

FOOD: Poor People's Production, Women, Food Aid

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Introduction

This work has been done within the framework of AWAHF (Adjustment With A Human Face - a term ARJ thinks was initially mine but for which I doubt I deserve credit and with which am not so sure I am happy!). More specifically it arises from Ghana, Somalia and Tanzania supplementary adjustment and/or early human condition warning system missions for UNICEF and related lead papers WEP/ADB 1987 Food Aid Conference in Abidjan* for the Economic Commission for Africa's 1988 Conference on the Human Dimension in Africa's Priority Programme for Economic Rehabilitation.**

The main areas have been:

- a. Production by poor peasants as a sine qua non for their improved food security or human condition;
- b. Women's work load reduction as a key means to - inter alia - enhanced food production;
- c. Creative use of food aid to stimulate - inter alia - the first two objectives.

Poor Peasant Production

Many (not all) hungry African peasants are primarily food crop producers who cannot grow enough to meet minimum household nutritional requirements plus that portion of minimum cash expenditure requirements which they cannot earn except by selling food. This pattern is typical of the Upper and Northern Regions of Ghana. Except in the worst drought years they are in heavy food surplus at physical flow and effective demand levels, supplying two staple grains (millet, guinea corn/sorghum), a staple root crop (yams), a major oilseed (groundnuts) as well as livestock (cattle, goats) and vegetables (tomatoes) to the Forest and Coastal Zones and to neighbouring countries (especially Burkina except for livestock which flows the other way to Southern Ghana). They are also rice surplus but from a high cost, high mechanisation enclave not from peasant production. But in nutritional terms these are - both seasonally (pre-harvest "hungry season") and year round even in normal years - the most severe nutritional deficit regions in Ghana.

* "Hunger, poverty and food aid in Sub-Saharan Africa: Retrospect and potential", published in Disasters Vol.10, No. 4, The International Journal of Disaster Studies and Practice, Research and Development Institute, London, 1986

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The causes are at least fourfold:

- a. low ability to produce by most peasant households, at a basic level related to lack of applicable knowledge but at an immediate one to lack of basic inputs (e.g. machetes/cutlasses, hoes, seed, shovels, pickaxes, wheelbarrows, gumboots, snake bite serum);
- b. major terms of trade losses from higher transport costs with the "outage" of the main North Road and the abominable conditions on the secondary one since the end of the 1970s;
- c. the failure to act adequately to rehabilitate or to expand industrial and export crop production (cotton, tobacco, shea nuts) which are partly complementary in production, reduce weather risk and provide cash income other than from selling food;
- d. failure to utilise food aid to provide employment on small productive and infrastructural projects to increase overall and "hungry season" incomes in normal and, especially, in drought years interacting with peasant ability to finance their production rehabilitation, to have a higher productive capacity base and to be less at risk from future droughts.

The operational problem is not easily described as lack of political will. The PNDC is concerned that the Upper and Northern Regions are a periphery of a peripheral economy and set specific programming to assist them to produce more and to receive more basic services as a key priority in its April 1987 Donor's Group Submission.

But it is true that the Northern and Upper Regions are perceived as basically extraneous to macroeconomic and external account performance (except perhaps for the disastrous mechanised rice/irrigation sectors which do attract misallocation of resources). This has been true of past agricultural and import support programmes which failed to give priority to restoring (economically viable and locally preferred) domestic tool production to levels which would cause them to percolate north of the forest zone. Equally as of March 1987 the Government of Ghana (or more specifically the Ministry of Finance) had not included reopening the Great North Road in its Priority Economic Programme but had included for 1987-90 over \$100 million in export logging evacuation highway reconstruction and improvement.

It is not adequate - nor even fair - to blame the World Bank and FAO for all this even though they are part of the perceptual problem. Indeed in April 1987 the efforts of the Northern and Upper Region's domestic and external backers received a dramatic payoff from the World Bank. The unlisted Great North Road IDA Credit project (submitted but apparently not prioritised by Finance) was approved for over \$60 million. Ironically, however, it was billed as a regional linkage project to Burkina. While that is true and a significant side benefit to Ghana (and perhaps a greater one to Burkina since its main external route - the "Toonerville Trolley" rail line to Abidjan - is in parlous condition), it is not the basic justification for the project. That is the saving of up to 500 km (apart from quality of highway gains) on transport of - say - 350,000 tonnes a year of goods from and to these three regions.

The April 1987 GOG proposals to the donors group (see Annex) marked a broader breakthrough on prioritising the Northern and Upper Regions in particular within the context of priority attention to the production and income as well as basic service needs of poor Ghanaians. Donor response was positive and an inter-agency World Bank led mission was dispatched promptly.

On the bulk of the proposals the mission's report was relatively to very forthcoming. But there were two exceptions. These were:

- a. production by poor peasants;
- b. production by and reducing the workload of women.

Proposals under the latter head vanished virtually without a trace. One under the former was - ironically - put in under labour intensive public works assistance albeit it could have been self-financed at least after the first year and did not require hiring the villagers to do the digging. Most were set aside for a later IFAD and/or FAO mission to appraise. The import support (steel) for farm implement production proposal vanished without a trace as - one may well fear - did that for ox drawn, small scale, seasonal or pond irrigated rice production. Apparently the concepts that poor African peasants can produce more food and that pump priming resource injections and facilitating flows of inputs to be sold to them can pay off in economic as well as human terms still have a long row to hoe before being operationally and programmatically accepted.

Women's Workloads - Production - Incomes

Generalising about Sub-Saharan African women in food producing households is risky. The leap from 'invisibility' to prominent, simple generalisations such as "The farmer, she..." is progress analytically as well as polemically, but only up to a point which is usually well short of programmatically.

