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German Agro Action

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Man and Land

An Introduction into the Problems of Agrarian Structure and Agrarian Reform

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AGRARIAN STRUCTURE AND AGRARIAN REFORM - THE BASIC ISSUES

AGRARIAN STRUCTURE

The term AGRARIAN STRUCTUIRE denotes all of the existing and lasting production and living conditions found in a rural region. It comprises social, technological, and economic elements and determines the achievable productivity, income and its distribution, and the rural population's social situation.

The agrarian structure includes the system of land tenure (social agrarian structure) and the system of land management (technical and economic agrarian structure).

Systems of Land Tenure

(Social Agrarian Structure)

The system of land tenure governs the traditional or legal rights individuals or groups have re land and the resulting social relationships among the rural population. Its components are the system of land ownership and system of labour organization.

In accordance with the existing conditions, many different land tenure systems have developed throughout the world, whereby both natural conditions (climate, soil conditions, topography) as well as social factors (sociocultural values, political ideology, level of technological development, population trend, changes in the cost-price relationships, etc.) played a role.

Systems of land tenure are not immutable. On the contrary, they are subjected re a continual process of change. Changes in the natural growing conditions and economic factors, technological innovations, changes in the size of the population, and influences emanting from the political power structures bring about changes in the land tenure system. As in recent times these factors have been changing more and more rapidly, the system of land tenure frequently lags behind the new situation and does not adjust to it on time. Land tenure systems are institutionally established and are, therefore, difficult to alter. political power structures; cooperative ties; and class, cultural, and ethnic interests and motives all work towards maintaining the established forms.

As a result of the continual changes in the factors that govern and form the land tenure system, an ideal land tenure system cannot exist. The momentary, specific land tenure system is the institutional framework within which the agrarian production and „ay of life are carried out under the existing circumstances and conditions. It is interrelated with the natural, economic, social, and political conditions. As these change, the land tenure system has to continually adapt itself to the changing situation.

Systems of Land Ownership

The system of land ownership regulates the relationship of the people to the land, specifically the power of disposition over land and the right to use the land. As it is practically impossible, on the one hand, to increase the amount of land while, on the other hand, it is the basis of agrarian production, living, and recreation - in other words, the basis of existence for a rural society - the amount of land controlled and the type of distribution determine the social conditions. Rights in land bring with them work and income, prestige, and influence. Anyone without rights in land is dependent in an agrarian society. He is forced to work on someone else's land in order to earn his livelihood.

There are two forms of rights to the land - the right of disposition over the land and the right to use the land. The owner has the right of disposition. He has the right to decide whether to sell, lease, bequeath, give away, or lend, etc. a piece of land. The occupier has the right to use the land. 'This right regulates the cultivation of the land. In the case of an owner-cultivated family farm, the family has both the right of disposition as well as of use. A tenant, in contrast, has no right of disposition over his land but can only use it.

On the Question of Land Ownership

Private ownership of land is a Western concept that was first introduced into many developing countries by Europeans. It arose under a specific legal order by original acquisitioning of land (occupying and making the land arable) or changes in ownership (conquest, contract, inheritance). Until today, some societies have still not developed any forms of personal, private

rights to land that would grant a right of disposition. Instead, the individual is allotted land forhis own usage that reverts to the hands of the group (tribe) as soon as it is no longer used.

It is not unusual that laws governing the land exist atseveral levels, e. g., government laws and traditional tribal laws. If a conflict arises between these two levels, it leads to considerable breakdowns and obstructions of the legal guarantees and, thus, the usage of the land.

The question of the private ownership of land is strongly affected by the ideological point of view. On the one land, it is argued that the owner's interest in his land turns 'sand into gold." In contrast to this argument is the experience that especially increasing population pressure has fairly often resulted in the economically weak losing their land and that the land has become concentrated in the hands of a few people. According to the socialistic viewpoint, private ownership of the production factor land has led to exploitation and should, therefore, be abolished.

Practical experience has shown that agricultural and social development are possible with or without private ownership of land. A recent tendency in the industrial countries has been to stress the farm unit and its preservation while the significance of land ownership is diminishing.

Land becomes property by the state (tribe, clan, etc,) guaranteeing an individual this right to a scarce factor and, thus, warranting him the possibility of harvesting the fruits of his labour in the production process. Property rights, in other words, are granted to the individual by the society and always include certain limitations. Such restrictions and/or obligations are imposed upon the owner by custom, private rights, or public law. Among these are, e.g. , the obligation to maintain and expand the farm, creditors claims, rights of access and transit, services, taxes, market regulations, etc.

In developing countries, landed property is usually bequeathed by parcelling it among the children. If the farm is passed on to one heir, a practice in parts of Europe, it guarantees the existence and survival of the farm; however, it also presupposes alternative possibilities for the remaining heirs to earn a livelihood , a precondition that is frequently not present in such countries. A son sometimes receives a larger share under the condition that he has to take care of his parents, or sons receive larger shares than daughters. When the farms become so small that they are no longer profitable, the children sometimes operate the farm together and only split the yield. Usually, the traditional form of passing on the farm results in it becoming smaller with each generation, even if this is sometimes balanced out by the women's dowries. If job opportunities are not created outside the agricultural sector, it cannot fail to result in a drop in the standard of living wrong the rural population as soon as all of the land is taken under cultivation.

Types of Land Ownership

Various systems of land ownership have developed throughout the world under the influence of historical, cultural, and economic factors. These systems are exposed to a continual process of change.

State Ownership of Land

As a consequence of conquest, purchasing, gifts, and seizure, land belongs to the state in many countries in the same way as other areas belong to private people. In the USSR, the majority of the land has been turned into state property - in other socialist countries, only a part until now. This was done to prevent exploitation resulting form private ownership of the land as well as unearned income derived from ground rent. Otherwise, state ownership plays a large role if public interests cannot be satisfied by private ownership, or if the land is not of interest to private people from an economic standpoint (catchment areas, waste land, forest, frontiers, experimental farms, etc,). The state partially cultivates its own land (government farms, government forests) and also partially leases it out. In some countries, the church likewise has a great deal of landed property. The process by which the church gained possession

of the land and its function is similar to that in the case of state land.

Land Grants

In Islamic countries, land is granted to schools, ,mosques, orphanages, and similar institutions. This type of grant is often called a "waqf." The beneficiary receives an irrevocable right of use that is carried out by government organizations, generally in the form of being leased out. The institution that is granted the right of use receives the profit. The lands are frequently in very bad condition as hardly any investments are made.

Land is sometimes established as a private waqf. The irrevocability of the grant, that is established in court, prevents eventual changes in ownership and protects the family against property losses. The family receives the income derived from the yield. This type of grant is also found in the south of Europe and existed in Eastern Germany until 1945 where it was called "Fideikommis."

Collective and Communal Ownership

In this type of ownership, the right of disposition is in the hands of kinship or political groups that are larger than a single family. In the forms of communal ownership found in Africa (a widespread phenomenon south of the Sahara), the land rights are generally controlled by the tribe, and the use of the land is regulated by the chieftain or priest serving the land and earth deities. Every member that is born into the group has a lifelong right to a piece of land for his own usage. The tribes regard themselves as custodians of the land for future generations rather than proprietors.

In Mexico, former latifundia were transferred into a form of communal land called "ejido." The members of the community are granted land on a heritable basis for their usage, while pasture land and waste land are used commonly. In various countries such as Taiwan, India, and Jamaica, land belongs to minorities in the form of common land. The purpose behind this is to give protection against loss of the land.

In socialistic countries, land was collectivized in accordance with the political doctrine in order to prevent exploitation resulting from private ownership of land. At the same time, this measure simplifies controlling agricultural production and the process of adapting to the goals of rapid industrialization and overall development. Based on a different ideology, but with similar motives, various religious communities have also abolished private ownership of land and collectivized it. Physical and/or psychological coercion and pressure or a critical situation have always played a great role in collectivization.

Private Ownership of Land

In non-socialistic countries, the right of disposition is often in private hands - regarding agricultural land, less so in the case of forests. In face of the positive experience in European history and its great ability to adapt to changing economic and technological systems, private ownership of land was introduced in many of the former colonies. In the process, however, it became obvious that the positive outgrowths of private ownership were dependant upon certain specific preconditions that were not always present. The decrease in the size of the farms resulting from population increase and the differences in the success achieved in the process of adaption to changing conditions - especially of an economic nature - led in part to property losses, whereas other people were able to gain control of large areas and, thus, economic and - consequently - political power. As a result of this process, today there are several widely differing forms of private ownership.

Small-scale agricultural property, or smallholdings, is a widespread form throughout the world and is the target of most of the non-socialistic agrarian reforms. Family farms have proved to be an expedient form of agricultural organization, both regarding agrarian production as well as the social conditions, as long as the farm size is large enough. The incentive ensuing from the farmer's freedom to make his own decisions and the knowledge that he will receive the fruits of all his labour and investments have always been a tremendous inducement, especially if the attitude

towards work and investments was positive and the concomitant institutions (extension services, credit system) were advantageous. In order for family farms to guarantee the continuation of yields from their land, it is necessary for them to observe the preservation of the ecological balance. As seen as the precondition of sufficient farm size no longer exists, the situation becomes less favourable and the living standard of the farmers' families drops, the farms become indebted, property is lost, and the ecological balance is endangered.

Large holdings are in many cases not farmed by the owner himself. If there is a large demand for land, the owner is in a position to let others work for him and still receive a sufficient income. He, therefore, leases the land out, and, although he exercises his influence regarding farm management, this is more to control the farm rent payments than to foster agricultural production. The rent is usually not reinvested, but rather used by the owner to cover his own living expenses as well as other purposes. Thus landed property becomes a source of rent while the agricultural economy remains static.

As soon as the owner becomes more interested in the cultivation of his land, he generally switches to centrally controlled farming as this makes it possible to control the cropping more closely and, thus, guarantee economic success. This form is not only found on plantations and commercial farms. In the course of the Green Revolution, many former lessors started cultivating the land themselves as this appeared to them to be more profitable under the new circumstances than the traditional forms of leasing the land to tenants.

Farm Tenancy

An increasing population, while at the same time the job opportunities outside the agriculture) sector develop only slowly, has forced a growing number of people to look for land that they can rent from someone for their usage for a period of time. In densely settled countries with private land ownership, in some cases more than half of the land is cropped today by tenants. One can differentiate between various forms of renting the land according to the type of payment that is demanded.

Occupational tenancy: in way of payment, the tenant works for a specific number of days on the landlord's farm in order to pay for the land he rents. In some cases, he uses his own draught animals and implements. This form, is particularly found in Latin America where it is called a colonate. Until a few years ago, it also existed in Westphalia, Germany, under the name Heuerling.

In the case of cash tenancy, the tenant pays a fixed rent for the land he rents and, thus, bears the full cropping and marketing risk himself; however, he also receives all the proceeds growing out of his labours. This form demands the ability to face a risk and is, thus, found in the case of tenants who are economically sound.

Rent in kind is a form of tenancy in which the tenant pays a fixed quantity of produce and, therefore, does not lave to take the marketing risk himself. This form is found especially among landowners who rent out small parcels of land and who consume the rent in their own household.

Share tenancy is a specific form of rent in kind. It is widely spread, particularly in the developing countries. In this case, the gross output is divided between the landlord and tenant. while the original size of the share was determined by the reciprocal obligations and the productivity of the land, the great demand for land has led increasingly to shares equalling 50/50. Under these conditions, each side receives only half of any proceeds resulting from additional inputs. There is little incentive, therefore, to increase productivity by means of working harder or making larger investments. Moreover, the contract is often drawn up for only one year. Even though it is often prolonged by tacit agreement, it leads to insecurity and a state of dependence. This has, along with the normally extremely small size of the plots under tenancy, resulted in many farmers being indebted and living in very poor economic and social conditions.

Although tenancy can fundamentally bring about flexibility in the structure of land ownership and allows making adaptions to changing economic and social (family) conditions, under the circumstances in the developing countries (with a one-sided advantageous position on the market for land available for tenancy in favour of the landlords), tenancy leads to stagnating agricultural production, dependence, and an economically poor situation for the tenants and their families.

Systems of Labour Organization

The system of labour organization regulates the relations between the people carrying out the work on the farms, particularly the method of dividing the work and the yield - i.e., the wages. There are considerable differences between the cases in which these relations exist among family members alone (family labour organization) and those cases in which the farmer's family employs hired labour (labour organization with hired hands). The working relations in collectives of various kinds fill in an intermediate position.

Family Labour Organization

At all times, members of a family have pooled their labour in order to cover their needs. This system of family labour organization has existed since time immemorial and is spread throughout the world. Each member of the family is willing and ready to do his best because he is aware that he only has to share the fruits of his work with the members of his own intimate family. The fluctuations in the family's labour capacity resulting from the family's life cycle influence the organization of the farm; bottlenecks are compensated for by overworking, changing the cropping intensity, or leasing out or renting additional land. Within the family, the method of dividing the work among the members and sexes is often influenced by custom.

This system of family labour organization can also be confronted with problems if the farm unit becomes too small and not all of the members are needed to carry out the work. As long as no alternatives for earning a living are available, the family usually remains together and splits the work and yields. This leads to rural underemployment and low living standards in the agricultural sector. As soon as alternative job opportunities are created, there is a transition to sideline activities and part-time farming.

Labour Organization with Hired Hands

Whereas in industrial countries there are only few hired agricultural labourers and these are mainly found on the large farms, there is a large number of wage labourers in the rural areas of the developing countries. This is partly the result of the low level of mechanization in agriculture in the developing countries. What is even new important, however, is the fact that after all the land has been settled, there is no more land available to the growing population. Since only a small number of non-agricultural jobs exist, the landless are forced to offer their labour to the landlords for a wage in order to receive part of the crop yield and, thus, establish a basis to subsist upon. This one-sided shift in the conditions on the labour market has resulted in the fact that many of the landless live in poor economic and social circumstances. It must be mentioned, however, that the labour relations and living conditions vary greatly. The following types of agricultural labourers are widely spread throughout the world.

Permanently hired labourers: These farm hands, who have a regular job, are usually found on somewhat larger farms that are in a position to finance a permanent worker. They are often paid on the basis of an annual wage. The working relationships are long standing, sometimes lifetime. This results in a close, patriarchal relationship that is not only limited to the obligations regarding work and pay, but rather includes a personal relationship and loyality as well as an obligation on the side of the employer to protect and help his employees. Some of these develop into skilled labourers such as tractor drivers, maintenance men for pumps, etc., once a higher level of development has been reached.

Casual labourers usually find employment in agriculture only during the time of the labour peaks. During the rest of the time, they try to find work in road construction, building construction, or similar jobs. They are, in other words, not agricultural labourers in the real sense of the word, but rather offer their labour to anyone who can use it. They are in many cases unemployed for several months in a year. They are only able to

earn a modest existence because of the relatively high piecework wages paid during the harvest time and because the women and children also work frequently. This group of hired labourers, which is numerically the largest, as the outcome of the rapid population growth without a simultaneous development of the job opportunities.

Agricultural labourers who own small farms: If through inheritance or property losses the farm becomes too small, a farmer has to look for an additional source of income in order to supply the needs of his family. In many cases this is only possible as a hired hand on a large farm. Because of the large number of marginal farms, this form is widely spread although it is hardly mentioned in statistics as these farmers are classified as either farmers or tenants.

Coloni: A special form of the above-mentioned type are the coloni, farm hands who are given a piece of land that they can cultivate themselves in way of payment for their services. This form is found in Latin America.

Migratory workers: The labour peaks during certain seasons, which are particularly prevalent in monoculture regions, are partly met with migratory workers from distant areas. In some cases, the same gang of workers appears annually at specific farms or villages. The emergence of the national states in Africa created problems for the traditional migratory worker routes since the borders can no longer be so easily crossed. Part of the migratory workers belong to ethnical or religious minorities.

Plantation workers: The employment situation of the plantation workers has several characteristics in common with that of industrial workers: rigidly organized work, work regulations, union organization. Respite this, the living conditions of this group are frequently poor: low payment, poor accommodations, monotonous work, a lack of opportunities for advancement. Because of this situation, plantation workers are likewise frequently members of minorities or aliens. In some regions, plantation workers are allowed to cultivate a subsistence plot.

Rural craftsmen:In some societies, work carried out by handicraftsmen is paid with a wage. In other cases, however, a reciprocal relationship has developed such as the jajmani or sep relationships in South Asia. In these instances, the handicraftsmen carry out all of the necessary work that belongs to their occupation for a lump sum paid in kind by the farmers they have an agreement with. In this way, the handicraftsmen are protected against unemployment, and the farmers have their skills available at all times.

Bonded labour: Sometimes known as economic slavery, this form emerges as a result of economic obligations, specifically debts. In some cases, people enter this relationship voluntarily in order to obtain protection and a basis of existence. Usually these people enter a contract upon drawing credit in which they agree to work for the creditor until the sum is paid back. Low wages and high interest often result in these relationships turning out to be of a long duration, sometimes lifelong or inheritable. Such contracts are indeed illegal, but in their situation there is little chance that the workers can do anything against it. A milder form is a contract under which a creditor can demand services from a debtor at any time. The creditor has, thus, labourers at his disposal without the obligation of employing them and paying them continually.

Collective Labour Organization

Workers labouring in the various forms of production cooperatives and collectives have both characteristics of family and hired labourers. They are expected ire show self-serving interest and care, much as in the case of family labourers, while simultaneously having the chance to specialize as found on large farms. Regarding the competence to make decisions, working regulations, and pay, their position is closer to that of hired labourers. Contrary to the theoretical goals, the problem of creating motivation without pressure and material incentives has not been solved, and some of the advantages have been outweighed by the bureaucratic apparatus.

Systems of Land Management
(Technical and Economic Agrarian Structure)

Agriculture - cultivation and use of the land - is a form of production based on the process of growth of animals and plants. In its original form, man creates food and other articles of consumption by using his labour to cultivate a piece of land. At a very early stage, he attempted to make this work easier by making simple implements and, thus, form capital. Traditional cultivation of the land utilizes, in other words, the conventional production factors labour, land, and capital.

In the modern world- and in rudimentary forms even much earlier -the farmer runs a type of enterprise. His goal is of an economic nature: he produces in order to cover his own needs, to barter, and in modern times, to sell. The modern farmer is tied to the overall society by his enterprise. He is dependent upon supplies and buyers and has to fulfil their wishes and conditions. Modern agriculture is not only an interplay between the soil, solar energy, and labour, but is rather determined by a number of modern factors that originate outside agriculture.

In the endeavour to cope with these factors and achieve as productive cultivation as possible, requirements emerge that cannot be met by the individual farmer. The success of his farming depends, therefore, upon the extent to which his efforts are supported by social institutions that help him in the areas in which he reaches the limits of his own possibilities.

Conventional Factors of Production

The basis of agricultural production and the most important production factor for the farmers is land. By means of it, they can use their labour (and capital) in order to earn their livelihood. In traditional agriculture, more land also means more income and a better life, and increasing the size of the farm was a simpler way of improving the living conditions than farming the existing land more intensively. This was the source of the inclination to buy land that is still found in agrarian societies.

The possibilities of increasing the area of land are, however, limited. Land cannot be enlarged or increased beyond that which it is, and when all of the land has been put under cultivation, growing populations lead to continually smaller farms. This is why land has the reputation of being a scarce production factor.

However, "scarce" and "abundant" are relative. Since mankind first began settling, land has changed in its role as production factor. While at the beginning only the natural fertility of the previously untilled soil was present, it was then put under cultivation. The soil has improved over the centuries through the work of man so that more products can be grown on the sane amount of land, or ruthless exploitation and negligence have mined it. In many regions, the productivity of the soil has been greatly improved by artificial irrigation systems, or the crop intensity was increased. These measures reduce the scarcity in the sense that on a given piece of land as much can be grown as previously only on a larger area of land. That this process has rot remained without success even in densely populated areas can be seen from the frequently deficient utilization of the soil that can, in some cases, be called wastefulness. The prevailing land and land use laws may play a role in this context, as well as the limited technical possibilities in traditional agriculture. This does not change anything in the fact that land in the scope of traditional agriculture is indeed limited, but that this can be overcome to quite an extent. In other words, if the system of land management is improved, the scarcity of land is reduced by more intensive cultivation. An improvement in the agrarian structure creates the precondition for appropriate management and land use systems, a purposeful integration of animal husbandry and much more.

