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INTEGRATION OF WOMEN INTO THE FOOD-PROCESSING INDUSTRY
IN AFRICA*

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* The present document has been translated from an unedited original.

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INTRODUCTION

The integration of women into the food-processing industry is part of the wider problem of integrating women into economic development, or, in other words, the emergence of women as active participants in development, rather than bystanders.

The subject of women in development (WID) emerged in the early 1970s, when policy makers and researchers recognized that:

"Women are not merely mothers, affected passively by development in general and by welfare and family planning programmes in particular. They are also economic agents, in charge of key aspects of production and economic development. Their contribution could be enhanced by more sensitive development programmes and projects". 1/

It is now recognized that women have a double role:

1. A reproductive role, consisting of reproductive or human resources maintenance activities. These activities are carried out to reproduce and care for the household and community, including fuel and water collection, food preparation, child care, education, health care and home maintenance. These activities, which are often viewed as non-economic, generally carry no monetary compensation and are usually excluded from the national income accounts;
2. A productive role, comprising productive or economic activities. These activities include all tasks that contribute economically to the household and community, e.g. crop and livestock production, handicrafts, marketing and wage employment. 2/

The subject of women's integration in agro-industries was already taken up by an expert group meeting convened by UNIDO at Vienna, Austria, in October 1985.

As applied to the African continent, this subject is of interest for two main reasons:

- Food-processing industries play an important part in African economies and can serve as the basis for an economic development process centred on the processing of local farm produce;

1/ Women 2000, published by the Division for the Advancement of Women, Centre for Social Development and Humanitarian Affairs, P.O. Box 500, A-1400 Vienna, Austria.

2/ Basic concepts extracted from the United Nations Population Fund document, Incorporating Women into Population and Development.

- Industries do on a large scale what rural women in Africa do every day in preparing and cooking food, and in processing and preserving food products in the traditional way.

Rural African women do 70 per cent of the farm work and 100 per cent of the processing of commodities; 3/ logically, therefore, the food-processing sector (from the smallest to the largest scale) is the best gateway to industrial activity for these women.

3/ SPORE, No. 44, April 1993, published by the Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, the Netherlands.

I. THE FOOD-PROCESSING INDUSTRY IN AFRICA

Food-processing industry is taken here to mean all the activities involved in processing, storing and packaging agricultural raw materials for food.

As this sector is linked to agriculture in that it uses farm produce, a brief indication of the agricultural background must be given.

1.1 Economic background to African agriculture

In Sub-Saharan Africa, farm production is no longer sufficient to feed all the people. In 1988 alone, the countries of this region imported nearly 9 million tons of food products.

This dependence on imported food is becoming more acute, as the growth rate of agricultural production remains lower than that of the population. The consequences are appalling: already more than one quarter of the population of Sub-Saharan Africa suffers from malnutrition.

Some sources suggest that, to reverse this trend, farm output in Africa must grow at the rate of 4.5 per cent per year. 4/

The following diagram shows how the combination of demographic constraints and such environmental constraints as poor soils and drought tends to reduce land productivity and increase rural poverty.

Faced with the lack of farmland, the men leave the countryside to seek work in town; the wives and children stay behind and become the vulnerable victims of rural poverty.

According to IFAD estimates, there are 600 million rural women living in a state of absolute poverty in the world, including 150 million in Sub-Saharan Africa alone. 5/

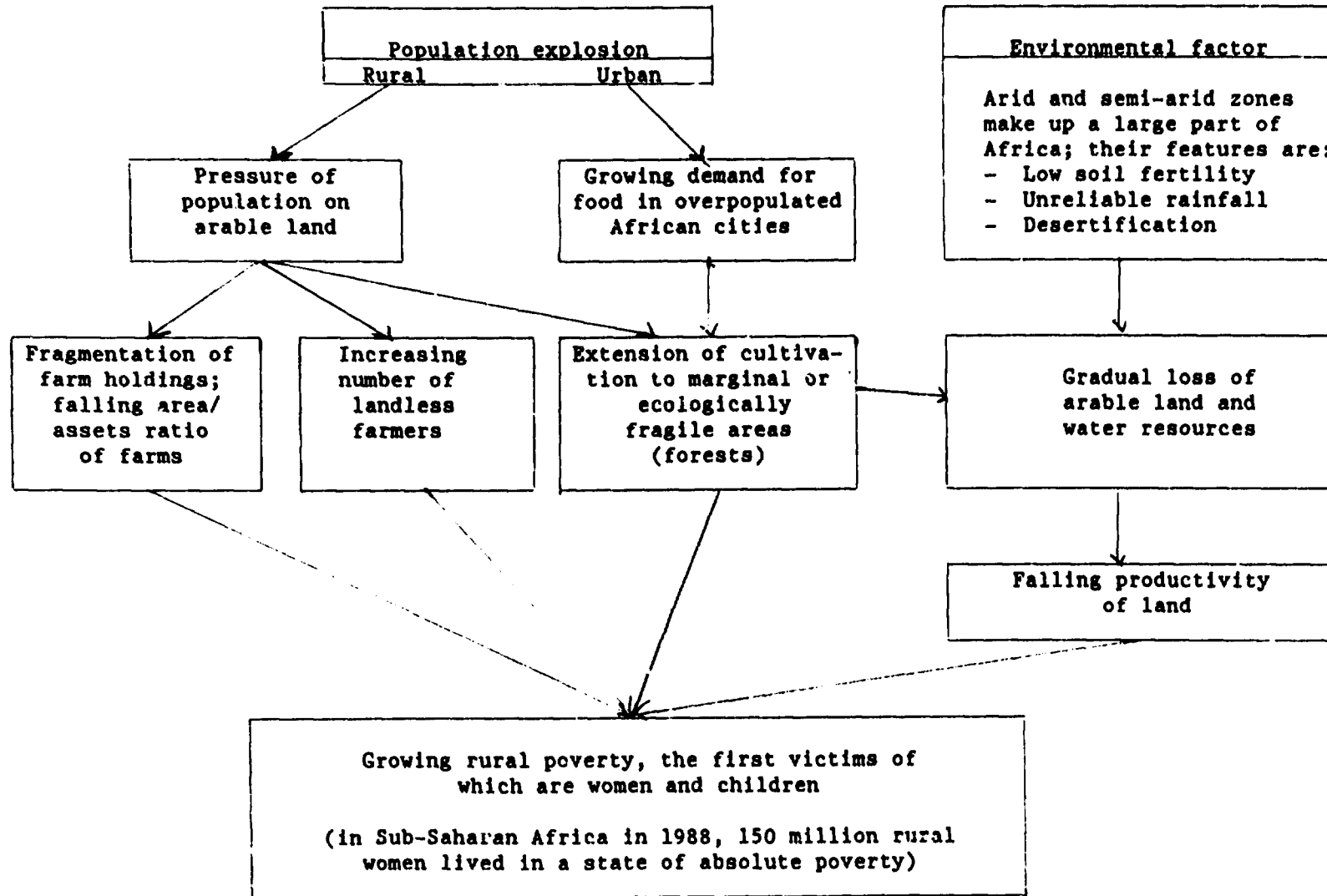
Such is the context of crisis (slow agricultural growth, rural poverty, soaring population growth, rapid urbanization) in which the food-processing industry in Africa finds itself.

