

**Republic of Yemen**  
Ministry of Agriculture &  
Irrigation  
General Directorate of  
Planning & Monitoring

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



الجمهورية اليمنية  
وزارة الزراعة والري  
الإدارة العامة للتخطيط والمتابعة

## **Aden Agenda**

(Summary)

Framework of the Structural Adjustments  
For Reform of the Agriculture and Irrigation Sector

Part I

Yemeni Agricultural Policies and Strategies

## **Executive Summary**

Use of the limited natural resources of water and land as a base for its continuity, which is rapidly depleting. This is due to the bias towards groundwater irrigated agriculture, and a distorted price structure for agricultural inputs and outputs and in view of the existence of small and widely dispersed farm holdings, not to mention the neglect of the traditional farming methods by Research and Extension and the lack of compatibility of the advanced inputted technologies because they do not meet the needs of the farmers and do not correspond to the available resources.

The rainfed and irrigated agricultural systems in their present forms also lead to the poor levels of output, which make agriculture unattractive and unsustainable. Plant and livestock production is in the forefront of the agriculture economic systems, in addition to the diversified forestry and pasturage productive systems. Included in this system is production in fisheries, in view of the linkages and intertwining aspects of the two in the lives of the rural population with their various ecological breakdowns.

The current bias in favor of one sector against the other has adverse effects, especially for the agriculture sector, in all its activities, and this bias takes its form in the small size and the proportion of the investment budget which is presented for the agriculture sector, despite its importance economically and socially, and the increased deductions thereof by more than half, with a bias towards a pricing policy, customs tariff and protective measures that work against agriculture, as well as the inequitable trade balance.

The annual renewable water resources amount to approximately 2.1 billion cubic meters, whereas the estimated water used comes to 2.8 billion cubic meters

The agriculture services in the sector center on providing research and extension services and some of the basic services in plant protection, livestock breeding, quarantine and rural credit.

Agriculture is beset by a number of natural, technical, social economic, institutional and legislative constraints and difficulties.

To remedy the difficulties requires turning towards a new form of remedies that starts with linking the actual present situation with the lessons learned over the different past stages which agriculture has gone through, in particular, and what the development process went through in general, through the comprehension and recognition of the challenges faced by the sector, including the depletion of the natural resources and the poor position of agriculture economically, as well as the issues of poverty and hunger that is sensed by most of those involved with the sector.

Overcoming the difficulties and constraints relied upon the adoption of guiding principles that will lead to determining the objectives, the formulation of policies, and the development of the features of the agricultural strategies in two models, which are first, the farmers and second, the interventions. To meet the base of the second model, the interventions, this requires the determination and the breakdown of the roles between the different parties involved in the development process, at the executive, service and management level, whereby its features are linked by integration and compatibility.

The development objectives of the policies are the achievement of food security, combating poverty and sustainable growth. These policies were formulated in a number of forms and they were framed within the context of the general policy expressions within the appropriate physical, technical, economic social, legislative and institutional setting. In order to realize these policies the strategic choices were adopted for the accomplishment of targeted increases in the output of grain, livestock production, and the increase of incomes generated by rainfed agriculture, and the increase of the output from irrigated agriculture.

The achievement of the strategic targets rested on the magnitudes/devices for making them possible, such as enabled farmers, institutional reinforcement, appropriate settings, and investment guidance through programs that seek to proceed to the target and that aim for the strategic devices in the fields of technology and productive programs, finance, investment and human development programs, management improvement and policy analysis programs, from the standpoint of modernized outlooks, which are based on the expanse of time and space. All these steps would require that change is instilled by combined of proficient efforts and the farmer's convinced of the need for participation and of taking measures that ascend to the prerequisites for change, which are linked with the analysis beyond the outlooks that are associated with analysis of the actual situation and the absorption of the implications of the notion of change itself for what lies beyond the modernization outlooks.

## **2.5 Difficulties and Constraints**

### **- Natural:**

These include (scarcity of land, scarcity of water, drought/floods, soil erosion, and desertification.

### **- Technical:**

These include use of inefficient technology, poor production structures, inadequacy of rainfed agriculture, inefficient livestock production, low productivity, poor management of pastureland, the unsuitable methods of water use.

### **- Social:**

Insecure holdings; high population growth; poor awareness, poor health conditions; malnutrition; poor education, Differences in consumption habits, and the use of qat.

### **- Economic:**

Inadequate credit facilities, shortage of job opportunities; high prices, low incomes, and increasing poverty.

### **- Institutional:**

Poor institutional structuring; failure of the sector strategies, the lack of clear policies; shortage and poor quality of information; poor institutional capacity of the staff; the problem of equity, poor effectiveness and efficiency.

- **Legal:**

Inadequate legal framework, poor law enforcement and application.

## **3.0 Modernization Prospects**

### **3.1 Introduction**

Any outlook towards modernization in the agriculture sector, with a view towards developing and improving the sector, is nothing more than a reflection of the scrutiny of the current situation of Yemeni agriculture. As previously cited in the last Section, agreement could be arrived at that the most significant problems (constraints) faced by the agriculture sector may be summarized within three principal challenges. These challenges are: the deterioration of the natural resources, which agriculture depends upon; the poor economic significance given to agriculture, and the sense of poverty and hunger, which can be sensed by most of those connected with the sector, with open and realistic minds, in a way that is consistent with the changes, aspirations and the available means. This outlook may be formulated so that it becomes tantamount to the answers to three questions:

- What lessons have we learned from our readings on the actual present situation of agriculture? When defining the lessons learned from all the above, we would have arrived to a set of considerations (or guiding concepts), which shall be focused upon when setting the objectives.
- What is it that we wish to achieve, in order to revitalize agriculture? When we realistically put forth the desired objectives, we will then have set forth the development objectives towards the improvement of the agriculture sector.
- What will guide us to achievement of such objectives? The answer to this question will enable us to clarify the features of the general policies before setting out the strategies, which will be discussed later in this section.