The farmer's major instrument for achieving a good output is labour. Labour has a direct effect if by means of investing a greater amount of it the output is increased. Indirectly, labour can have an effect on the production via capital formation.

In densely populated agrarian societies, labour is an abundant production factor, especially in relation to land and capital. This results, in extreme cases, in land being substituted for by labour. In the case of a scarcity of land, e.g., fodder is not grown as the entire land is needed for growing crops to feed the people. The necessary fodder for the animals is collected by foraging weeds which demands the investment of a great deal of labour. A further consequence of the often unproportionally large supply of labour is rural underemployment. Manpower that is actually not necessary in the agricultural production process is nevertheless retained in the family members. By remaining together, the family supplies a basis for all of the members to exist upon, even if at a lower level. It must be mentioned, though, that that which is produced is consumed, and there is little left for investments,

While quantitatively abundant labour is available, narrower limits exist qualitatively. This has an effect when traditional agriculture is no longer practiced. One peculiarity of an occupation in agriculture is its many sidedness. In his function as a labourer, the farmer cares for his crops and animals in order to achieve a larger output. In his function as farm manager, he chooses between alternative crops and methods, whereby the people in his surroundings influence the type and possibilities of the choice. The family - along with the existing norms, traditions, and religion - plays a particularly important role.

With their ability to work, learn, think, and strive for something, the farmers have continued to develop the cultivation of the soil from the digging stick culture of earliest times up to modern agriculture. The rapid introduction of innovations today, however, often takes them to their limits because the existing abilities are not adequate to comprehend the consequences of the changes and to plan and carry out the measures purposefully.

Under these circumstances, the productivity of the labour would be raised if the agrarian structure could develop a more balanced ratio between labour and land. One precondition for this would be to raise the

abilities of those cultivating the soil to a higher level.

According to the general opinion, traditional agriculture utilizes little capital. This is also true if one thinks of modern form of capital. However, if one looks at it more closely one finds that traditional forms of capital are indeed abundant so that a greater use would only lead to a slight increase in productivity. Soil amelioration, buildings, leveling fields, and other forms of capital that are created by the work of the farmer's family are examples. In the single cases they are only small increments in capital stock; however, they add up to significant quantities over the generations and on the many farms.

The need for capital created by work is large - and the chances of capital formation are correspondingly great - if the level of the individual farms is abandoned. However, this leads to,unsolved organizational and allocation problems. At the village or regional level, the yield resulting from the invested labour no longer flows automatically to the labourer's own family.

The capital stock is even smaller when new forms of capital are considered, e. g., implements that have to be procured through the marke. Adequate agrarianstructure forms cannot only reduce the organizational problems involved in non-monetary capital formation but also create paths for the introduction of new forms of capital that could make a larger contribution to production.

Preconditions for Modern Agriculture

The conventional production factors land, labour, and capital are able to provide the farmers with a subsistence, especially if the population is not dense. However, if a noticeable and rapid increase in production is desired, they do not suffice. To do so, further factors are necessary, and these are those production factors that are actually scarce. They cannot be provided by the farmers themselves, but rather must be produced by the society in processes involving a division of labour. Agricultural development is not only dependent upon land, labour and capital, but rather an interplay between these traditional factors of production

and the new factors produced in other sectors of the economy. If agricultural production is to develop beyond the stage of self-sufficiency, an external demand as well as new technologies and inputs that are produced outside the agricultural sector are necessary.

A strong effective demand for agricultural products gives the farmer an incentive to increase his production beyond the level of subsistence. The achievable prices have to be high enough to cover the costs of production and be a satisfactory reward for the involved efforts. Especially the latter is dependent, among other things, upon the existence of functioning markets.

In early stages of development, an effective demand for agricultural products - not the desire for more food - is often limited because the number of buyers (due to the widespread self-sufficiency in rural societies) is small and because of the limited purchasing power of the purchasers. Furthermore, the demand in most regions is limited to cereals. Perishable goods can, an account of the underdeveloped transport and storage systems, only be produced in the close vicinity of cities. In case no opportunities exist for exporting the produce, the size of the domestic demand sets the limits of the development in agricultural production.

Before the domestic demand can be stepped up, the non-agricultural sectors have to be developed in order for the necessary purchasing power to be there. This development in industry, trade, and crafts is, on the other hand, the precondition for an increase in agricultural production because inputs are necessary that are produced outside the agricultural sector such as commercial fertilizer, implements, and services. To quite an extent the modernization of agriculture is concerned with supplying energy. Fossil fuels play a particularly important role in production increases.

Modernizing agriculture always means an increased interlacing of agriculture with the other sectors of the economy. In order to achieve lasting increases in agricultural production it is necessary to leave the level of an economy based on self-sufficiency and enter a stage of agricultural production interlaced with the market. In this process, the market prices are

the incentive and orientation for the farmers; these, however, simultaneously raise the involved risk. Although farmers always had to face production risks, which could be mitigated if needed by tightening one's belt, the modern producer of agricultural products is additionally faced by a marketing risk and technical risks owing to the new procedures that are ill-adjusted. The risk is also much larger since the externally purchased inputs have to be paid. Functioning markets are a precondition to make the risk bearable. The agricultural commodities markets will have to be expanded and made more dynamic in order to fulfil the conditions of a demand backed by strong purchasing power that is needed to develop modern agricultural production.

A higher level of agricultural production, stimulated by the increasing demand, is the result of new technologies in agriculture, in other words, new methods of "how to do it". Techniques, methods, and varieties have to change continually in modern agriculture if stagnation is to be avoided. Such innovations can be copied from other farms and other regions. First and foremost, they are the result of research and experiments. The development of fertilisers and pesticides, new high yielding varieties, machines, implements, and irrigation methods are examples of new technologies in agriculture. Since in agriculture production there is a close interrelation between various factors and practices, changes should be made together if possible. The simultaneous introduction of a package of innovations has a greater effect. On the other hand, sometimes only one factor has a limiting effect and changing it can raise the productivity of the entire system. Frequently it is the question of new inputs that have to be purchased, and since these are often nondurable goods it is necessary to continually buy them. Usually it is necessary to simultaneously employ a whole package of new inputs. Therefore, many goods have to be purchased so that it results in a strong interlacenant with the rest of the economy. Modern agriculture is no longer simply the result of the farmer's struggle with his land, but rather it is also influenced by the activities of factory workers, scientists, and merchants who make their contribution to agricultural production indirectly through the division of labour. Modern agricultural production is part of a closely

knitted all-inclusive economic system.

For new inputs to be successful, it is important that they are available everywhere; in other words, that there are functioning supply markets. They also have an effect on the conventional production factors. If the innovations are limped together, they often bring about a change in the entire production process and cropping system, e. g., as a result of economic and organizational considerations or conditions of crop rotation. The agrarian structure has to give the incentive for the development of such new technologies and for acceptance of innovations. The creation of an institutional framework that facilitates the interlacement of the agricultural sector with the rest of the economy is an important aspect

Institutional Support for Agriculture

The incentive created by a demand backed by purchasing power results in the modernization of agriculture on the basis of the existing technological innovations. In this manner, a slow but steady increase in agricultural production has taken place over the centuries. If - as today all over the world - rapid development is the goal, it is not enough to leave this process to itself. Instead, it is necessary to intervene in this process by forming and promoting it. In order to do so, a number of service and support institutions are necessary.

The new technologies that are needed in order to modernize agriculture will only evolve and be developed to the extent needed if the agricultural research facilities are adequately developed. Traditionally, research has mainly been concerned with the problems of large farms and crops for export. The tasks and goals will have to be changed. In addition to central research facilities, an infrastructure of experimental stations that study the applicability of the innovations under local conditions is also necessary . The system character of agricultural production makes it necessary for agricultural research to not only study single matter problems, but also to deal with the combination of individual results into applicable procedures that can be employed for practical purposes.

The more intensively new technologies are presented to the farmers, the sooner they are accepted in practical agriculture. Agricultural extension services are the indispensable tool for this purpose. Their organization and methods have to be adapted to the type of farm. Their content should not remain limited to the agricultural production aspects, but should also include economic and management questions and - as the farmer - keep the entire farm in mind. The more formal education the farmers already have, the easier the extension service personnel's job will be. School education accelerates the learning process, especially if it is relevant to development.

New technologies cost money. Industrially fabricated inputs that have to be bought play a role frequently. This creates a financial problem. The speed at which they are accepted and applied depends on how much credit is available to solve the financial problems and how easy it is to receive credit as well as whether the conditions of the loan meet the farmers' needs, especially regarding the important short-term credit loans. Credit, though, can only accelerate the process if the goods that have to be financed are available an the market.

Thus we come to the market for inputs and agricultural products. The existence of marketing and supply facilities; a system that allows mediation between producer and consumer; and an unproblematical, trustworthy market not only animates the farmers to take advantage of the potential in modern agriculture. Efficient distribution channels have an indirect effect on the prices and, thus, on the incentive to develop beyond the stage of traditional agriculture.

In view of the large number of fairly small producers and buyers in agriculture, group activities are frequently necessary. At the least they present a good opportunity to offer services less expensively. Internationally, therefore, the various types of cooperatives have a good reputation. The more help in organization, management, financing, and technical aid granted to activities without the help being dictated from above or having a paralyzing effect on initiative, the sooner the joint activities will be accepted.

The form the support institutions take is in each case specific to a particular culture and dependent upon the historical development. The extent to which this support is given has an important influence on farming. The promotional institutions make up, therefore, an essential element in the agrarian structure.

AGRARIAN SYSTEMS

The system of land tenure (that is, land ownership and labour organization) and the technological and economic conditions are not independent factors. Their concrete form is interlaced with the natural and social conditions found in each specific area.

The natural conditions not only influence the production factors -generally good and poor soil, enough precipitation, and temperatures favourable for growth and working - but also influence what types of ownership are found in an area: large farms are seldom found, for example, in regions where the soil conditions are poor and the topography is mountainous.

Even more important is the relation between the agrarian structure and the existing social conditions in the individual countries and regions. Feudal, capitalistic, and socialistic social orders result in very different conditions of land ownership, systems of labour organization, and forms of cultivation. The social system, in other weeds, makes up the framework within which agrarian structures can evolve. In this process the state as well as tribes, landlords, communes, and colonial powers can determine the conditions. Within the framework of social conditions, the agricultural sector's economic goals, the function land fulfils, and the political and social system play significant roles. The economic goal can vary from self-sufficiency and satisfying one's needs, maintaining the farm, earning rentor interest on capital, production for the market, maximizing profits, ormeeting economic plans. In doing so, land can function as a basis forearning one's livelihood, home, means of production, a commodity, an asset, annuity, power basis, or prestige object.Several functions can be combined.

The above-mentioned factors are not independent, but rather are embedded within a system; that is, a change in any factor results in a change in all of the other factors. The term "agrarian system" bas been coined in order to conceptualize this complex system. The "agrarian system" consists of the "institutional, economic, socio-organizational, and ethical patterns found in the agricultural sector and rural areas that are oriented towards the superordinate economic and social system" (RÖHM)

The following brief summary of the most important agrarian systems is by no means exhaustive and stresses in particular the most significant agrarian systems found in the developing countries.

Tribal and Kinship Agriculture

Migratory Herding

In this form of livestock industry, the animals are periodically driven to the pasture grounds. There are several types. In the case of mountain grazing or alpine cattle keeping, the livestock is kept in stables located in the valley during the winter; in the summer they are driven to the mountains by hired hands or family members who tend them and keep them there to graze. Transhumance is characterized by periodic migrations with herds that belong to owners who live in a permanent settlement. The herds migrate between two climatic zones that have very different conditions (e.g., mountains and lowlands). Therefore it is not necessary to feed in stables during the winter. This form is found in all parts of the world and makes use of marginal areas. Pastoral nomadism is the wandering of social groups (clans, extended families) with their herds through tribal territory that serves them as pasture lands and that is often theirs more on the basis of tradition and domination than legally defined.

The insecurity involved in an existence in marginal regions forces the groups to be strongly tied together in order to protect grazing and water rights. The leadership of the group, therefore, demands strictly observed loyalty on the part of the group members, while the leader gives patronage and protection. The individual families are principally equal.

Social differentiation is the result of a process of superior position of permanently settled cultivators with whom the nomads avoid integration by means of a special code of honour and closed marriage circles.

The right of use for the grazing areas is in the hands of the tribes, while the animals belong to the individual families. This differentiation results easily in the land being overgrazed if grazing land grows scarce. The tendency exists, namely, to own a herd with as many animals as possible and not to try to achieve high performance. The livestock is rot only the basis on which the group's own needs are met and a security against times of crises, but it is at the same time the only form of maintaining a food buffer stock in a nomadic way of life. It creates, furthermore, prestige; serves as a source of gifts needed to meet social obligations, and to pay the bride price for the purpose of tying social relationships that, once again, serve as a means of securing the existence of the group.

In many cases, there are economic ties to the settled population. This is necessary to meet the demand for non-animal products. In recent times, cereal cultivation by tenants and farm hands has increased.

Migratory herding is of great importance for reclamation of desert and marginal regions as well as transport and trade routes. The production is, however, low and the land is frequently devastated by being over-grazed. It is difficult to motivate the tribal groups to change their mode of production. This is namely at the same time their way of life, and a change would include settling. Efforts taken in this direction have, however, little success as this transition would man the necessity of taking up field cultivation, which is not respected, and giving up their elite position in other words turning away from the traditional culture.

Shifting C4ltivation

Shifting cultivation is a type of farming in which the land under cultivation is periodically shifted so that fields that were previously cropped are left fallow and subject to the encroaching forest. It is an

original method of making use of land and can still be found today in the tropical rain forests. Shifting cultivation in the narrower sense means shifting both the land under cultivation and the settlement. More recently, however, the tendency has been to shift only the land that is cropped while the settlement remains permanent due to the increasing population density and influence of the state.

The land is common property and is controlled by social groups, usually tribes. The chieftain or land priest designates land to the individual families for their use. The land is cleared by cutting down the trees and burning the land. This land is cropped for several years and then left forest fallow while another piece of land is cleared. The regeneration period maintains the fertility of the land if it lasts long enough -in other words, if the population is very small. In this case, such extensive usage suffices, with limited input, to enable a meager self-sufficient existence.

Labour is carried out by the family and is designated according to a culturally specific division of labour. Usually, the men clear the land whereas the women are responsible for planting, cultivation, and - in modern forms - marketing. This basically egalitarian social system is restricted to small groups, particularly families and tribes in which all needs can be satisfied and there is a strong solidarity, The groups practicing shifting cultivation have little contact with the new national states. At a time when the land was only sparsely settled, this system allowed a secure and lasting existence at a low level. There was no landless class, no land speculation and exploitation on the basis of private ownership, and the fertility of the land was maintained.

In recent times, the population increases in many regions have made it necessary to clear land more and more frequently and cut down on the time when the land is left fallow and, thus, endangered the fertility of the soil. An adjustment through tribal wars between tribes controlling a lot of land and tribes with little land is hardly possible today. The continual shifting of the settlements and fields hinders building up an infrastructure. The growing cities' demand for foodstuffs can only be satisfied

with difficulty as it is hardly possible to intensify production while using this system.

A transition of this system that no longer complies with today's demands, however, would meet with tremendous problems. It would necessitate the new states intervening in the traditional rights of the tribes. There is also a lack of suitable concepts. The concept that has been most frequently discussed to date is the individualization of rights in land. This, however, is a Western model that is so alien to the indigenous culture that it is only practiced hesitatingly.

Feudalistic Agriculture

Feudalism is not considered here under the aspect of an historical period in the development of society, but rather as a form of social stratification characterized by marked differences in property, income, power, and prestige. Between the minority consisting of large landowners and the majority made up of landless or people owning only very little land, there are mutually binding rights and obligations that are, however, very unbalanced.

Rental Feudalism

Fiefs, tax lease, or economic hegemony are the basis upon which the upper class of landowners (landlords) bases its domination over the dependent farmers and landless. As the latter have no other alternative means of earning their livelihood, they have to accept high rents, forced labour, and in some cases even personal dependence in order to find a livelihood as tenant or labourer. Even if agrarian reforms and economic development have brought about some changes, this system still exists in many parts of Asia as well as in the Mediterranean countries and Latin America.

Essential for the formation of this agrarian system is the concentration of the ownership of land and water in the hands of a few landlords whose interest in the land, however, is limited.

They segment the land into very small parcels to be farmed by sharecroppers. The duration of the contract often lasts for only one vegetation period. They are, indeed, frequently prolonged by tacit agreement, but the insecurity leads to a state of dependence. The gross output is divided between the landlord and tenant in the case of sharecropping. The tenant must obey the landlord's orders on cultivation. Because of the small size of the plots they rent, the economic situation of the sharecroppers is critical and they frequently lose even more freedom to the landlords as a result of debts. The landlords try to gain higher incomes by means of high rents while investing little effort instead of trying to reach the tenants to crop more intensively. The land is a source of rent for them that at the same time gives them prestige and power since the tenants' dependent state covers even their personal living conditions and forces them to be loyal in all situations. The system takes from the poor and gives to the rich. profit is derived by siphoning off as much as possible, not by increasing production.

The large landlords do not control the tenants personally, but rather leave the job up to overseers (formerly to sub-leasers as well) who increase the exploitation. Although restrictions limiting the amount of land that can be owned have been introduced through agrarian reforms in the post-war period, they have often led to only a replacement of the large landlord by the petty landlord. Since the latter lives in the village, the control is even stricter. In areas in which the Green Revolution took place, the system has disintegrated because the landlords evicted the tenants and began to cultivate the land themselves. Under the new wage and earning ratios this proves to be more economical. .

Latifundia (Hacienda)

Latifundia are overdimensional pieces of landed property covering tremendous areas. Today, they are only found in Latin America. The most widely spread form is the hacienda (facenda) that originated under colonial law allowing forced labour recruitment and through land grants for military services. A hacienda is an economic and social entity that, similar to a

small state, strives to be self-sufficient and autarkic and is centered upon the "patron". The hacienda is not a farm but rather an area of land on which several different forms of labour organization and land utilization exist simultaneously, e.g. , plantations and sharecropping. The intensity of the cultivation is very different on different parts of the hacienda, although low all in all. The haciendas include forest and waste land in their property.

The various economic units on the hacienda are tied together through labour relations. Cash is used as little as possible. The patron receives work performance from the labourers, tenants, colons, herdsmen, the management, and other personnel and provides - even if with very low standards -schooling, medical aid, subsistence, old-age benefits, and stores. Wages, credit, and purchases are calculated together in an account in the store.

For the haciendero, the land is above all a source of respect, power, and speculation. Its significance as a basis of agricultural production is only secondary. The large landowners are the financial aristocracy in the countries and have a large influence on the government. A change in the government often only mans that another family takes over. Despite their political interest, the hacienderos strive to uphold regionalism and, this, hinder the construction of an infrastructure in the country. There is a distinct class structure with landed property and race as the most important characteristics determining the strata. The patriarchal structure determines the life of the people from birth to death. It is hardly possible to break out of the system as there is nowhere else to find work. The coexistence of latifundia and minifundia (marginal farms), abundance and destitution, is hardly as marked in any agrarian system as this case.

Family Farming

In the case of family farming, the property and usage rights are in the hands of the individual families. The management and labour are carried out by the family that owns the farms and, thus, are independent of larger social groups. This type is found in Europe, in the European settlements as well as in many other parts of the world.

