together to disseminate final design, respond to questions
Month 3	1) Announce program, visit villages to sign final accords with compensation payees 2) End of Month, make payments	Villagers have accepted final program Checks drawn on Muheza bank, cashable in Muheza or through secure "bank on wheels" as done for Songo Songo gas pipeline
Month 4	RDC works with destination villages and District authorities to identify definitively land to be made available to Derema farmers	Destination villagers have reconfirmed their acceptance of long-term government plan to redistribute unused plantation land
Month 5	1) Farmers begin visits 2)Specialists (crops and extension) visit 5 Derema villages to make presentations on lowland crop options	RDC has organized transportation and program for visits RDC has worked with Agriculture and private sector to identify experts to give training on crop options and investments responsive to farmer skills, interests, and capabilities
Months 6 - 12	1) Farmer visits, land purchase continues 2) Alternative livelihood projects and farm extension continues	Land transfers are completed with appropriate documents arrange through District, Region
Months 12-24	1) Monitoring starts, ends with report 2) Crops are planted, first harvest in lowlands takes place	Contract has been agreed with WFP to provide impact monitoring Farmers have taken up new lands, plant and cultivate without disturbance or insecurity of tenure
Month 24	RDC terminates work with completion report	District authorities have built program into their own regular work programs, continue services to farmers ANR takes over relations to 5 Derema villages as beneficiaries of Amani alternative livelihood projects and as participant villages in income redistribution

88. **Budget for RAP implementation**. The budget for the implementation of the RAP, as shown below in Table 5, is heavily loaded on the item of the compensation money itself. In addition to that item, money is needed to manage the RAP, ensure the delivery of the compensation, and put into place a Compensation and Development Office led by a Coordinator who will in turn facilitate other activities necessary to the completion of the work, including crucial facilitation by the Muheza District Government. The following two tables show the sources of funds for the compensation and the distribution of funds in the overall budget. (It is to be noted that the Government of Finland contribution has been pending for some years, and is not guaranteed.)

FINAL DRAFT

Table 4: SOURCES OF FUNDS (in US $)

	Timing	Funding	Duration of work (mo)	Year 1	Year 2	TOTAL
Preparatory work						
Update social survey	Nov 05 – June 06	CEPF/WWF	2	30,000		30,000
Preparation of RAP	May/August 2006	FBD/from TFCMP	2	50,000		50,000
Compensation payments						
Compensation payments	May 2006	Global Con-servation Fund		350,000		350,000
Compensation payments	April/May 2005	Gov Finland		200,000?		200,000?
Compensation payments	April/May 2005	Gov Tanzania		95,000		95,000
Compensation payments	October 2006	WB/TFCMP		1,459,261		1,459,261
Management						
See budget next table		WB/TFCMP		104,600	86,600	191,200
TOTAL				2,288,061	86,600	**2,374,661**

Table 5: RAP IMPLEMENTATION BUDGET

ITEM	Duration	Months	$/mo.	Year 1	Year 2
Participatory monitoring scheme	2006- 2008	8	10,000	10,000	40,000
Management costs					
Resettlement & Development Coordinator	2006-2008	24	1,500	18,000	18,000
Office Facilities at ANR	2006-2008	24	250	3,000	3000
Vehicle (4x4) plus PLMx24	2006-2008	24	1,000	37,000	12,000
Communications	2006-2008	24	400	4,800	4,800
5 Motorcycles (@$3000), to facilitate Muheza Dist staff: Land, Crops, Forest, Admin + PLM	2006-2007	24	400	19,800	4800
Facilitation of Derema Village Govts for Compensation and Land Acquisition Exercises	2006-2008	24	1000	12,000	12000
Compensation					
Total due	2006-2007	8		2,184,261	
TOTAL				**2,288,061**	**86,600**
GRAND TOTAL				**$ 2,374,661**	

FINAL DRAFT

ANNEX 1A:
DETAILED REVENUE ANALYSIS PER CLUSTER OR CROP BASIS
TAKEN DIRECTLY FROM PROPER CONSULT STUDY,
WITH SOME CHANGES TO FIRST CROP, CARDAMOM,
AND SOME FORMAT EDITING TO ENTIRE TABLE

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1. 0 CARDAMOM

Gross income: (per cluster p.a. @ 3 kilo dried product p.a.)……7,200/=
Less: Operating cost @ 40% *(see below*)……...… ……2,880/=

Net income for year 3-6……..……..4,320/=
Net income for years 6-12 is 20% of the proceeding production or 864/=
Crop value…..YP*NI 4,320/-) for the first 3yrs + YP*NI (864 /-) for the next 6 yrs
(The figure obtained is a proxy for capital value, see end of table, below))
Capitalisation rate, (i), adopted is 4.5% , I.e the risk free rate in the Tanzania economy

M1 (matured crop, level one)…Good production and well tended clusters
Assuming:

Well tended farm, good land exhaustion, good crop yield
Good plant population, good spacing of 2.5cmx25cm
Non- mixed farming; pure stand of cardamom
Yield greater than 80% (*sourced from research*)

Very few farm qualify under M1; they are found in some parts of Msasa IBC and Kwemdimu
Therefore M1= 5,100/=, derived as above

M2 (matured crop, level two): Crop value is rated at 65% of M1 which is 3,315/=

(a) Average production 60%-80%
(b) Fair farm attendance 60%-80%
(c) Average land exhaustion 60%-80%,
The above factors are aggregated at least 65%

M3 (matured crop, level three): Crop value is rated at 40% of M1, or 2,040/=

(a) Below average production 40%-60%
(b) Poor stocking of cardamom 40%-60%
(c) Poor tended farm (wild) 40%-60%
(d) Old farm that has been abandoned 40%-60%
The above factors are aggregated at least 40%

(Most of Kisiwani Village farms fall in this group).