This three pronged system (concepts/objectives/strategies) has been called the prospects for modernization, which are now believed to be the sources of enlightenment for the path that will lead to any change culminating from the process to reform the sector.

The outlooks that will follow – based on analytical studies of the sector – in a participatory manner, were formulated after extensive discussions by all those with a stake in the sector, at all levels (implementation/service/management).

## **3.2 Guiding Concepts**

It might be appropriate to mention, inspired by the lessons learned from the situation of Yemeni agriculture, that a set of concepts should be taken into consideration which need to be instilled, not just when determining the objectives and formulating the policies, but also when developing the features of the agriculture strategy, and the associated measures for its implementation. These concepts may be set forth in two consecutive modules: The Farmers, first, and the Interventions, second.

### **3.2.1 First, The Farmers**

We could not have easily placed the farmers (male and female) in the lead, had we not first turned to three concepts. These concepts are, namely: participation/compatibility/suitability). In order to keep the farmers in the lead, efforts must be taken so that they are rigged up to "participate" knowingly and voluntarily, for the benefit of their own interests. In addition, the setting, in which agriculture will develop, should be "compatible" to them, whereby they accept it, and are ready to bear the costs involved, in accordance with their abilities and the means available to them. In addition, the development of agriculture must be directed so that it is "suitable" to the farmer's needs and aspirations and consistent with the extent of the obstacles they face.

#### **3.3.1.1 Participation**

Both rural men and women have the 'perception and the awareness' that are essential for them to feel secure to join in the development of agriculture, but at varying levels, based on the information they obtain regarding the level of their participation and to what extent that it shall lead to serving their interests. The poor level of awareness will need to be upgraded in order to ensure that the participation is voluntary and which, in turn, will lead to the maximum benefits.

The participation should not be limited to undertaking development tasks, but should go beyond that to include the involvement in formulating, planning and the managing such tasks and in the decision making involved with respect to such tasks accordingly. In view of the significant role of women in agriculture in Yemen, the involvement of rural women becomes a primary pillar for any strategy and policy system for the agriculture sector. Moreover, the cooperative self-help activities, in all their voluntary manifestations will assure the various roles that must be assumed by both men and women accordingly.

#### **3.3.1.2 Compatibility**

The progress in agricultural development requires that there is a compatible setting, institutionally, socially, economically, naturally and technologically.

## **Institutional Compatibility of the Setting**

This requires that policies and laws are established that will meet the requirements for real and compatible institutional structures, which will be able to carry out their social, economic and other similar functions, in the manner that will best serve the interests of the local communities and that will enhance the development role of community groups (women's organizations, farmer's associations, etc.).

## **Economic and Social Compatibility of the Setting**

The compatibility of the setting, economically and socially should, through awareness and responsiveness, be able to arrive to an adequate level for discussing and solving the problem of landholdings, and to a willingness to bear costs, and obtain a proportionate share of the benefits, and to be able to grasp the implications of economic comparative advantage.

## **The Natural and Technical Compatibility of the Setting**

In order for the setting to be compatible with the development side naturally and technically, it must be linked with the compatibility of the target to the scarcity of resources. The same also should be the case for the compatibility of the technical level to the target as well.

### **3.2.1.3 The Suitability**

The approach to be taken should be demand oriented, with an objective, problem-solving and should meet the suitability requirements accordingly.

### **3.2.2 The Interventions**

Updating the prospects cannot be expected to occur without consideration of the interventions that must be undertaken by the parties that have a stake in the development of the agriculture sector at all the different levels; i.e., implementation/service/management levels. This should be based on the role, which will be assumed by such interventions, especially those of the government. The characteristics of such interventions are that they should be "integrated" and "interconnected" actions, in addition to the requirements of sincerity and "accountability" of those who are in charge of such interventions, with respect to their performance. Otherwise, without these traits, there will be more random and ambiguous interventions and the priority needs of farmers will not be fulfilled. Yet, these traits alone might lead to a waste of effort, funds and time, unless the interventions have undergone a process of selectivity based on "equity" and aimed at enabling the farmers to realize their desired goals and towards achieving effectiveness that is based on efficiency and the sustainability of the efforts exerted and the funds and time spent. The Yemenis' perception of time needs to be changed, if we are to overcome the challenges confronting agricultural development. There are different levels of intervention. At the lead is the provision of full support and at the tail is support through motivation by incentives.

### **3.2.2.1 Selectivity**

Not all those who have farmed or who have lived in the rural areas (implementation level) deserve intervention by full support. There are those who are self-supporting and only require motivating incentives. Similarly, not all the sector services (service level) should receive full support for providing such services. There are some services, which could be supported by the Government, such as most of agriculture research services. However, there are other services the Government might as well just drop.