That African rural women are "economically active" in even the narrow sense of that term is a safe generalisation. But not always in food crop growing - in some (by no means all or even most) Islamic areas they work predominantly on food processing, handicraft production and retail trade in their homes. Even in the more normal case of women working in the fields certain qualifications are needed to such sweeping phrases as "two-thirds of Africa's food is produced by women":

- a. the gender division of labour by task and by crop differs markedly and in some cases both women and men engage substantially in most food crop production tasks (e.g. Bay Region, Somalia);
- b. a food crop production system with no male labour input is - except for very poor female headed households unable to mobilise or hire any male labour - very unusual for staple crops. That is, most food crop output is a joint product even though the bulk of the labour time is female in a majority of contexts.

Perhaps a safer - and broader - generalisation is that rural African women's workloads vary from heavy (at low farm work seasons) to crushing (at peak farm

work seasons). The reason is not only - indeed ususally not primarily - direct food (or other crop) production time. Rather it is the sum of that plus:

- a. watering. Water collection is almost wholly a female - including both girls and women - responsibility and can often take 3 hours per round trip for an inadequate supply;
- b. fuelling. Collecting branches, bushes, dead trees and - less uniformly - cutting live trees and branches is usually classed as "women's work" and, increasingly, is as time consuming as water collection;
- c. tending the sick and getting them (especially children) to health points. Again this is (not just in SSA!) virtually wholly on the female side of the gender division of labour. In malnourished households with limited water supplies (for cleaning, washing, cooking), many children and long distances to health points, it can be very time consuming indeed;
- d. food processing and handicraft production both for household provisioning and for sale. The former is dominantly and some branches of the latter frequently on the female side of the gender division of labour;
- e. retail trading or selling to "wholesalers". Most SSA rural women do sell food, processed food products and/or handicrafts locally and/or to traders/transporters collecting for urban markets. Some also collect (or grow) industrial/export products (e.g. shea nuts in the Upper West region of Ghana) and sell them. Because few rural SSA households (including basic ones, not merely extended families) have unified budgets and there is a gender division of expenditure responsibility, women's cash incomes are crucial to household nutrition, environmental sanitation (e.g. soap) and children's welfare (e.g. clothes, clinic fees and - less uniformly - school costs especially for girls);
- f. 'normal' homework. Cooking, cleaning, child care, etc., are just as much "women's work" in Sub-Saharan Africa as elsewhere (an objective description not a normative prescription by the present author!) and are much more time consuming than in the North.

This overwork problem has been exacerbated by the lack of articulated, focussed action to reduce it. Women remain invisible - with side token references and a few genuine exceptions - to most development analysts, practitioners and functionaries. As a result their workloads are rarely identified in detail or overall and still less rarely are articulated programmes to reduce them identified or allocated significant resources. Projects are not so much rejected on cost efficiency grounds as rarely visualised or spelled out in the first place. This is by no means simply a matter of lack of concern - when countries with some concern do list programmes positively affecting women, movement to near universal access to primary education, to primary/preventative health care within 5 kilometres, to 40 to 50% (at least if maintenance were improved) rural access to nearly pure water do not figure on the lists because their special relevance to women is invisible. There is an objective perception and conceptualisation problem quite apart from traditional/colonial attitudes toward women.

It would be both philistine and fatuous to suppose (as some social cost benefit analyses of - for example - water projects do) that time saved on the foregoing functions should or would all go to increased food production. But at some seasons at least part of it certainly would. This may be particularly true in respect to secondary, nutrition enhancing food (e.g. green vegetable) production. Or at any rate so say many of those (few) rural African women when (rarely) someone bothers to ask them.

This suggests that enhancing women's ability to produce food for household self-provisioning cannot and need not be approached solely (perhaps not primarily) by technological innovations in food production. Parallel avenues include:

- a. input provision for present or known desired lines of production. For example, in Northern and Upper Ghana machetes and hoes (for general food production), seeds (for vegetable production), machetes, rubber boots and snake serum in health posts (for de-snaking, protection against snakes, treatment if bitten to augment shea nut collection);
- b. infrastructure restoration such as tools to de-silt natural and artificial ponds in Northern and Upper East Ghana so that adequate water for spot irrigation of gardens (and watering of livestock) is again available;
- c. accessible basic services provision notably health services (preventative and basic curative) and water (preferably pure but even accessible, purifiable water in adequate quantities is, in itself, a major gain);
- d. food processing technology which is cost accessible and user friendly. For example, Botswana millet and sorghum husking/milling innovations suitable for household or village use reduce labour time by up to two-thirds (with a spin-off effect of reducing women's preference for maize because it takes about a fourth as long to prepare and thus potentially reducing the growing of maize in ecologically hyper-risky zones);
- e. income augmenting innovations tied to specific contexts. For example, in Ghana (coastal and forest zone to date in this case) adapted small maize mills have allowed small groups of women both to produce weaning food for their households and to earn cash incomes by selling it and/or maize meal. In the shea nut case, women collectors usually sell by the pan to middlemen (literally) who provide bulking, bags, a few days storage and sell for cash to the Cocoa Board for twice what they pay the female collectors. Provision of working capital to women's groups for bags and of education to farm/run their own co-ops to sell to Cocobod (which thinks shea nuts are "grown" not collected and that male middlemen are the "producers") is apparently a feasible way forward (unless you are a middleman!). More generally the Great North Road's restoration (most Northern and Upper Region rural roads/tracks are useable most of the year) should both lower transport costs and increase numbers of buyers/transporters with probable positive real income impact.

Which activities should be focussed on women to the exclusion of men is complex. In many cases programmes will be self-selecting - few men grow vegetables, collect shea nuts or produce weaning food. In others - e.g. primary education - universality is probably the most effective way to reduce inequality of access against women and girls.