SEEDLINGS AND OR SAPLING (S)

S1: (level one) Cardamom seedlings that are >4-6 months old represent at least 10% of level three (M3) crop value in terms of investment, costs, etc, equivalent to Tshs 204

S2: (level two) Cardamom seedlings that are >6 to12 weeks represent 5% of level three crop value or 102/-

DAY (OR WEEK) OLD SEEDLING/SAPLING (DOS)

DOS: This represents one day old to 5 weeks seedlings/saplings, most of which were planted during the inspection/counting of crops in subject villages

The value is estimated at 50% of level two seedling in terms of investment and other development costs, equivalent to Tshs 51/-

Operating costs

This involves the following activities, established through research on site:

Farm clearing: ……..4% (amortization)
Purchase of seedlings/seeds:…...2%
Planting……1%
Harrowing ……12%
Harvesting ……..……..10%
Drying, packaging ……..…….2%
Transport …….……6%
Others …….……..……3%
TOTAL ……40%

2.0 BANANA:

Assuming: good farm, well managed and tended, good yield and good crop husbandry.

Gross income per cluster (each cluster has 3-7 plantains) yielding 4,800/= p.a on average

Less: Operating cost at 30% (see below) ……1440/=

Less: Domestic consumption 35%…..……1680/=

Thus net income p.a per cluster is Tshs 1,280/=

Crop value = YP*NI (for five years running)

$1680*(1-PV)/1=1680*(1-1/1.15)^5)/0.15 = 5,600/=$

Note: capitalisation rate, i, adopted is 15%, adopted as the denominator because of very low and substandard yields. Banana plantains are grown on hills in subject villages

Hence a higher opportunity cost required for such an investment in the hills. A lower rate would apply to suitable lands for banana growth.

M1 category of banana, typical of very few farms in Msasa IBC

M1: 70% of crop value = 3,920/= p.a per cluster (A 100% output is typical of equatorial type banana production levels)
M2: 55% of crop value are 3,080/= p.a per cluster e.g Kisiwani & part of Kwemdimu village

S1: 4% of crop value are 224/= per cluster per annum
S2: 0.2% of crop value are 11.20/= per cluster p.a
DOS: 0.1% of crop value are 5.60/= per cluster per annum

Operating costs

Farm clearance ……	5% (to be amortised)
Purchase of seedlings/seeds……	2%
Planting……	2%
Harrowing……	4%
Harvesting……	2%
Transport ……	5%
Others……..10% (pesticides, management etc)	

TOTAL …….. 30%

3.0 SUGAR CANE:

Gross income per annum per cluster
(10stalks @cluster p.a @ 200/=……2,000/=
Less: Operating costs 20% (researched) ……400/=
Less: Consumption cost 40%……..800/=
Thus, Net income is 800/=
Crop Value = YP*NI
M1: 1-(1/1.04)/0.04*800 = 770/=
S: rated at 4% or 31/=
DOS: rated at 0.1% or 1/=

4.0 PINEAPPLE:

Gross income p.a per cluster……150/=
Less: Operation 20%……30/=
Less: Domestic consumption 60%……90/=
Net income is 30/=
Crop value = YP*NI= $1-(1/1.04)^2/0.04*30 = 57/=$
M1 = Crop value for mature pineapple is 57/=
S: 4% of crop value which is 2/=
DOS: 0.1 of crop value which is 1/=

5.0 COCOYAMS:

Gross income per cluster p.a ……100/=
Less: Operation cost 15%……15/=
Less: Domestic consumption 65%…..……..65/=
Net income is 20/=
Crop value= YP(2years)*NI=37
M1 = Crop value for matured, ready for harvesting, cocoyam: 37/=
S: 20% of crop value or 7/=
DOS: 0.1% of crop value or 1/=

6.0 MANGO TREE:

Gross income p.a per cluster ……9,000/=
(assuming large mature tree producing 2,000 mangoes per annum for 10 years)
Less: Operating costs (see below) 30%……..2,700/=
Less: Domestic consumption (village research by PAL) 45%……...4,050/=
Net income is 2,250/=
Crop value of each tree = YP*NI for 10 years = 18,000/=
M1 (mature tree, level one): 8.1*2,250=18,250/=
M2 (mature tree level two) : 60% of crop value = 11,000/= (most mango trees in the subject villages fall in this category or below)
S: 4% of crop value which is 730/=
DOS: 0.1% of crop value which is 18/=

7.0 CINNAMON

Gross income per annum per cluster…….1,600/=
Less: Operating cost 40%……....640/= (same items apply)
Less: Domestic consumption 20%……..320/=
Net income is 640/=
Crop value = YP x NI = 1-PV/0.04 (640) for 3 years

M1 (matured crop, level one): crop value of 1776/= per cluster (period of 3 years is adopted because the remaining period involves coppicing & replanting)
M2 (matured crop, level two): 60% of crop value which is 1065/= pa/ cluster.
S1: 4% of the crop value or 7/= p.a per cluster
DOS: 0.1% of the crop value or 2/= p.a. per cluster

8.0 COFFEE

Gross income per annum per cluster…….400/=
Less: Operating cost 35%……140/=
Net income is 260/=
Crop value =YP*NI
Year 3-6 (first three years): $1-(1/1.04)^3$ /I x 200 = 556/= (A)
Year 7-20(next 13 years): $1-(1/1.04)^{13}$ x 40% of 200/= equal to 780 (B)
Total crop value = 1,336/=
M1 (matured crop level one): Crop value of 1,336/=
S. rated at 4% of crop value which is equal to 53/=
DOS: 0.1% of crop value which is equal to 1/50=