Undoubtedly, the management of the agriculture sector is a burden that is fully borne by the Government, for it is obvious now, that it is not possible that the private sector should be charged with selectivity, that includes all the forms of interventions at the level of the farmers/producers (implementation), at the level of provision of rural/farm services (the service) and at the level of sector management. There are benefits that come with selectivity, of which the most important are: saving and rationing the use of resources (efforts, funds and time), and it also reinforces enabling the farmers and gives them access to such interventions equitably.

However, selectivity without controls and standards will only lead to having the interventions go to those who are not really entitled to them, and loses all the significance intended by such selectivity.

### **3.2.2.2 Effectiveness**

Effective interventions must be efficient and sustainable. Sustainable is not implied here in the comprehensive sense of the word, which would entail efficiency, effectiveness and equity. Rather the implication here is the continuity of the intervention with the same effectiveness – the intervention that meets the requirements at all levels of the sector. This guiding concept arose after the rural/farm service institutions were studied, which lead to the requirement that the roles (interventions) must be divided among all the parties (from the public, cooperative and private sectors) (Refer to Result<sup>1</sup> 2 of Aden Agenda).

## **3.3 Development Objectives (Policy Objectives)**

What has become almost certain is that over the next twenty years, the rural population of Yemen will rise by 12 million people, and accordingly the demand for food will increase. Actually already more than one-fifth of the rural population is considered poor. Therefore, unless the rural economy is able to absorb the increased labor force, then the number of the poor rural population will rise to uncontrollable levels then. Accordingly, the general policy of agricultural policies then should be to "achieve increasing growth - sustainably and equitably – of the outputs of the agriculture sector and increase the incomes of those who are dependent on agriculture, especially of the rural poor.

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<sup>1</sup> Could also mean "Conclusion" or "Finding" 2.

Within the context of this general policy objective, the implementation of the "Aden Agenda" has resulted in setting forth the general objectives of the agriculture sector, which are:

1. **Food Security:** The achievement of high levels of food security that depends on the domestic agriculture production of food.
2. **Combating Poverty:** Support the anti-poverty efforts exerted in rural communities.
3. **Sustainable Growth:** The realization of sustainable growth at rates that should at least be not less than the population growth rate.

### **3.4 General Policies**

After completing the frameworks for the Guiding Concepts and formulating the development objectives, now it is possible to draft a set of expressions that – in light of which – could provide guidance towards the achievement of the development objectives (Policy Objectives).

There are a number of modules for the formulation of policies. However, the policy statements shall be classified here under a number of elements, to facilitate easier reference to them. Among such policy elements are the natural (linked to the resources), technical (linked to methodology), social (linked to relationships), economic (linked to feasibility), institutional (linked to approach), spatial and legal (linked with controls). According to the interconnection between these elements, in adherence to the guiding concepts and within the context of aiming for the achievement of the policy objectives, the sector's general policy statements shall be framed as follows:

- **The Natural Framework**

The optimal use of the natural resources for agriculture; the increase of productivity per unit; support to community participation of in the management of resources; protection of the traditional assets; protection of natural resources and the promotion of setting up natural protected zones.

- **The Technical Framework**

The use of production inputs prudently; participation of the private sector in research and applied research work; to work towards updating technology in a manner that will conform to the local capacities, improve the effectiveness of research and extension work; direct attention to agricultural training programs; and upgrading the performance of the agriculture staff.

- **The Economic/Social Framework**



To lean towards an open market orientation for trade in agricultural products; finding sources of financing for small farmer enterprises; exploitation of climatic comparative advantage; expansion of agricultural self-help or cooperative associations; direct agricultural credit towards actual output; and support to rural women.

- **Legal/Institutional Framework**

Follow the principal of empowerment and delegation of authorities, integration of the various institutional roles, in a manner that does not conflict with the centralization of policies and the decentralization of management and implementation; support to the creation of marketing companies, regulation of agricultural quarantine; finding the accounting system that will motivate the local staff, completion of the regulating legislation in the area of agricultural inputs and output; control the use of production inputs and requirements; open up competition in the provision of inputs and requirements for production; and the provision of information on agricultural markets and data on output.

## **4.0 Strategic Options**

### **4.1 Strategic Targets**

#### **1. Increase production of cereals, especially wheat, and the production of livestock (Food Security)**

- Support to the efforts towards enhancing the effectiveness of farm services towards meeting the objectives of the producers and upgrading their capacities;
- Support to the establishment and improvement of the quality of information systems;
- Find food alternatives that compete with qat;
- Secure land property holdings;
- Improve the capacities to confront and reduce the occurrence of natural catastrophes (droughts/floods);
- Remove policies that work against motivating cereals production; and
- Support to finding acceptable alternatives for food consumption habits.

#### **2. Increasing incomes generated by rainfed agriculture (Anti-poverty)**

- Support to research and extension in the rainfed agricultural areas;
- Reduction of desertification and the erosion of mountain terraces;

- Give rainfed systems farmers access to financial facilities;
- Vitalize participation in the management of natural resources; and
- Creation of opportunities for diversification of income sources and for the creation of added value in agricultural production.

### **3. Increase productivity of irrigated agriculture systems (Sustainable Sector Growth)**

- Improve groundwater use;
- Activate the participation of farmers in irrigation management from both surface and groundwater;
- Create an integrated incentives system for the sustainable methods of land and water use;
- Reinforce the institutional structuring of farmers' associations and the expansion of their memberships.
- Support the institutional structuring of Sectoral Management (in MAI);
- Support to the potential opportunities for the expansion, improvement and compatibility of agricultural markets.
- Intensify and promote private sector investments in market oriented agriculture; and
- Disseminate awareness among producers on the possibilities for the diversification of the agriculture products that are exportable.