In the following paragraphs, we give a breakdown of the sector by type of production and examine its development.

4/ "The African Women Leaders in Agriculture and the Environment Program", Summary of the Program Strategy, Winrock International Institute for Agricultural Development, April 1991.

5/ IFAD, issue paper for the Regional Consultation on the Economic Advancement of Rural Women in Sub-Saharan Francophone Africa, Dakar, Senegal, 29 July - 2 August 1991.

Population growth, environment and rural poverty in Africa



1.2 Analysis of the food-processing industry by scale of production

The food-processing sector can be divided into three subsectors by scale of production:

- **Micro- or domestic scale:** This comprises all the food-processing and storage activities carried out and managed at rural household level, usually by women. These various activities are aimed at providing subsistence for the family, i.e. producing for home consumption; a surplus for trade is sometimes produced, however, thus providing rural households with an additional source of income;
- **Small- or artisanal-scale:** This usually involves the processing of local products, employing seasonal workers, often from the family, and is trade-oriented. Ancestral methods are still used, a typical example being the traditional grinder for making olive oil;
- **Medium- and large-scale:** This is the real food-processing industry, involving local or imported products, highly concentrated, employing paid workers and based on imported modern technology.

In Africa, the typical characteristics of the food-processing industry are often as follows:

1. It processes large quantities of raw material, and is located near large towns, which provide its market;
2. It is often detached from local agriculture, because it consumes imported raw materials;
3. It depends on foreign countries, because its technology is imported and capital-intensive.

1.3 Recent history of the food-processing industry

By producing greater surpluses, agriculture can be a powerful stimulant for the food-processing industry.

It is not the only stimulant, however: food processing can very well expand rapidly without surpluses from domestic agriculture.

Although primary processing ^{6/} is closely linked to local farm output, secondary processing ^{7/} may very well be based on imported raw materials or semi-processed products. The main stimulants for secondary processing are higher incomes, changing food habits and rapid urbanization.

^{6/} Primary processing is based on agricultural raw materials, examples being the conversion of food grains into flour, oil-seed crushing, sugar extraction and the slaughtering of livestock.

^{7/} Secondary processing is based on semi-processed products, examples being industrial baking and confectionery, the refining of raw oils and raw sugar, and the cutting up of animal carcasses into pieces ready for cooking.

It would seem, therefore, that the conditions are ripe for rapid growth of food processing in Africa in the coming years, even if local agricultural production does not keep pace.

A United Nations study ^{g/} on the future of the world economy forecasts the following growth rates:

Table 1
Average annual growth rates of GDP and of manufacturing
and light industries in Africa a/

	GDP	Total manufacturing	Light industry ^{b/}
Africa (arid)	5.5	6.2	5.4
Africa (tropical)	6.5	6.6	5.3

a/ Based on tables 14 and 15 in the reference document.

b/ Light industry comprises food processing, textiles and clothing, furniture, paper and printing.

According to this study, light industry (which includes food processing) should grow at an average annual rate of:

- 5.4 per cent in Sub-Saharan Africa;
- 5.3 per cent in tropical Africa;

which is a high rate of growth.

However, the question that springs to mind is: will the growth of modern food-processing industries be of benefit to agriculture, the local labour market and African rural development in general?

1.4 Food processing in Africa: bad choices of technology?

Economic policies with regard to food processing in Africa have often given preference to large-scale modern installations over small-scale and village industries.

^{g/} Leontief et al., The Future of the World Economy: a United Nations Study, New York, Oxford University Press, 1977.

The characteristic features of these modern installations are:

- Large size: located near the large towns that provide their markets, they have to process considerable quantities of raw material;
- Technological dependence: these industries import modern, capital-intensive technologies;
- Detachment from local agriculture: if local supplies of raw material are insufficient or non-existent, these industries make use of imported raw material;
- High degree of concentration: these industries are usually concentrated in the hands of powerful multinational groups or State monopolies.

In a well-known book by Serge Michailof, ^{9/} the author cites the example of the palm-oil industry in Côte d'Ivoire, in particular the firm called SODEPALM-PALMINDUSTRIE, which he disapprovingly describes as having an overblown management structure exercising centralized control over 12 food-processing plants, 1,300 supervisory and technical staff and farm workers, and more than 70,000 ha of plantations.

The author goes on to wonder whether this is not a case of inappropriate technology, where an all-embracing production system unsuited to the socio-political conditions in the country has been introduced into Côte d'Ivoire. Should industrialization and large-scale production not have come after, rather than instead of, vigorous development of village industries and small-scale processing, as Côte d'Ivoire demonstrated remarkably well in the case of coffee-bean husking?

Other authors ^{10/} endorse the term "inappropriate technology" because of the vast number of small employment- and income-generating units that have been put out of business by a few large imported plants.

Such choices of technology have often had the effect of depriving numerous rural dwellers, particularly women, of their principal source of income.

An illuminating example is provided by the introduction into Java (Indonesia) of modern rice-husking mills. Until then, rice husking had been a decentralized activity, a source of income, a task traditionally performed by

^{9/} Serge Michailof, Les Apprentis Sorciers du Développement (The Sorcerer's Apprentices of Development), Economica, Paris, 1984, pp. 119 and 124.

^{10/} Janos Fath, "Women and the growth of agro-industries in developing countries", Expert Group Meeting on Women in Agro-Industries, UNIDO, Vienna, Austria, 14-18 October 1985, p. 15.

women, very manual but cheap. Following the introduction of electric mills into the country, almost 7.7 million women are estimated to have lost their precious income. 11/

Such decisions in favour of capital-intensive technologies have disastrous effects on women's employment; they highlight the need for more care in formulating economic policies and for thorough study of all the effects of new technologies on employment of the most vulnerable categories of the population (particularly rural women).