9.0 S. MALEYENSIS:

Gross income: 100 fruit @ 5/= per annum…….500/=
Less: Operating cost 10%……..50/=
Less: Domestic consumption 45%……...225/=
Net income p.a per tree is 225/=
Crop value = YP*NI for 5 years
M1 (matured crop, level one: 1-PV/I x 225 = 1000/=
S: rated at 4% or 40/=
DOS: 0.1% of crop value or 1/=

10.0 LEMON TREE:

Gross Income p.a per tree (400 pcs @ 1.5 p.a)…….600/=
Less: Operating cost 20%……....120/=
Less: Domestic consumption 55%…….330/=
Net income is 150/=
Crop value = YP*NI for 5 years

M1: 1-PV/I x 150 = 667/=
S: rated at 4% or 26/=
DOS: 0.1% of crop value or 1/=

11.0 KWEME TREE

Gross income p.a per tree (600 nuts @ 5/=)…….3,000/=
Less: Operating cost 30%…….……..900/=
Less: Domestic consumption 40%……....1,200/=
Net income is 900/=
Crop value = YP*NI for 2 years
M1: 1-PV/I x 900 = 1,697/=
S: rated at 4% or 68/=
DOS: 0.1% of crop value or 2/=

12.0 ORANGE TREE:

Gross income p.a (500 oranges @ 3/=p.a)…….1,500/=
Less: Operating cost 20%……....300/=
Less: Domestic consumption 40%……..600/=
Net income is 600/=
Crop value = YP*NI for 5 years
M1: 1-PV/I x 600 = 2,671/=
S: rated at 4% or 106/=
DOS: 0.1% of crop value or 2.50/=

13.0 PAWPAW TREE

Gross income p.a per tree (20 pawpaw p.a @ 50/=)…….1,000/=
Less: Operating cost 10%…….…..100/=
Less: Domestic consumption 50%……..…….500/=
Net income is 400/=
Crop value = YP*NI for 3 years
M1: 1-PV/I x 400 = 1,110/=
S: rated at 4% or 45/=
DOS: 0.1% of crop value or 1/=

14.0 PASSION FRUIT

Gross income p.a per tree ……...5,000/=
Less: Operating cost 40%……..2,000/=
Less: Domestic consumption 40%…….2,000/=
Net income is 1,000/=
Crop value = YP*NI for 2 years
M1(matured crop, level one): 1-PV/I x 1,000 = 1,886/= from well managed

and well tended farm
M2: rated at 60% = 1,130/=
S: rated at 4% or 75/=
DOS: 0.1% of crop value or 2/=

15.0 GUAVA TREE:

Gross income p.a per tree ……7,500/=
Less: Operating cost 35%……...2,625/=
Less: Domestic consumption 45%……..3,375/=
Net income is 1,500/=
Crop value = YP*NI for 4 years
M1: 1-PV/I x 1,500 = 5,444/= for mature, highly productive guava tree, producing at least 3700 pcs of fruits
All trees producing guava were disease ridden because of hostile weather and management problems
M2: rated at 60% or 3,266/=
S: rated at 4% or 217/=
DOS: 0.1% of crop value or 5/=

16.0 OIL PALM

Gross income p.a per cluster ……...8,000/=
Less: Operating cost 30%……..2,,400/=
Less: Domestic consumption 45%……..3,600/=
Net income is 2,000/=
Crop value = YP*NI for 15 years
The return rate cannot be very well predicted hence a higher rate of return of at least 10%
M1: 1-PV/I x 2,000 = 15,212/=
Inspection of crops in subject villages did not indicate mature oil palm trees that produce 10 bunches per annum.
The maximum rating is a bit more above average around 55%
M2: rated at 55% or 8,366/=
S1: rated at 4% or 608/=
S2: rate at 0.2% of crop value or 30/=
DOS: 0.1% of crop value or 15/=

17.0 CLOVE TREE

Gross income p.a per tree (7kg of harvest p.a @ 2,500/=) ……17,500/=
Less: Operating cost 45%……..…7,875/=
Less: Domestic consumption 15%……..…2625/=
Net income is 7,000/=
Crop value of M (mature crop):
(i)from a mature, well stocked, well maintained from well managed farm
(ii)Assuming adequate rainfall and stable climate
(iii) Assuming stable economy where there are no substantial price fluctuation
(iv) No substitutes to clove
(v) No diseases to attack cloves
All the above call for a higher return rate required in order to cover risk posture, not less than twice the applicable bank rate at least 10%
Therefore YP x NI = 1 - PV/I x 7,000 = 60,000/- = M1 (level one mature crop)
M2 is rated at 60% of crop value or 36,000/= ;most farms fall in this category
S: rated at 4% or 2,400/=
DOS: 0.1% of crop value or 60/=

18.0 BLACK PEPPER

Gross income: stem p.a …….. 2,500/=
This reflects 40% rating of typical black pepper grown using modern agricultural techniques, fully matured, well tended farm purposely developed for pure crop stand of black pepper, provided with fertilizer and very good production. Inspected crops are in the range of 40% of the typical crops.
No black pepper qualified to be rated at 100% : hence the adopted rate below.
Therefore our M1 will reflect the 40% rating.
Less: Operating cost 40%……1,000/=
Less: Domestic consumption 20%…….500/=
Net income is 1,000/=
Crop value = YP x NI for the first 3 years
(i) 1-PV/I x 1,000 = 2,400/=
(ii) 1-PV/I x NI at 5% production from 7th -20th years or 500/=
M1: Total crop value = 2,900/= per stem or cluster
M2: Crop value rated at 40% or 1,160/= which is characterised with haphazard planting, wildly (or spontaneously), supported by creepers and average production.
S1: Seedling >4 to 6 months. Rated at 4% of crop value or 116 p.a per cluster.
S2: Seedling > 6 to 12 weeks, rated at 0.2% of Crop Value or 6/=
DOS: Rated at 0.1 of crop value or 3/-