In general, specific women's programmes - unless organised by women or reasonably strong women's organisations - tend to be or to become marginalised and to attract few resources and more rhetoric than serious policy attention. This may well be the result of male chauvinism, but it is also a fact. Similarly while rural SSA women do operate in - and seek to make use of the possibilities within - gender divisions of labour, income and budgetary responsibilities, they do not desire, in general, greater fragmentation of households. (The South African woman's leader who dumbfounded a UK feminist by saying her first priority was to be able to live with her husband illustrates - if in an extreme context - this point.)

However, programmes which are not informed by knowledge of the actual, local gender division of labour are unlikely to be fully effective. One agricultural extension corps (male) for men and another (female) for women is unlikely to be a useful (indeed even an operational) concept but a single corps nearly totally innocent of the gender division of labour and to whom women are invisible (even in some cases when in fact extension personnel usually do speak to - or at least in the presence of - both male and female household members) is an absurdity from a functional point of view just as much as it is a glaring case of subordination of women. It is not much use to teach men how to weed or to sort picked cotton if (as is frequently the case) 75% to 90% of these tasks are done by women. Nor is it production efficient to overlook that frequently 25% of peasant households are permanently or usually female headed and often face quite specific labour input and production constraints.

These points are not limited to crop production. For example, they apply to simple water projects. Under most 'traditional' (or adapted traditional) gender divisions of labour, men are - and see themselves to be responsible for much or most of the labour to construct wells, ditches, spring protection works, but see routine protection and maintenance as "women's work". In that context it makes little sense to involve only men in planning projects (which women will operate) and to train men (if anyone) in maintenance which women will be expected to do.

The standard complaint that pump handles are too high because they are designed for men seems to be a confusion. They are designed for adults and frequently young girls are a high proportion of the users. However, the point that involving women in planning would provide the specialised knowledge needed to avoid design errors presumably remains valid - they know who collects the water and how tall they are not.

It can be objected that the whole foregoing approach accepts (implicitly at least) a gender division of labour, income and budgetary responsibility which is inherently unequal and therefore constitutes increasing efficiency in exploiting women not a step toward liberating them. While overstated, that objection certainly has a core of validity - the evolving traditional divisions of labour, income and budgetary responsibility (static and

primordial they are not) are hardly egalitarian between the sexes.

But these divisions do exist. They are most unlikely to be altered radically in the short run. Women's work loads can be reduced and their household provisioning/income earning capacities raised within them. Neither is likely to happen by ignoring or only condemning their existence. Most rural SSA women and women's organisations do appear to want concrete, immediately implementable measures in the directions cited above.

This in no way denies that changes in gender divisions (including, ones of power) are equitable/desirable and may be attainable. But that longer term process falls outside the scope of this paper and of the competence of a male macro-economist and one who is a Northern expatriate student and sojourner, an expatriate still even if one with over a quarter century of African experience.

Developmental Uses of Food Aid

Food aid is usually considered in the contexts of disaster relief (survival), general balance of payments/budgetary support or particular, narrowly defined projects. The first and third are usually seen as requiring literal physical distribution of the imported food aid to the intended beneficiaries. Only the second is perceived as related to any general developmental process and then very vaguely (when vertically untied as to use of proceeds) or fragmentarily (when - at least nominally - project tied).

The only two SSA cases in which food aid is arguably perceived and articulated in a national development strategy context are Botswana and Cape Verde.

Food aid could be used to make a much greater contribution to production by poor peasants and to reducing rural women's work overload than is now the case. This is true of disaster relief as well as of longer term, normal year programmes. One reason this has not happened may be that food aid's origins appear to lie in ad hoc humanitarian support for survival and North centred tactics for disposing of burdensome overproduction. Neither, by itself, gives rise to medium and long term SSA national and local contextual conceptualisation and planning for optimal use, albeit neither is inherently inconsistent with such conceptualisation and planning.

Key elements in such an approach are likely to include:

- a. small labour intensive rural public works (directly productive and infrastructural) relevant to poor peasants;
- b. support for rehabilitation and production capacity/time saving inputs in support of poor peasant production expansion and women's production/income augmentation and workload reduction;
- c. support for domestic costs of basic services programmes (e.g. health, education, water).

Commodity aid more broadly may have parallel potential. Two examples include steel for hand implement production (and for rural artisanal tool fabrication) and basic drugs for primary health services. As with food aid, a similar, designated cash support for the programme would usually be more cost efficient but may often be less available or available only at a lower level.

Selected Indian and African (e.g. Zimbabwe, Botswana, erosion control and community reforestation in Ethiopia) experiences suggest that food aid (usually in monetised form) can support useful labour intensive construction projects. To do so during disasters (i.e. famines averted by use of food aid/proceeds of food aid) helps allow peasants to stay on the farm. This both avoids the (unavoidable) horrors of ad hoc mass camps and of flight to them and puts the people affected in a position (literally) to combine survival with rehabilitation of their productive capacity when the rains return (or go away in flood or washout cases). Both are relevant to sustaining self-reliance and self-respect (as is providing money for genuinely useful work to buy food rather than a food handout).

Even in normal years such programmes can be valuable in poor rural areas with inadequate food production levels, annual hungry seasons and limited opportunities for earning cash incomes other than by selling food, e.g. Northern and Upper Ghana. In these - as in survival support cases - seasonally biased, supplementary work for large numbers, not year round, full time employment for a few, is desirable from income and poor household productivity augmentation perspectives. Admittedly it does pose certain construction scheduling and efficiency problems. (As dry seasons are good for rural construction and project design should, by definition, concentrate on unskilled labour, these problems, while real, should not be exaggerated.)

Project identification and pre-preparation is usually possible - albeit it does require articulated, contextual forward planning. This is true not only for public works per se (where some African PWD's with or without ILO assistance have proven both forthcoming and creative when asked) but also for production capacity enhancement. The Ethiopian erosion control, land reclamation, community forestry cases are well known.