Land is the integrating factor in this rural social system. It is simuntaneously the basis of existence, production factor, wealth, and home. In accordance with time-honoured custom, the land is nut sold, but rather used and then passed on to the next generation. The economic goal is to satisfy the economic and social needs of all of the people living on the farm. Being a long-term goal that lasts for generations, farming must be carried out in such a way so that the fertility of the soil and the environment are not harmed.

There is a correlation between farm size and labour capacity. The ideal situation is when the farm is only large enough for the family re be able to carry out all of the work itself while meeting all of its needs. If the farm size is adequate and can satisfy these requirements, family farming is a stable system whose social stratification is limited and, therefore, is especially suited for cooperative work. In this case, the economic performance is remarkable. A decrease fn the farm size as a result of being distributed among the heirs or loss through debts can endanger the system and sometimes leads to a transition to a feudal agrarian system. By educating and providing heirs who leave the farm with a start, the system renders considerable benefits for other economic sectors.

In Europe as well as in some developing countries, the farms have shifted their orientation towards the market, capitalization and the employment of modern farming methods under the guidance of extension service.This was accompanied by an increase in the size of the farms as an effectof the higher capitalization. Depending on the concomitant circumstances,this was connected with some of the farmers changing their occupation and taking up jobs outside agriculture or merely losses of property and a drop in social status. Since the latter is frequently the result of mismanagement and the inability to adapt to changing conditions, the attempt is sometimes made to take the key farm management decisions away from theprevious farm manager through a system of 'production under supervision" achieve better results by means of central control. This can eitherbe brought about by vertical integration or coercion and is especially-widespread in the case of settlement projects.

As soon as an increased number of non-agricultural job opportunities are available in a region, various types of sideline activities and parttime farms crop up. In other words, one or several members of the family take up a non-agricultural occupation.

Modern commercial farms are a derivative of the traditional family farms with a sure commercial character. In the case of market-orientated, capital intensive family farms in Europe and the developing countries, however, the difference between commercial farms and family farming of a nor, peasant nature is becoming increasingly smaller.

Capitalistic Farming

Various forms of farming with characteristics of capitalistic management exist in the world. Examples are the farming corporations in North America, the ranches in Latin America, and the agroindustrial konbinats in Eastern Europe. The most important type of capitalistic farming in the developing countries are the plantations. A plantation is a large scale farm that primarily grows perennial crops, e.g., trees or bushes or shrubs, frequently in a one-crop system. The produce is usually processed industrially in the plantation's own processing plant and is destined for export (sugar cane, bananas, tea, coffee, cacao, sisal, oil palms, coconut, etc,), The plantation are often owned by foreigners.

The industrial processing demands consistent quality and an uninterrupted delivery of a quantity sufficient enough to make full use of the plants' capacity. The management is, therefore, characterized by strict control and a rigid hierarchy. By employing top-level personnel for the management, the productivity is very high. The plantation, however, serves first and foremost foreign interests and, as an enclave, is often of little benefit to the domestic economy. The countries receive large sums from the export taxes, indeed; however, the economic and political influence is sometimes considerable. Furthermore, the social conditions are often poor, although this varies. The working mass has a very low income, few prospects of a better job, and often miserable living conditions. The plantation supplies living quarters, indeed, but they are frequently of

the poorest quality. Nutritional and health conditions are poor, partly due to the lacking subsistence production. Labourers are often recruited from other regions, countries, or population groups, which leads to even greater problems. Plantations that are owned by the domestic elite have the same characteristics, with the only difference being that the productivity is frequently lower.

Collectivistic Agriculture

According to the degree of collectivization, it is possible to differentiate between several basic types within this greatly varying agrarian system. In the case of socialistic agriculture, the means of production base been put into the hands of the public and the production is planned by the state. Communistic agriculture is not only an economic system, but rather an entire way of life. This can be politically or ethically/religiously based.

Socialistic Agriculture

According to the socialistic ideology, private ownership of land leads to exploitation. The socialization of the means of production is, therefore, an essential element of this agrarian system that is predominantly influenced by the political ideology. Belonging to this is the conception that small farms have been passed up by technical progress and should be combined into large economic units, therefore. The third component is the rigid state planning of the agricultural production. Thr actual longterm goal - abolishing the difference between agricultural and industrial ways of life - has not been achieved to date. In fact, there are great differences between the individual East European countries and Cuba regarding the extent of their presently achieved socialization. Thus the extent of the socialistic sector in agriculture fluctuates between 96 in the USSR and only 31 and 15 % in Poland and Yugoslavia, respectively. The rest is split among small private farms and household plots that are allowed to the members of the collectives in all of the countries.

Regarding the farm organization in socialistic agricultural forms, a differentiation must be made between state farms (sowkhoz) and collective farms (kolkhoz)-The latter is often given preference because although it is subjected to complete state control, the state does net have to bear the economic risk. This is shifted onto the shoulders of the members. Furthermore, the state can influence and direct wage levels as well as capital formation and capital transfer by means of delivery quotas and fixed prices. In other words, it can use the agrarian sector for its own economic policy goals. In this system, the individual household plot production plays an important role. In this case, labour intensive production is carried out in order to improve the farm members' own supply while simultaneously producing crops that are difficult to grow on a large farm unit. Animal husbandry also plays a certain role in the household plots. The profits allow an improvement in the otherwise partially low incomes.

The system has a few elements that have to be regarded as weak points from a production performance viewpoint. The collective bas to employ anyone looking for work owing to the right of employment, even if they are not needed. The percentage of controllers and idle time resulting from red tape on government farms is high. This, together with difficulties with the supply of inputs, results in relatively low production performance that, even over a longer period of time, cannot measure up to the productivity of Western industrial countries, It must be mentioned, however, that this is only one possible judgment criterion. The picture would be different if one took the factor contributions - the capital and labour transfer in other sectors - and contribution towards the political goals in these states into consideration.

Communistic Agriculture

Communistic agriculture can be based on a political and an ethical-religious syndrome.

In contrast to kolkhozes, the Chinese people's communes are a form of collectivization comprising all economic and living sectors - in other words, not only agriculture. The entire population in a region belongs to

it, not only the agricultural population. This entity that can be as large as a rural district organizes within the area it covers agricultural and industrial production, services, education, health services, cultural programmes, the administration, and political matters as well as some aspects of consumption and personal life.

Work is rigidly organized in a fashion similar to in the military and is descliplined. Internally, they are divided into three levels that carry out the work (production groups, production brigades, and communes), whereby the relationships between state- commune and commune-brigade are regulated by contracts. The economic activities take place within the framework of state planning that, however, leaves room for local decisions.

The basic needs are regulated in an egalitarian manner and met with a basic cash wage and pay in kind in the form of staples as well as free education and health services, etc. In addition, it proved necessary to introduce bonuses in order to increase productivity as well as to allow private small-scale farming. Thus the society is in principle classless, but bonuses and private household plots as well as the existence of functionaries led to the formation of new social strata. However, the differences in income are no longer the result of differences between persons and/or families but rather between communes with different production and marketing conditions. These, in some cases, considerable differences are not directly noticeable.

The system is still in a process of change and has also led to important transformations in the society, e. g., the old family system no longer exists and woman have been granted equality. It is particularly the success in organizing the population to build up the economy and form capital that makes this system attractive for other countries. It must be mentioned, however, that the possibility of, and conditions for, successfully introducing the system in other countries have not been adequately analysed.

Collectivization has not been limited to socialistic systems. From of old, philosophical and religious communities have tried to create a way of life devoid of social differences, property, and mutual exploitation -

an other words, under the signs of fraternity, equality, and justice. Usually they were small groups. In durability and significance, the kibbuz in Israel stands out among the other groups. This is a voluntary community, comprising people, land, and capital for the purpose of collective production, distribution, consumption, and living. In all comunistic forms, coercion played an important role in making the people take part. This took place either in the form of political pressure or an acute state of distress for the population that could be more rapidly overcome in a collective.

AGRARIAN REFOM

The specific agrarian structure and the existing agrarian system are the manifestation of the most appropriate combination of people, land, and technology with the framework of the existing economic and social conditions. Along with these, they are subject to continual change. In the course of history, the process of adaption to changed conditions and demands frequently did rot take place rapidly enough. In earlier times, these retardations in development were most frequently found in the fields of political and social order. The present worldwide striving for rapid economic development has shifted into the focal point of the discussion the hindering factors in the agrarian structure that affect agricultural production and rural development.

This stressing of the economic components should not be deceptive and attract the attention away from the fact that inequality, dependency, and lack of equal chances for the majority of the population have their roots in the agrarian structure and the predominant systems.

Changes in the agrarian structure are necessary in many parts of the world. In the type of shortcomings and the changes that are necessary, however, there are great regional differences. While leaving out many details, the attempt will be made in the following to make this clear, by sketching the most important problems in the Third World.

In Latin America, the major problem is the contradiction between latifundia and minifundia. The large landowners represent not only the economic upper strata, but rather also have political power and dominate the social system. Their wealth makes it unnecessary for them to make complete utilization of their land. Their situation sharply contrasts with the situation of the dependent peasants who usually have only small plots at their disposition in their role as sharecroppers, colonates, or squatters (people who settle, or squat, on land to which they have no title). One of the major reasons for their poverty is their lack of access to land under the existing conditions. They have hardly any chance of improving their living conditions. The same is true of the workers who are employed on the plantations that are, in some cases, intensively cropped. In these circumstances, a change in the power structure is the necessary primary step towards an improvement. Since this is strongly based on the control of the land, a change in landownership gains most importance. In connection with this, one has to face the challenge of the special problems of the minifundia in order to improve the living conditions for the small farmers.

In Asia, changes have taken place in the agrarian structure in the last 30 years as a result of agrarian reforms and, partly, the Green Revolution, but often only the extreme cases have been touched. A limited number of landowners still own large parts of the land that they allow small sharecroppers to farm. Many of the farmers have very small farms and are indebted. Large sections of the rural population are even landless and usually underemployed. Despite the great population pressure, cultivation is often of a poor quality because the farmers are not given the freedom to make their own decisions or they do not have adequate access to the necessary services. These shortcomings require not only a change in the land tenure system, but rather in addition also measures for reorganizing land use and management

In Africa, the - for the most part - lack of private landownership has allowed a relatively egalitarian agricultural society. Problems arise from traditional shifting cultivation functioning inefficiently under new conditions. The transition to market production and permanent crapping, family members changing occupations, increasing population pressure, and

disintegration of the tribal system have created a new situation that can be better confronted by a reorganization of production and management than a change in land tenure.

The necessary changes in the agrarian structure can take place various ways. Measures to adapt the agrarian structure take place in small steps over a long period of time. They work mainly be means of incentives such as taxes, subsidies, investments in agriculture, setting up extension services, etc. They are suited for supporting the continual adoption of the agrarian structure to changing conditions, but they are too mild to balance out serious shortcomings once they have arisen.

Agrarian reforms are measures designed to overcome obstacles hindering economic and social development that are the result of shortcomings in the agrarian structure. Changes in land tenure - i.e.. ownership and tenancy and labour organization - as well as changes in land use (reform of land management) belong to these measures. Agrarian reforms make use of legal force and intervene in the property and land use rights of the people, although with certain compensations. Formerly, the term 'land reform' was common. This term, however, only points out changes in the property rights without referring to changes in cultivation. Owing to the increasing importance within the scope of the struggle for economic development, it is used today less frequently.

Agrarian revolutions are spontaneous, radical changes in the traditional agrarian structure with uncompensated redistribution of all rights and usually a drastic regrouping of the society. The terms 'agrarian reform' and 'agrarian revolution' are frequently not clearly differentiated. They do not differ so much in their goals as in the speed they are forced through and how radical they are. For development planning, agrarian reforms have the most significance since they can be used as an instrument and shaped according to policy goals. Thus agrarian revolutions frequently turn into agrarian reforms following the upheaval. Agrarian revolutions and socialistic agrarian reforms are not identical. Agrarian reforms as well as agrarian revolutions can have redistribution as well as collectivisation as their goals.

Objectives of Agrarian Reforms

Agrarian reforms usually have an entire package of goals. They are often imprecisely formulated and can only be deduced by looking at the list of measures. This is because the laws are passed during unsettled periods in which there is very little time to formulate them precisely. Sometimes it is also done on purpose, especially if the government is forced to introduce the reforms through inner or external pressure. Imprecise formulating of the goals makes it easier to effect changes later on and increases, therefore, flexibility. Most reforms comprise political, social, and economic components. Classifying them is somewhat arbitrary because there are many overlappings, even goal conflicts.

The kernel of agrarian reforms are changes in the power structures, i.e., political events. The goal behind abolishing large-scale land ownership and feudal forms of power and liberating the small farmers and tenants is to put an end to unrest among the rural population and integrate it, in many cases, in the overall society for the first time. Stabilizing the political system likewise often plays an important role as a goal. Reforms passed shortly before a revolution maintain the old order, while reforms carried out after a revolution help legitimize the new order.

In the social sector, the goal is to reduce inequality in income, wealth, and chances in life. Since this inherently means a conflict of interests between those who own property and those who own nothing, it is as impossible to separate this target from the political goals as in the case of improving the status of the rural population and liberating it from feudal bonds.

The economic goals consist of increasing production and productivity in agriculture, improving capital formation and transfer, employing more labourers, and later on discharging them with progressing development, as well as increasing the demand for inputs and services that work as incentives towards development in non-agricultural sectors. An improvement in the balance of payments by increasing exports or avoiding imports by raising domestic production is likewise an aspiration. In addition, mutual

promotion of the agricultural and non-agricultural sectors by increasing coordination between them is a goal of some agrarian reforms.

In the individual cases, the goals and goal combinations are determined by the existing situation and are especially influenced by the conditions at the beginning, by the already achieved degree of economic development, and the existing social system. The package of goals has grown continually more complicated over the years. Whereas in past centuries more equality was the main goal of most struggles for agrarian reform, there are many variations today. According to the particular political ideology, the target will be collectivization of family farms based on individual property or permanent rights of use. In these cases the attempt is also made to attain the advantages of larger units by founding cooperatives. If the priority is given to making a contribution towards economic development, the measures may concentrate on an increase in production and more employment In the case of an already achieved higher level of development. and already existing occupational alternatives, income distribution gains more significance than the distribution of land. Higher incomes bring with them a tendency towards larger farm units. The changing technology that results presents special demands on the agrarian structure, especially the suitability for mechanization. Just as agrarian reform is not a one-time process, but rather an adoption to changing requirements and circumstances, the reform goals shift in type and intensity in the course of time.

Agrarian Reform Measures

Measures to leader, land Ownership

Redistribution of Land

Requisition of land: Most agrarian reforms include the expropriation of land. In socialist countries, landed property is often totally expropriated whereas this otherwise usually happens to only certain groups (e.g., absentee landlords (Japan) and members of earlier dynasties (Egypt). Normally, a ceiling is set governing the amount of landed property allowed, and any

areas of land that exceed the ceiling are expropriated. The ceiling determines the extent of the redistribution. Fixing it is, therefore, a primary political decision that is decided more by the ability of the government to realize its goals rather than economic considerations. High ceiling affect only a few landlords and are, therefore, easier to initiate; however, in that case only very little land is available for distribution. The lower the ceiling is, the greater the opposition that will be met with since larger family farms will also be included.

It must also be taken into consideration that the land ceiling will also limit the income that can be earned from farming which could eventually lead to the most qualified sections of the rural population migrating. When put into practice, it will be difficult to fix the ceiling so low in densely populated countries that all demands for land would be met as this would lead to the establishment of uneconomic farms as well. Some countries exempt intensively cropped areas (fruit plantations, intensive animal keeping) from the ceiling in order to promote such desired conditions in accordance with the agrarian policies (Pakistan, Iran). For similar reasons, a higher ceiling is set in some cases for owner-cultivated land than for rented land (Japan, Greece).

The reform laws frequently include a stipulation that the fixed ceiling is not allowed to be exceeded in the future either by buying additional land, inheritance, etc. Exempted occasionally is the farming of previously uncultivated land (Korea). In some cases, the permitted land ceiling is lowered in several stages so as to make the measures less radical and, thus, lower the resistance. Inversely, some countries discuss whether to abolish or raise the ceiling after having reached an advanced level of development, shortage of manpower, and progressive mechanization (Taiwan, Korea).

A number of countries would like to avoid the complicated administrative problems involved in redistributing land and animate landowners to sell land on a voluntary basis to tenants or landless by threatening to initiate reforms, or by means or tax incentives, or by granting a space of time be-

fore the reform laws go into effect during which owners could voluntarily sell their surplus land (Taiwan, Thailand, Egypt). Since, however, tenants and landless do not have the means to buy land, the land usually does not reach the hands of those intended in this way.

The Gandhi discipIe VINOBA BHAVE's appeal within the framework of the 'Bhoodan' and Gramdan' movement to the landlords for land grants is a special case that was limited to India and had very limited practical effects. Its significance consisted of shifting the idea of social obligations involved in owning land to the centre of the discussion.

Distribution of land: The expropriated land can be used to give landless land or increase the size of farming units that are too small. Since in the latter case draught animals and implements as well as experience in managing a farm are already available, this is often given priority.In other cases as well, an effort is usually made to create farming units that are large enough to supply a family with a basis for their existence. This naturally limits the number of beneficiaries. A priority scale is, therefore, frequently drawn up in which the actual cultivator of the land is put at the top of the list, followed by others living in the same area (Egypt, Syria).

The rights of the new farmers are usually restricted. In some cases, the land may not be sold or mortgaged in the future (Mexico). Usually it cannot be sold until the last installments have been paid on the purchasing price. Some laws fix a minimal area limit that cannot be overstepped by division, sale, etc. (Egypt, Pakistan). In other cases, the state reserves a right of disposition if the land is not cultivated properly, or it insists on the land being farmed by the owner himself, or forces membership in an agrarian reform cooperative (Egypt, Syria, Irak) in order to ensure the success of the reform.

Financing redistribution: In socialistic countries or in the case of certain groups (state enemies, foreigners), compensation is rot paid for expropriated land. On legal and moral grounds, compensation is paid in all

other cases; however, the amount varies greatly. A large compensation hinders planned redistribution of wealth and effects only a change in the contents and form of the wealth since the wealth is then increasingly invested in non-agricultural fields. In practice, the size of the compensation depends to a large extent on the state's ability to enforce its goals. Following revolutions, therefore, compensation is usually lower than that paid in the case of reforms before a revolution. Sometimes compensation is cut later on or devalued by intentionally accelerating the rate of inflation (Japan).

Evaluating the expropriated land causes tremendous problems as land appraisals are usually not available. Experiments were made employing a percentage of the market value (Kerala and Orissa in India), with several times the land tax (India), and the productive value (Egypt, Korea).

Compensation is seldom paid all at one time (Colombia) but rather in the form of an annuity over a period of 10 to 40 years. Sums that are too small are frequently not invested but rather increase consumption and, thus, inflation. In order to ensure that a large percentage will be invested, compensation is paid in the form of industrial shares (Philippines, Taiwan) or in government bonds that can be used to pay taxes or, sometimes, to buy uncultivated land (Egypt). By issuing the bonds in the form of quantities of staples, compensation is protected against inflation (Taiwan).

The beneficiaries of the reform seldom receive the land free, but rather must pay for it in installments, frequently after a period of a few years of grace. The installments are often fixed as high as the amount paid as compensation (Egypt, Philippines). If surcharges are added for administrative costs (Egypt, Syria), then the reform does not represent a burden for the state. It should be taken into consideration, however, that the purchase price lowers the chances of raising the new farmers' living standards. If production is not efficient, the new farmers cannot meet their obligations and the state has to carry a heavy burden in its budget. In such cases, the agrarian reform does net promote economic development, but rather becomes a burden that the state can only escape by lowering the sooner paid as compensation, or by planned inflation.