19.0 AVOCADO:

Gross income p.a per tree ……12,000/=
Less: Operating cost 30%…….3,600/=
Less: Domestic consumption 45%…….5,400/=
Net income p.a per tree = 3,000/=
Crop value =YP*NI for 5 years
M1: 1-PV/I x 3,000 = 13,350/=
M2: rated at 50% of crop value = 6,675/=
S: rated at 4% or 534/=
DOS: 0.1% of crop value or 13.40/=

20.0 COCONUT TREE:

Gross income p.a per tree ……12,000/=
Less: Operating cost 40%……...4,800/=
Less: Domestic consumption 50%……/……6,000/=
Net income p.a per cluster = 1,200/=
Crop value = YP*NI for 40 years
M1: 1-PV/I x 1,200 = 23,750/=
M2: rated at 60% of crop value = 14,250/=
(inspected crops fall in this categories and below)
S: rated at 4% or 950/=
DOS: 0.1% of crop value or 23/=

21.0 JACK FRUIT

Gross income per tree ……1000/-
Less: Operating cost 25%……...250/=
Less: Domestic consumption25%……250/=
Net income p.a = 500/=
Capital value = YP*NI for 10 years
M1: 1-PV/I x 300 = 2,433/= per tree: with rated stable annual production
M2: rated at 60% of M1 or 1,460/= . The trees inspected in the said village fall in M2 category and below
S: 4% of crop value or 97/=
DOS: 0.1% of crop value or 2.50/=

NOTE ON CALCULATION OF NET PRESENT VALUE:

$$YP = \frac{1-PV}{i}$$

$$PV = \frac{1}{(1+i)^n}$$

Where i = 4.5% (see above, page 1)

ANNEX 1b
PROPOSED DEREMA FOREST CORRIDOR
DEREMA REVENUE YIELD MATRIX1 13 7 02.xls with cardamom modified
VALUATION FOR COMPENSATION FOR STANDING CROPS

	Crop (cluster)	Compensate as per	Rotation age (yrs) (Planting to maturity)	Frequency of harvests p.a.	Total harvest p.a. (kg or pc)/ cluster	Price per kg/pc in Tshs	Gross Revenue/ cluster p.a.	Operating costs p.a. in per cent	Gross income /cluster p.a.	Domestic consumption	Net income /cluster p.a. in Tshs	Net income /cluster p.m. in Tshs	CROP VALUE (YP X NI = CV)					
1	E. cardamom	kilograms	3	3	3	2400	7,200	40%	4,320	0%	4,320	360	5,100	3,315	2040	204	102	51
2	Black pepper	kilograms	3	2	2.5	1,000	2,500	40	1,500	20	1,000	83	2,900	1,160	NA	116	6	*3*
3	Banana	bunches	1	3.5	8.0	600	4,800	30	3,360	35	1,680	140	*3,920*	3,080	NA	11.2	224	6
4	Coffee	kilograms	2	1.0	3.0	140	420	35	273	0	273	23	NA	1,336	NA	53	NA	2
5	Cinnamon	kilograms	2	0.5	3.0	530	1,590	40	954	20	636	53	1,776	1,065	NA	7	NA	2
6	Cloves	kilograms	3	1.0	7.0	2,500	17,500	45	9,625	15	7,000	583	60,000	36,000	NA	2400	NA	60
7	Pineapple	pieces	1	1.0	1.0	150	150	20	120	60	30	3	NA	57	NA	NA	2	1
8	Oil palm	bunches	5	1.0	20.0	400	8,000	30	5,600	45	2,000	167	15,212	8,366	NA	608	30	15
9	S.Maleyensis	pieces	1	1	100	5	500	10	450	45	225	19	NA	1,000	NA	40	NA	1
10	Cocoyam	kilograms	1	1	0.8	100	80	15	68	20	52	4	NA	37	NA	7	NA	1
11	Jack fruit	pieces	5	1	200	5	1,000	25	750	25	500	42	2,433	1,460	NA	97	NA	3
12	Mango tree	pieces	10	1	2000	4.5	9,000	30	6,300	45	2,250	188	18,250	11,000	NA	730	NA	18
13	Coconut tree	pieces	10	4	240	50	12,000	40	7,200	50	1,200	100	23,750	14,250	NA	950	NA	23
14	Lemon tree	pieces	5	1	400	1.5	600	20	480	55	150	13	NA	667	NA	26	NA	1
15	Orange tree	pieces	5	1	500	3	1,500	20	1,200	40	600	50	NA	2,671	NA	106	NA	3
16	Mkweme	pieces	2	1	600	5	3,000	30	2,100	40	900	75	NA	1,697	NA	68	NA	2
17	Pawpaw	pieces	2		20	50	1,000	10	900	50	400	33	NA	1,110	NA	45	NA	1
18	Passion fruit	pieces	1		2500	2	5,000	40	3,000	40	1,000	83	1,886	1,130	NA	75	NA	2
19	Guava	pieces	4	1	3750	2	7,500	35	4,875	45	1,500	125	5,444	3,266	NA	217	NA	5
20	Avocado tree	pieces	5	1	240	50	12,000	30	8,400	45	3,000	250	13,350	6,675	NA	534	NA	13
21	Sugar cane	pieces	1	1	10	200	2,000	20	1,600	40	800	67	770	31	NA	31	NA	1