An example in Upper East and Northern Ghana is pond de-silting. About 1,000 small natural and check dam ponds used for human and livestock water supply and spot irrigation have become seriously affected by silting. Digging out the mud and rocks requires labour (which might in fact be mobilised on a community basis in many cases) and simple tools (shovels, pickaxes, crowbars, wheelbarrows) which have been physically unavailable in the regions for years albeit national production capacity exists and is partly operational. The proceeds of food aid (possibly with parallel steel commodity aid sold to the tool producers to ensure adequate supply) could finance both the labour and the tools. The programme would be self-liquidating, i.e. once the tool stock was restored and deferred maintenance cleared, replacements and ongoing maintenance could (and almost certainly would) be within peasant household and community capacity. Gains would include saving of time on dry season water collection and stock watering, reduction of livestock losses, augmentation of grain production, facilitation of women's (desired by many of them) building up spot irrigated production of vegetables and other secondary crops for household nutrition improvement and sale.

The rehabilitation input factor is included in the above example. It applies more generally in terms of seeds, tools, core livestock and similar items. In these cases physical availability is often as much of a problem as purchasing power so that procurement and distribution (whether free, on credit or to be purchased out of income earned on work projects) may be more frequently needed than for food proper.

Inputs into basic service programmes in rural SSA (preventative and primary health care, primary and adult education, water, effective agricultural and other extension services) can be justified on the basis that poor people matter. However, the present point is that in most cases they are production effective in the short and long run (incentive to "stay on the farm", time saving, ability to work hard, available knowledge and skills) and, in particular, highly relevant to reducing women's work overload and augmenting their time available for/devoted to food production.

Salaries can fairly obviously be paid with the proceeds of food aid. So can local materials for furnishings and local labour for fabricating furnishings and building maintenance/construction. These can also contribute to the goal of raising poor farming household incomes from sales other than food and from wage earning opportunities.

There can - but need not - be a contradiction between community support for basic services provision and food aid's use for the same purpose. In the first place in some contexts (e.g. rural Somalia and to a degree Northern and Upper Ghana) the most cost effective/user friendly forms of support are likely to include providing rural basic service personnel with food and/or additional labour to help grow crops or tend livestock. Effective Ghanaian health post operators (part time, nominally unpaid) seem to receive community help on their farms in return for the time they spend on their health duties. Both rural Koranic teachers and community health workers in Somalia are paid by their communities, dominantly in the form of food (e.g. one goat a month per pupil with a camel for successful course completion in some Koranic schools). So long as food aid is monetised to pay cash salaries, it complements community food payments rather well. In respect to labour either a ceiling on paid time or its limitation to certain functions (or both) could allow supplementary income providing employment and community contributions in labour time to live together, albeit there are real practical problems in this case.

Perhaps ironically this is a very market oriented approach to food aid, frequently opposed by institutions and individuals who in most other contexts profess greater faith in markets than that of the present author. Normally in rural SSA food exists as do local market modalities adequate to its delivery at costs rather to radically less than moving imported food from the point of import through an ad hoc food aid distribution chain. The linked basic rural problems are of ability to produce enough for household use and of entitlements. The main food shortages in physical terms are urban and there for the bulk of would-be consumers the cash to purchase (if famine level prices are averted) does exist as does a functional wholesale/retail network.

The major exceptions are the urban poor (outside the scope of the present paper) and major, sudden rural crop failures. The word sudden is relevant. Even in widespread rural crop failure cases, it is not impossible to implement

cash for work schemes backed by injection of food into commercial channels to prevent price blast-off into famine orbits. This approach helps allow peasants to remain on their farms, to prepare for self-rehabilitation of production, to avoid the horrors of hastily thrown together camps, to retain self-reliance and self-respect. Zimbabwe from 1983 and parts of Ethiopia in 1985 and this year demonstrate its practicability. If no proper pre-disaster organisation, mobilisation, procurement, distribution has taken place (or if - as in Mozambique - one is in the middle of a hot war) the first need may well be to move physical food to internal refugees in camps - survival is a precondition for rehabilitation. But most such cases underline the brutal, damning fact that disaster relief is itself a disaster area staffed by technical personnel who can say in all innocence and with good intentions, "but you do not understand ... disaster is our bread and butter".

In the ongoing programme context physical food fetishism can lead to absurdities which would be hilarious if they were not seriously put forward by serious development finance institutions. For example, in Somalia (which has a perfectly reasonably functioning nationwide commercial food distribution system) it has been seriously proposed that food aid to support resuscitation of primary education be handled by (almost literally) 10,000 weekly cartons of 10 foods to primary school teachers scattered all over Somalia! Apart from appearing to illustrate "Stalin Planning" (in the perjorative sense) at its worst; that lumbers the very difficult task of putting primary education on its feet with the quite unrelated one of operating a high cost, parallel wholesale and retail food distribution system to by-pass functioning markets and deliver food packets almost certainly not corresponding very well to what 90% of the recipients would have chosen to spend the equivalent cash income to purchase.

Money is more fungible, more portable and only slightly easier to 'lose'/divert than food. Most commercial food markets function (and function better if food aid is sold into them at plausible prices - those in Somalia are admittedly too low to arable crop peasants' and the government's loss primarily to the benefit of overseas remittance recipients who are predominantly not absolutely poor).

The same two problems/barriers relating to acting to facilitate poor peasants producing more appear to apply in setting up non-market parallel channels is (except in extreme disaster survival cases) expensive, unnecessary and inefficient.

Conclusion - or Hopefully Not Yet

Food security for low income/nutritionally deprived rural SSA households depends primarily on these households being empowered to produce more food and secondarily on their having access to more other sources of cash income so that they can afford to eat more and sell less food.

Practicable, contextual measures toward those ends can be identified. The key problems confronting movement to broader implementation do not lie there but in:

- a. a perception that such increases in poor peasant self-provisioning food

production/cash incomes are basically irrelevant to macroeconomic and external balance concerns.