Collectivization of the land

According to the Marxist/Leninist doctrine, private ownership of land leads to exploitation and must, therefore, be abolished. Until now, however, this has only been done within the USSR, whereas other socialistic states have mixed systems comprising socialized and private ownership of land. The collectivization process consists actually of several changes. The land (all land or only large farms) is socialized, or rights are transferred to specific groups. Furthermore, the farm structure is changed so that larger economic units arise (kolkhozes, state farms). Small plots, however, are left to the workers fur their own use. Finally, the organization of labour is changed so that the workers have no similarity to independent farmers, but rather assume the character of wage labourers.

In the single states, the collectivization process has achieved different levels and in some cases has been revoked. Furthermore, there are deviations from the above-described scheme, In peoples' communes, the land does not belong to the state, for instance, but rather to the production brigades that allot the right of use to the individual production groups. In the GDR, the collectivized land is still legally private property and the right of use was granted to the cooperatives by the state.

In collectivization, legal or psychological coercion has always played a large role. This is also true in the case of non-socialistic examples of land being collectivized. In these instances, extreme situation or religious belief exercised similar pressure, whereby the participation was generally voluntary. In the case of the Israeli kibbutzim, the land belongs to the state that leases it for a symbolic sum to the kibbuzim. In this instance, the collectivization comprises land utilization, distribution, parts of consumption, and private life. The mexican agrarian reform partially transferred land into the hands of the village community that allotted the individual members a heritable right of use. The widely discussed experiments with cooperative fanning, especially in India, have until now had little practical significance.

Individualizing land

Until the present, individualizing land has been more of a discussion theme in the African countries south of the Sahara than a practical measure. The occasion were the economic and social changes that made it necessary to rearrange the land tenure. Thus permanent cultivation replaces the traditional redistribution and leads to individualization without legal regulations. The same thing happens when - as a result of dense settlement - the time land is left fallow grows continually shorter and, finally, completely disappears. Attempts to increase intensity demand a longer planning horizon before there is an incentive to make investments. In addition, people with wealth, information, and influence have understood how to obtain a more or less legal title to areas of land. This leads to the danger of land becoming concentrated in a few hands.

Individualizing land tenure would indeed solve some of the existing problems; however, it might create more new problems. In particular, there is the danger that this process will be carried out at the expense of backward sections of the population and put an end to the relative equality in the society. Since individualizing demands a great deal of administration and is expensive, as well as the fact that there is no guarantee that the advantages would outweigh the disadvantages, only a few countries have to date decided to undertake concrete measures. In these instances, titles were granted in recognition of already existing circumstances, or they were settlement projects.

Improving Tenancy

In countries in which tenancy is widespread, very many small cultivators are not touched at all by measures to change ownership. Since it is precisely the situation of the tenants that is frequent very bad, most agrarian reforms include measures to improve the conditions of tenant farming.

In some cases, they attempt to increase the tenants' security. This can be done by making regulations governing the form of tenancy contracts, such as stipulating that they must be in written form (Taiwan, Korea, Irak, Egypt).

or making it obligatory to register them (Taiwan, Korea, Indian states). Sometimes, a minimum duration for tenancy is laid down (Taiwan, Egypt, India) and notice can only be given on specific grounds such as self-cultivation, if it can be accepted from a social standpoint, negligence of the tenant, or permission of a tenancy commission (Taiwan, Burma, Ceylon).

Other regulations attempt to influence farm rent, e. g., by changing sharecropping to cash tenancy (Korea, India). Many countries have regulations limiting the hight of the rent (Korea, Taiwan, India), or anulling the obligation to pay rent in the case of crop failure (Japan, Taiwan). Abolishing the tenants' secondary obligations is likewise a way of reducing rent (India, Taiwan). Sometimes, compensation is promised for investments that are approved by landlords or tenancy commissions (India, Pakistan). Most of the laws forbid subleasing (Egypt, Japan, Pakistan) or limit it to specific authorized cases (India, Vietnam, Japan).

To even a much greater extent than in the case of changes in land ownership, the measures aiming at improving farm tenancy remained on paper. This is a result of the fact that expropriation is a one-time administrative act, whereas enforcing tenancy laws demands continual control. Furthermore, it can hardly be expected that those concerned will cooperate. These measures are against, after all, the existing conditions on the land and tenancy markets - similar to the instance of efforts to enforce a minimum wage far farm workers. Tenancy laws have a chance if the tenants have an alternative livelihood. The dependent tenant who is happy to receive a piece of land to cultivate will be willing to accept additional agreements and relinquish his rights. In some countries, tenant associations have indeed managed to improve the tenants' position in negotiations, however, tenancy laws have generally shown little success.

One of the important factors here is that the landowners have not only a landlord- tenant relationship with their tenants, but rather they also have a labour relationship, credit relationship, welfare relationship, and loyalty relationship with them. It is hardly possible to separate any

component from this complex.

Owing to the limited success of the attempts to regulate farm tenancy, some countries have given up this goal. Instead they want to completely abolish tenancy, e.g., by promoting owner-occupancy (Korea, Venezuela, Bolivia, India). In this instance as well, the success is limited because landlord-tenant relationships can be easily disguised as working relationships. By agreeing to circumvent the law, the tenant winds up being even more dependent. Furthermore, it is also possible that by completely abolishing tenancy an important regulatory factor accommodating labour, capital, and land may be done away with.

Measures to Reform Land Management

The political goals of agrarian reforms can be largely achieved on the basis of land ownership reform measures. Therefore, in the past when these goals stood in the foreground, land ownership reforms were sufficient. An increase in production and income - as it is demanded today, in addition -can only be expected if the redistribution of the land is accompanied by measures to improve land management. By these measures, new farmers are either supplied with missing knowledge or inputs, or functions that were carried out by the landlords until then are taken over by someone else. In substance, these are first and foremost the usual agrarian policy promotional measures that are, in this case, integrated into the land ownership reform process and thereby increase its chances of success.

An important task is advsnsing and true the beneficiaries of the reform. This is all the more important if previously landless are granted land. In this case, both the question of cropping techniques as well as farm organization and guidance in marketing have to be supplied. If the new farmers come from other regions, they do not have any knowledge of the local soil and climatic conditions and their consequences for agriculture. Tenants who were previously used to working under the supervision of a landlord need help in adjusting to the new situation. As a result of the size of the farming units being reduced, animal keeping will surely spread

and bring along with it extension service tasks. Following an agrarian reform the number, level of knowledge and the type of production of the extension service clientele changes because instead of a few landowners there are many small farmers that have to be advised. That demands an increase in the number of extension workers and, possibly, a change in the extension service methods with a transition from individual to mass extension methods. This may make it necessary to organize the farmers in groups.

Before the extension work can be intensified, the extension workers have to receive the necessary training concerning both contents as well as methodology. Specifically regarding farm organization and marketing, there are often considerable gaps in knowledge. The extension personnel has to function as intermediaries between the farmers and the state promotional institutions and make public what the government offers. The activities of the extension workers make it necessary to further develop and reorientate the targets of research.

As a result of the change in land ownership and management, investment and financial problems arise that demand a functioning credit system. In particular, short-term credit is necessary for financing the running production and cost of living until the harvest. In addition, the feeling of security might lead the new owners to make investments and, after all, the landlord used to often finance part of the farm costs. A substitution has to be made available for that if the farmers are to be kept from becoming dependent once again as s result of debts. Unless their demand for credit is met, the new farmers are sometimes unable to make use of the land allotted to them.

In practice, however, it has proved to be very difficult to organize functional credit programmes for small farmers. The banks are frequently not very interested in loans for small farmers, and if property rights are not transferred completely, then there is no possibility of getting a mortgage loan. Numerous experiments with group and cooperative credit failed because the procedure for granting credit was too slow and unwieldy

and the loans were not repaid. Because of the high personnel expenses for small farm credit, it is sometimes not possible to avoid subsidizing them.

The organization of the marketing system for both selling the products as well as procuring inputs is important for the target of increasing the yield and incomes. As the existing facilities are mainly set up to meet the requirements of large farms, entirely new organization will have to be established in some cases. This is also often necessary because a change in the type of produce is a result of a change in the farm size structure leads to the marketing of products for which there are no marketing channels. According to the state's choice, state, cooperative, or private forms are given preference. All of these can only then be successful if the required transport and communication networks are at hand aswell as whether the legal framework and control instances have been created.

All of these services have a better chance, if the majority of the small farmers are organized in cooperatives or similar groups. Innumerable agrarian reforms make provisions, therefore, for the establishment of such organizations. These vary according to the number of services they offer and the extent of the self-help concept behind them. Much more important than the organizational form and the contents of the statutes is that cooperation takes place; that is that the members make use of the advantages of acting together.

The facts have shown that it is not always enough to offer these measures to promote cultivation to the new farmers and leave it up to them whether to make use of them or not. This would sometimes lead to a very slow adaptation by the individual farm managers and result in yield increases being hesitated. Therefore, it is believed necessary, in some cases, to make provisions to enforce the employment of modern farming methods. For this reason, the new farmers, after the Egyptian agrarian reform had been passed, had to, according to law, enter an agrarian reform cooperative that was given certain key functions to ensure the farms success. These cooperatives that were directed by a trained agronomist took over the responsibility for providing seed, fertilizer, credit, plant protection, machines,

and marketing the produce. In addition, the crop rotation was made uniform in order to allow ploughing to be carried out without being limited to the boundaries of the single plots. All other field operations were the business of the individual farmers. Not only large increases in outputs, but especially the fact that there was no decrease in outputs immediately following the reform, proved the success of such measures.

In the case of some settlement projects as well, production under supervision plays a role and ensures that the large capital investments for the project pay off. If training for the purpose of creating more self-reliance is not included in *these m*easures, it can easily result in a continual need for supervision and guidance which would cost the parties financing the project accordingly.

Executing a land Reform

It may be astonishing that despite the acute necessity to change the agrarian structure in many parts of the world - with sometimes extreme inequality, dependence, and very poor living conditions for the rural masses -agrarian reforms are quite seldom executed. Obviously, this potential does not suffice. An analysis has shown that a certain a1eaah of political instability or considerable economic changes ~nst stso take place. The rural population must work together with officers and the technical intelligentsia - in other words, the urban middle class - in order to unleash revolutionary upheavals.

In this case, there are two possibilities for an agrarian reform. During, or following, a revolution the new leaders must legitimize their rule and, therefore, get the rural population on their side by means of an agrarian reform. As soon as they *have established* their power, the interest in the agrarian population tends to wane and, consequently, the interest in agrarian reform. In regard to socialistic reforms, rural welfare is replaced by party ideology; agrarian reform helps realize this by collectivization and the formation of large economic units.

On the other hand, directly before a revolution the old leaders try to remedy worst grievances through an agrarian reform and alienate the intelligentsia in the eyes of the farmers. In this case as well, the tempo of the reform slows down generally as soon as the danger has been averted. The necessary cooperation between the rural population and the middle class is so rare because their interests are quite different. Farmers strive for tangible goals: land, rent reduction, better prices, and aim their demands less at the state than at landlords and officials. Furthermore, they are split and have trouble expressing their interests politically.
The intelligentsia has, in contrast, abstract political goals;they strive to establish a new society, whereby agrarian reform has a symbolic character.

There is also frequently a large difference between the wording of the reform legislation when it is passed and what success is really achieved. A very strong political will and ability to enforce one's plans are necessary before an agrarian reform can be enforced.

On the one band, the existing administrative body is politically functionally overtaxed. High placed official come from large landowning families and find themselves, therefore, in a conflict situation. Low ranking officials are not independent and, in some cases, bribable. Particularly in the instance of an unstable government, they are afraid to enforce the laws strictly because following a change in governments, the position of the landowners might establish itself again and they would suffer disadvantages. The absence of a land register and laws that are not written clearly and precisely result in questions and insecurity which gives the landlords the opportunity to turn to the courts. The pause they thus win allows them to take countermeasures and, fairly often, to bridge the time when the laws are strictly enforced.

Such opposing activities have to be expected with every reform owing to the interests of those affected by the reforms. They commence already before the law is passed with the attempt to reduce the measures to a minimum and allow many exceptions. It is sometimes also allowed to divide land among all of the family members before the law comes into effect. While the measures are being executed, the administrative personnel is hindered, and the attempt is sometimes made to abolish laws that have already been passed. Especially if there is a rapid changeover, in governments, this is sometimes possible.

Among the methods to head off agrarian reforms is the propositioning of alternatives. Taxes are generally mentioned in the first instance. It is true that it is possible to achieve certain effects by means of taxes used to either hinder or as incentives for specific goals, but these measures have as a rule little effect, especially due to the low absolute level of agricultural tax rates. The settlement of new land is likewise hardly appropriate as an alternative. It is able - where there is suitable land available at all - to reduce the pressure on the land and increase agricultural production; however, settlement measures are very expensive and personnel intensive and can only affect a small number of people. They rather distract from the real agrarian reforms. The same can be said of the normal agrarian policy measures. If the goal is limited to small changes, they can be successful. The greater the significance of the political goals in the agrarian reforms, the less such mild measures will suffice.

Effects of Agrarian Reforms

While neglecting many differences, the consequences of agrarian reforms can be divided into five areas.

Promoting Equality in the Rural Population

Agrarian reforms influence the basis of economic and political power in rural areas - land and its distribution - with their redistribution measures. The extent to which equality is reached within the agrarian sector depends on how radical the agrarian reform is. It is, therefore, greater in the case of agrarian revolutions and socialistic reforms. If

the reforms are mild, the effects are limited. By intensifying cultivation, the landlords can make up for eventual drops in income resulting from land losses. in other respects, one should not place too much hope in changes at the village level. The situation of the landless and tenants is hardly altered if a large landowner has to usually give up only a small part of his lands. The psychological effects are sometimes of most significance. The reform shows the lower class that it is possible to take something away from even the large landowners, and these see the reform as a warning to change their behaviour accordingly.

How compensation is regulated plays a great role in changes in the landowners' economic situation resulting from an agrarian reform. The higher the compensation, the less equality will result from the reform. This is important for the question as to what extent the landowners' power position will be changed at a regional and national level. Compensation in the form of industrial shares only changes the composition of the wealth, but not its extent.

The political position of the rural population is also influenced by land management reform measures. Making the necessary services available frees the farmers from certain dependencies, particularly in the credit sector, whereas reforms that do not regulate these needs can hardly change the old relationships.

Failing to consider water rights enough has likewise made more than one "landlord" into a "waterlord".

Agrarian reforms generally shift the balance of power at the national level from the large landowner class to the state and, thus, increase its capacity to act and its scope of authority. Weakening the landowners' position decreases their influence. Furthermore, the state's influence on agriculture is increased by organizing the extension service institutions. Semigovernmental cooperatives are also a control instrument for supervising and influencing agricultural production. The arrangement of the compensation presents a chance to influence investments in the agricultural sector.

Increasing Incomes and the Living Standard

An improvement in the living conditions of the rural population can be achieved primarily by increasing production. Since land management reform measures in particular work as an incentive for production increases, these have a considerable effect on income. But increasing legal security, or even just clarifying the legal relationships, likewise has a positive effect. The feeling of security and the resulting willingness to work harder can increase production and, thus, income.

The effect on agricultural incomes from changing the distribution of the outputs, as foreseen in the land ownership reform measures, is conparatirely smaller. Exaggerated hopes are often placed in these measures. Naturally, measures such as placing a limit on farm rent or abolishing subleasing have positive effects. Making tenants into landowners saves them from paying rent but necessitates them taking over the services and obligations that were previously carried out by the landlord. Furthermore, distribution changes ,mean generally only the redistribution of chances that cannot be taken advantage of until there has really been an increase in production. Whether this is possible depends also on the concomitant measures for improving land management.

An income can also arise out of the secondary effects of agrarian reforms. All developments raise the chances of earning additional income from nonagricultural activities because of the increased demand for services and present, in particular for small farmers, an opportunity to improve their income.

Employment Effects

Agrarian reform measures will result, all in all, in a slight increase in employment. The small size of the farms is generally accompanied by an intensification in cropping, an increase in animal husbandry, and an increase in the input of labour, especially manual labour. There will also possibly be an increase in trade, transportation, and services as a result of the

rise in purchasing power. If the specific groups are studied separately, significant differences are found. First and foremost, there would be mainly more work for those who are already employed - in other words, a decrease in underemployment. Breaking up large farms can, however, result in farm workers becoming unemployed. Likewise, tenants may lose their land if the owners start cultivating the remaining land they are allowed to keep, particularly if mechanization is introduced or increased at the same time. Some of the laid off workers and tenants will find employment again, *even in* better occupations, e. g., tractor drivers, pump attendants.

The transition to family farms brings with it more evenly distributed work that has to be done over the entire year as a result of more variety in cropping. It means, as well, more work for family members, especially women. The greatest effects on labour can be achieved through collectivization, and this particularly in the case that collectivization is not limited to the agricultural sector. For then, namely, the organizational preconditions are supplied for making use of the labour force in order to build up capital.

Consequences for Production

Production is directly influenced by measures for improving land management It is indirectly influenced by incentives affecting work performance and investments that ensue from a land ownership reform. Regarding the effects on the production rate, it is possible to differentiate between short-term and long-term effects. In the short-run, there is the danger that there will be a setback in production; or at least, significant increases should not be expected. Particularly slow enforcement of the reform causes periods of insecurity. The new farmers still lack experience and do not have sufficient inputs. In the case of collectivization, the new organizational and decisional structures have to get into full swing. The danger of a setback in production can, however, be reduced greatly by mans of intensive land management reforms measures.

In the long-run, an increase in production can be expected. The new farmers have reason to work hard, and the old large landowners will try to make up for losses by intensive cultivation of the remaining land at their disposal. This will, on the other hand, be all the more successful the more intensive the help given by means of providing the necessary services. The higher the level of development, the easier this is, and therefore it is possible in this case to expect larger increases in production than at a lower level.

The effects of the agrarian reforms on the type of production are generally clearer. The transition from large to small farms leads to a tendency to increase the planting of crops that guarantee self-sufficiency, animal husbandry, multi-crop farming instead of one-crop farming, and annual instead of perennial crops. The drop in the market share resulting from this can be aggravated by the new farmers increasing their consumption. Fears that the rural population's supply will suffer are generally exaggerated and are the result of false agrarian reform measures. Appropriate measure for promoting land management make it possible to avoid decreases in the share designated for the market and setbacks in the cultivation of export crops..

Changes in Capital Formation and Investment

Capital formation is of great importance for both the agricultural sector, due to its long-term effects on production, as well as for the overall economy because of the boost for investments that further the economic development. The agrarian reforms lead to a shift in the methods of capital formation. Small farms pay few taxes because they are exempted as the larger share needed far subsistence is not counted and only a small percentage of the products are subject to sales and export taxes. On the other hand, the chances for non-monetary capital formation increase. On the small farms, it is possible to take considerable increases in capital stock over the years by investing labour in small improvements on the farm. However, this is generally only found at the level of the individual farm whereas there are organizational problems already at the village level. Reforms aiming at collectivization have better chances of succeeding in forming capital by

means of invested labour even at a higher level than the farm.

The propensity to save will likewise sooner grew as a result of the farm size being reduced, at least following a period of increased consumption. In small farms, there is a marked tendency to invest, even overinvest. This depends, naturally, upon there being alternatives to consumption - in other words, that real investment opportunities are given in the fern of a supply of appropriate objects being available on the market. Furthermore, credit must be supplied and the necessary aid given through extension services.

The way capital formation takes place changes after an agrarian reform. whereas the landowners had taken over capital formation earlier - sometimes inappropriately used - a new form of organization will have to take their place. This task generally falls to the state. If the state fails to absorb some of the proceeds through taxes, rent, and prices, the overall development suffers as the means will not be available to build up the non-agricultural sector as well as to provide state services to agriculture.

Agrarian Reforms and Development

As necessary as agrarian reforms are in many parts of the world, one must not expect too much of them. Very often, they produce the preconditions without which a development process cannot get started. Creating the preconditions, even if they are successful, is not a guarantee, however, that there will be development. Agrarian reforms are only a contribution.