Considering that unemployment and poverty are reaching serious levels in developing countries, and that these countries import at great expense advanced technologies that eliminate jobs in small-scale industry (the technologies being capital-intensive), it would be better to adopt labour-intensive technologies.

Labour-intensive technologies create jobs, and hence incomes, for the most disadvantaged categories of the population; this boosts the demand for consumer and producer goods, which has a stimulating effect on all sectors of the economy, including industry. That is the theory propagated by a number of third world economists, particularly from India. They feel that it could prove more economical in the long run to apply policies that seem backward but that are in fact more suited to the national economy. 12/

1.5 Towards strategies better suited towards local socio-economic conditions

As an opponent of outsize plants and the concentration of industry in huge units, Serge Michailof advocates the adoption of more than one technological model (modern industrial, semi-industrial, small-scale and domestic).

In the same vein, Edgar Pisani writes:

"The key to a genuine rural development process that can survive the initial impulse provided by outside agents, and that is self-sustaining and lasting, lies in the adoption of a participatory approach instead of the technocratic approach, which saddles farmers with productivist targets, inappropriate modern technology and centralized structures." 13/

Another drawback of centralization and concentration in the food-processing industry is that, lacking diversification, the industry cannot then take advantage of all the opportunities for growth and development that different-sized entities with varying legal statuses could benefit from.

11/ Mechtild Petritsch: "Women's participation in manufacturing in developing countries, with emphasis on agro-industries", Expert Group Meeting on Women in Agro-Industries, UNIDO, Vienna, Austria, 14-18 October 1985, p. 30.

12/ Devaki Jain, Director, Social Studies Institute, New Delhi, India; interview accorded to Ceres, No. 100, July/August 1984, p. 37.

13/ Serge Michailof, op. cit., preface.

Development of a wide range of economic agents must therefore be promoted and strengthened at all levels of production, especially in the cooperative sector, with small private enterprises (both rural and urban) operating side by side with State and multinational firms.

To be more precise, the task is to promote the emergence of the following categories: 14/

1. Small-scale rural entrepreneurs engaged in primary processing (dairy farms, flour mills, etc.);
2. Rural cooperatives having the capacity to extend their activities from primary to secondary processing;
3. Small urban enterprises with the ability to respond effectively to changing market requirements in a variety of areas (industrial bakeries, carbonated beverages, ice creams, pre-cooked dishes, etc.);
4. Enterprises in other branches of activity capable of absorbing and making good use of the by-products of the food industries (chemical, chemical-related, cosmetic and pharmaceutical enterprises).

The soaring urban demand for processed food products and the diversification of food-processing enterprises, in terms of both legal status and size, should offer new opportunities for the integration of women into this sector, from the smallest scale to the largest. 15/

II. EMPLOYMENT OF WOMEN IN THE AGRICULTURAL AND FOOD-PROCESSING SECTORS IN AFRICA

Although the division of labour between men and women varies from one region to another, the general rule is that men are more oriented towards the money economy and public life; they are more likely to have a cash income from their paid employment, craft work or marketable crop. The women for their part usually devote themselves to the subsistence economy, food crops and household chores.

In rural areas, women's work is usually of three types:

- Household chores (fetching water and wood, preparing meals, cleaning);
- Helping in farm work, particularly in growing food crops;
- Income-generating activities (craft work, trade).

14/ J. C. Simon, "A differentiated approach to the industrialization of the agro-food sector in the developing countries", UNIDO, 24 July 1984, pp. 14-15.

15/ Janos Fath, op. cit., p. 34.

Work done by women is indispensable for the family's survival and well-being; it is mostly unpaid, although some secondary activities (especially the processing of food products) make a considerable contribution to the family income.

Women's work is still a subject of much ignorance and is difficult to evaluate, because the existing systems do not provide separate data for men and women.

2.1 Lack of reliable statistics

In Africa, all experts are in agreement that the contribution of women to agriculture and the food-processing industry is considerable but remains almost impossible to quantify.

As a good deal of the work is done within the scope of household and family activities and is not directly income-producing, it is not accounted for in conventional statistics.

As a result, women's work has long been underestimated and rural women have not been involved in development programmes and projects.

This situation has changed appreciably in the last ten years, as international institutions, bilateral cooperation agencies and NGOs started introducing "women in development" (WID) components into their projects.

2.2 Women's work in agriculture

Women play a very important part in the household in rural areas; they not only carry out domestic tasks (gathering wood, fetching water, preparing meals and looking after children) but also participate actively in such productive activities as farm work and handicrafts.

According to the United Nations, more than 85 per cent of rural women in Africa take part in farm work. Their contribution to the various types of agricultural and food-processing work has been evaluated by FAO, as shown in the following table, which presents the share of men and women in the various operations.

Table 2
Distribution of farm work by task and sex
for Africa as a whole

	Women (%)	Men (%)
Land clearing, fencing	5	95
Tilling	30	70
Sowing and planting	50	50
Hoeing and weeding	70	30
Harvesting	60	40

Table 2 (continued)

	Women (%)	Men (%)
Bringing crops home	80	20
Storage of crops	80	20
Processing of food products	90	10
Marketing of surpluses	60	40
Fetching wood and water	90	10
Tending of farm animals	50	50
Hunting	10	90
Cooking, housework and family care	95	5

Source: FAO Study, Population and Employment in the Rural Economy, No. 45, 1984.

This table provides us with the very interesting information that:

1. Men do the heaviest work such as land clearing, fencing and soil preparation, but this work is intermittent; hunting is still their fief;
2. Women do a great amount of farm work: they do the major part of hoeing, weeding, storage, processing and marketing, and some of the tasks, e.g. bringing crops home from the fields, are tiring.

Women do all this work in addition to the household chores that are traditionally theirs, such as fetching wood and water, preparing food, doing housework and looking after children;

3. The tasks of sowing, planting and tending livestock are shared equally between men and women.

Under these conditions, rural women have very busy days, starting at dawn and not finishing before sundown. A rural woman's typical working day is as follows:

"Four to five hours are spent in agriculture, four to six hours in crop processing, cooking and household chores, two or more hours fetching water and fuel wood, and as much time as can be squeezed in for earning small incomes to purchase basic family consumption goods, including foodstuffs. Child care is carried on simultaneously with all other tasks." 16/

16/ IFAD, The Economic Advancement of Rural Women: Guidelines for Action, report published in preparation for the Brussels Summit, 25 February 1992.