## **4.2 Strategic Dimensions/Tools**

The tools that the strategy depends on are:

- **Enabled Farmers**

To work towards finding enabled farmers, through human development by training and rehabilitation.

- **Reinforced Institutions**

Set up strong institutions, and the laws, policies, strategies, plans, regulations that will support this effort and which will provide information, data and the qualified staff; preparing and stimulating farmers to be involved in voluntary work.

- **Compatibility of the Setting**

This can be realized through the existence of tax and pricing incentives with legal backing; provision of export opportunities and areas for exports in agriculture; solving the problems of land holdings, whereby they are compatible with the requirements of the targeted setting; similarly, the introduction of compatible techniques that meet the requirements of cost reduction and increased productivity.

- **Investment Guidance**

To direct investment towards small enterprises that generate income and that are consistent with the requirements for the creation of job opportunities and increasing the efficient use of resources, in order to back the sector with quantitative and qualitative output; and to direct government investment towards the essential infrastructure needed for the sector.

### **4.3 The Trends/Program Areas**

#### **4.3.1 Trends**

The trends that the programs will take are:

- **To turn towards the targets**

Alleviation of poverty; food provision, rationing of water, reduction of soil erosion; and increase in the rate of agriculture growth;

- **To turn towards the strategic tools**

Enabled farmers; strong institutions, compatible setting; and guided investments.

#### **4.3.2 The Program Areas**

##### **The Program Areas within the tasks of the Ministry of Agriculture and Irrigation**

- Technology and Production Programs;
- Financial, Investment and Human Development programs;
- Management of Natural Resources and Irrigation programs; and
- Management Improvement and Policy Analysis programs.

#### **4.3.3 Priorities**

The priorities are set within the implications of the prospects for modernization, which are based on the time for the fulfillment of a priority need, whereby the time period required for completing an ongoing development activity shall be the criteria that determines the extent of its priority. Its implementation before or after this period takes it out of the sphere of priority. Similarly, it is based on the spatial range, which implies that the site should be the place in which can be found the requirements for the exploitation of the resources that are directed towards targeted development activity, in a way that such resources will not be wastefully lost.

## **5.0 The Step after the Outlooks**

Change requires that it be instilled in a way so that the concept of change reaches the people, and there is reception and responsiveness to the ideas of change. Change can never be undertaken by just one entity alone, but requires that the efforts of all are combined, knowingly and persuasively. In addition, all share in the responsibility of enduring the tasks and requirements of change itself. Alongside the implanting change comes taking steps and measures that are consistent with the levels that are reached by the different stages of such change.

### **5.1 Implanting the Idea of Change**

Instilling change requires components that first enable it to permeate and the use of the most appropriate method that will be effective in carrying out such a role. Based on the envisioned prospects for modernization, this requires understanding the nature of the agriculture sector, the analysis of its present components for greater insight into the present situation of the sector and drawing out the lessons learned, and accordingly, to grasp the change that is required for the stage that comes in after having set the modernization outlooks, exemplified by the importance of structural adjustments, keeping in mind the effects that are associated with such changes on the Economic, Financial and Administrative Reforms that primarily have a medium and long term effect on the rural poor. This requires clarification of what the farmers and the staff of the sector can expect to gain from these reforms, since it is possible to use the method of promotion, in its various forms, that will lead to the gradual interaction with the idea of change and to having it implanted and instilled by those having a stake in the sector, in order to rejuvenate the sector accordingly.

### **5.3 The Sequential Measures**

Sequencing measures is intended to mean, according to the concept derived from the prospects for modernization of the sector, that priorities follow through sequentially, whereby they achieve compatibility, suitability and equity. In other words, the sequencing of the measures takes on a needed dimension, because some of the measures cannot be implemented except after the implementation of specific prerequisite measures. For example, reduction of groundwater depletion cannot be pursued without the issuance of the Water Law, the availability of the appropriate equipment for the efficient use of water, dealing with the prices for the power that is the essential energy source for pumping the water, etc. In addition, the same thing applies to the remaining measures, which come under each program and which target for the achievement of specific targets.

## Part II

# The Vistas for the Institutional Development of the Agriculture Sector

## Preface

- i. The most recent data on agriculture indicates that the rural area of the country still represents the domicile of over 75% of the total population of Yemen totaling 17.5 million, based on the a population growth rate of 3.7%. Most of the rural population generally lives under low standards of living, due to the poor rainfall and the deterioration of the natural resources. Recent statistics confirm that the rural areas of the country are congested with four million poor people.
- ii. In order to combat poverty in the rural countryside, an agricultural strategy must be adopted, which will ensure the sustainability of the development of the agricultural sector. This will only come through the optimal utilization of the natural resources, the participation of the targeted beneficiaries in decision making at all levels and the motivation of the private sector to take part in the provision of various agriculture services, while the public sector should focus on providing essential required services that the other sectors do not provide.
- iii. Accordingly, based on the foregoing, it was essential that the previous policies on the development of agriculture be reviewed and that the lessons learned thereof should be benefited from, with a view towards revising the general objectives of Ministry of Agriculture and Irrigation, in a manner that will lead to the reinforcement of its role of raising the standard of living in the rural areas, confronting poverty, improving food security and vitalize the contribution of women to the development of agriculture.
- iv. Consistent with the orientation of the Government's Economic, Financial and Administrative Reform Program, MAI started of by holding the Workshop on The Future of Agricultural Development in Yemen, in March 1997, at the University of Aden for the purpose of reviewing the roles and objectives of the agriculture sector and to prepare a future prospectus of the vistas of for the institutional modernization, which will be consistent with the new roles and objectives envisioned, and accordingly arriving to the development of the national agriculture sector strategy for the country.
- v. The determination of the sectoral outlooks and the preparation of the strategy for agriculture, besides the institutional and administrative restructuring is nothing more than the real interpretation of the Government policies of the Economic, Financial and Administrative Reform Program for the modernization of the Agriculture Sector.