In particular, they are not able to overcome some of the basic obstacles that hinder development in economic and social fields. Among these are, first and foremost, the population problem and the resulting employment problems. In densely settled countries, agriculture is not in a position to provide all of the people with productive work. It is indeed able to employ more labourers if the structure and organization are appropriate and has to keep people in the rural areas who are not really needed - even if this means less productivity - in order to provide them with the minimal basic needs. A solution

to the employment problem can, however, only come form the non-agricultural sector. Adequate agricultural production is the prerequisite for this.

The above has already intimated that agrarian reforms can only obliquely touch the problem of poverty and not solve it. The really poor are landless and are generally not affected by agrarian reform measures.

These limitations that agrarian reforms are faced with make it clear that the more integrated they are in the overall economic development process and its promotional measures, the more effective they will be. The fact that, unfortunately, agrarian reforms are still frequently restricted to the agricultural sector means that they will be faced by limitations because this ignores the intertwining and interdependence of agricultural and non-agricultural development The most consequent integration of agrarian reforms in the overall economic development took place in the case of the Chinese People's communes

Finally, agrarian reform measures are limited in the time they will be effective. The newly created agrarian structure will soon exhibit new problems regarding the relation of people, land, and technology and, therefore, necessitate new changes to adjust to the situation, or new reform measures.

As the individual countries have reached different levels in the development process, the major targets of agrarian reform measures will vary.

In the early stages of development, the greatest problems result from the concentration of the land in the hands of a few. Since the basis of existence is the ownership of land, the land monopoly leads to power over, and exploitation of the landless. The landowners' interest concentrates more on the control of the land than its productivity. Land ownership reforms reduce the inequality in the distribution of the land, tie more labourers to the land, and cause an end to the stagnating agrarian economy.

At a somewhat more advanced level of development, industrialization and

urbanization begin, frequently accompanied by a population increase. At this level, an agrarian reform has to overcome the obstacles preventing an increase in agricultural production. These can partially still be found in the land ownership system. Measures for promoting land management also gain importance at this stage.

In view of the limited demand for manpower in the nonagricultural sector, an increase in agricultural production should be achieved mainly on the basis of more intensive employment of labour.

Progressing industrialisation necessitates setting manpower free and, thus, forces agriculture to become more capital intensive. The increased employment of inputs produced outside the agricultural sector causes the agrarian economy, industry, and service sectors to became interwoven. The agrarian structure has to be adjusted to the demands created by the employment of capital. That may necessitate increasing the farm unit area, or a transition to collective forms of farming. The increased risk, resulting from farming being interwoven with the market, demands an intensification of extension work and training.

A mature industrial society, again, means new roles for agriculture that has diminished to only a small sector. Since there are adequate alternatives for earning a living, there is little pressure to redistribute the land. In fact, small farms are not attractive. The centre of interest is not the ownership of land, but rather the income that can be earned through it. In order for agriculture to be comparable to other sectors, the farm size, capital assets, and investment of labour have to be appropriate. Agricultural production has characteristics similar to industrial production whether in a socialistic or capitalistic system. True agrarian reforms are less important under these circumstances than carefully planned incentives in the form of taxes, prices, and subsidies. They have to be integrated in the overall development policies due to the inseparable interlacing of the agrarian economy and society with the other sectors of the economy and society.

MAN AND LAND IN SOUTH ASIA - A CASE STUDY

THE HISTORICAL DEVELOPMENT OF LAND TENURE

Land Tenure in Ancient India

Ancient record show that land has been under cultivation in India for more than 5,000 years. In the beginning, tribes exercised control (especially delimitation and defence) over the areas they had taken possession of. This right of the conqueror was the initial from of land right. The tribes allotted to the individual families land for their utilization, usually by means of shifting cultivation.

The jungle which covered unlimited land, although economically useless, led to another form of land right, namely, the right of the first clearer. Whoever cleared a plot in the jungle also had the right to use this land. However, this individual right of utilization was only valid as long as the land was actually cultivated. As soon as it was abandoned, the power of disposition over it reverted to the tribe.

The strenuous work of clearing, the necessity of mutual help, small-scale defence measures, and the expansion of the families led, in the course of time, to the formation of villages which assumed the regulation of land rights. Two different forms developed in time.

The village which had individual land rights consisted of a group of families which had rights to the land on the basis of having cleared it. The claims of the families were limited to the cleared land. The uncultivated land in the vicinity of the village was jointly utilized, but no claims were made to it. It belonged to the ruler who, in later epochs, also granted permission to cultivate the land.

In the case of villages which held land rights jointly, the village community claimed the right to all land within the village boundaries and allotted it to individual families for utilization. The administration was

net carried out by a village headman, but by the panchayat, a village council in which the individual families had their say.

Thus, at an early period already, there were individual and joint land rights. But landed property, as known in the West, did not exist at all. The rights were a privilege granting inheritable utilization rights and included social obligations, especially taking consideration of the village community's interests.

Because of the need for defence, authority concentrated in the course of time, and thus, a state was formed with one ruler at its head. Costs of governing were covered, at first, with gifts. Soon, however, it became obligatory to deliver a share of the grain yield - in other words, a tax was introduced. The king was thus only given a right to a share of the yield, but ro rights to the land and its utilization. However, he was entitled to all the uncultivated land that lay between the villages.

It was necessary to establish an official hierarchy to collect the taxes. The tax collectors were remunerated by being given a share of the collected taxes and a plot of crown land. This "watan" land was free of tax, inheritable, and transferrable, and represented a new form of land rights, namely, land rights on account of the government allotting land to government officials.

In the course of time, the tasks of the central government increased. In this huge country where transport conditions were difficult, possibilities of simplifying administration played an inportant role. Therefore, the ruler allotted the tax revenue from specific areas to people who had to maintain troops in the provinces, make roads passable, and keep the passes open. At first, the transfer of the right to these taxes was valid only for the timefine during which these tasks were carried out. Even priests and favourites were provided for in that way, at first for life. Later on, all these cessions became inheritable. This right to the land on the basis of the transfer of the right to taxes included taxes only, but not ownership of the land as in the case of 'watan' lands.

In pre-Islamic times already, there had been a diversification in the land rights. In addition to the land claims of the village community and the farmers based on the right of the conqueror and the first clearer, the ruler's claims to a share of the yield and the uncultivated land between the villages were generally recognized. In addition, the right to collect taxes for certain regions was transferred to specific people and land rights to officials. These were only allotted crown land. The traditional rights of the cultivators remained unaltered.

The Moguls who conquered India in the 12th century left the land to the cultivators at first in exchange for the usual taxes. Often, former small rulers were employed as tax collectors and were given 10% of the collected amount as remuneration for their trouble. They were even allowed to keep the land they had held before and were exempted from paying taxes. They were strictly controlled to prevent them from collecting more taxes than was lawful.

Emperor Akbar (1556-1605) implemented radical reforms. He replaced the payment of taxes in kind by a monetary tax which was no longer fixed as a share of the actual but rather of the average yield. Thus, it was not calculated according to the yield, but according to the area sown, and the cropping risk was shifted to the cultivators. In addition, the taxes were increased to amount to half of the average yield. Although this resulted in evil times for the rural population, the Moguls did not make any claims to the land itself after their conquest. Tax administration was high level; a land register was introduced; and taxes were levied according to criteria such as quality of the soil, and so on.

After Aurangzeb's death in 1707, the power of the central government decreased rapidly, and the control over the tax revenues was lost. In order to obtain revenues at all, tax collectors' posts were leased to the highest bidders in exchange for fixed sums. On the basis of their knowledge of the local conditions, the tax collectors were free to extort as much as possible from the rural population and keep for themselves the difference between the collected taxes and the amount to be remitted. These "assignees" were

the first intermediary step in the direct tax relations between the government and cultivators.

The transfer of tax collection rights, know already in pre-Mogul times, for specific regions as remuneration for services rendered became so common that, under Aurangzeb's reign, 90 % of all tax revenues fell to such privileged parties, and only 10 % to the ruler. These grants of land with the right to collect taxes from it were also conferred on favourites. The conferment of such "jagir" transferred all the rights the government held, i.e., taxes, claims to uncultivated land, police power, etc., but no claims to the cultivators' land. Whenever tax collectors became landlords in the course of time, this was due to their reclaiming waste land or their confiscating the land of people who owed taxes.

Towards the end of the Mogul era, a type of "right" to land developed which was in the hands of sometimes parasitical rent collectors who did not perform any work. But this refers to the government's tax rights, not to a direct claim to landed property, or land utilization, on peasants' land. Their old saying 'Taxes are the king's wealth, the land belongs to me" was still valid.

Changes in Land Tenure under British Rule

India's invasion by the British brought about, in the course of time, a complete transformation in the country's land tenure system. The East India Company experienced difficulty in its trading because the scale of British goods in India was insignificant. On the other hand, the exportation of gold and silver from England to pay for Indian goods was soon prohibited. The company found a solution by securing money from India to pay for Indian goods. It collected taxes for the Indian rulers which, in the beginning, brought revenues of only 10 % of the levied taxes, but, since the control over the amount of levied taxes became lax at the end of the Mogul period, its revenues increased. In addition, they were assigned areas as "jagir:º' The decisive breakthrough came when, in 1765, the office of 'dewan' for Bengal, Orissa, and Bihar, namely the financial sovereignty for these areas, was assigned to the Company with the concession for levying taxes in exchange for a global sum of Rs. 2.6 million per annum.

After some time of experimentation, in 1793, Lord Cornwallis' Permanent Settlement brought a final regulation of the procedure for levying taxes, which led to decisive changes in land tenure. The British did as if all the land belonged to the state and was thus at their disposal. They registered the local tax collectors, who were called zamindars, as owners of the land in their district. These zamindars had to collect and deliver the taxes; the amount was fixed at the beginning and remained the same permanently. To give them an incentive, they were free to decide how much to demand from the cultivators. On the other hand, the fixed lump tax sum was an incentive to put more land under cultivation and, thus, have more taxpayers in one region. In order to do so, one could not bleed the individual farmers too much.

The right to the land conferred on the zamindars was alienable, rentable, and heritable. This meant the introduction of a complete novelty, in India. The privilege of utilizing land had become a saleable good. Those who had been cultivators until then obtained the status of 'occupancy tenants.' These occupancy rights were heritable and transferrable and were not tampered with as long as the holders paid their taxes. In contrast to these, the tenants who cultivated land owned by the tax collectors were tenants-at-will, i.e., they could be evicted.

In the beginning, there were hardly any problems. The scarcity of cultivators prevented the zamindars from demanding too high taxes. They were interested in attracting people to cultivate the land and, thus, to increase the number of tax-payers in order to increase the difference between the revenues and the fixed amount that had be remitted.

The detrimental consequences of recognizing the tax collectors as landlords and of introducing the legal institution of saleable private landed property first became evident as, later, considerable changes occurred in India in the demographic and economic situation. The industrial revolution in England, namely, brought about a change in the British policy in India. The objective was no longer to import from India, but to sell English products in India. Since the textile industry played an important role at the beginning of industrialization in England, very large amounts

of cheap products manufactured by mechanical looms were exported to India and this soon led to a collapse in the textile home industry in India. A large number of weavers became unemployed. In order to secure a basis of existence, they migrated to the rural areas and tried to lease land they could farm. The scope of this migration - Dacca's inhabitants alone decreased from 150,000 to 20,000 between 1824 and 1837 - caused pressure on the rural areas and brought about a complete change in the relationships between zamindars and tenants. The monopoly of controlling the means to secure livelihood shifted power unilaterally into the hands of the zamindars who were able to extort more and more taxes as the demand for land increased. This led to indebtedness and often to the loss of occupancy rights and relegation to tenants-at-will.

The great discrepancy between the fixed amount of taxes to be remitted and the increasing revenues made the zamindars wealthy. Soon they no longer went to the trouble of collecting the taxes themselves but rather sub-leased this office to others while they themselves lived on the remainder between the amount claimed as taxes and that paid to the "sub-assignees." The difference between the revenues and the amounts to be remitted was so great that even the "sub-assignees" tried to sub-lease. After some time, it became quite common to have 10 to 20 intermediaries, more or less without a specific function, between the government and the farmers, and they all had a share in the cultivation yield.

In addition, abwabs, supplements and fees for the most curious reasons were introduced; for example, for using an umbrella, for permission to sit down in the zamindar's office, for being allowed to stand up again, etc. Moreover, the "begar" unpaid work which the tenants were forced to perform on the zamindar's land, took on larger and larger proportions. On the average, it amounted to 20-25 % of the lease. Under the effect of these developments which should be regarded as late consequences of the changes in the land tenure brought about by the "Permanent Settlement," more and more cultivators became indebted, lost their occupancy rights, and dropped in status to tenants-at-will or agricultural labourers. On the other hand, the wealth of the zamindars kept increasing on account of the income they

earned from the difference between the amount of taxes and the rentals, the increase in cultivated areas, ,money-lending, and expropriation of debtors. In the course of time, the zamindari region was characterized by the marked difference between wealth, power, and prospects in life. Even the government experienced drawbacks on account of this system. Changes in the monetary value, prices, and the amount of cultivated areas turned the fixed tax, after 150 years, into nothing but a token sum, and considerable tax losses ensued.

The zamindari system was not introduced in the whole of India. Because of the experience made with the system, better knowledge of the conditions in India, and liberal influences on the colonial policy, the provinces which became British possessions later were assigned other taxation systems. The ryotwari system was introduced in Madras, Bombay, and Assam. Under that system, the government claimed the property rights to all of the land. but allotted it to the cultivators on the condition that they pay the taxes. They could use, sell, mortgage, bequeath, and lease the land as long as they paid their taxes. Otherwise, they were evicted. This direct tax relation between the government and the cultivators was meant to prevent sub-tax collectors, thus increasing purchasing power, and, in that way, improving the marketing prospects for English products. Here, the taxes were only fixed in a temporary settlement for a period of thirty years and then revised. This way, the government increased its revenue.

In North India and in the Punjab where villages with joint land rights were common, an attempt was made to utilize this structure in the Mahalwari system. Taxation was imposed with the village community as theoretical landlord, since it had the land rights. The village community had to distribute these taxes among the cultivators who owed taxes individually and jointly. Everyone was thus liable for the others' arrears. A village inhabitant - the lambardar - collected the amounts and remitted them in bulk. Here, too, tax assessment was revised at intervals.

Despite this different system, the conditions for cultivators constantly deteriorated in these regions as well. The high taxes fixed by the government -half to two-thirds of the net yield was the usual amount - made investments impossible. Because of fragmentation resulting from inheritance, the farms became smaller and smaller. The fact that land could be used as collateral made it possible to borrow money to pay taxes in the case of crop failures. But, in that way, more and more farms passed into the hands of moneylenders, often better-off cultivators in the village. In the course of time, these ceased to cultivate their land themselves and sub-leased it instead. Finally, the ryotwari region was no longer a self-cultivator region. More than one-third of the land was leased and in many districts more than two thirds. The great demand for land owing to the population growth made it possible to let others work for oneself.

In the Mahalwari region as well, sub-leasing and indebtedness became more and more common. Indeed, it was not possible to transfer the land to people who were not from the locality, but the result was that landed property became concentrated in the hands of a few wealthy people, whereas the others lost their rights. A constantly increasing number of people were or became landless. While in the middle of the last century there were still no landless, in 1931 and 1945, respectively 33 and 70 million landless labourers were registered. Others succeeded in renting some land, but on less favourable terms. Share-tenancy, in particular, increased greatly.

The British land policy which lasted 150 years as well as the consequences of economic changes and the drastic population growth led to a complete change in the land tenure system in India. Whereas, formerly, the cultivators possessed the right of use and the government the right to impose taxes, now the rights in land were split into many pieces. In this process, not only did a large number of cultivators lose their valid land rights and fell in status to unprotected tenants and labourers. At the same time, the tax collectors became landlords and large landowners. A stratum of intermediaries who did not have a specific function developed, and the land passed into the hands of moneylenders. This caused an enormous differentiation in financial conditions, whereby, the mass of farmers lived in abject poverty.

To explain the further development following India and Pakistan's independence, it is very important to note that, admittedly, the economic situation of the different groups of the rural population had developed very differently, and a large part of the population became poor, but, in its main traits, the social system remained intact, There existed namely a complicated relationship pattern between landlords, cultivators, and landless people which was based on mutual rights and obligations and which provided everyone with a place - even if a poor one - within the rural society. The system aimed at satisfying the needs of everyone in the economic and social sector, and was based on the fact that all members depended upon one another.

Thus, the landlords owned land, it is true, but were dependent upon the landless tenants, agricultural labourers, and village craftsmen to cultivate it. Inversely, the landless could rot utilize their labour in an agrarian society if the landlords did rot give them the possibility of working on the fields. This made it necessary for the landlords to maintain the landless' economic situation at least at a level which was not detrimental to their capacity to work, nor caused them to migrate. This not only forced the existence of a minimum wage, although very low, but also induced financial aid in emergencies, crop failures, etc. In addition, the landlords preferred to face want than not meet the obligations resulting from their labour relationships.

Such mutual relationships existed even in the social sector. The landlord assured the protection and representation of their workers externally, whereas the landless adopted a loyal attitude towards their employers and were, so to say, automatically on his side. This secured him power and influence and put him in a position to represent their interests well externally. In the wars. of time these behavioural patterns became so ingrained that the obligations of the strong towards the weak became social norms, and paternalistic behaviour was a prerequisite for being recognized as a leading personality. This norm, which is typical for rural societies, sets obvious limits to exploitation. It is true that the level of these limits was very low, but they guaranteed a subsistence. It is also important to observe that the rights had been unilaterally shifted to the benefit of the landlords, but the landless did not consider

themselves to be exploited. Here, religion may have played an important role, but the existence of mutual relationships - even if they were unequal -which granted security against threat to existence were also of extreme importance.

THE AGRARIAN REFORMS SINCE INDEPENDENCE

During the last years of the colonial era, numerous congresses and commissions called for agrarian reforms and worked out appropriate suggestions. If, prior to independence, the demand for agrarian reforms was part of the strategy of the leading parties to gain power, independence fostered not only a favourable climate for such measures, but helped the new governments to legitimize their power. Not only the motivation but the measures, *too, were very* similar in India and in Pakistan. However, each time, they were enforced more rapidly and strictly in India, whereas Pakistan showed more regard for the landowning strata.

Agrarian Reform Measures

It is not easy to obtain a general idea of the agrarian reform measures in India since, according to the federal constitution, every state enacted laws; specific laws were made far each of the sub-measures; and some of these laws were repeatedly changed and supplemented. This is why the Indian legislation on agrarian reforms comprises far more than 100 laws. Just as an Pakistan, however, these measures can be divided into three groups: those concerning the abolition of 'intermediaries' (the numerous people who occupy a position between the government and the cultivators, e.g. , the "jagirdars," the "zamindars;" etc.; the improvement of tenancy; and the stipulation of the maximum ceilings of landed property allowed.

Abolition of the 'Intermediaries'

In 1951, as the first agrarian reform measure, the intermediaries, the numerous revenue collectors who often did not have a definite function, lost their rights. Considerable problems cropped up because of the large number of very different cases. This measure did not aim at abolishing the

ownership of large amounts of land, but only of specific rights. Among those who were affected were numerous small zamindars who earned low incomes from a few acres of land. Often, this was their only source of income, and they had come legally into possession of it, either through purchase or inheritance. Illegal methods my also have played a rule when the titles were acquired, but some jagirs were conferred in return for important services. For all the above - as well as constitutional - reasons, the government took over these rights in return for quite high compensations whose rates increased inversely to the amount of income earned from the land. The compensation was paid in installments without binding conditions for its use and burdened the government in India with Rs. 6.3 billion and in Pakistan with Rs. 360 million.

An exceptional situation arose in the former jagirs whichhad often been very badly administered. Not only was the government forced to make considerable investments in health services, schools, etc.. to bring these regions to the same level as the rest of the country, but it had to take over the jagirdars' staff as well as pay their pensions. An additional burden resulted from the fact that many jagirdar families were not in a position to make a new start in life. After having spent the sum they had received as compensation, they became destitute, and it became necessary to draw up special rehabilitation programmes.