The workload that rural women in Africa have to bear continues to grow as a result of the following factors:

1. The economic crisis and unemployment drive men from the countryside to seek work in town; these young men very often leave behind them children and a wife, who then becomes de facto the new head of the household; for example, 60 per cent of the households in the Gikongara region of Rwanda, and 37 per cent of the households in the Bututsi region of Burundi are run by women. In Mali, a study carried out in the region of Tombouctou and Gao in 1987 showed that, of 20,000 household heads, a quarter were women;
2. Falling incomes in rural households and rising prices of household goods caused by inflation force women to devote more time to income-generating activities;
3. Population pressure on natural resources (land, water and forests) and the clearing of forest areas for agriculture are the prime causes of deforestation and fuel scarcity in rural areas; women spend more and more time fetching water and wood, which is traditionally the woman's job.

The following diagram shows very clearly how the biomass crisis (fuelwood, charcoal, other fuels of vegetable origin, dung) affects the amount of work that has to be done by rural women. 17/

2.2.1 Rural women and agricultural production systems

The way in which rural women are integrated into farm production in Africa varies according to the socio-cultural and environmental conditions of the area. In Sub-Saharan Africa, we can distinguish three main farm production systems in which rural women play different roles.

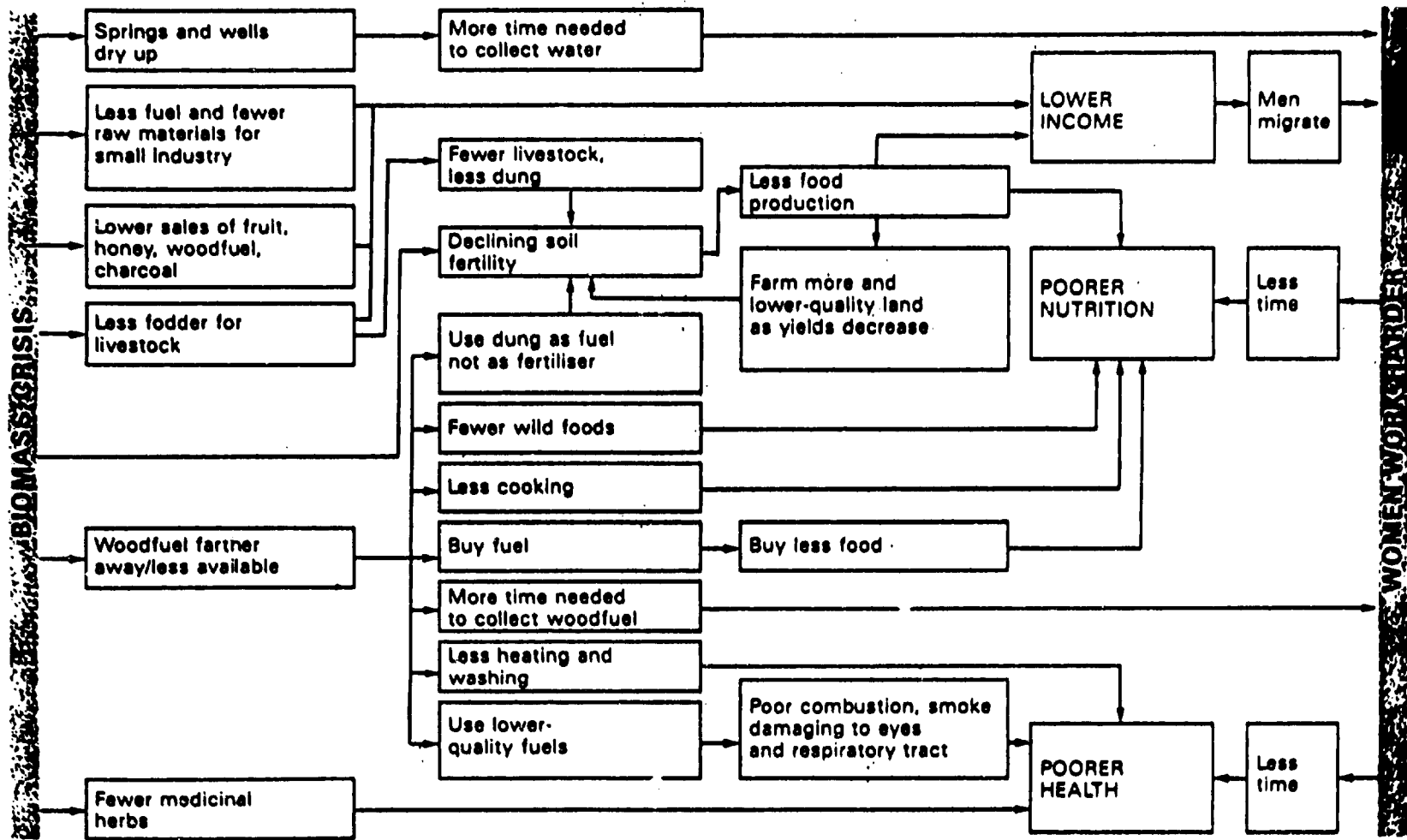
1. Distribution of fields between men and women

This is the predominant system in the forested regions of West and Central Africa. Women are assigned separate fields in which they have to grow the basic crops consumed by the family; women take all the decisions involved in cultivating their fields, do most of the crop tending themselves and are usually responsible for managing the harvested crops and marketing surplus quantities.

The men's fields are planted with cash crops, generally intended for export.

With this system, women have severe time constraints and cannot do paid work at the same time.

17/ Elizabeth Cecelski, "Energy and rural women's work", International Labour Review, vol. 126, No. 1, January/February 1987, p. 51.



2. Working of fields by extended rural families

This system exists in the Sahel and some parts of East Africa.

Here again, the men have their own fields in which they grow cash crops, while the women have smaller plots that they use to grow subsistence crops for the family; the difference between this system and the first one is that, in this case, the women have to share in the work on other fields, which limits the time available for income-generating activities.

3. Agricultural work done by men alone

In some parts of West Africa, the men take care of subsistence crops as well as crops intended for the market. Women may or may not work on their husbands' fields, but usually they are responsible for processing farm produce and marketing the products obtained. If there are a few animals, they are looked after and milked by women.