## **2. Field Services**

### **2.1 Assessment of the Current Situation**

#### **Government Service Areas**

Currently, the Ministry of Agriculture and Irrigation provides a profusion of services through its existing institutional frameworks, which are the regional authorities, investment projects and the branch offices in the Governorates. Table 1 shows a selected sample of the major services and facilities provided by MAI in the regions, as well as the future policies with respect to each of these services:



Table I:  
The Services and Activities and Facilities of  
The Ministry of Agriculture and Irrigation

Activity	Future Policies	Mountain Highlands			Coastal Plains			Eastern Plateaus		
		NRA	SHP	Mah. Off	TRA	Lahj Off.	Abyan Off.	ERA	WHP	Shabwa Off
<b>Service Provision</b>										
Monitoring Water	Transfer				XX				XX	
O&M Water Structures	Partners				XX	XX	XX	XX		
Dev. Rural Women	Merger	x	Xx	XX	XX	XX	XX			x
Agr. Road Maint.	Partners			XX	XX					
Plant Protection	Split	x		XX	XX	XX	XX	X		
Veterinary Services	Split	x		x	XX	XX				
Organizing Communities	Support									
Working Networks: With AFPPF										
With Com. Dev. Fund	Support	x	X	x		x	x			
<b>Creation and Transfer of Technology</b>										
Research	Restructure									
Groundwater Mgmt.	Support									
Watershed Mgmt.	Support									
Livestock Research	Support									
Rainfed Agriculture. Res. Extension	Support Restructure	xx		xx	xx	xx	xx	xx		xx
Agriculture Education	Restructure									
Agriculture Training	Restructure		X				X			
Disseminating Info.	Restructure		X		x					
<b>Investments</b>										
Flood Protection	Support		X	X						
Spate Structures	Restructure				xx					
Water Supply	Transfer		Xx					xx		
Groundwater Irrigation	Transfer	xx			x					
Cons. Rural Roads	Transfer		Xx	xx	xx				x	

X – Some activity; xx – The main activity

Transfer – Other Governments provide the service.

Division – The work divided between Government frameworks and other frameworks (I.e. "The Government should not undertake what other are doing successfully").

Future Policies Reflects some of the ideas that are being formulated presently in MAI with respect to agricultural services.

Merger or amalgamation: The integration of some of the activities, in the Development of Rural Women with

Partnership – The Government Frameworks working in partnership with the Other Framework.

Support – Government frameworks providing support for this type of service.

Restructure – means that the service needs restructuring.

## **Institutional Structuring**

Based on the accomplishments, it is not clear which is the better, the development authorities or the agriculture offices, in terms of carrying out tasks and responsibilities. Both of them are confronted with the problem of poor service provision, and, for both of them, this is attributed to financial difficulties and problems. Moreover, many of the agriculture offices face the problem of overstaffing and the availability of scanty financing.

Some of the bright aspects of the institutional structures do not necessarily mean that this organ is distinctive from the other. For example, we find that the Tihama Development Authority did some good things, and Al-Mahweet Agriculture Office achieved some good things. Observations demonstrate that competent management and suitable funding, sense of responsibility, clear objectives, in addition to having well-trained staff and adequate incentives are bound to lead to exceptional work, whether in the agriculture offices or the development authorities.

The relative independent character enjoyed by the authorities, is not useful due to their extreme internal centralization.

**I. Gradual change to new institutional structures, whereby the authorities and agriculture offices will have equal responsibilities for providing services and equal access to resources and whereby the temporary projects will be attached to either of them. This would require the following:**

- Selection of pilot organs (from among the authorities and agriculture offices) where the reforms mentioned in Items I and II may be initiated.
- To work towards reorganizing presently existing projects in keeping with the proposed reforms and work with the representatives of the authority and the farmers at the Governorate level and maybe at the District level.

### **1. Human Resources**

#### **3.1 Analysis of the Present Situation**

##### **The Size and Distribution of the Manpower**

- At present, the number of employees in MAI comes to 154,456 employees as compared to 1,115,496 land holdings throughout the country. This means that there is one employee for each 72 land holdings. This is a high ratio, which increases Government labor costs for the sector. The wages and salaries bill amounted to YR 1.73 billion for 1997.