Since the measures aimed at abolishing specific legal conditions, land which belonged to the same people under other legal conditions was not affected by this measure. Nor was land expropriated that was self-cultivated, to provide them with a basis for existence. Those who until then had not cultivated any land themselves, were granted the right to dismiss tenants of land up to three times the size of an average family farm before expropriation was enforced. The term "self-cultivation" was not clearly defined and gave rise to many manipulations. The zamindars began to let hired labourers cultivate land they had leased to tenants until then and even persuaded illiterate tenants to give up their rights. This abuse took on such proportions that special laws had to be passed to cancel the voluntary waives made during the last years. In spite of this, the number

of protected tenants decreased considerably.

Despite all these problems, by the mid-fifties, the intermediaries had been abolished in the two countries. The farmers in these regions - more than 20 million in India alone - had come into direct contact with the government whose tax revenues increased considerably. However, the above described higher burdens largely counterbalanced this increase. For the farmers, this meant freedom from the arbitrariness of the zamindars and of the numerous "abwabs," but the tax burden remained the same with the only difference being that the government was now the recipient. At any rate, the legal status of the "occupancy tenants" was now clearer. However, only those who were well-off could avail themselves of the possibility of purchasing land rights since most of the actual tenants lacked the necessary funds to that end. The larger cultivators could thus enlarge their farms and became the new lessors in the village. These measures did not affect in any way the large number of subtenants who had leased land from occupancy tenants.

Tenancy Reforms

However successful the first step of the agrarian reform turned out to be in achieving its objective of eliminating functionless revenue collectors, the efforts to improve the situation of the majority of the tenants proved to be ineffectual. The objective of the tenancy reform laws was to establish and strengthen the tenants' rights. To that end, a minimum leasing period of 5 to 10 years was introduced, and eviction was only allowed on the basis of specific reasons. Sub-leasing was forbidden and, in the case of eviction, the tenant was to be paid compensation for his investments. Finally, the tenant was granted the right to purchase the land he cultivated. Sub-tenants who had cultivated a plot of land for already more than 12 years gained the status of occupancy tenants and were, thus, protected against eviction. The laws foresaw a restriction of the rent to one-third to one-sixth of the gross harvest, and payment of the land tax was shifted to the landlord.

These measures proved to be an extremely serious encroachment on the lessors' rights. This is why it became indispensable to offer them an alternative in way of compensation. Before the laws were enforced, they were granted the right to give notice in case they wanted to cultivate the land themselves. Since the term "self-cultivation" was not clearly defined and was finally understood as "supervision of cultivation," this meant a set-back for the tenants. Many of them were dismissed and reemployed as agricultural labourers or sharecroppers. It was possible to reemploy them as sharecroppers because the many types of sharecropping were not defined as tenancy in the laws. Thus, a large number of tenants lost their rights as a result of the laws passed to improve their condition.

The other measures did not prove to be very successful either. The poor administration which, moreover, was more on the side of the landlords on account of its origin, simply could not cope with the tasks of the tenancy reform. Here, it was not only a question of a non-recurring control of the lease contracts, but of the permanent enforcement of the regulations as well. It proved to be particularly disadvantageous that the law had not given any aid to the administration by means of tenants' associations which would have had to be founded and which could have examined specific cases at the local level. Besides, the legal measures were sometimes very unrealistic. If the usual rent has, for a long time, amounted to more than 50% of the gross yields, the prospects of imposing, by law, rents of 16 % to 33 % are negligible. The other measures are also unfavourable to the conditions on the tenancy market. If there is a great demand and a limited supply, some of the potential tenants will always be prepared to make to the landlords concessions which infringe the law.

Altogether, it can be ascertained that tenancy laws in the two countries have not meant much success for the tenants. The majority of the sharecroppers was not included in the measures at all and, of the occupancy tenants, many lost their status, and only a few gained anything at all.

Ceilings for Landed Property

In South Asia, efforts to limit the amount of landed property and to redistribute land have only become effective in the course of time and with much delay. In the beginning, the main concern was to limit the amount of landed property that could be acquired in the future; that is, an attempt was made to prevent large-scale landed property from newly developing. Later, ceilings were fixed for the amount of landed property allowed, and land exceeding those demands was to be expropriated. At first, the ceilings in the two countries, especially in Pakistan, were high so that only a few landowners were affected. Subsequently passed laws reduced the ceilings each time.

The actual enforcement, especially in the period during which the first laws were valid, was by far not as strict as stipulated according to the word of the law. These laws already foresaw many exceptions. In Pakistan, for example, the law did not apply to seed farms, mechanized farms, and fruit-growing areas, thus making an exception for the better cultivated and especially the self cultivated areas. In many cases, land was allowed to be distributed among the family members before the laws were enforced. Due to the large number of children, a family could often retain a large amount of land, and some areas were even transferred to unborn children. Other laws fixed the ceilings varyingly according to the size of the family.

Usually, it was left up to the landlords to decide which areas they wanted to cede if their property exceeded the ceiling. The result was that much of the land which was surrendered consisted of burial sites, waste land, and other unusable areas. A reform law in Pakistan allowed those concerned to decide whether they wanted to have the land ceiling measured in acres or in produce index units. Since the produce index units had not been adjusted over 25 years, the ceilings were raised by an average of 50 % when they were utilized as the basis. The result of all these obstacles - to which many wearisome law suits can be added - was finally, that this measure had a limited effect. Specifically, only a relatively small amount of land was available for distribution. Most of this land was used to enlarge marginal

farms so that the number of actual new farmers is quite insignificant in comparison with the number of landless people. Inversely, the laws brought about only abolition of large-scale landed property, in India more than in Pakistan. Only the upper stratum of landowners were more severely affected and expropriated.

Consequences of the Agrarian Reforms

If one takes stock of the 15 years of agrarian reforms in India and Pakistan, the difference between the objectives of the reforms at the time of independence and the actual results is particularly striking. In simple terms, one say that the reforms were directed against the feudal landlords and against the poor tenants and agricultural labourers, whereas they benefitted the rural middle class, especially the upper middle class.

The top of the traditional upper class, especially the revenue collectors who bad no definite function, were eliminated as well as the largest landowners, especially in India. But large-scale landed property was not abolished, only restricted, and land concentration was thus somewhat reduced. These measures were especially directed against the landlords who did not cultivate their own land or at least manage its cultivation, but restricted themselves to collecting rent. This old feudal upper class was decisively weakened and today no longer plays an important role in these countries.

But the lower class, among whom great expectations were aroused but not fulfilled, is the actual loser in the agrarian reform process. The landless and the sharecroppers were not affected at all by the reform measures and benefitted from land allotments only in specific cases. A large number of the previously protected tenants were deprived of their rights owing to the transition to self-cultivation and quite a number of them new cultivate the same land, but under less favourable conditions. They now have only short-term lease contracts, and these sometimes still comprise supplementary agreements. They are not beneficiaries, but the losers in the agrarian reform process.

Those who actually benefitted from the agrarian reforms belonged to the rural middle class, i.e., small landlords and larger owner-cultivators. The emphasis on the promotion of owner cultivation in the laws and the way in which this term was defined resulted in a concentration of land in the hands of this middle group. Former landlords, who cultivated the rest of their land after part of it bad been expropriated, were forced downwards into this middle group. From below, economically sound cultivators who had the means to buy the titles to the land they cultivated rose into the group. They all increased the number of economically viable medium-sized farms.

This middle stratum consisting of small landlords and large cultivators became, after the old feudal landlords had been eliminated, the main stratum in these countries and held not only a large number of the parliamentary seats, but exercised great influence due to their being related to high officials and members of the military. Many members of this stratum deal intensively with the cultivation of their land, partly because they want to balance out their losses resulting from losing land by cultivating their land more intensively, partly as a reaction to the more advantageous prices for agricultural products that arose in the course of time. But their more commercial attitude towards agriculture is of considerable importance. Their aim was not to skim off high rents, but to achieve profits through appropriate methods of cultivation, and this was further encouraged by the government's agrarian policy.

This change of attitude again had an unfavourable effect on the lower stratum. The replacement of feudal landlords by commercial farmers led to a transition from traditional to contractual labour relations. Thus the tenants and agricultural labourers were further deprived of the minimal securities which the former reciprocal relations with, and concern of, the landlords represented and were thrown into the struggle for life without any protection so that, in view of the prevailing market conditions, they could only be losers. By bringing about such a change, the agrarian reforms established the basis for further changes. They became more drastic in the case of the Green Revolution and showed their actual implications.

THE GREEN REVOLUTION AND LAND TENURE

One of the objectives of those concerned with agrarian reforms was to increase production. In the countries where food shortages are chronic - India and Pakistan - as well, agrarian reforms have been justified by the necessity to increase the production of basic foodstuffs. Since the measures were .,fly restricted to a redistribution of control over land but brought about little change in the traditional cultivation, little production increases ensued from the reforms. The lack of measures to change cultivation caused the two countries to depend largely on cereal mports with the ensuing economic and political consequences.

In the second half of the sixties, technological changes took place in agriculture which exercised a strong influence on the production level. The yield increases resulting from the Green Revolution were so obvious that, within just a few years, the new technology had taken over in all of the regions where it was possible to apply it. It was remarkable that these large yield increases bad been achieved without institutional changes in the agrarian sector. This soon led to the assumption that it was possible to develop agriculture without institutional reforms and that one could do without complicated agrarian reforms. However, this soon proved to be an erroneous conclusion. A more comprehensive analysis of the process shows that numerous bottlenecks arose due to the prevailing agrarian structure and that the implications of the Green Revolution actually made a change in the agrarian structure even more necessary.

The Process of the Green Revolution

The increased production in agriculture as a result of the utilization of new varieties with a high yield potential in conjunction with more water, fertilizers, and pesticides is called the Green Revolution. The new varieties are not of themselves high-yielding, but rather, genetically, they are a yield potential which can only develop if sufficient water and plant nutrients are available. If these are lacking, the yields are sometimes lower than those of local varieties. As is often the case as far as high-bred varieties

are concerned, they are susceptible to diseases and require careful plant protection measures, Besides, on account of their low resistance and rapid degeneration, the varieties must be replaced by newly bred varieties after only a few years.

When the new seeds are grown with sufficient water, fertilizers, and pesticides, the increases in the yields are astounishingly high. Many a farmer has, from one year to the next, harvested three times as large a wheat yield from the same area using the new seeds. This obvious increase in the yield caused the new varieties to be rapidly adopted. During the first years, the shortage of seed, and not a lack of readiness to utilize it, constituted a bottleneck when the new varieties were introduced.

All the same, one should be conscious of the narrow limits of this technological change that is misleadingly called a "revolution." It is not a general breakthrough in agricultural production. The changes apply primarily to the cultivation of wheat and rice, whereas the other cereals are hardly affected. Thus, cereals from the arid regions as well as cotton, pulses, and oil plants are more or less excluded.

As far as rice is concerned, the problems are far more difficult. The new rice varieties require not only that irrigation be available, but also make great demands on the quality of irrigation. The varieties suffer damage from too much as well as too little water. Thus, while controlled irrigation is necessary, frequently an irrigation system is used that consists of rain water overflooding the upper terraces and flowing down to the lower terraces so that the ammuat of water cannot be controlled. In such cases, it is a definite necessity to improve the irrigation systems before the new varieties can be successfully cultivated.

Since irrigation is an indispensable factor for this new technology, regions which depend on rainfall are implicitly excluded from partaking in these changes. But in India and in Pakistan, only about one-third of the arable land is irrigated. This results in tremendous regional differences. The Green Revolution is restricted to irrigated regions and, therefore, to regions which have always produced better yields and thus

belonged to the wealthier states. The regional differences became, therefore, even more pronounced.

Similar differences in participation are found according to farm size. Better information, a greater capacity to take risks, and readiness to adopt innovations explain why the large farms adopted the innovation at an early stage, In addition, they had the advantage of obtaining high subsidies during the first years and better prices for seed production. Small farms followed later with some hesitance. In some cases, tenants ,were forbidden to use the new seed. The more delayed adoption by the small farms can also be explained partly by the initially poor baking quality when the technology which existed in the villages was used and by its poorer taste.

Even after the initial phase, the large farms were more advantaged than the small ones. There is no doubt that the new technology can be split up. Seed, fertilizers, water and pesticides can be used on small as well as on large areas. They are therefore neutral as far as farm size is concerned. However, this is no longer true in the case of tractors and pumps. In trying to improve the new opportunities by utilizing machines, the large farms had, therefore, advantages. However, the differences between the different sized farms concerning their access to the new farm inputs are still more important. In this aspect, the large farms have decisive advantages. They are better informed, have better transport facilities, and more credit, and, when capital goods are scarce, they are frequently more likely to be supplied on a preferential basis.

The new technology utilizes to a greater extent purchased inputs, i.e., that are not produced on the farm. Thus, the interdependence with the market, capital expenditure, and thus risk are increased, especially for inexperienced farmers. Formerly, crop failures could be overcome by "tightening one's belt," but this longer helps if one has considerable debts to be paid to the farm-input suppliers. But precisely the risk ensuing from climatic fluctuations cannot be eliminated. Soon, there were crop failures because the farmers had not learned how to react promptly to infestation with disease. For those who were in a better economic position,

the integration in the market economy and simultaneous implementation of the technological innovation meant new possibilities of action. For the economically weak, the path leading to market integration often led to new dependences.

Likewise, under the aspect of the overall economy, the Green Revolution has not brought advantages alone. It is true that the yield increases in the two countries improved the supply of foodstuffs for a few years. This was more lasting in India because the necessary research stations were built to produce the constantly required new varieties. Today, Pakistan is still - or again - dependent on cereal imports.

Moreover, the intensified utilization of purchased inputs has not made production less expensive and has led to considerable price increases. The utilization of inputs previously unknown to the farmers can easily damage the environment. (quite often, pesticides and herbicides are applied in a wrong concentration. But increased irrigation also has consequences. The ground water level is raised and the risk of salinization is increased. Many regions have irrigation but insufficient drainage. In some regions, the water reserves also decrease. The overwhelming production increases also distracted from several alternatives. In countries where 20-30 % of the harvest is lost, it would surely be less expensive to reduce the losses than to increase production at high costs, especially when increasing oil prices bring about a considerable rise in the cost of inputs.

It must also be mentioned that the Green Revolution meant increased production at drastically rising social costs. The society subsidizes seeds, finances research stations, invests in fertilizer factories and irrigation systems, builds roads, and organizes farm systems. Since part of the higher yields can be attributed to these expences incurred by the society, and not to the efforts of the individual farmers, sae of the profits should be skimmed off and go to the government for further economic development But this is not taking place due to the prevailing power structure.

The Green Revolution is therefore a mixed blessing. It brought about decisive advances in agricultural production, but also serious economic and social problems. It is important to realize that these problems are not actually the consequences of the new technologies per se. They are the result of the prevailing economic and social conditions which only become more evident. Therefore, it cannot be a matter of putting a stop to new technology but, at the most, to keep it within bounds. It is important to take measures to solve the prevailing problems, especially the deficiencies in the agrarian structure so that new technologies no longer lead to negative consequences. The problem of the man-land relations following the Green Revolution becomes even more crucial. As will be shown in the following, the prospects in that respect have sooner diminished. This becomes especially evident if the implications of the agrarian changes for various strata of the rural population are more thoroughly ,,,mined.

A Group-specific Analysis

Small Landlords

This group of small landlords is characterized by the fact that they own more land than they can cultivate with just their family labour. To do the agricultural work, they employ on the basis of varying labour and lease conditions, people who do not belong to their family. Their property is often not much larger than that of a family farms. Today, the majority of them is likely to own 25 to 150 acres of irrigated land. Due to the agrarian reforms, the units of landed property exceeding this size are few.

The people concerned belong to the rural upper class who enjoy a high social status and possess wealth, economic, anal political power. Their outstanding position is based on landed property. In contrast to the former large landlords, they mostly live in villages and are interested in the cultivation of their land which, traditionally, was leased to sharecroppers. Their relationship to the sharecroppers was of a patriarchal, but quite personal, nature owing to their living and working together their whole life. They are often good farmers who reinvest large shares of their profits,

e.g., for improving irrigation, levelling fields, etc. They and their children have often received school education; especially the young generation has quite often attended secondary schools. Many civil servants and officers are likewise recruited among the members of this group.

They quickly accepted the new seed that was the basis of the Green Revolution. Trey possessed the necessary information, had access to farm inputs (which were scare in the beginning), and, whenever necessary, to loans, and could also shoulder the risk of innovating. Their prompt participation turned out to be profitable. They experienced large production increases and thus increases in their income, and came into the full enjoyment of the government subsidies.

The experience that agriculture can be a lucrative enterprise brought about a basic change in their attitude, and soon made of a way of life a business. Water very soon constituted a bottleneck, since without it the new seed could not be used. In order not to have to depend on the insufficient and unreliable canal irrigation, they began to invest their yields on a large scale and constructed tube-wells with pumps operated by electricity or diesel. Controlled irrigation allowed a change in the cropping system and an increase in the cropping intensity. The new bottleneck which now stood in the way was the limited draught-power. Oxen were slow and were only capable of working a few hours a day. This problem was solved by purchasing tractors. Within a few years, this group completely dropped land cultivation employing oxen for mechanized agriculture. The government encouraged this by means of financial incentives, e.g., duty-free importation of tractors and subvention of fuel. For a while, tractors in India and Pakistan were the cheapest in the world.

Such transformations brought about a basic change in the production factor ratios. The landlords observed that farming under the traditional conditions of sharecropping at a SO : SO ratio had become very expensive since, considering the new high yields, SOS represented more than twice the payment which had been usual until only a short time before. Moreover, one of the main tasks of the sharecroppers, the keeping of a pair of draughtoxen, had became superfluous because of the tractors. The landlords tried

to change the ratio since they now wanted only human labour from the tenants and not draught-animals. This led to unrest and strikes during the harvest.

It was not long before the landlords basically changed their labour organization. The tenants were dismissed and some of them reemployed as agricultural labourers. The rest of them were offered work only at harvest time. Some of the landlords even tried not to be dependent on this and purchased combine harvesters. However, their importation was soon prohibited.

Thus, the trend that arose through the agrarian reform to change from tenant to owner-cultivation continued to assert itself. The number of tenants decreased rapidly. Since the increase in the agricultural labourers' wages in the early years was minimal, the landlords benefitted even more from the higher yields. Agriculture had became such a profitable business that even members of the urban upper stratum began to invest in land. The land market came into motion. The landowners tried to purchase or rent additional land to carry out their lucrative business on still larger areas.

The group of small landlords therefore drew considerable benefits from the Green Revolution and could decisively improve their economic situation, Those who were already wealthy formerly became still richer and the gap between the poor and the rich became wider. But the change in their attitude was even more important. A downright hankering after earning money developed, and some of the people took to marked commercialism. The earlier paternalism, the obligation towards the labourers to care for them, was given up and the little security which the labourers and tenants had enjoyed was thus lost. There was, however, a limitation. Irrigated land was not the only condition for participating in the Green Revolution. It had to be combined with dynamism and intelligence. This applied especially to many of the younger landlords. But a gap arose between the landlords. Quite a number did not succeed in effecting the change from landlords to commercial farmers and hardly had a share in the increased income. The majority, however, improved their economic situation and their political power. They occupied the

influential positions in the parliaments at the district and state levels and saw to it that the agrarian policy which was profitable to them was pursued. Under the economic and political aspects, the small landlords are the main beneficiaries of the Green Revolution.