None of the systems allow women to have a piece of land of their own. They do their work using rudimentary methods and have only limited access to agricultural inputs and services. ^{18/}

These material and social constraints keep them at a disadvantage, with no way of improving their productivity or income.

2.2.2 Women and work at home

When the income derived from farm production is no longer sufficient, rural women in Africa are always ready to process, preserve and package foodstuffs that are surplus to the family's requirements, in order to obtain a greater added value and sell the excess on the market.

This work is done at home and is a natural extrapolation of the domestic tasks of preparing meals and processing, conditioning and preserving farm produce (e.g. grain processing, oil extraction, fish drying and smoking).

A case in point is Ghana, where a whole series of finished or semi-finished food products are prepared and sold by women: fufu (a dish made of tapioca), fish soup, smoked fish, etc.

Women's work of this kind generally makes a significant contribution to the family income. ^{19/} Statistics do not provide a clear picture, however, because it comes under the heading "unpaid family work". It is estimated that 30 to 50 per cent of women working in the developing countries fall into this category.

^{18/} IFAD, "Issue paper for the Regional Consultation on the Economic Advancement of Rural Women in Sub-Saharan Francophone Africa", Dakar, Senegal, 29 July - 2 August 1991, p. 4.

^{19/} M. P. Loutfi, Rural Women: Unequal Partners in Development, International Labour Organisation, 1980.

Work at home does not require any special qualifications: it makes use of local equipment and energy sources and requires little capital. Tools and know-how are passed on from one generation to another within the family, which explains why women continue to figure prominently in these unpaid production activities.

Very often, a minor technological innovation (in the form of an improved piece of equipment, or a more efficient oven that can save fuel-gathering time) is sufficient to enable rural women to increase their output considerably and obtain marketable surpluses.

Another possible source of wage employment is in traditional or modern food-processing enterprises.

2.3 Employment of women in the traditional food-processing industry

The traditional food-processing industry is taken to mean all those small-scale enterprises engaged in processing, packaging and marketing local farm produce, using traditional or semi-traditional methods, employing seasonal workers, often from the family, and producing for the market. (Rural households that occasionally sell their surplus processed products do not come into this category because they work on the micro-scale.)

The industry is made up of a host of small enterprises: (making snacks, producing and selling ground spices, etc.) that often operate informally, i.e. outside the formal, legal part of the modern economy.

According to Petritsch, ^{20/} the rapid growth of this sector can be explained by the following factors:

1. Changes in the organization of agricultural production, reflecting the insufficient amount of arable land, increased rural poverty and rural-urban migration;
2. Changes in the organization of industrial production, which lead to the disappearance of cottage and handicraft industries that cannot compete with large-scale production;
3. The inability of formal sector enterprises to provide sufficient employment for rural migrants and urban youth; ^{21/}
4. Employment policies of many formal sector enterprises that do not provide secure long-term jobs, particularly for women.

Many women are employed in this informal sector (although precise figures are not available) because it offers the advantages of:

^{20/} M. Petritsch, op. cit., p. 45.

^{21/} See also I. Ahmed, "Technology and rural women in the third world", International Labour Review, vol. 122, No. 4, July-August 1983.

- Flexible working hours or scope for working at home;
- Possibilities of combining paid work with children's education.

The disadvantages are:

- Increased workload;
- Low level of skill and hence low pay; the work is above all unpredictable, unstable, and subject to stiff competition from formal-sector enterprises manufacturing the same products.

In most instances, the position of women in this informal sector is in the least productive areas or in ancillary activities.

An exception worthy of mention is that of a minority of rural women who occupy a dominant economic position in the traditional fish-based sector. The famous "fish mummies" of Ghana and certain other coastal countries in West Africa control the distribution of fish and of a large proportion of food products. They often travel for hours by truck with their babies on their backs, to sell their baskets of smoked or dried fish in all the markets in the country; when they have sold their merchandise, they buy basic goods and vegetables, which they then sell in their own villages, thus performing a dual mercantile function. Some of these women, who are known for their business acumen and who started as simple fishwives, now own several sea fishing boats. Their contribution to the village's and region's economy is considerable.

2.4 Employment of women in the modern food-processing industry

The modern food-processing industry comprises all medium- and large-scale enterprises engaged in processing, packaging and marketing food products, having a paid, often seasonal, workforce and using modern, capital-intensive technology.

We shall make a distinction, based on the level of qualification required, between cases where the woman is a manual worker and those where she is a supervisor or manager.

2.4.1 Women as manual workers

On the African continent, women make up 11 per cent of the workforce employed in the modern food-processing industry (including food and beverage industries). 22/

As relatively unskilled workers, women receive very short training and very low pay. Working conditions are often trying (because of heat or humidity), with the result that employers are reluctant to report industrial accidents.

22/ Mechtild Petritsch, op. cit., p. 98.

The food-processing industry is subject to sharp fluctuations in output because of the seasonal nature of the raw material, which engenders frequent idle periods.

The industry does not guarantee a stable income or even re-employment the following season.

Only women who have no other choice can accept this seasonal, and hence insecure, kind of work.

2.4.2 Women as managers or supervisors

The women who have obtained qualified jobs in the food-processing industry in Africa are few in number. The chief reasons for this are:

- The weight of tradition: the high-level management posts in the industry are traditionally reserved for men, while women occupy lower-level posts in administration or social services;
- The lack of training and qualification in this particular sector, because of the tendency towards gender discrimination in educational trends at schools, and later universities.

III. CONSTRAINTS TO THE DEVELOPMENT OF WOMEN'S WORK

According to an IFAD document, ^{23/} rural women continue to be the poorest and most vulnerable individuals in the world of poverty.

It is true that rural women are burdened with a threefold handicap that is difficult to overcome:

- As women, they are subject to social and cultural constraints that prevent them from having a paid job, particularly if it is away from home;
- As country dwellers, they are subject to objective constraints in obtaining education and training (because of distance and/or isolation), as well as information and resources (inputs, loans and technical appliances);
- As poor people, they cannot borrow from the established banks which, as is well known, only lend to the rich.

We shall examine one by one these constraints to the integration of African women into the food-processing industry, focusing whenever possible on two aspects:

^{23/} IFAD, "Issue Paper for the Regional Consultation on the Economic Advancement of Rural Women in Sub-Saharan Francophone Africa", Dakar, Senegal, 29 July - 2 August 1991, p. 1.