- The staff with university qualifications and with specialized professional training constitute only 20% of the total MAI staff, whereas non-agricultural university degree holders and Secondary School certificate holders comprise 14%, and the staff who are holding intermediate school certificates and below constitute 66% of the total manpower.
- There is an obvious surplus of intermediate school level certificate holders and below comprise 14% and an obvious shortage of some of the specialized staff such as economists, sociologists, livestock zoologists, irrigation and engineering, information technology (data processing), monitoring and evaluation, etc. The percentage of female employees constitutes 10% of the total MAI manpower.
- Most of the MAI employees are concentrated in the following organs: The General Head Office, Abyan Agriculture Office, Lahj Agriculture Office, AREA, and the Tihama Development Authority (See Table 4).

### **The Reasons for the Problem**

1. Change of the economic regime in the Southern Governorates, which lead to the cancellation of many previous government jobs without the necessary arrangements to release the staff.
2. Shutdown of the former Ministry of Agriculture, without setting up solutions for its staff.
3. Rapid employment since 1990 (23% of the present manpower were recruited after 1990, and about two-thirds of these are holders of qualification levels below secondary school, most of whom were working with non-governmental organizations ("organizations of the masses").
4. Lack of application of the optimal use of staff and of the retirement regulations and referral to pensions.

### **3.2 Recommendations**

- The human resources problem is closely linked with the financial problems and they should be both dealt with concurrently.
- When restructuring the human resources, the priority should be given to the organs with large numbers of employees that are confronted with the problem more than the others are. Examples are the Irrigation and Land Reclamation Projects in Aden, Lahj, Abyan and Hadhramaut. Other areas worthy of attention in the restructuring process, by virtue of the size of their manpower are the following organs: The General Headquarters of MAI, Aden Agriculture Office, Lahj Agriculture Office, Hadhramaut Agriculture Office, AREA and the Tihama Development Authority.

- Within the context of restructuring of human resources, **some of the standards that link the size of the manpower and the available agriculture resources and means in the relevant area that is covered should be used.** Generally, to strive towards achieving a proportion of 100 landholdings for each employee would be a logical target to pursue after over the next five years, rather than keeping the present ration of 72 holdings per employee.
- The **frontline employees**, who administer the direct services to the farmer, must also be distinguished from the supporting staff that support the "frontline" staff. For the frontline staff, a ration of 200 holdings per employee should be reached by the Year 2004. The achievement of these ratios would mean that by the Year 2004 the total manpower of MAI would be 11,154 employees with the frontline staff numbering 5,577 employees accordingly.
- **The restructuring of the human resources should proceed as much as possible** by the retirement of staff and to direct attention towards recruitment of staff for the scarcely available qualifications that are needed by the units that are undergoing such restructuring. Consideration should also be given, when recruiting employees to the imbalance between male and female staff, and to giving opportunities to highly qualified women to be employed in the units that directly provide services to the farmers.
- Attention should also be directed to training and rehabilitation, to meet the requirements of the new tasks of the units that will be subject to restructuring. Whenever possible, staff should be relocated or redistributed, besides the provision of incentives for improving performance.
- The suggested schedule for the retirement of staff during the period from 1999 to 2000 should be as follows:

	<b>Immediate Retirement</b>	<b>Retirement during 99 - 2005</b>	<b>Total</b>
<b>Employees who reached Age 60</b>	778	1,339	2,117
<b>Employees who have completed 35 years of service</b>	260	501	761
<b>Total</b>	<u>1,038</u>	<u>1,840</u>	<u>2,878</u>

- Besides this, a number of Government institutions shall be included in the privatization program. The needed arrangements for repositioning the staff in these corporations should be within the framework of restructuring of human resources. The number of these staff is 1,735 employees, with the following breakdown:

General Poultry Corporation	248
State Farms	861
Agriculture Equipment Leasing Corporation	539
General Drilling Corporation	87
	<u>1,735</u>

- Encouragement of the early retirement, especially among the staff of lower qualifications, who constitute the surplus manpower. This choice will be able to those who have surpassed the age of 60 years or those who have over 25 years of service. Such staff number 581 employees.
- All the options cited above will contribute to reducing the total researched workforce in MAI by 37%.

**Table 4**  
**The Manpower of the MAI Organs (1999)**

Organ	No. of Emp.	Units included
1. General Headquarters	1,952	General Directorates; Productive Farms: Surdoud, Risabah and Mareb; Projects: Soil Conservation, Flood Damages; AFPPF, GAWR.
2. Aden Agriculture Office	2,050	The Departments of the Office; The General Directorate for Irrigation and Land Reclamation; the Agriculture Institutes: Irrigation Inst. and the Cooperative Inst.; Seed Procreation; suspended corporations: Drilling, Fruits and Vegetables, Poultry; Suspended Farms: People's, Sixth Conference; Suspended Projects: Secondary Irrigation, GAWR Branch
3. Abyan Agriculture Office	2,106	The Departments of the Office, the suspended farms and equipment leasing stations; Traditional Irrigation Project (suspended); Seed Procreation
4. Aden Agriculture Office	1,793	Agriculture Office Departments; Seeds Procreation; Suspended State Farms and Eqpt. Leasing Stations
5. Hadhramaut Agriculture Office	1,287	Agriculture Office Departments; Wadi Hadhramaut Project; Seeds Procreation; Suspended State Farms and Eqpt. Leasing Stations; Suspended General Poultry Corporation.
6. Shabwa Agriculture Office	757	Agriculture Office Departments; Agriculture Associations and Cooperatives; and Eqpt. Leasing Stations
7. Ta'ez Agriculture Office	535	Agriculture Office Departments; Southern Highlands Development Project
8. Dhamar Agriculture Office	299	Agriculture Office Departments
9. Ibb Agriculture Office	267	Agriculture Office Departments
10. Al-Mahweet Agriculture Office	253	Agriculture Office Departments; Branch Road Maintenance Project.
11. Al-Beidha Agriculture Office	188	Agriculture Office Departments; Rural Development Project (Rada'a)
12. Al-Muhara Agriculture Office	79	Agriculture Office Departments
13. Tihama Development Authority	1,032	Headquarters and Branches of the Authority
14. Northern Regional Development Authority	846	Headquarters and Branches of the Authority
15. Eastern Regional Development Authority	429	Headquarters and Branches of the Authority
16. Delta Abyan Regional Development Authority	48	Headquarters and Cotton Gin
17. Delta Tiban Development Authority	46	Headquarters and Cotton Gin
18 The General Authority for	1,390	Headquarters and Branches of the Authority