Family Farms

family farms have, in most cases, approximately 10-30 acres of irrigated land which are cultivated by the family members - at the upper level with the help of one or two agricultural labourers not belonging to the family. Among the family farmers are quite a large number of tenants who have sufficient land, lease security, and power of decision in economic matters. This group represents the upper stratum of the village society, has sufficient income, and enjoys prestige on account of landed property and of its belonging to a distinguished caste. It controls the village policies, the local cooperatives, and similar institutions.This group fully adopted the new technology regarding seed and fertilizers insofar as it had irrigated land. However, these people first began to participate one or two years after the small landlords. They had less access to seed and information; and because of their lower capacity to take risks, they wanted to wait and see what the results would be in practice. The high yield increases promptly convinced them. The further development is similar, in its main traits, to that experienced by the small landlords. They too bored tube-wells, purchased tractors, and became well-off. They often distinguished themselves by efficient and intensive agriculture.

However, in comparison, the results, here, were not so marked. The fact that had started at a later stage caused a lag of one to two years and did not a11ow them to achieve maximum prices in the time of seed shortage. They were also faced with much more problems than the larger landowners; with regard to obtaining a supply of seed and fertilizers on time, power cuts, and lack of water. The problem of obtaining loans prevented them for a while from purchasing tractors.

On the other hand, they could make up for some loss. Their family relationships with the owners of small plots resulted in their being especially successful when buying or renting additional land. The son was often a more careful tractor-driver than an agricultural labourer would have been. Often, to utilize their tractors to capacity, they did the ploughing for their neighbours in return for payment and, thus, earned an additional cash income. Since their fields rarely adjoined but lay between the fields of other farmers, they could sell water from their wells. Especially in the beginning, as there was little competion, extremely high prices were paid for ploughing and water, and "tractor lords" and 'water lords" soon became commonly used terms.

Due to the Green Revolution, in which it had a share, this group became well-off and was fully integrated in the market economy. Most of the group proved to be dynamic and flexible. It is true that commercial considerations played a role in the decision concerning the farms, but excesses caused by commercialization are rare as compared to the small landlords. However, they also went through a process in which quite a bit of differentiation took place, and a small group has remained at the old level.

Marginal Farms

The farms belonging to that group are, according to the local soil conditions, under 10 acres in size, often less than 5 acres and, therefore, too small to provide a family with work and subsistence. On account of the scarce amount of land, they have the highest cropping intensity. The farmers try to compensate for the lack of land by working intensively. For the same reason, these farms often have hardly any fodder-growing areas. All of the land must be utilized for producing foodstuffs in order to ensure self-sufficiency. The animals are fed weeds and grass which the family members collect in the village area. In this way, a great deal of work has to be invested and the fodder is often not of the best quality, but the basis of existence is thus extended. As far as smaller marginal farms are concerned, this does not suffice, and the farm operator must offer his work against payment to earn an additional income. The fact that he is bound to the marginal farm only allows him to take up work in the

immediate vicinity. In most of the villages, the only opportunity is to find work as an agricultural labourer on a large farm; therefore, there is a large number of agricultural labourers who have small farms. Often, they can only find work during the peak seasons for cultivating and harvesting, and for constructing houses, etc. The underemployment rate among this group is high.

These farms are hardly integrated in the market. The farmers cultivate what they need for their own supply or as barter goods in the village. It is only when record-harvests have been achieved that they have something to sell. It very often happens that the reserves are used up before the next harvest and the people have to incur debts.

This group has little opportunity of utilizing the new technology. It lacks financial means, credit, access to farm inputs, and the capacity to take risks. For these farms which produce for their own supply, the fact that new wheat varieties do not always correspond to their taste and meet with their requirements in baking quality plays a very Important role. All the same, some of them tried to have a share in the great increases in yields. However, some of them failed. The insufficient access to extension services allowed mistakes to be made. Loans were borrowed from moneylenders at high rates of interest since the banks did not grant them loans because of the great risk. They did not own plumps, and, thus, it often happened that the expenditure did not bring the expected return and the loans could not be refunded.

In the course of time, a differentiation became apparent within this group. A few of them succeeded in working their way up into the group of family farms. Inheritance, possibilities of renting additional land, efficiency, and chance played a role thereby. A much larger number became indebted and had to sell part of or all of their land. If the number of marginal farms has not decreased in spite of this, this is due to the fact that, as a result of partition due to inheritance, additional farms moved down into this group. However, it happens more and more often that this danger is parried by forgoing an actual distribution. One of

the children to whom the other children lease their share of land assumes the cultivation of the land.

The participation of this group in the Green Revolution is insignificant and is often limited to better prospects of finding employment Quite a number of them even leased their land to larger farms so as to be free when looking for work, however, on the whole, the technological change meant a drop in this groups economic and social conditions.

Tenants

This group is constituted by the small, unprotected tenants who often cultivate the land as sharecroppers. The economic situation of this group has always been hard. The small areas they leased did not allow them to economically utilize their labour, and the landlords' propensity to allow only easily controllable crops to be cultivated prevented them growing vegetables and other intensive crops. The underemployment rate was high, but, often, they were not allowed to take up other occupations - in case they could find any. Many of these tenants were indebted and, thus, even more dependent.

The Green Revolution brought about radical changes for this group. At first, it had no share in the revolution. The landlords utilized the new seed on self-cultivated land. As the construction of wells and the acquisition of tractors progressed, many of the landlords went over to owner-cultivation and dismissed the tenants. Growing unrest among the tenants on account of the attempts at changing the sharecropping conditions, but also the fact that the tenants' draught-oxen were no longer needed were the reasons why within a few years, the contracts of a large number of these tenants were not renewed, and the sharecropping system was almost abolished in large regions. In India's Punjab alone, the number of tenants decreased from 583,000 to 80,500 between 1955 and 1969.

Some of the evicted tenants succeeded in finding employment as agricultural labourers, but, for the majority, work was only available at harvest time. If, in spite of this, the evicted tenants did not become

paupers, this can be largely attributed to the fact that they kept animals. All of them owned a pair of oxen which they could no longer use, but which could be sold at high prices. They exchanged these for a pair of buffalo cows which were fed on fodder collected by the family or given by a farmer when they worked for him. It has always been a traditional rule-of-thumb that whoever owns two buffalo cows earns, by selling calves, milk, or ghee, the equivalent of a casual labourer's income.Their subsistence was thus ensured, and, besides, they could offer their labour and earn an income. Growing trade and increase in transport and marketing often allowed them to find work. The fact that what they earned from selling milk ensured their livelihood allowed them to be particular when accepting a work. The mass of tenants thus did not directly participate in the Green Revolution, but the radical changes this group experienced have not led to the expected misery.

Landless Labourers

For this very heterogenous group, the implications of the Green Revolution vary according to the category of workers. The picture also differs from region to region. The general upswing in trade and business and the increased purchasing power in the country had a positive effect on the rural service occupations. There was an increased demand for their services, especially in the small towns. Since there was only a limited supply of these skilled workers, the village craftsmen broke off their old working relations with the farmers and exercised these professions in the towns for cash payment. The sep-jajmani relationship was partly maintained without observing the former obligation to be present in the village at all times. They worked in the village in the evenings and on holidays. The economic situation was considerably improved by combining the traditional employment relationships with gainful occupations in the rural town. Some of them established actual small industries. It was not possible far all of them to use their technical knowledge - even if it was limited - in handicrafts and to achieve, thus, a higher Income. Technological development sometimes made specific handicrafts superfluous. In such cases, the people concerned had to look for employment in another occupation.

This change did not take place in favour of similar occupations. Instead, the available resources constituted the basis for a new occupation. Thus, the potters became unemployed because the pots and pitchers manufactured in the factories were cheaper and more attractive than their products. The donkeys they owned, which they had used to transport their goods, became the basis upon which they entered the rural transport business.

As far as the permanent agricultural labourers were concerned, they fairly often rose into higher qualified occupations. The long-standing ties to a farm and the resulting close relationship and trust were the reason why these workers were entrusted with tasks related to the new agrarian technology, i.e., they were trained as pump attendants or tractor drivers. These occupations not only meant greater responsibility, but were also better paid.

The effect of the technological change on the rural casual labourers is of a complex nature. Firstly, their number not only increased because of the growing population, but also because tenants were evicted. The attempt of a few landowners to put a stop to their dependence on these workers during harvest time by purchasing combine harvesters constituted a grave danger for this group. Since the high piece wages paid for harvest work - as already described - guaranteed the existence of the casual labourers. There was the danger that a large number of workers would sink into misery and squalor. But, recognizing the danger of this situation, the governments of the two countries promptly prohibited the importation of combine harvesters.

Quite a few of the casual labourers keep buffalo cows for milk production and find therein, just as the tenants, a basis for their existence. In Pakistan alone, more than one million households which do not cultivate land keep cows or buffaloes. Farmers experienced that supplying fodder was a greater incentive for work than the usual wages. Furthermore, the Green Revolution created more job opportunities for this group than was often assumed. The higher incomes opened up many prospects, especially in trade. Neither the income from, nor the productivity of many such activities is high, but since they are often combined with the earnings of other family members and the income from dairy cattle

keeping, a certain improvement in the living standard can be ascertained. The result is an astonishingly high supply price for labour. Farmers no longer find workers at any wage. Moreover, this group has become more mobile and actively looks for work in other localities as well.

While the group as a whole endured the change quite well, the differentiation within the group itself became more pronounced. Not everyone was in a position to adjust to the changed circumstances. Only those who were economically better-off could keep buffaloes. Only those who were still quite young and in good health were mobile enough to look for work in other localities too. It is particularly disadvantageous for the weaker that the landlords changed their feudal-patriarchal work relationships for commercially orientated contacts and no longer felt obliged to be concerned about the weak as they did formerly. The living conditions of the weakest among the agricultural casual workers thus clearly deteriorated.

In other words, only a small percentage of the rural workers succeeded in improving their situation within the framework of the Green Revolution. The mass had no share in it. In spite of this, the living conditions often did not deteriorate in this case either, since the mass could adjust itself to the changed conditions. However, within the group, there are considerable differences due to age, activity, and family status. The living conditions of the weakest have worsened even more; for others, the gap between them and the wealthy has become wider; and the rest dropped only relatively in comparison to the other groups of poor people in the rural areas such as village craftsmen and small tradesmen.

Summary of the Implications

If an attempt is made to summarize the effects of the Green Revolution on the land tenure system, the following developments become evident:

- The Green Revolution clearly favoured the economic situation of the larger landowners and of the family farms, whereas marginal farms, small tenants, and agricultural labourers had little share or experienced a decline in their standars of living. Thus, the polarization between

those who have sufficient land and the poor has been further intensified.

-Only irrigated regions benefitted from the Green Revolution to a degree worth mentioning. It is true that, by constructing tube-wells, it was possible to extend the irrigated area. But the gap between these regions, which have always been better of, and the arid regions has widened.

-In the irrigated regions, the young, better educated, wealthy, and active farmers benefitted primarily from the technological changes, whereas the rest participated to a lesser extent. Whereas, formerly, agriculture was quite uniform and marked by tradition, there now exists a great disparity within it. Efficient and less successful farmers achieve very different economic results.

-The new class of progressive farmers replaced the former feudal landlords as the central power in the country. Their economic power gave them great influence in political matters as well. Their close relationships with the administration and the military helped them. They occupy the majority of seats in parliament and thus make sure that the agrarian policy which is advantageous for them is further pursued.

-The attitude of the new leading class towards land and agriculture is completely different from that of the former feudal landlords. For them, land is a farm input and agriculture a lucrative business. This commercial attitude corresponds to the labour relationships based on contract instead of tradition and concern.

-Thus, the common interest in agriculture as formerly shared between the classes - even if it was one-sided - was abolished. The classes now compete with each other. Polarization has become more pronounced and, in many areas, this already found vent in unrest. The relationships are much more unstable than formerly.

- It is true that the agricultural production has increased, but the production system has become far more complicated and susceptible. Me interlacing of agriculture with the other sectors of the economy is irreversible. It is no longer possible to temporarily revert to a subsistence economy. Since the supply and marketing channels are not reliable, agricultural production is more susceptible than before.

- The Green Revolution was a partial modernization of agricultural production without changing the mode of production. Since these were characterized by inequality, the result could only be an accentuation of the already existing inequality.

PRESENT LAND TENURE PROBLEMS

A brief look at the essential problems with which the agrarian structure and agrarian reforms in South Asia have to deal today should orientate itself on the priorities in the rural and agricultural development in this region. Even if this is a subjective viewpoint, it seems that three tasks should be given utmost priority within the framework of rural development in South Asia.

- Increasing agricultural production

  The chronic shortage of food in South Asia not only brought misery to many people but was also considerably detrimental to the development process on account of import requirements and the resulting dependencies. Even if, at the moment, India has solved her most crucial problems after a few good harvests and with the help of the technological changes which took place in the last years, one should be aware that the supply situation is still unstable. One or two insufficient amounts of rainfall during the monsoon can completely change the picture. The higher costs for farm inputs as a result of the increases in the price of petroleum are very likely to influence the capacity of agriculture to produce foodstuffs at reasonable prices. Moreover, the large population increase and the growing income, not for the whole of the population, it is true, but for large groups, causes demand effects, especially for high quality foodstuffs.

- Better utilization of rural labour

Increased production may be able to make an insufficient supply of food disappear from national statistics, but It does not suffice to guarantee the supply of food for the whole population. It brings food onto the market but not into the houses of the poor people who lack money to buy this food. Their poverty is primarily the result of the lack of job opportunities which world give them an income and, thus, purchasing power. Because non-agricultural job opportunities grow only very slowly and the population increases constantly, as many people as possible have to find employment in agriculture. It is true that there are limits in that sector, but they are far from having been reached. Institutional factors prevent, first and foremost, more labour from being employed in agriculture. The same applies to opportunities for employing people who are not needed in agricultural production for developing the infrastructure.

- More social and economic equality for the rural population

The present unequal distribution of economic and political power is not only responsible for the unbalanced participation of the population in development until now, and for widening the gap between the poor and the rich in the rural areas. This process led to a polarization of the social groups which annihilates the prospects of cooperation in efforts towards achieving economic and social development. But only on the basis of more equality would it be possible to create the political climate an which incentives to increase production and employment can be achieved and maintained.

The three above-mentioned priorities for rural development in South Asia are not goals which exclude each other, but which are compatible if the institutional preconditions exist. However, these preconditions, just as agricultural production, employment of labour, and equality, are strongly marked by the agrarian structure. The agrarian structure and the changes made in it will determine whether and in how far development will be achieved to the benefit of the whole rural population. This raises the question of the necessary agrarian reform.

Land ownership reform should be mentioned first. Even if there has been considerable redistribution of land, especially in India, quite a lot remains to be done. However, the emphasis is laid less on the real redistribution of landed property. There are no "appropriate" farm sizes for all agricultural functions. The distribution of the power of disposition over means of production of whatever kind and the severance of landed property from economic and political power are more significant than land redistribution in the old style.

Increasing agricultural productivity, at first regarding area, and then labour, will steadily become more important than land redistribution. This will raise the question of the social organization in agriculture and of the organization of the farm units. The agrarian organization which is required is one which

- encourages a combination of production factors which is compatible with their availability and with the costs
- creates incentives for productive labour performance, capital formation, and investments and this for all the members of the rural society.

To create the preconditions for this will be the major task for the agrarian structure and agrarian reform policy in the future. This includes access to the necessary services for everyone so that everybody can contribute towards the objective of increasing production. There is no doubt that this will not be possible alone on the basis of the existing service institutions but requires the development of new organization forms. In this connection, small farmer, tenant, and agricultural labourer associations which support their interests against other groups are also important.

Moreover, the agrarian structure must be changed in such a way that incentives for labour performance and investment develop for all the various groups among the rural population. Until now, such incentives have been mostly individually beneficial for a limited stratum of people. It should be examined how incentives could be developed for the other members of agrarian societies and whether they can be orientated towards

group interests and benefits. Thus, for example, capital formation functions on individual farms, but, at the village or regional level, where family relations no longer exist, problems crop up. Is it possible to create organization forms which would allow the underemployed to be employed in developing the infrastructure or allow the absorption of surpluses in order to develop non-agricultural enterprises?

An organization of agriculture which allows an increased labour input can also include the integration of animal husbandry on the farms and, thereby, simultaneously improve income and food. The question of appropriate organization forms is still unanswered.

Finally, the question arises as to whether changing conditions, especially the growing population pressure, do not necessitate a change in the systems and in the organization of land management. Until now, in South Asia, cooperation has prevailed in agriculture, primarily in the services. The success, however, varied. Can success also be achieved through cooperation in production? One can imagine that forms of joint land management and animal husbandry could bring new aspects, especially for the employment of labour. Surely, some of the models have been politically tainted, but they should be examined from a non-ideological viewpoint, and one should keep in mind that production under supervision, e. g., the Gezira project in Sudan and the agrarian reform cooperatives in Egypt, and other models also figure among those. All these models should be examined on the basis of multiple criteria, e.g., production and market performance, capital formation, employment, equality, participation, adaptability to innovations, etc.

Finally, the growing differentiation between the regions constitutes one of the problems of man-land relations. Regions which cause problems are the stagnating zones, especially the non-irrigated areas. On account of increasing regional differentiation, more and more laws and measures can no longer be applied to whole countries but most be specified regionally.

the nature of the problems of agrarian structure mentioned here - changes in the disposition of production means, access to services, incentives for production, and forms of joint land cultivation and animal husbandry - shows that, more and more, changes in the agrarian structure are not problems of single, non-recurring agrarian reforms, but rather demand a lasting and continuous agrarian and development policy. It is a question of expediency whether the measures should be carried out in small doses or bundled into a "reform."

AGRARIAN REFORM AND RURAL DEVELOPMENT

PROBLEMS OF THE DEVELOPING COUNTRIES

The Views of the World Conference on Agrarian Reform and Rural Development

From 12 - 20 July, 1979, the World Conference on Agrarian Reform and Rural Development (WCARRD) organized by the Food and Agriculture Organization (FAO) of the United Nations was held in Rome. It was not the objective of this conference, to which the governments of 145 nations had sent representatives, to develop new, ideas and knowledge on that subject. This would have required the organization of a conference of experts. The aim of this political conference was to prepare - on a world-wide scale - a programme of action for agrarian reforms and rural development which would be acceptable to all. It was to show means and ways of coping with the problems of agrarian reform and rural development. At the same time, the conference, which met with world-wide interest, brought to attention the key-position rural development has in the overall development process.

After detailed discussions, which had partly already been conducted at preliminary conferences, the conference passed a policy statement and approved a programme of action for agrarian reform and rural development. The most important items in these two papers are summarized in the following chapter.

Basic Elements of a Programme of Action

In an analytical report on agrarian reforms and rural development in developing countries since the mid-sixties (which was prepared as a preliminary report for the conference) it was ascertained that the development efforts made until then had often not reached the rural regions. The inequality and differentiation between urban and rural areas have become even more pronounced. Within the framework of socioeconomic development, an appropriate population policy is required, and the ecological balance as well as the conservation of limited resources gain considerable importance. The main objective of the development efforts is to eliminate poverty, famine, and malnutrition. The responsibility for the agrarian reform and rural development rests, primarily, in the hands of the governments of the individual countries. However, these must be supported by the international community. But this collaboration must be based on the principles of independence, national sovereignty, and self-determination as well as non-interference in the internal affairs of nations. On the basis of these principles, the following guidelines were, among others, drawn up for the programme of action.

- The basic objective of development is individual and social improvement, development of one's own abilities, and improvement of the living standard far all of the people, especially the poor in the rural areas.

- National progress that is based on growth, equity, and participation requires redistribution of economic and political power and a greater involvement of the rural areas in the national development efforts. It is also necessary to improve employment and income-earning possibilities for the rural population, to develop farmers' associations, cooperatives, and other voluntary, democratic organizations for producers and agricultural labourers.

- The greatest possible efforts should be made to mobilize and use the local resources for rural development.

- The governments should give priority to rural development and offer incentives for more substantial investments and increased production fn rural areas.

- An equitable distribution and efficient utilization of land, water, and other inputs while taking the ecological balance and protection of the environment into consideration are indispensable for developing rural regions, mobilizing the people, increasing production, and reducing poverty.