FINAL DRAFT

ANNEX 2

DEREMA CORRIDOR

TOTAL REVISED COMPENSATION DUE FOR ALL CROPS INVENTORIED, BY VILLAGE

NOT INCLUDING COMPENSATION for inflation 2003-2006

CROP ↓	KISIWANI	KAMBAI	KWEZITU	KWEMDIMU	MSASA IBC	TOTAL BY CROP
CARDAMOM	4,610,910	6,025,191	356,439,969	445,802,740	1,230,348,512	2,043,227,322
BLACK PEPPER	1,319,975	186	103,465	1,572,243	2,492,447	5,488,316
CLOVE	1,003,200	685,140	6,289,940	1,406,260	72,571,626	81,956,166
CINNAMON	96,242	2,300	321,747	143,959	3,655,427	4,219,675
AVOCADO	117,480	15,456	1,198,872	64,535	3,445,390	4,841,733
BANANA	3,351,270	200,021	12,983,802	9,108,422	84,669,044	110,312,559
COCONUT	0	0	1,900	199,546	28,050	229,496
COCOYAM	50,563	8,821	948,622	136,312	2,446,925	3,591,243
COFFEE	289,745	110,930	2,486,354	515,872	11,082,512	14,485,413
GUAVA	148,644	7,553	1,280	6,749	66,913	231,139
JACK FRUIT	122,815	34,698	59,284	361,235	856,515	1,434,547
KWEME (tree)	240	5,091	19,415	3,462	76,047	104,255
LEMON	18,148	442	12,527	8,546	20,986	60,649
MALEYENSIS	3,920	0	0	0	432,409	436,329
MANGO	142,220	85,030	35,773	511,272	289,526	1,063,821
OIL PALM	794,711	167,590	42,475	1,230,751	300,459	2,435,986
ORANGE	318	0	98,594	18,649	69,297	176,858
PASSION FRUIT	0	0	150	0	1,296	1,446
PAWPAW	2400	0	0	2,445	1,136	5,981
PINEAPPLE	139	0	13,276	5,895	14,439	33,749
SUGAR CANE	620	0	6,214	19,074	4,577,866	4,603,774
VILLAGE TOTALS	**12,073,560**	**7,348,449**	**381,083,659**	**461,117,967**	**1,417,446,822**	**2,279,070,457**

FINAL DRAFT

ANNEX 3

SAMPLE INVENTORIES OF CROPS
(FARMER NAMES REMOVED FOR PRIVACY)

FROM PROPER CONSULT INVENTORIES, 2002

	NAME OF PEASANT:					
	KITONGOJI; IBC-JUU					
SN	**CROP NAME**	**LEVEL**	QTY	RATE	F/RATE	R E M A R K S
1	Cardamon	DOS	520	51.00	26,520.00	NEW FARM
2	Banana	M	50	3,080.00	154,000.00	
3	Avocado	DOS	50	13.00	650.00	
4	Cinamomum	DOS	400	2.00	800.00	
	TOTAL				**181,970.00**	
	NAME OF PEASANT:					
	KITONGOJI; MAJENGO					
SN	**CROP NAME**	**LEVEL**	QTY	RATE	F/RATE	R E M A R K S
1	Cardamon	M	655	5,100.00	3,340,500.00	WELL TENDED
2	Banana	M	50	3,920.00	196,000.00	
3	Cocoyam	S	200	7.00	1,400.00	
	TOTAL				**3,537,900.00**	
	KITONGOJI; MAGODA					
SN	**CROP NAME**	**LEVEL**	QTY	RATE	F/RATE	R E M A R K S
1	Cardamon	S	50	204.00	10,200.00	WELL TENDED
2	Cardamon	M	87	5,100.00	443,700.00	
3	Cardamon	DOS	120	51.00	6,120.00	
4	Banana	M	13	3,080.00	40,040.00	
5	Banana	S	19	224.00	4,256.00	
6	Cocoyam	S	70	7.00	490.00	
7	Avocado	M	1	6,675.00	6,675.00	
	TOTAL				**511,481.00**	

ANNEX 4

LIST OF PERSONS CONTACTED

Dar es Salaam

Ministry of Natural Resources and Tourism

Felix Mallya, Coordinator, Tanzania Forest Conservation and Management Project
Evariste Nashanda, Manager, Eastern Arc Forestry Project (GEF)
Mathias J. Lema, Regional Catchment Forest Manager, Catchment Office, Tanga Region
Dr. Neil Burgess, Scientific Adviser, Eastern Arc Forestry Project (UNDP – GEF)

Ministry of Lands

Albert Mallya, Legal Adviser

Proper Consult (Consultants on valuation of Derema crops, 2002)

Mr. Alec R. D. Rwongezibwa, FRS, MBA, Estate Valuer, EMACK (T) Ltd.

Embassy of Finland

Veli Juola, Counsellor (Forestry) (outgoing)

University of Dar es Salaam and WWF

Professor George Jambiya, Geography, UDSM, and Policy Officer, WWF Tanzania
Iddi Mwanyoka, Water Resources Planner

World Bank

Christian Albert Peter, Senior Forestry Specialist

Tanga Regional Administration

Mrs. Gertrude K. Mpaka, Regional Commissioner
Mr. Gervas Msanga, Regional Executive Secretary
Mr. Ndihalema Kisheru, Regional Administrative Secretary

Muheza District Administration

Mrs. Joyce Mgana, District Commissioner
Mr. M.T. Mujibhila, District Administrative Secretary
Mr. Obed. J. Mwasha, District Executive Director
Mr. Mzo, District Administrative Officer
Mr. M. Mussa, District Crops Officer

Amani Nature Reserve

Corodius T. Save, Curator, Amani Nature Reserve
Mathaya Mbanga Matthew, Director, Tourism, Research and Training, Amani Nature Reserve

Derema Corridor Villages

Village chairmen, other officers and affected farmers in the following villages:

Kisiwani
Kwemdimu
Kambai
Msasa IBC
Kwezitu

Lushoto District

Mr. E. Mbara, Lushoto Land Officer

FINAL DRAFT

ANNEX 5

ITINERARY OF CONSULTANCY

25 May 2006	Arrive in Dar es Salaam
26 - 31 May 2006	Meetings with FBD officials, other Tanzanian officials, and donor and other stakeholders in Derema Forest Corridor
1 - 7 June 2006	Field work in Derema villages, Tanga Regional and Muheza District Headquarters
1 June	Tanga Region – Meet with Regional Administrator and TFCMP
2 June	Muheza District – Meet with District Administrative Secretary
3 June	Meeting in Kisiwani village
4 June	Meeting in Kwemdimu village
5 June	Muheza District – Meet with DAS, Crops and Land Officers, travel through areas of land availability around Msozwe and Mkwajuni
6 June	Meeting in Msasa IBC village and in Kwezitu Village
7 June	Meeting in Kambai village
8 – 28 June 2006	Report writing in Dar es Salaam
29 June 2006	Presentation of results, workshop at FBD Ivory Rooms, DSM
30 June 2006	Depart Dar es Salaam
6 – 13 July 2006	Discuss report findings with World Bank officials, revise report

Annex 6
Letter of 31/3/1999 from Ministry of Lands to Ministry of Agriculture
Listing and Assigning Plantations to be used for Muheza farmers

HALMASHAURI YA WILAYA YA MUHEZA

(101)

IDARA YA ARDHI,
S. L. P. 20,
MUHEZA.

Kumb. No. ASP/69/176. 3/3/99

Afisa Kilimo na Mifugo (W),
MUHEZA.

Yah: MASHAMBA YALIYOMEGWA KUUZA YALIYOUZWA
MAJUMBA YA NMT

Kazi ya kuyamega mashamba niliyoyataja kwa ajili ya wakulima wadogo wadogo imekamilika. Maenao hayo yalionyeshwa kwa viongozi wa vijiji mbalimbali ili kufahamu mipaka mipya ya mashamba ya wanakijiji.

1. Mnamo wa kilimo umeshafika.
2. Katika kikao cha kamati ya ugawaji ardhi (W) cha tarehe 19/3/99 tuliamua kuwa ugawaji ufanywe na Halmashauri za vijiji kwa kujua wakulima wenye uhitaji na ardhi waliyonayo. (Baharti nzuri wawe ni ajuabe na ulihadhuria) majina ya watakaopewa yaletwe wilayani pamoja nkari.
3. Tumekuwa tukisisitiza kuwa katika ugawaji huo utaalamu utumike ikiwa ni pamoja na kunapo barabara. Ofisi yako inategemewa sana kutika hili ili wakulima wawaze kuvuna kwa kiwango kikubwa.
4. Vile vile tuliwafahamisha uongozi wa vijiji kuwa wale wenye mashamba ya awali wazigawe mashamba mapya, wacache utaalam ili wavune vizuri katika mashamba yao.
5. Maenao mengine yalikuwa yameavamiwa hivyo uangalifu utumike katika kuyagawa ili kuepusha migogoro.

Pamoja na barua hii naambatisha mgenao hayo na ekari zake.

L. F. Mhando
AFISA MAENDELEO YA ARDHI (W)
MUHEZA

Nakala: Mkuu wa Wilaya,
MUHEZA

" Mkurugenzi Mtendaji (W),
MUHEZA

Annex 6 (continued)

4.1.3

TAARIFA YA KUTHIBITISHA MAENEO YALIYOMEGWA KUTOKA MASHAMBA YALIYOKUWA YA MMT KWA AJILI YA WAKULIMA WADOGO NA TAASISI - WILAYANI MUHEZA*APRILI, 1998

NO.	SHAMBA	ENEO HA	VIJIJI VILIVYO MEGEWA	MAPENDEKEZO YA MMT			MAONI YA VIJIJI	MAPENDEKEZO YA KAMATI NDOGO	HA	JUMLA	ZINAZO BAKI
				MGAO WA KWANZA	NYONG-EZA	JUMLA					
1	2	3	4	5	6	7	8	9	10	11	12
1	MUHE ZA MKU-MBI KITISA	5300	1. Lusanga	65	20	85	Eneo linatosha.		-	85	
			2. Tanganyika	44	60	104	Wameomba waachiwe eneo lao la asili lenye mazao ya kudumu mbalo halijawahi kupandwa Mkonge.	Waachiwe.	5	109	
			3. Mkanyageni	40	50	90	Wananchi 694 wanalima nje ya eneo lililomegwa awali katika shamba la Muheza Mkumbi. Kilapura jumla 894 wasio na mashamba.	Kwa mujibu wa taarifa ya awali ya kijiji Kumb. Na. KT/NG/AR/VII/110 ya tarehe 20/12/96 waliokuwa wanalima nje ya eneo lililomegwa la M/Mkumbi ni 201. 2. Wanaolima kwenye eneo lisilohusika wahamishiwe katika eneo la nyongeza ha 50. Watakaosalia wahamishiwe kwenye shamba la Azimio.	-	90	
			4. Uendelezaji wa mji wa Muheza	986	5	991				991	
			5. Mkwakwa Mafleta	144	-	144	Wengi wanaolima katika eneo hilo ni wakazi wa Mjini Muheza walianza toka enzi za Nguvu kazi.			144	
			6. Wafanyakazi wa Mkonge nyuma ya Hospitali Teule.	-	20	20				20	

Annex 6 (continued)