Agricultural Research and Extension		
19. The General Corporation for Agricultural Services	99	Headquarters and Branches of the Corporation

## 5. Financial Resources

### 4.1 Analysis of the Present Situation

- In view of the low current expenditures under Chapter II, the performance of the most of the MAI organs becomes distorted, although the expenditures for operations and maintenance of the machinery, equipment, motor vehicles and trucks and for the maintenance of the buildings, structures and public utilities are deemed important. These expenditures also include the costs of the various inputs of the activities of MAI and the services it provides. Therefore, increases in the appropriations under this Chapter will inevitably lead to revitalizing and improving the standards of operations of MAI.
- The present method of approving the budget is ineffective and fails to link the budget to specific programs and targets, except whatever is approved as the minimum obligation of the Government's contribution against the foreign contributions. It is also worth mentioning that expenditures are not tied to the work need to be implemented.
- The amount allocated for operations is low, amounting to only YR 11,300 = US \$ 75 per employee per annum, which, for all practical purposes, render MAI Headquarters and MAI Agriculture Offices incapable of providing their services. This also makes the payment of YR 1.3 Billion for salaries and wages feasibly unproductive, and makes reforms a necessity (See Table 5).
- There is an imbalance between the salaries (Chapter I) and Current Expenditures (Chapter II), whereby the amounts under Chapter II amount to 7.5% = YR 174,896, while Chapter I amounts to YR 1,729 million = 92.5%.
- The assistance provided to cover the deficit in Chapter III, Item 6 Class 4 is not considered an optimal method. MAI has worked towards reducing this amount especially in Agriculture Equipment Leasing Stations, whereby no amounts will be appropriated for 1999.

### 4.2 Recommendations

- The budget for expenditures must be adequate: in 1997, the actual expenditures for salaries amounted to YR 1,729 millions; for Chapter II the amount was YR 190.6 million. By adding the salaries of Chapter V (YR87.175 millions and expenses under Chapter V (YR 806.710 Millions, the total comes to YR 2,813.485 millions = approximately US \$ 18 million. In this respect, the recommendation is that we suggest that the total current expenditures should not be less than US \$ 18 million, **but with the restructuring of the allocations to correct the low expenditures for**

**operations and increasing the incentives in salaries and wagers, in order to improve effectiveness and increase revenues.**

- **Reduce wage costs and increase expenditures for operations**, until they reach YR 75 thousand/employee/annum (the equivalent of US \$ 500), with the targeted number of employees about 10,000 = YR 1.5 billion; i.e., the equivalent of US \$ 10 million.
- Increase the average salaries above the present average (YR 99,000 per annum, or the equivalent of US \$ 660 to a targeted average of YR 150,000, the equivalent of US \$ 1,000 per annum x the number of employees (about 10,000 employees) = YR 1.5 billion or the equivalent of US \$ 10 Million.
- **Improve the effectiveness by restructuring field services and the General Headquarters and the preparation of a program budget.** Consideration should be given to the priority of tasks requiring that the implementation and the output should be tied to the approved budget, the increase of the contribution of the beneficiaries to the costs and to obtaining authorization for use of the revenues.

**Table 5**  
**Actual MAI Expenditures for 1997**  
**(YR MM)**

<b>The Entity</b>	<b>TOTAL</b>	<b>Chapter I</b>	<b>Chapter II</b>	<b>Chapter III</b>	<b>Chapter IV</b>	<b>Chapter V</b>
General Headquarters	1,271.9	200.1	43.2		318.3	719.3
Aden Agriculture Office	192.6	182.6	10.1			
Ta'ez Agriculture Office	55.8	52.6	3.2			
Hadhramaut Agriculture Office	138.3	135.4	2.9			
Al-Hodeida Agriculture Office	-	-	-			
Lahj Agriculture Office	219.3	187.9	4.2	16.9	-	10.3
Ibb Agriculture Office	31.3	28.5	2.8			
Abyan Agriculture Office	271.7	245.6	9.1	-	-	17.0
Dhamar Agriculture Office	35.0	31.6	3.3			
Shabwa Agriculture Office	86.2	84.7	1.5			
Al-Muhara Agriculture Office	11.7	10.6	1.1			
Al-Beidha Agriculture Office	28.7	18.0	1.4	-	-	9.3
Al-Mahweet	40.4	13.9	-	-	-	26.5
<b>Total Agriculture Offices</b>	<b>1,111.0</b>	<b>991.3</b>	<b>39.6</b>	<b>16.9</b>	<b>-</b>	<b>63.2</b>
Tihama Development Authority	369.1	142.2	37.8	1.6	111.4	71.1
Eastern Regional Development Authority	522.5	34.7	7.5	0.9	453.1	26.4
Northern Regional Development Authority	632.5	82.3	8.5	21.9	507.8	12.0
The General Authority for Agricultural Research and Extension	279.5	229.8	33.1	7.8	8.7	-
Delta Abyan Regional Development Authority	39.2	24.5	9.7	1.3	-	3.6
Delta Tiban Development Authority	28.2	13.2	5.3	5.2	4.3	0.2
<b>Total Agriculture Authorities</b>	<b>1,871.0</b>	<b>531.7</b>	<b>101.8</b>	<b>38.8</b>	<b>1,085.4</b>	<b>113.3</b>
Total Equipment Rental Stations	12.5	6.4	6.0	0.1	-	-
Southern Highlands Project	267.3					267.3
Wadi Hadhramaut Project	325.9					325.9
Other Projects	2,432.8					2,432.8
<b>Total Projects</b>	<b>3,026.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,026.0</b>
<b>Grand Total</b>	<b>7,292.4</b>	<b>1,729.5</b>	<b>190.6</b>	<b>766.1</b>	<b>1,403.7</b>	<b>3,202.5</b>