- Great diversity in rural activities, including the integration of agriculture and animal husbandry, fisheries, aquacultures,and integrated forest development is important for rural development on an broad basis.

- Settling industries, especially agro-industries, in rural regions offers the required mutual ties between agricultural and industrial development.

- Measures and programmes concerning the agricultural and rural systems should only be implemented with the assent and participation of the whole rural population, including the young people and their organizations. Development efforts should be orientated towards the needs of the various groups of rural poor.

- Women should be granted equal rights and contribute in the same way as the men to the social, economic, and political process of rural development as well as partake fully in the improved living conditions in the rural regions.

- International collaboration should be intensified and a new awareness how urgent the measures are should be developed in order to increase the flow of financial and technical means for rural development.

On the basis of these principles, the conference recommends the governments and all the organizations concerned to implement a programme of action with the following contents, to formulate the appropriate objectives to that end, and to make fund available.

Access to Land, Water, and Other Resources

For the countries in which it is necessary to redistribute landed property, it is suggested that maximum ceilings for land be fixed by law. When distributing land, the weakest groups of the population should be

taken into consideration in particular, and cooperatives should be established so that the desired improvements in productivity actually occur.

Rapid redistribution is the best protection against the reform being prevented. After redistribution has taken place, the associations protect the new farmers from landed property becoming concentrated one more and exploitation occurring again. For all the countries, tenancy and wage regulations are considered necessary. In order to do this, tenants should be registered; the governments should determine and enforce maximum land ceilings and control leasing, give the tenants access to loans and extension services, and encourage them to make investments. It is recommended thattenants associations control the measures implemented for improving the conditions of tenancy. Similarly, minimum wages should also be fixed for agricultural labourers and necessary measures introduced to protect them against exploitation.

In regions where land is owned communally, it is important to stop the trend of land being turned into private property in the hands of only a few people and especially safeguard the rights of small cultivators and nomads. Existing systems which can fulfil the function of controlling the right of common usage of land and water should be maintained and developed. Grazing areas should be efficiently utilized in such a way that the yield remains in the hands of the herdsmen.

If the efficiency of the agricultural production is hindered by the farms being fractioned and parcelled into too small units, measures should be taken to amalgamate them. These should be combined with village and regional development measures in order to supply jobs to those who have been displaced. Collective forms of land use of greatly varying types can help to propagate the benefits drawn from the improvement of the infrastructure, research, employment, the supply of inputs, an increased capabilities.

The control and management of forest land, waste land, an water are to be regulated in such a way that the public interest and especially environmental protection are upheld, while, at the same time, taking the

legitimate interests of the local communities into consideration. The population should be made aware of the danger of erosion and informed about its control. The preservation of fishing grounds should be ensured by using them and maintaining them properly with the participation of local persons.

Wherever unutilized land is available, it should be used to settle people looking for land. By creating infrastructure and extension services, the governments should ensure the permanent success of such measures. Thereby, settlement projects should be regarded as a supplement to, and not a substitute for, measures of agrarian reform.

In some countries, there is considerable inequality among the various regions. The governments should help level out the differences between poor and rich, as well as between the regions with a good and a poor infrastructure by means of investment programmes. Within this framework, it is important that development programmes be drawn up for integrating towns and their rural environment.

Participation of the Population

The conference regards participation as a human right and considers the participation of the population to be of particular importance so that political power can be exercised in favour of disadvantaged groups and orientated towards the requirements of economic and social development. Rural development can only be achieved by the motivation, participation, and organization of the rural population at the basis.

As a foundation for effective participation, the governments should remove all obstacles which stand in the way of the rural population freely joining and organizing groups of their choice. In particular, they should promote the creation of farmers' and workers' associations and cooperatives at local, regional, and national levels, support these, and concede them rights of self-determination. The rural population should have the opportunity to participate in development institutions, and take part in

deciding on, implementing, and evaluating developing projects, especially projects concerned with rural employment. The various social, economic, and cultural service institutions need financial support and training for their functionaries, without their autonomy being interfered with. Especially the energy of the young people should be mobilized for rural development activities.

In order for the rural population to make a contribution when development programmes are planned and implemented, especially those of regional development, it is necessary to decentralize the decision making process. In order to do so, local executive authorities should be developed or created. One of the most important tasks of the local government authorities is to educate and train disadvantaged groups so that they can have a greater share in the life of the community and in the development process.

In the wake of agrarian reforms, associations for the new farmers should be founded which should supervise the observance of the tenancy regulations when land and water rights are redistributed. Loans and inputs should also be controlled by organizations for the small farmers and those who benefitted from the reforms. In the case of settlement projects, it should be ensured that the settlers are organized and can, thus, mobilize workers for developing in the infrastructure.

Integrating Women in Rural Development

Before rural development can be successful, the important role of women has to be acknowledged. Moreover, they have to be fully integrated and given the possibility of acquiring knowledge and skills, and of utilizing them as well.

The government should also abolish the legally based discrimination of women fixed in inheritance rights; give them equal access to land, livestock, and means of production; make it possible for them to participate in business activities; and guarantee them a right to membership and voting in labour organizations, credit associations, and similar organizations.

The number of women in training and extension programmes should be increased, especially in posts from which they have been excluded until now. The contents and subjects of training and extension programmes should be expanded so that the role of women in production, processing, and marketing can also be taken into account.

To achieve participation equal to that of men in public institutions, the women's "operative activities should be promoted. To achieve this goal, it will be necessary to create a system for ascertaining the obstacles hindering the participation of women in schools, health services, employment, and general development. Statistical data showing women's contribution in production should be compiled and published. Measures facilitating household work and care of the children increase the chance for women to participate in economic, training, and political activities. Men should also be obligated to do their share of household work.

Training facilities of equal quality for girls and women, with the same subject matter as for men, should be established and made attractive by offering scholarships. These institutions should be followed up by possibilities of earning an income with the guarantee of an equal salary for equal work. Training possibilities for women are especially important not only in the fields of agriculture and in non-agricultural gainful employment, but also in the sectors health, nutrition, children's education, and family planning. It is necessary to make sure that, during the transition from a traditional economy to the modern technologies, the negative implications for women are minimized.

Access to Inputs, Markets, and Services

Rural development is hindered by the insufficient utilization of inputs. Only specific groups of farms employ modern, yield-increasing technologies.

By means of measures affecting the price and interest policies, the governments should encourage the small farms to increase the utilization of purchased inputs. To that end, local institutions have to be established in order to make them available, all of the farms must have equal access,

and it should be possible for local groups to participate. It is of crucial importance that the capital goods be available at the appropriate time and as input package.

Regarding the organization of extension services, various forms should be experimented with, and particular attention should be paid to reaching small farms and cooperatives. In order to equip subsistence farms with inputs, preferential prices should eventually be conceded and the access to social services ensured.

Local markets and cooperative institutions should be promoted to improve the conditions on the credit and commodity markets. Especially small farms will benefit from the promotion of informal markets and cooperatives. When making credit available, the requirements of small farms for building houses, consumption, production, and refunding debts should be taken into consideration. Eventually, subsidies will be required to compensate for the high costs of granting loans to small farms; the same applies to risk funds. owing to the low risk capacity, insurance against crop failures, price support, and other measures against price fluctuations are of special importance to small farmers. All marketing institutions need a well-developed infrastructure for which public and local funds have to be made available. The price policy should ensure that in the choice between products for the domestic supply and for exportation, attention is paid to the interests of the domestic food supply.

Rural development demands more research on problems of the rural sector and funds must be supplied for that purpose. The goal of eliminating poverty should be given due consideration in fixing the research priorities, and appropriate technology for small farms and cooperatives should be conceived. The problems of agriculture in arid regions and shifting cultivationare also urgent. Technological and economic research should be coordinated with social science studies in order to understand the socioeconomic implications of technological change in particular. Especially studies and innovations which minimize ecological disturbances are worth promoting, as well as studies on cheap building technology for building houses for the poor in the rural areas.

Development of Non-agricultural Activities

Increased agricultural production and more equal income distribution create a mass market and an effective demand for industrial products and services. Inversely, industrial products and services are necessary for rural development In order to particularly promote the development of rural areas, as many industries as possible should be established in the rural regions. To that end, tax incentives, especially for small and medium industries, can be of help. The more public institutions established in rural areas, the more attractive these regions will become for investors. Especially home industries offer numerous possibilities, e. g.in organizations of the cooperative type. The government can promote their establishment by supplying funds, by providing vocational training institutes ,information, and supporting marketing.

Especially during the periods when there is not much work to be done in agriculture, rural work programmes, can offer the opportunity of earning an additional income and, at the same time, of developing the infrastructure.

Such measures should be integrated in the general development plans and be implemented with the population collaborating in the planning. In some regions, there are areas that can be used to grow forests both to achieve ecological results as well as to provide fuel, wood, and fooder. Fisheries and aquaculture can also improve the income of small farmers.

Education, Training, and Extension

School education is a fundamental need, not only for the development of a human being, but also for modernizing the agrarian economy. Primary schools, free of charge, should be given top priority, but it is as important to transmit knowledge that will help increase the productivity and income. In order to achieve this, research and extension have to work together.

The governments should aspire to achieve primary education for the entire population by the year 2000. Thereby, the subject matter and the organization of the training should be adjusted to the conditions in rural regions, especially to the fluctuating labour requirements in agriculture. Schools

should be equipped with plots of agricultural land so that agricultural skills and knowledge can be acquired. Moreover, possibilities of training in the fields of nutrition, agriculture, farm management, and Cooperative matters should be created, and knowledge and skills for taking up an occupation in a non-agricultural sector,in construction, and for repairing implements should be imparted, with particular attention paid to using local material.

The promotion of rural development demands the *in-service training* of the personnel from the government institutions at the various *levels*, particularly with regard to the special requirements of rural development and the problems of the poor sections of the population. In the agrarian sector, there is a great demand for intermediary-level extension workers, but people from the villages should also be trained and then sent back to these villages. Successful agricultural development requires collaboration between planners, rural educators, extension officers, and officials from the rural organisations in order to coordinate their activities. In particular, farmers should participate in planning research so that it complies with their specific needs.

International Trade

The problems of international trade that are less directly connected with the subject of the conference actually concern other international bodies. They were mentioned, however, because rural development is influenced to quite an extent by the stability of revenues and the functioning of international trade.

The conference addressed itself to the industrial countries requesting them to meet the obligations they had already entered with a view to liberalizing trade and to removing the obstacles to the trade for products which are of particular interest to the developing countries. This also involves the extension of the general preferential system to other products and goods, the convention of international commodity agreements, and the implementation of the Common Fund.

The developing countries, n turn, should remove obstacles hindering the exportation of agricultural products and create incentives to increase production, especially in the case of small producers. This would require that even small farms can share in the benefits resulting from the changes in prices on the world market, but are protected against price fluctuations by a stabilization fund or similar measures. If at all possible, the products should be exported in a processed or finished state to increase the profits. Exportation should not endanger the domestic food supply.

Other Measures

The developing countries should examine the possibilities of close cooperation among themselves in various fields related to rural development and make use of these with the support of the industrial countries.

Demers as well as beneficiaries of development aid are recommended to set aside more funds for rural and agricultural development. Flexible allocation terms; the assumption of domestic-currency-costs and current expenses; the remission of debts; and increases in food aid, as compensation for temporary decreases in production when agrarian reforms are implemented are further recommendations. In the last case, care should be taken that food aid does not bring about a reduction in the efforts towards domestic production.

Finally, the conference makes recommendations to the effect that, when the program,, is implemented, the FAO and other international organizations should give their support by observing the agrarian reforms and rural development, by evaluating and spreading findings, intensifying technological aid, and helping to mobilize funds.

PROBLEMS OF THE INDUSTRIAL COUNTRIES
AN OUTLOOK

There is a need, especially in a number of the eveloping countries, for extensive agrarian reforms because there are such great discrepancies between the existing agrarian structures and what is required for socioeconomic development to take place that comprehensive and radical measures would be necessary in order to bridge the gap. This is why the subject "agrarian reforms" is usually discussed in connection with developing countries.

This, however, should not lead to the belief that the industrial countries have no agrarian problems. If despite this fact agrarian reforms are hardly ever mentioned in the context of industrial countries, it is mainly due to two factors. Firstly, the problems are not primarily such as would demand a change in land ownership and thus call for an agrarian reform in its narrow sense. Moreover, the instruments and institutions that are available in the industrial countries often make it possible to take the necessary measures step by step without necessitating sweeping reforms. It is true that such adaptions are in some cases either undertaken only hesitatingly, or not at all; However, the fact that the agrarian sectors are generally quite small makes it possible for the industrial countries to neglect undertaking the necessary measures on the basis of political or other grounds because the overall economy is in a position to pay the cost of this, sometimes, irrational behaviour.

This cannot cover up the fact that the agrarian question has led, in some cases, to considerable and constantly growing problems in the industrial countries and that the measures undertaken to solve them have an influence on the conditions in the developing countries. For these reasons, an outlook will be drawn up here - without any claim to being complete and comprehensive - in order to show a few essential problems in the relationship between man and land in the industrial countries.

One very important difference in comparison to the developing countries is the fact that, most cases, the agricultural sector in the present industrial countries developed after industrialization had taken place. This was possible because at the beginning of industrialization the population density was comparatively low, food imports were available to meet any deficiencies, and, finally, emigration overseas functioned as a blowoff valve when the pressure became too strong. At the beginning of industrialization, economic and psychological factors led to an exodus of labour from agriculture that - in Germany, for example - has continued until today. Agriculture tried to compensate for the shortage of manpower, which had always existed in a few overseas countries, with migrant workers and, soon thereafter, mechanization. This process which had already taken place in other countries and on the large farms before the Second World War also spread to the small farms after the war. Thus agriculture was faced with a new obligation; it had to pay the cost of mechanization. Furthermore, the exodus from agriculture could only be stopped by satisfying not only the income expectations of the agricultural labourers (which were based on industrial wages), but of the farmers' sons as well.

The way to do this was to increase production and productivity in the process of commercializing agriculture. To be a farmer was no longer a way of life, but an occupation. Rational considerations determined the management of the farm and resulted in a division of labour, specialization, and cooperation among the farms, or even in the decision to give up agriculture if the farm area was too small. In addition to mechanization, intensifying agriculture brought about increased utilization of new, technologies, especially fertilizers, pesticides, and high-quality seeds, etc. These farm inputs are of industrial origin and must, therefore, be purchased. This results in an increased interlacing of agriculture and the non-agricultural sectors and, thus, increases dependence. Those farms in particular, with highly qualified managers, good soil conditions, and a favourable market position achieved astounishing increases in productivity and income in this process.

The process, however, did not take place without having side-effects that caused problems, or at least raised some questions. In the course of this process of adaption, quite a few farms were ruined. A lack of land, unfavourable natural conditions, disadvantageous market positions, and inadequate managing abilities forced some farm managers to give up, or impelled the successors to turn to another occupation. Thus, between 1950 and 1980 the number of farms in the Federal Republic of Germany decreased by 50 %. Other industrial countries went through a similar development In particular, a large number of farms with less than 20 hectares of land at their disposal stopped operations and, thus, made it possible for other farms to increase the size of their cultivable area. All in all, this process was taken in step fairly well as it took place at a time when industry was booming. Still, this should not hide the fact that the process caused a great deal of suffering and misery in concrete, individual cases.

The increases in farm size made it possible, on the average, to meet the growing income expectations. Considerable differences, however, developed within agriculture itself. In some regions - particularly mountainous regions - the unfavourable natural conditions set narrow limits to efforts to increase productivity and incomes. Since there are only few non-agricultural job opportunities in some of these regions, large sections of the population migrated to urban centres, which resulted in entire regions becoming depleted. As it was usually the young, active sections of the population that migrated, whereas the old people remained, this also led to further deterioration of the economic and social structures.

Likewise, the price-cost ratio made it possible for some types of farms to earn astoundingly high incomes, wheras others - conversely - earned only way below average incomes. Individual performance, market position, and varying effects of government price and subsidizing policies have led to considerable disparities with agriculture - in other words, to large differences in income among the farms.

Finally, among the forms of unsuitable agrarian structures that should also be mentioned are, in particular, the widespread types of tenancy found in the countries of Southern Europe as well as the employment of inexpensive alien employees and migrant workers in agriculture in Europe and the USA.

Despite all of the structural changes and intensification of agriculture, the income earned in large sections of agriculture was unsatisfactory and was raised by state subsidies to promote income. These measures, which can be found in one form or another in nearly all industrial countries (in Germany, agriculturists had at one time a legal right to compensation that raised their income to the level of comparative non-agricultural wages) improved the incomes of many farmers, it is true; however, at the same time they created new problems. Agriculture has became a dependent section of the overall economy which regards demands for price increases as a nuisance. Many of the subsidies have furthermore led to unintended sideeffects. The most important in this context is overproduction. The subsidized prices were so attractive to many producers that they resulted in production increases that surpassed the demand. The outcome was additional expenses for storing these products and, in some cases, further subsidies in order to promote marketing outside the country. Larger surpluses, especially in cereals, led to the development of a systematic policy of cereal exports and food aid to the countries of the Third World. This is, in some cases, often a blessing and prevents hunger in countries that do not produce an adequate supply of food. Too often, though, the food deliveries cause a decline in the recipient countries' efforts to raise their own production. Certainly, this would mean a long, costly process in concrete cases. But wouldn't the production in most of the developing countries also be higher if they were granted the same amount of aid to use to increase their production that is otherwise given in the industrial countries? At least there is the danger that price subsidies granted for the purpose of raising agricultural income in the industrial countries might in the end prevent the desired domestic production in the developing countries from taking place.

On the other hand, pressure to continue high-production policies in the industrial countries also comes from another side. To an increasing extent, maximum yields are not only the product of efforts made in agriculture itself, but also the result of prior and subsequent services performed by industry and the service sector. These sectors apply pressure to increase the employment of inputs and services in order to enhance their own economic success. This can easily be too much. Exaggerated usage of pesticides and weed-killers has detrimental effects an the environment and health. Additives in feed may have negative effects on quality or even endanger health. Breeding cannot only increase susceptibility and, thus, risk, but also reduces the variety of types. Peasant agriculture has indeed proved its sense of responsibility, but regarded globally and particularly in the case of commercial forms of agriculture, the dangers cannot be denied.

The increased interdependence between the sectors not only makes agriculture dependent, but it also reduces the amount of land available to agriculture. The necessary transport network and industrial sites, dwelling places and recreational areas for the non-agricultural population reduce agricultural land to a considerable extent In the Federal Republic of Germany, the area of land under cultivation shrank between 1949 and 1976 by 900,000 hectares. It should be mentioned, however, that this includes substandard land first cultivated during the war.

The new functions the rural areas fulfil in an industrial society also create new tasks. More and more townspeople prefer a home in the country and commute to their place of work. Furthermore, the rural areas are becoming recreation areas for the urban population, a role that can only be fulfilled as long as the countryside is protected and preserved. These tasks also have consequences for the agrarian structure and farming.

Recently, an additional question has arisen. To a considerable extent, the great increases in production are dependent upon the utilization of fossil fuels. Tractors, fuel, fertilizer, and pesticides would not be available without oil. Even if there is enough oil in the future, the

prices will increase drastically. This will lead, without fail, to considerable increases in the price of agricultural products. It will be possible in the industrial countries to burden the consumer with these price increases. Is this also true of the surplus production that is marketed commercially in, subsidized, r granted as aid to the developing countries? And how long should agricultural production be pursued at continually increasing costs in the industrial countries that is not needed there? From what point on is it sensible and desirable to invest the same means in the developing countries?

Under the right conditions, the same amount of capital could lead to a greater increase in production, while at the same time being produced where it will be consumed. What consequences would this have for the domestic food supply in times of crisis?

The goal of this short outlook is not to say that all of the circumstances described above must, can, or should be changed. The aim is just to raise questions and, thus, indicate that in the industrial countries as well, the constant changes in the economic, social and political conditions necessitate continual reconsideration of the relationships between man, land, capital and technology.

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