NO.	SHAMBA	ENEO HA	VIJIJI VILIVYO MEGEWA	MAPENDEKEZO YA MMT			MAONI YA VIJIJI	MAPENDEKEZO YA KAMATI NDOGO	HA	JUMLA	ZINAZO BAKI
				MGAO WA KWANZA	NYONGEZA	JUMLA					
1	2	3	4	5	6	7	8	9	10	11	12
		7. Kivindo	-	-	-	-	Wameomba na ha 400 Wakulima 245 Shamba la kijiji 250 Shamba la shule 5 Malisho mifugo 50 Upanuzi kijiji 50 Vikundi uzalishaji 5 400	Wamepewa ha 250 kwa sababu shamba limefikia kiwango cha chini cha uzalishaji (Economic size) kwa ajili ya wananchi 245.	250	250	
		8. Kibaoni (Kidutani)	-	-	-	-	Wanaomba ha 400 kwa ajili ya kitongonji cha Kidutani. Kidutani wanalima M/Mkumbi wakati mgao umetolewa katika shamba la Kibaranga ambalo lipo mbali na wao na hazitoshelezi wote.	Wapewe ha 400 kwa sababu shamba limekuwa kiwango cha chini cha uzalishaji (Minimum economic size)	200	200	
				1279	155	1434			455	1889	3411
2.	KUMBURU	2310 + 1000 Mivumoni = 3310	1. Kigongomawe	110	-	110	Zinatosha	Wote wamegewe kutoka shamba la Kumburu na murwekezaji afidiwe kutoka shamba la Mivumoni kwa gharama ya kuchangiwa na wananchi.	-	110	
			2. Mkuzi	150	150	300	Hazitoshi wanaomba ha 150		-	300	
			3. Mpapayo	50	200	250	Wanaomba ha 200 zaidi.		-	250	
			4. Magoda	-	400	400	Wanaomba ha 400 kutoka Kisita ambao ni wakulima 550				
			5. Mgome	-	250	250	Wanaomba ha 250 kwa ajili ya wakulima 123		-	400 250	
				310	1000	1310				1310	2000
3.	KIBARANGA	9510	P/Darajani	413	-	413			-	-	-
			Mjesani Kibaoni Upare Dirima Ngugwini Kizota, na	100	20	120	Wanalalamika kuwa eneo kuwa ni mchanga/mawe		-	-	-
			Mazinde	200	-	200			-	-	-
NO.	SHAMBA	ENEO HA	VIJIJI VILIVYO	MAPENDEKEZO YA MMT							

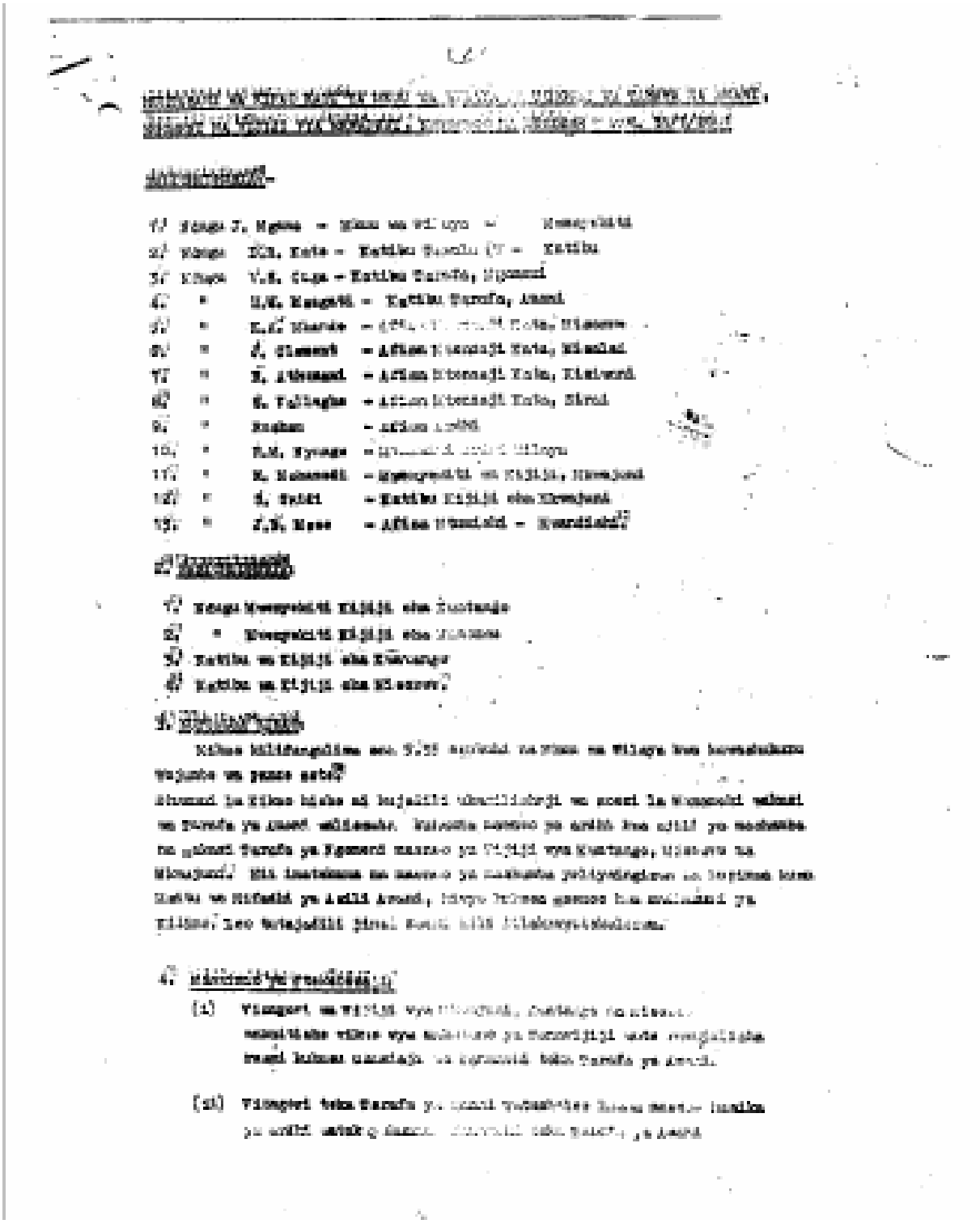
Annex 6 (continued)