- The possibilities of paid employment;
- The possibilities of individual enterprise.

3.1 Social constraints

Patriarchal societies define the division of labour between men and women very precisely, with the man engaged in the monetary, income-generating economy and the woman taking care of the household's subsistence economy, which is non-income-generating.

In times of crisis, when the man has not enough work, the woman is encouraged to do more work at home (weaving, handicrafts, processing of farm produce), so that she can work and take care of her home at the same time. The advantage of work at home is that it satisfies the requirements of conservative families, who would look askance at a woman working away from home.

Whether it is done at home or elsewhere, women's work is always limited by the following constraints:

- The time constraint: On average, women have longer working days than men: 11 to 14 hours compared with only 8 to 10 hours; the explanation for this is that they participate in farm work in the same way as men but in addition they carry out the very time-consuming household chores alone (the activities that take the most time being fuel gathering and cooking); under such conditions, it is difficult to take on paid work as well without prejudicing farm work or household chores;
- The burden of numerous, closely spaced pregnancies: This constraint is aggravated by the inadequacy of health services and the highly-significant lack of family planning and contraceptives.

3.2 Macroeconomic constraints

Because of the economic crisis and the insufficient number of jobs created compared with the needs expressed, the employment of women is not a matter of top priority for governments; new job offers often go first to men, without any particular mention such as delicate work, requiring finesse, skill or patience.

In some developing countries, the unemployment rate for women is two to three times higher than for men, the hardest hit being girls coming onto the job market and older women. 24/

Faced with the lack or inaccessibility of paid work, the alternative for women is to start up an income-generating activity of their own.

The constraints are then essentially of two types:

24/ Mechtild Petritsch, op. cit., p. 23.

- The material difficulty of obtaining the various means of production such as land, loans, equipment and inputs;
- Difficulties stemming from inadequate education, training and/or information.

3.3 Material constraints

Material constraints are all the more strongly felt as rural women in Africa have few or no resources of their own: in Sub-Saharan Africa, 150 million rural women live in a state of absolute poverty.

These material constraints consist of difficulties in obtaining the various means of production such as land, loans, inputs and equipment.

3.3.1 Difficulty in obtaining land

Rural women have tremendous difficulty in obtaining land even though, in certain countries such as Senegal, ^{25/} the legislation recognizes them as farmers in their own right.

In most farming systems, women are responsible for producing food crops for home consumption: they have an annual right to use particular fields assigned to them by the head of the family, but never own land.

3.3.2 Difficulty in obtaining loans

Having no land and being unable to save because of their low incomes, rural women in Africa cannot provide any collateral if they want to borrow from the established banking system.

In some cases, even when they have the collateral, the law obliges them to have their husband's consent, which is not always forthcoming.

What is more, the traditional lending establishment is not particularly interested in this female clientele, which usually seeks small loans that bring in little interest and are very expensive in terms of administrative costs.

It is important to point out, however, that whenever rural women have obtained loans, they have always achieved a higher repayment rate than men.

This is perhaps the explanation for the success of informal lending systems, in which the contents of a village kitty are handed over to each contributing member in turn (as in the Senegalese tontines).

^{25/} "Senegal Government strategies to improve response to rural women's needs", Regional Conference on the Economic Promotion of Rural Women, IFAD, Dakar, 29 July 1991, p. 21.

3.3.3 Difficulty in obtaining inputs

The meagre resources of rural women in Africa go first of all to meet consumption needs; afterwards, there is nothing left to buy quality inputs (selected seeds, fertilizers, crop protection products).

Yet these are the key to better yields, greater marketable surpluses and higher incomes.

There is thus a vicious circle that rural women cannot break without outside help (from governments, NGOs or international organizations).

3.3.4 Difficulty in obtaining equipment

Women in rural areas use time-worn methods of preserving, processing and packaging farm produce. These methods often consume a lot of time and fuel. A study carried out in one country of the Maghreb showed that rural women spent an average of four hours a day grinding wheat to make couscous.

Yet even minor technical innovations would be enough to enable rural women to improve their productivity and produce a surplus for the market.

Cases in point are improved cooking stoves and grain grinders, which can save precious time that can then be devoted to other income-generating activities.

Such equipment is very often not available to rural women in Africa, who remain hostages to their arduous domestic labour.

3.4 Training and information constraints

Illiteracy and the lack of training and information represent severe constraints to the integration of women into the food-processing industry.

In Sub-Saharan Africa, nearly 50 per cent of women and 30 per cent of men are illiterate. ^{26/}

The want of basic education limits the opportunities for paid work, precludes the use of more advanced technology and restricts access to institutional resources (such as bank loans and government training programmes) that involves filling out forms or submitting written applications.

Having pinpointed the chief constraints to women's integration into the food-processing industry, we can now define a number of measures that would alleviate these constraints.

^{26/} United Nations, The World's Women, 1970/1990, Trends and Statistics, 1991.

IV. MEASURES TO IMPROVE WOMEN'S INTEGRATION INTO AGRICULTURE AND THE FOOD-PROCESSING INDUSTRY

Before taking any action, a detailed knowledge of the level and nature of the requirements is necessary in order to avoid offering dressmaking, embroidery and cookery projects to women who need fertilizers and tools, as Western women's movements have done. 27/

4.1 A better response to real needs

Elizabeth Cecelski 28/ reminds us that the three main concerns of rural women in Africa are:

- To feed their families and improve their level of nutrition;
- To obtain an income for the purchase of manufactured products or inputs;
- To save time in daily household chores.

These concerns can be translated into three objectives for projects intended to upgrade women's work:

1. To ease the burden of housework;
2. To increase the productivity of women's agricultural work, bearing in mind that this is devoted mainly to growing food;
3. To provide income-earning work, particularly in processing farm produce.

These three objectives are closely linked, but the crux of the matter is probably the burden of household work that women in rural areas have to bear every day. We shall therefore take up that point first.

4.2 Easing the burden of household chores

By reducing the time and energy spent on household chores, more time and energy are made available for income-generating activities, the household's income can thus be increased, and the level of health and nutrition improved.

Many writers have pointed out the strong correlation between higher incomes for rural women and healthier, better fed children. Easing the domestic workload entails:

27/ "Women's integration into development: a necessity", SPORE: Bimonthly Bulletin of the Technical Centre for Agricultural and Rural Cooperation, No. 44, April 1993, p. 2.

28/ E. Cecelski, "Energy and rural women's work", International Labour Review, vol. 126, No. 1, January-February 1987, p. 57.