- b. a failure to accept at operational level the concept that poor people really can produce more with relatively low cost (cost efficient) support.

Women's workload - or rather overworkload - is central to the liberation (or rather non-liberation) of rural SSA women and to increasing household (and especially child) food security. Because the workload is not only - or even dominantly in most cases - food production work, action to reduce it needs to be both context specific and broader than agricultural innovation. Again it is by no means difficult in many contexts to identify specific projects which appear relevant, potential user friendly and low cost.

To do this requires understanding and relating to the 'evolving traditional' gender divisions of labour, of income and of budgetary responsibility. That these are usually less than equitable and are candidates for change is true but does not contradict the points that significant gains can be achieved within these divisions and that winning such gains can often be a reasonably short run goal whereas basic gender role division changes are likely to take much longer.

Food aid can be utilised to deal with some aspects of poor peasant and specifically women's production and income augmentation. This is rarely systematically conceptualised or articulated in existing food aid programmes (at least in SSA outside Cape Verde and Botswana).

Among the programmatic areas are labour intensive rural works (both infrastructural and directly productive and both famine year and normal year in areas of limited cash income generation possibilities), domestic cost support for basic services and financing of support inputs (e.g. simple tools) into poor peasant production and women's time-saving projects. These approaches would make disaster relief food aid more supportive if allowing peasants to stay on the farm, prepare for rehabilitation of their production, reduce future vulnerability and retain their self-reliance and self-respect. One key requirement at that level and even more in ongoing programme support is overcoming physical food fetishism and a crude form of material balances planning by monetising the bulk of food aid in ways improving food market system functioning rather than seeking to set up high cost, inefficient non-market parallel distribution systems.

ANNEX

Production By, Services With Poor People: Programme Notes

The purpose of this annex is to illustrate the possibility of building up a potentially financeable, cost effective, interlocking programme whose components add up to a significant assault on poverty and vulnerability. The actual projects are actual or proposed ones from Ghana and the overall programme is based on that presented to a Consultative Group meeting by the Government of Ghana but the presentation and interpretation are those of this paper and should not be seen as necessarily representing those of the Government of Ghana.

Components: Toward Interaction and Critical Mass

The programme includes nine components:

1. Strengthening and expanding primary health care with particular priority to rural areas and urban low income neighbourhoods;
2. Reinforcing primary and adult education through improvement of textbook and basic furnishings supplies and improved building maintenance;
3. Sustaining the borehole rural water programme serving up to a third of the rural population through creating an ultimately self financing maintenance programme;
4. Augmenting peasant productive capacity by restoring national availability of basic agricultural and related implements (matchets, hoes, picks, shovels, sledge hammers, crowbars, wheelbarrows) through providing adequate secure intermediate input supplies to existing, efficient domestic manufacturers;
5. Reducing seasonal and drought vulnerability through a selective, largely seasonal, labour intensive rural and urban works programme;
6. Increasing womens ability to increase household provisioning and income earning capacity via improved fish smoking, weaning food production/grain grinding, vegetable growing and shea nut collection and marketing;
7. Creating a focus on the people of the most deprived and vulnerable regions (the Upper West, Upper East and Northern) within the previous project clusters and by their use to support/facilitate land and water reclamation (pond desilting);
8. Improving basic service provision capacity by augmenting mobility via improvement and parts stock restoration for vehicle maintenance and repair workshops (initially in support of primary health care);
9. Data stock and flow reinforcement through a poor rural household income/expenditure/social and human condition survey and establishment of an early warning system for nutrition and health going beyond purely

meteorological and technical agronomic data.

The components are intended to generate a critical mass i.e. to assist a substantial proportion of poor and vulnerable Ghanaians to reduce their vulnerability and to raise their productivity, incomes and human conditions. Within it are elements directed to basic services, agricultural productivity, income, peripheral-poor-vulnerable geographic zones, opportunities for enhanced production by women, environmental protection and data generation - the main areas identifiable as directly affecting poor and vulnerable Ghanaians, especially women, children and residents of the Northern and Upper Regions and of urban slums.

Costings: Substantial, Manageable, Sustainable

Over three years the programmes would require of the order of \$100-200 million in external support. Set beside a total of \$2,000 million odd external concessional resource transfers (of the order of \$50 per Ghanaian per year) that 5 to 6% appears perfectly reasonable as a social fabric and human condition restoration, production by the poor now augmentation and future productivity boosting investment.

A substantial proportion of the funding - e.g. metal for implements, paper for texts, pump spares - will generate counterpart funds useable within the overall programme. This is necessary because in several cases the most binding constraint on effective action is that on foreign exchange (imports). Beyond that government resources are primarily ones already devoted to the sectors in question primarily personnel (not very productively of present because of lack of working capital or complementary resources).

Ultimately the cost of the programmes will be met largely by the taxpayers (which may be progressive) and those participating in them (basically proportional). Some - e.g. borehole maintenance, implement production - can be fully or largely self financing in local currency terms from the start and others - e.g. the women's production and pond desilting - can quickly become so.

Benefits: Estimation and Significance

The benefits to be derived from the programme can be described as speculative, subject to wide errors of estimation or "soft". It is prudent to admit that fact. But the same applies with only a little less force to more conventional projects and programmes. Many rural projects' payoff estimates depend on net gain from new technique estimates and farmer takeup rates which are rather less based on even rough surveying, a consensus of informed opinion and cross checking results for plausibility than is the case in this programme. Because of price uncertainties - and others affecting actual as opposed to nominal capacity output - most projects benefit/cost ratios should be seen as ranges not points. Social cost/benefit analysis is widely accepted but by its nature uses "soft" estimates.