			MKOSEWA	MGAO WA KWANZA	NYONGEZA	JUMLA	MAONI YA VIELI	MAPENDEKEZO YA KAMATI NDOGO	HA	JUMLA	ZINAZOBAKI
1	2	3	4	5	6	7	8	9	10	11	12
			Misozwe								
			Mabungu	110	-	110	Hazitoshi waongezwe ha 200		-	-	-
			Manyoni	90	-	90	Hazitoshi waongezwe ha 200				
			Kicheba	268	-	268	Sehemu waliyoonyeshwa hazifiki hekta hizo	Mamlaka ionyeshe eneo lote.	-	-	-
			Parambo	50	-	50	Sehemu				
			Mkwajuni (Mwarimba)	281	100	381	Wanaomba ha 120	Idadi ya ha zilizobaki itapatikana baada ya kujua maeneo mengine yaliyotolewa kwa watu binafsi.			
			JUMLA	1512	120	1632					
4.	AZIMIO/ KILAPU - RA	5133	1. Darajani Machemba	300	-	300	-	Wabaki na hizo ili sehemu iliyobaki iweze kutatua matatizo mengine endapo tutachukua lote na wasimame kukaribishia watu kutoka Tanga.			
			2. Mkalia shida	280	-	280	HAZITOSHI				
			3. Kilapura	300	-	300	HAZITOSHI				
			4. Wafugaji (Ng'ombe)	1600	-	1600					
			JUMLA	2480	-	2480				2480	2653
5.	HALE/ MVULE	6516	1. Potwe Ndondondo	150	-	150		Sehemu yote iliyobaki ipo upande wa Wilaya ya Korogwe.			
			2. Potwe Mpirani	150	-	150					
			3. Songa Kibaoni	20	-	20					
				320	-	320				320	6196
6.	AZIMIO/ KILAPURA (ENEO LILILO BAKI)	2653 + 600 (Furaha) 3253	1. Wakulima wa Mkanyageni 200	-	-	-	Wakulima 200 wanalima Azimio	Wapewe	400	400	
			2. Wananchi wa Muheza Mjini Masuguru	-	-	-	Wananchi 200 wanaomba	Wapewe	400	400	
			3. Majengo	-	-	-	Wananchi 310	Wapewe	600	600	
NO.	SHAMBA	ENEO HA	VIELI VILIVYO	MAPENDEKEZO YA MMT							

Annex 6 (continued)

			MGEWA	MGAO WA KWANZA	NYONG-EZA	JUMLA	MAONI YA VIJIJI	MAPENDEKEZO YA KAMATI NDOGO	HA	JUMLA	ZINAZO BAKI
1	2	3	4	5	6	7	8	9	10	11	12
			4. Mbaramo	-	-	-	Wananchi 250	Wapewe	500	500	
			5. Wanaotoka Amani	-	-	-	Wananchi 670	Wapewe	1200	1200	
			6. Huduma mbali mbali	-	-	-	5153	-	153	153	
								JUMLA	3253	3253	
7.	SAGUL AS	500	1. Kwemsala	125	-	125				125	
			2. Lunguza	125	-	125				125	
			3. Mindu	125	-	125				125	
			4. Kibaoni	125	-	125				125	
				500	-	500				500	
8.	LEWA	3005	1. Kwabada	335	-	335	Hazitoshi wanahitaji ha.	Mamlaka itimize ahadi ya kumaliza matatizo na kumwambia mwenzao ili ha. zote zitolewe na kuongezewa vijiji	666	1001	
			2. Madumo	335	-	335	Wanahitaji ha.		667	1002	
			3. Mtindiro	335	-	335	Wanahitaji ha.		667	1002	
				1005	-	1005			2000	3005	
9.	Mhindu-ro		1. Mhinduro								
			2. Mtakuja	2158	-	2158	-		-	2158	-
			3. Churwa								
			4. Matemboni								
			5. Maramba A&B								
			JUMLA KUU	9564	1275	10839			5708	16547	-

Annex 7: Letter of 31/1/2001 from District Commissioner to Muheza Divisional Secretaries setting out terms for facilitating lowland villages to provide 3-acre plots to villagers from Amani Nature Reserve area



Annex 7 (continued)

\- 3 -

(iii) Fomu za Mkataba za kugawiwa maeneo ya ardhi zitagawiliwa na Wilaya ili Kijiji kinachohamishwa kimpatie kila anayegawiwa kwa ushahidi wa umiliki.

(iv) Viongozi wa Tarafa ya [illegible] na Vijiji husika wanaombwa [illegible] kuendesha na kusimamia maeneo ya mashamba yatakayotolewa kwa watu toka Amani.

(v) Kila Mwananchi aliyehamia toka Amani aende kwa [illegible] wake kuona uongozi wa Kijiji [illegible] barua ya [illegible] toka uongozi wa Amani [illegible] kutoa.

(vi) Kila Mwananchi atagawiwa eka tatu (3) na ekari moja pia atatumia kwa ujenzi katika eneo hilo.

(vii) Ada ya kuandikishwa Kijijini itatozwa Shs. 3,500/= ambayo kila atakayelipa atapewa stakabadhi.

(viii) Maeneo yaliyotengwa Amani na ambayo hayaendelezwi yagawiwe na wenye [illegible] kulima.

5. [illegible]

Mkuu wa Wilaya alifunga kikao saa 6.30 mchana kwa kuwashukuru Viongozi wote waliohudhuria pia kuwapa Uongozi wa Kijiji cha [illegible] taarifa kwa atakayeshuhudia kuona maeneo husika tarehe 15/8/2001 katiba ya ziara yake itaandaliwa na Katibu Tarafa [illegible] na kumjulisha.

15/8/2001

MWENYEKITI — TAREHE — KATIBU

Annex 8:
Letter of 9 August 2001 from District Executive Director to respective Villages in lowlands, providing lists of Amani area residents seeking ex-plantation land allocation