- Improving the water supply (through closer wells);
- Improving the supply of wood or other fuel (e.g. gas);
- Making available more efficient appliances for preparing meals and cooking food (grain grinders, improved stoves and fish smokers that are more efficient and consume less wood); this is the "appropriate technology" concept which is being increasingly applied by international development institutions (such as UNIDO and IFAD).

Country studies made by the International Labour Office show that rural women have had much less free time since the shortage of fuelwood became more acute and that food production and incomes have fallen as a result, albeit indirect, of deforestation.

The same studies are critical of many energy-intensive projects and suggest alternative solutions.

The aims must be:

- To manage rural energy resources more efficiently and improve supply (by means of rural development schemes, reforestation and the establishment of windbreaks and hedges between plots);
- To devise, with the help of the people most closely concerned (the women), efficient cooking appliances that save time and energy.

Elizabeth Cecelski considers that "energy is a very effective starting point for addressing rural women's priority concerns with food, income and time-saving" and makes two recommendations for the success of this type of project: 29/

1. Locally conceived solutions and approaches must be adopted, because of the diversity of ecological and other circumstances of villages, even within the same country;
2. A participatory approach to project design and implementation must be adopted, in line with poor people's priority concerns.

A good example of a locally conceived solution is the Chorkor method of smoking fish developed by FAO in Ghana in 1970. This method proved much more cost- and energy-efficient than the other methods used in West Africa. It consists of piling up to 15 trays of fish one upon the other over a rectangular oven made of clay and easily obtainable local materials. The smoke and the embers are trapped in the stack of trays, which is covered at the top. The fish is thus smoked quickly and evenly, with a minimum amount of handling, and reduced wood consumption. In addition, the women suffer less from the smoke and heat than with other methods.

29/ Elizabeth Cecelski, op. cit., page 53.

An example of the participatory approach is the distribution of improved cooking stoves in rural areas. Experience in India and other developing countries has shown on many occasions that, whatever the qualities of the stoves on offer (low pollution, low wood consumption, high thermal efficiency), acceptance depended on the degree of local participation - especially of women - in the decisions concerning the model of oven and where it should be put in the house. ^{30/}

4.3 Improving the productivity of women's agricultural work

As women's agricultural work mainly relates to subsistence crops, any improvement in the productivity of this work will increase the household's food resources and therefore raise its level of nutrition.

To achieve that means overcoming a number of formidable obstacles, which we shall discuss in order of priority.

4.3.1 Better access to land

Women still depend on the head of the family giving them the simple right to use particular fields. This is a tenuous arrangement in that women have no right of ownership over the land they work. The result is that they bring no improvements in the form of reforestation, fruit-tree planting or irrigation. National legislations must give rural women, especially women who are household heads (because the husband has died or migrated to the town), recognition as farmers in their own right.

4.3.2 Better access to farm tools

Numerous studies carried out in African villages show that rural women use practically no modern farm tools.

Although men have the benefit of technical advances in tilling and can thus cultivate greater areas, women continue to hoe, harvest and process farm produce in the age-old fashion.

With good tools and better farming methods, the women responsible for growing food crops could increase their yields substantially.

4.3.3 Better access to loans

Bereft of resources, as they often are, and with no security to offer, rural women in Africa cannot obtain ordinary bank loans.

The two ventures described below are of special interest because they provide a tentative answer to the problem of borrowing in poor rural areas.

^{30/} Michael Maniates, "State-NGO collaboration in the management of rural resources: the Indian improved cooking stove programme", UNASYLVA 171, vol. 43, 1993, p. 23.

1. The Senegalese tontines

As a reaction to the impossibility of obtaining conventional bank loans, informal lending systems based on self-help within villages have come into being. The principle is that each inhabitant wishing to participate pays regularly into a kitty, and each contributor is entitled in turn to the contents of the kitty for a given period.

2. The Grameen bank in Bangladesh

This is a completely new type of institution, created by Mohammed Yunus, a professor of economics, in 1976. Flouting all the conventions and hallowed principles of the conventional banking system, it specializes in lending to poor rural women.

Is it possible for a bank to be viable, working solely with persons burdened by the triple handicap of being women, rural and poor? The Grameen's existence proves that it is possible.

The way it works is as follows:

- All applicants have to pass a very strict eligibility test, which admits only the poor or very poor; borrowers must come from rural areas, for example, and must own at least 0.2 hectares of arable land;
- Borrowers must form groups of five persons, one of whom is appointed chief; the groups each meet once a week with an official from the bank;
- The two poorest members of each group are the first to be entitled to a loan; if there are no repayment problems in the following weeks, the two other members of the group receive their first loan; the chief is always the last to obtain a loan;
- The loans are generally small and always relate to income-generating projects; the interest rate of 16 per cent is the same as that applied by the commercial banks but is much lower than money-lenders' rates;
- The bank requires neither collateral nor guarantor: its sole guarantee is the system based on groups of five people who keep an eye on one another;
- Another feature of the Grameen bank is that 91 per cent of the borrowers are women; Professor Yunus, the founder of the Grameen, is of the view that a loan made to a woman tends to be of greater benefit to the family, because women are generally more astute and better placed to see the long-term advantages for the household.

Professor Yunus's principles have been a great success in practice. With a repayment rate of 98 per cent, the Grameen now covers 23,000 villages in Bangladesh, representing 1 million borrowers. 31/

31/ "Loans for the rural poor: The growth of the Grameen Bank in Bangladesh", Cooperation South, UNDP, January 1992, pp. 3-7.

Can this experience, which was conclusive in Bangladesh, be successfully transferred to other socio-economic environments, particularly in Sub-Saharan Africa? Opinions differ.

Some observers criticize the Grameen for operating like a normal bank in that it applies the same interest rates; they are more in favour of building on African experience in savings and loans, and of fostering in particular the tontine system in which each participant receives a loan in turn. ^{32/}

4.3.4 Better access to inputs

Access to inputs, whether from government sources or from international aid agencies, is often tied to the control of land and the production process; this system favours cash crops, which are men's domain, at the expense of food crops grown by women.

In order to restore some balance, governments and donor agencies should keep a certain proportion of the available inputs for food crops and thus enable rural African women to free themselves from the vicious circle of low productivity.