That said reasonable first approximation gains projections are substantial. By the end of the three year period the annual gains should be of the order of:

- a. 60,000 lines saved (5 per 1000 reduction in overall and 10-20 per 1000 in infant mortality) by strengthened primary health care;
- b. 135 to 172,500 person years of time from reduced illness (at 10 days per patient over 4 to 5 million patients) - relating primarily to basic drug supply, immunisation and first aid;
- c. rehabilitation of Northern and Upper Region primary schools allowing 50,000 more primary and 200,000 more adult education students plus 2,000,000 primary and adult education students nationally receiving better education - and therefore increasing their future productivity - because of enhanced textbook supply;
- d. averting loss of access to nearby pure water by about 3,000,000 Ghanaians now served by boreholes with no assured servicing backup (basically because of lack of spares). If the loss occurred, about 1,000,000 women and girls would have to spend 1½ to 4 hours a day trudging to (often polluted) water sources and back - an annual cost saving from the boreholes of 250,000 woman years;
- e. valuing production gains from implements is hard under conditions of extreme scarcity leading - especially in the Northern and Upper Regions - to use of totally worn out (say 1 to 2 inches metal remaining) hoes or even wooden substitutes (a local but most inappropriate technology) and to be unable to clear bush, remove stones or desilt ponds for lack of shovels, crowbars, pickaxes and matchets. An estimate of five times the retail price in output gained (by raising labour productivity and work which can be done) - implying an annual gain in agricultural production of \$40 to 50 million is not unreasonable;
- f. the Northern and Upper Region productivity enhancement (shea nut) and rehabilitation (pond desilting) projects could involve up to 125,000 households and yield a shea nut, grain and vegetable output gain of \$9 to \$12.5 million plus a presently hard to quantify gain from reduced livestock loses as a result of dry season water supply enhancement;
- g. the labour intensive public works programme could employ up to 150,000 persons (from - say - 100,000 households); valuing its output at cash cost plus locally provided labour and inputs (which may be an underestimate given the backlog of economically as well as socially desirable small maintenance, rehabilitation and construction projects) gives a figure of the order of \$6 to \$6.5 million;
- h. while most of the gains of the mobility project can be treated as subsumed in the health and education ones, by extending the serviceable life of vehicles a saving of the order of \$5 million a year should be realised.

Valuing the person years made available by reduced illness and reduced water collection time poses special problems. The average incremental value of a

working day is probably of the order of Cedi 200 (say \$1.33) albeit this varies over both location and season. Assuming that 45% of the time is used for production the rough order of magnitude of economic gains would be of the order of \$55-65 million. The other 55% time use would include a high proportion of socially useful activities, e.g. childcare, cleansing and washing, food preparation, adult education (now often constrained, especially for women by workload). It is somewhat arbitrary not to value these - largely but not wholly female - activities, but GDP statistics do not do so, unless they are performed by a waged employee not by a household member.

In summary the potential annual gains came to:

- i. 60,000 lives saved;
- ii. \$115-135 million additional production and vehicle savings;
- iii. 150,000 additional primary pupils and adult students and improved quality of education for 2,000,000 pupils and students;
- iv. reduction of social and human costs of ill health plus additional time for housekeeping and environmental sanitation activities.

The three items to which no monetary value is attached clearly do have economic as well as social or human value.

The \$115-135 million represents of the order of 2½% of GDP. This is not negligible at the macro level especially as it is a buildup over three years which would presumably be extended thereafter. Further, the programmes are designed to relate to identifiable groups of poor and vulnerable people. About two thirds of all cash or self provisioning gains would go to them, especially because their water, health posts, schools and tool needs are "end of the line" ones which suffer first from cutbacks. \$77 to \$90 million would represent a 15 to 18% increase in their cash and kind income (plus the non quantified benefits). This can hardly be dismissed as trivial.

Brief Programme Notes

Primary health care expansion and upgrading would center on a national essential drug supply programme requiring about \$5 million a year in external support. Partial cost recovering (drug cost excluding distribution, up to 25% of patients given local level waivers) could yield Cedi 500 million counterpart funds to support rehabilitation of buildings, an honorarium to the (now voluntary) health post cadre, transport and training.

Additional external support of up to \$5 million a year would be needed for basic supplies, technical assistance (strengthening local manufacturing capacity and quality), primary health care unit equipment (e.g. refrigerators), additional cycles and vehicles to enhance mobility and strengthening Central Medical Stores delivery and cold store capabilities.

Primary and adult educations key external input is \$4 million a year in paper to allow printing of 10,000,000 odd primary and adult education texts and pamphlets. This would need to be complemented with pencils, erasers, chalk, a

limited number of vehicles, bicycles (incentive to and mobility for teachers), and spares. The first year total might be \$7 million with under \$5 million a year (including paper) thereafter.

Partial cost recovery on texts and pamphlets could yield perhaps Cedi 630 million a year to cover printing, adult education tutor honoraria (basically to primary school teachers for extra work) and training and Northern and Upper Region school rehabilitation and refurnishing. The enrollment - especially of girls - in these regions is well below the national average and many schools are both in a state of disrepair and with no furniture. Funding should go to parents groups for wood and tools to be used with community labour to construct furniture and to carry out repairs - probably to teachers houses as well as school buildings proper.

Borehole water maintenance focuses on the 7,500 borehole pumps needing refits every other year with a backlog of 2,500 now overdue for refit and a desirable stock level of 3,700 kits. The cost of 17,500 kits (for three years plus basic inventory) would be about \$6 to \$6.2 million. In addition 2,000 new pumps (1,500 replacements, 500 inventory) would cost \$1 million. Beyond the initial year, CIDA backed buildup of local kit building capacity should reduce import requirements (and change some of them from parts to steel).

If user communities were charged when (and if) refits or replacements were provided, there is little doubt they would be willing to pay the full cost of the spares and pumps in Cedis. This would be much more cost effective (and acceptable) than attempting monthly household level user fee collection. The proceeds could be of the order of Cedi 350-375 million per year, perhaps 20-25% of which would cover the water corporation's local cost on repair and replacement leaving 75-80% to bolster its precarious general finances.

Basic tool availability (more accurately non availability in much of the country) is a significant barrier to enhanced peasant productivity. The bottleneck is not lack of serviceable domestic capacity with proven ability to produce acceptable tools. Rather it is of foreign exchange to import steel and fittings to use in the manufacturing process.

Approximately \$3.75 million a year could provide the imports to manufacture - say - 3 million matchets (cutlasses), 1,000,000 hoes, 200,000 each shovels and axes and smaller numbers of pickaxes, hammers, chisels, adzes and wheelbarrows. These could be sold at a profit to the enterprises so that counterpart funds of the order of Cedit 550-600 million should be generated.

Of that amount perhaps one half could be used to finance Northern and Upper Region production rehabilitation and expansion (in large part by initial tool provision) and the balance toward local costs of selected research and extension and of road rehabilitation and maintenance in these regions and in the more isolated parts of the Volta and Brong Ahafo regions.

During droughts and the normal dry season in rural areas and in urban low income areas there is both a need to raise incomes and "involuntary leisure time" (no only very low productivity farm or "informal sector" tasks or work available). Labour intensive small scale works schemes could provide such income augmentation consistent both with social strengthening and human dignity enhancing of the persons and households involved. If well designed

(including a project reserve to cope with needed rapid employment level augmentation in dry years) they could also be efficient means to maintaining, restoring or extending economic and social infrastructure. Detailed identification from village and neighbourhood level up could produce an extensive, articulated list relatively rapidly.

Seasonal (or drought period) rural employment concentrated in the Northern and Upper Regions and urban in low income neighbourhoods could be targeted at 150,000 persons (2/3 rural, 1/3 urban), 50% female, 50 days per person per year maximum, at Cedi 100 for a six hour day (probably well above opportunity cost in these specific contexts although this would need to be verified) would cost about \$5 million for wages.

To be cost effective perhaps \$1.5 a year million a year in tools, simple equipment (e.g. for rock crushing, block moulding, ground compacting), and building materials (wood, cement, metal sheet) would be needed as complementary inputs. The total cost of \$6.5 million a year would initially need to be externally financed given the fiscal position.

Commodity aid - e.g. wheat, milk powder, sugar, rice and cotton - would be a suitable medium for financing. However, it should be fully monetised and the proceeds used to pay wages and to buy the complementary inputs locally. Even in the Northern and Upper Regions, except in the worst drought years, food is physically available so that to use a literal food for work programme would raise transport needlessly, interfere with functioning local food markets and gratuitously add all of the problems of running a long distance food wholesale/retail system to the necessary ones of identifying and implementing projects and of hiring and remunerating workers.

Increasing women's ability to provision their households - through direct production for household use and/or augmenting cash incomes - is a priority both because of the overall need to augment poor household incomes and because women's cash and kind income is crucial in respect to child nutrition, cleansing (soap), clothing and health (clinic fees and drug charges). Women's income - as is typical in Africa - is not usually pooled into a common household budget, nor is male earner's income generally freely available for expenditure on behalf of children (with the apparent exception of school fees and related costs).

Two projects carried out by community based women producers assisted by the national women's council and UNICEF may serve as examples of what could be done over a wider range of activities and participants.

The first is improved fish smoking. Standard techniques have waste, spoilage and quality problems. A simple improved technology was used at a village called Chorkor. This has now been extended to over 50 villages augmenting both protein and calorie availability for the households of women engaged in smoking and significantly increasing their cash income from food processing which contributes a significant to dominant share of poor women's cash income in urban and some peri-urban or closely settled rural areas.

The second is production of improved weaning foods. The direct impact on child nutrition is significant because malnutrition rises sharply at the cessation of breast feeding. To afford the raw materials for the food and to

cover maintenance and ultimate replacement costs of the adopted grain mills used, the women have built up "contract" grinding of other households' grain.

At present these two projects are of value to perhaps 2,500 to 5,000 poor women and their households. That by itself is arguably trivial - albeit not to 2,500 women and probably 7,500 children! But the numbers are steadily growing - especially as natural extension from word of mouth information followed up by visits to present fish smokers and weaning food grinders has begun. Further these are very cost efficient programmes which appear to recover full capital costs (initially often donated) in less than a year.

The need is not simply to expand these two - which are basically coastal and forest zone - but to identify other opportunities - especially in the poorer Upper and Northern Regions. Two such potential projects are sketched in the next section.

Poverty and vulnerability reduction usually requires special attention to certain regions - in this case the poorer, drier, more isolated, higher transport cost (on sales and purchases), more drought vulnerable Northern and Upper Regions. Several of the projects covered above either have such a component or would benefit these regions disproportionately because present basic service provision is the most exiguous or deteriorated. However, additional initiatives focussing on removing barriers to increased peasant agricultural productivity are needed.

Three such are pond desilting (for livestock protection, grain output augmentation, vegetable cultivation), shea nut collection expansion and small scale, labour intensive rice cultivation probably combined with additional training and use of animal power.

Approximately 1,000 ponds (natural or behind checkdams) in the Upper East and Northern Regions have silted severely to totally. This reduces dry season water availability as well as traditional irrigation capacity around the pond and downstream. The costs are increased livestock mortality, reduced grain crop production and limited ability of women to utilize free seeds and advise to establish or expand vegetable garden cultivation. The reason villagers (who in fact see the problem and wish to reverse it) cannot act is that outside the provincial capitals there have been virtually no pickaxes, shovels or wheelbarrows making silt and rock clearing impossible.