4.4 Access to an income-generating activity

This third objective for rural women in Africa is closely linked to the first two, since:

- With improved methods of preparing meals, cooking and processing food, it would be possible to progress from the subsistence stage to the marketing of surpluses (e.g. smoked fish, dried fruit and vegetables, ready-cooked dishes);
- With more efficient farm tools and methods, it would be possible to increase women's labour productivity and yields, and hence produce surpluses for the market.

In order to create their own income-generating activities, women need more than access to the usual means of production: land, loans, inputs and equipment.

They need above all:

- Education (reading, writing and arithmetic);
- Training, particularly in management methods;
- Information (on projects, available means of production, and markets);
- Access to markets.

^{32/} Regional Consultation on the Economic Role of Women in Sub-Saharan Africa, summary record of the 26 July 1991 workshop; reporter: Ms. N. Koyara.

In order to have the best possible chances of success, women wishing to start a new activity must:

- Have had a basic education in an educational system free of gender discrimination;
- Have access to management training, ^{33/} or to advice from an extension officer (male or female);
- Have access to a regular network of information sources so that she can take the right decisions at the right time;
- Be capable of joining forces with others, particularly in cooperatives, so as to match up to the merchants and middlemen who control the markets and pocket the biggest profits.

The task of the authorities is therefore to create an enabling environment in rural areas for women to start up income-generating activities.

4.5 Access to various social services

There can be no talk of women's integration into economic development if they do not enjoy its social benefits.

By social benefits, we mean:

- Access to health services (maternal and child care);
- Access to family planning and birth control services.

Much remains to be done in this field for poor rural women in Africa.

^{33/} UNIDO devised the Training Programme for Women Entrepreneurs in the Food-Processing Industry for this purpose in 1989.

V. RECOMMENDATIONS

Any project for economic integration of rural African women must have one of the following three goals:

- To ease the burden of household work by introducing simple equipment that can be mastered and produced locally; this is the "appropriate technology" concept which is increasingly being applied by NGOs and international agencies (see annexed description of GREI project);
- To improve the productivity of women's agricultural work;
- To provide women with an income for household needs.

To achieve any one of these three goals, many complex and often interconnected constraints must be overcome (see chapter III).

An African association for the promotion of rural women would provide a suitable framework for discussion and action; it could lobby governments and international agencies for projects more closely geared to rural women's needs, with women's participation and for their benefit (see annexed description of GREI project).

Of the constraints mentioned above, the basic one in our opinion is the illiteracy and lack of education prevalent among most rural women in Africa: an ignorant, illiterate person obviously has little control over his or her future.

The training needs are therefore vast and could only be met at the basic level by a policy of education for all, with no discrimination between the sexes. At the higher level of instruction, it would be useful to envisage training programmes for women entrepreneurs, i.e. women wishing to start an activity of their own in the food-processing industry.

ANNEX

An original GRET project: the introduction of improved solar driers in Senegal

A description is given here of the original approach adopted by the Groupement de Recherche et d'Echanges Technologiques (GRET) (Technological Research and Exchange Group) in Paris, which has carried out numerous projects for rural women in Africa; one of the aims of these projects was to use the plentiful and free energy of the sun to dry a whole series of farm products - coffee, cocoa, fruit, vegetables, meat and fish - in the traditional way. 34/

The originality of the GRET approach lies in:

- Improving traditional methods already well-known among the target groups of people;
- Involving the targeted groups (especially women) in defining their needs precisely, evaluating the technical changes proposed by GRET and appraising the various technical solutions proposed (the participatory approach);
- Using local, preferably cheap, raw materials;
- Training people to manufacture and maintain the equipment locally.

The following project, which was carried out by GRET in the Senegalese village of Koumbidia, involved the introduction of "tent" type solar driers.

The villagers already used solar drying to preserve what they had gathered (grasses, leaves and berries) and grown (onions dried then ground; tomatoes ground, salted and then dried; okra ground and dried). However, only small quantities were dried in this traditional way, the loss rate was high (as much as 30-50 per cent) and the storage life was short.

GRET decided to introduce a new technique and provided each of the three women's groups in the village with a solar tent made in Dakar.

This type of drier is in the shape of a wall tent with a metal tube framework. The east, south and west sides are made of polyethylene, 150 μ m thick. The north side and the floor are made of black plastic. An ordinary net serves as the drying surface inside, the drying area being 4 m².

With the solar tent, 25 kg of fish can be dried in two days (to a final water content of 25 per cent), without pest damage, whereas traditional drying used to take four days and involved losses of 30-50 per cent.

34/ "Solar drying of food products", GRET/GERES, File No. 8, October 1986.

The device can also dry:

- Sliced onions and okras, in two days;
- Onion and cabbage leaves, in one day.

Women appreciate the drier's advantages (high throughput, limited loss rate, better-quality drying, longer storage life), but they consider it too expensive and do not like the collective method of use, which impairs efficiency. They refer here to the frequent opening of the tent to turn or remove the products, which causes a drop in temperature, and to draughts during handling operations, which contaminate the products with dust.

At the instigation of the village women, GRET then devised the shell drier for individual use, entirely made from local materials.

The drier is made up of two half-shells obtained by cutting a 200 litre barrel in two and laying it flat, then painting it black. The feet, handles and tray frame are made of welded 6 mm reinforcing rods and the tray itself is a grating. The lower half shell is pierced by 40 holes 1 cm in diameter to admit air, while the upper half shell has a single 8 cm hole as an air outlet. The drier operates on the black body principle, with a drying area of 0.25 m². Its chief qualities are:

- It is robust;
- It is simple to use and move;
- It provides a drying time of two days at most, and excellent drying quality (with no colour loss, crust formation or dust);
- It can be used either as a drier or as a ... larder!

The shell driers have gained wide acceptance among the women of Koumbidia. They are manufactured in small batches by a local blacksmith, who only uses scrap metal. Their success has attracted delegations from other villages, who have decided to place orders although the price is still a little high (CFAF 10,000 for a single unit or CFAF 7,300 for a bulk order).

Thanks to the tent and shell driers, the women of Koumbidia have been able to obtain a higher drying throughput with better quality; the surpluses obtained have been sold in town, bringing households a substantial additional income.

The Koumbidia project is a success because it corresponds to the real needs expressed by the people of the village.

A sentence taken from the introduction to the GRET book 35/ encapsulates the guiding philosophy of those who designed the project:

"Introducing solar drying into third world countries is pointless unless it contributes to their development and helps the people concerned take the future into their own hands." 35/

35/ GRET, Op. cit., p. 3.