Assuming 1,000 ponds over three years and initial tool stock (30 shovels, 15 pickaxes, 2 wheelbarrows per pond) the annual cost would be of the order of Cedi 60 million - if the agricultural tools project had been begun to increase local supply. From the third year replacement tools could be sold - or if the supply had become adequate could be acquired by villagers through normal commercial channels.

Vegetable gardening by women - especially during the dry season - could substantially augment nutrition (including during the hungry season). Free initial seed plus advisory services through the women's council should result in markedly increased takeup once ponds were desilted and garden irrigation water available. The advisory service cost should not exceed 12.5 million cedi annually and the seed \$200,000.

Reasonable output gains would be 10,000 tonnes of grain (Cedi 200 million at local, 375 million imported cif Accra, or 525 million imported and transported to Tamale) and 20,000 tonnes of vegetables (200 kilos times 100,000 likely participants) nominally worth of the order of Cedi 375 to 450 million at local prices. Both the grain and especially the vegetables would be used largely for household self provisioning in these regions which have very severe nutritional shortfalls.

Shea nut production (primarily gathering from groves of wild trees) is concentrated in the Upper West Region. Of the order of 20,000 tonnes are marketed largely via the Cocobod for export as an input into skin friendly soaps and cosmetics. Output is hampered by poisonous snakes. Groves in areas infected by them cannot have trees pruned, undergrowth cut down or nuts collected resulting (according to collectors' estimates) in a loss of a third of collectable output - say at least 10,000 tonnes.

The requirements for achieving collection are: rubber boots (for protection of collectors), cutlasses (for slashing bush, pruning trees, "cutting" snakes) and snake bite serum in local health units. About 30,000 women collectors are involved.

Initial free distribution of (imported from Cote d'Ivoire) boots and (domestic) matchets (cutlasses) with subsequent replacements sold plus - via the primary health care project - ensuring refrigerator and vaccine supplies would overcome the barriers to increased production and higher women's incomes. The women's council could serve as delivery and advisory agent. It could also advise the women on using traditional or modern credit unions to raise working capital for bags to sell nuts by the bag to Cocobod rather than by the pan half as much to middlemen who then bulk them.

The costs would be of the order of \$300,000 a year and Cedi 2.7 million (cutlasses, including delivery of cutlasses and matchets). An output gain of 10,000 tonnes would be worth Cedi 300 million at Cocobod prices and 400 million at fob export level.

Traditionally Ghanaian rice was Northern upland (dry) in seasonal courses or below ponds planted at the end of the rains. The new mechanized large scale irrigated sector is high cost (perhaps three times cif price) and import intensive (almost as much foreign exchange to grow a tonne as to import) and more counting fuel to transport to Accra).

An intermediate approach - oxen plus small scale (e.g. archimedean screw) irrigation around ponds, permanent water courses and Lake Volta is technically feasible and likely to prove financially attractive to peasant growers.

The inputs required would be ploughs, water lift devices, oxen and fuel, all domestically purchaseable or fabricatable. These could be purchased on loan but with a three year grace period given the newness of the area and most of the area.

For 2,500 peasant households trained and provided with initial equipment (ox, plough, water lift device) the annual cost could be of the order of Cedi 75 million with expansion thereafter less cost as recovery began. The output gain by the third year 2 to 3 tonnes per household.

yields times 2 to 2.5 hectares per holding should yield 10,000 tonnes worth about Cedi 300 million at Northern and Upper Region local prices and Cedi 450 million cif (imported) or Cedi 500 million wholesale transported to Accra.

For this trio of projects the local costs could be financed from the counterpart funds generated through the sale of steel and fittings under the agricultural tool project. If they were not then \$1.5 to 2 million a year additional finance would be required.

Delivery of basic services is severely hampered by lack of mobility. Some of the previous projects include vehicles and spares components but they do not, by their nature, address the underlying maintenance problem. For example in 1986 of 2,000 odd nominal Health and Education vehicles about 500 were "runners", 700 off the road for repairs and 800 physically defunct or economically life expired.

The keys to overcoming this position of more repairable but awaiting repair vehicles than ones actually operational are: systematic spares acquisition (including as a component of vehicle aid), training of mechanics (again partly in vehicle provision packages) and restoration of the capacity of the existing, but run down, ministerial regional workshops.

Direct import requirements would probably be of the order of \$4 million a year including vehicle rehabilitation, spares inventory establishment and normal maintenance, workshop replacement equipment and technical assistance in respect to programme design and/or training. Given the fiscal limitations - which are especially acutely felt by these ministries - Cedi 150 million a year out of local costs of Cedi 200-300 million a year (rising as the programme builds up momentum) would be needed from donor counterpart funds (or additional commodity aid - e.g. 500 tonnes cotton to be sold to the fibre constrained textile industry).

Local materials (wood and metal for vehicle rehabilitation and workshop repair plus some spares - e.g. tyres) would be about two thirds of cedi costs. The balance would include training, an extra duty allowance of say \$500 per year to hold artisans once trained and general overhead expenses.

Data in relation to poverty, vulnerability and especially on how to link reducing these to enhancing production is inadequate. The standard statistical system does not - and realistically for some years will not be able to - provide it on a timely basis or within present programme capacity. Two pilot efforts have been begun:

- a. an urban low income area (neighbourhood) household sample survey to identify income sources and levels, expenditure patterns and other basic social condition indicators;
- b. ways and means to create a rapid warning system combining morbidity, malnutrition, local market price and rainfall data for the closed month by the end of the current month fed to a contingency monitoring unit feeding into the executive offices as an input into policy response with reference to pre-disaster avoiding or disaster containing and reversing action.

The results from these are expected to give indications as to priorities for further "quick and nasty" but broadly correct data collection on more specific topics to alter, extend coverage of or add to the projects/programmes sketched above. Total costs of the two initial endeavours are of the order of \$50,000 a year.