## **5. Summary/Conclusion**

The institutional restructuring of agriculture sector, in light of the recommendations of this paper could start in the Year 2000, whereby the agriculture services should be carried out in parallel with the decrees related to the issuance of the decrees on the Agriculture Sector Policies and concurrently with the restructuring of the human resources and the financial resources. These four elements should proceed together and all the measures taken at the national and local levels should be congruous.

The vital component from the restructuring process of the highest significance is to be found in the savings derived from the reduction of the number of employees and potentially using such savings to increase the expenditures for operations in the agriculture services sector, the improvement of staff performance quality through rehabilitation and training and the payment of remuneration that is linked to good staff performance.

After having taken the appropriate decisions, with respect to the recommendations, the implementation of the measures taken accordingly would require coordinated well organized efforts by The Agriculture 21 Agenda Team, which would require the support in the form of technical assistance. It is possible to start with four selected units, commencing in the Second Half of the Year 2000

**Annex 1**  
**Aden Agenda The Role of the Public Sector and the Other Sectors for the**  
**Provision of Agricultural and Rural Services**

Service	Public Sector Role	Role of Other Sectors (Cooperative/Private)
<b><u>1. Agricultural Research</u></b>		
Policies and Strategies	XXX	X
Research Based on Farmer Demand	XX	XX
Resource Management Research	XXX	XX
Rainfed Agriculture Research	XXX	XX
Livestock Research	XX	XX XX
Refined Bred Seed Production	XXX	XX
<b><u>2. Agriculture Extension and Training</u></b>		
Policies and Strategies	XXX	X
Optimal Use of Resources	XX	XXX
Focus on Rainfed Areas	XXX	XX
Publication/Circulation of Information and Making Technology Generic	XX	XX
Focus on Small Producers and Women	XX	XX
Training of Extension Staff and Farmers	XX	XX
Meeting the Needs of Large Investments	X	XXX
<b><u>3. Agriculture Education</u></b>		
Policies and Strategies	XXX	XXX
<b><u>4. Lending and Rural Financial Services</u></b>		
Conservation of Resources	XX	XX
Traditional Agriculture and Production of Strategic Crops	XX	XXX
Focus on Small Farmers	XXX	XX
Large Investments in Agriculture	XX	XXX
<b><u>5. Plant and Livestock Agriculture Quarantine Services</u></b>		
Laws, Regulations and Legislation	XXX	X
National Immunization Campaigns against Livestock Diseases	XXX	X
Control of Main Entry Points to the Country	XXX	X
Domestic Quarantine	XXX	X
<b><u>6. Plant Protection and Livestock Health Services</u></b>		
National Anti-Agriculture Disease Campaigns	XXX	X
National Anti-Livestock Disease Campaigns	XXX	X
Combating Locusts	XXX	X
Crop Protection Services for Farmers	X	XXX
Veterinary Services for Farmers' Livestock	X	XXX
XXX Major role	XX Participatory role	X Assisting/Responding role

**Annex 1 (Con'd.)**  
**Aden Agenda The Role of the Public Sector and the Other Sectors for the**  
**Provision of Agricultural and Rural Services**

Service	Public Sector Role	Role of Other Sectors (Cooperative/Private)
<b><u>7. Agricultural Marketing Services</u></b>		
Standards and Measures	XXX	X
Data and Information	XX	XX
Markets	X	XXX
<b><u>8. Rural Infrastructure Services</u></b>		
Rural Road Construction	XX	X
Spate Irrigation Schemes	XX	X
Wadi Bank Protection	XX	XX
Water Supply Projects	XX	XX
Maintenance of Spate Irrigation Schemes	XX	XX
Construction of Water Dams and Dikes	X	XX
Maintenance of Rural Agricultural Roads	X	XX
Maintenance of Water Dams and Dikes	X	XX
<b><u>9. Management of Natural Resources</u></b>		
Policies, Strategies Regulations and Legislation	XX	X
Watershed Management	XX	X
Forest and Rangeland Management	XX	X
Anti-desertification	XX	X
Rangeland Work	XX	X
Soil Protection	XX	X
Water Harvesting	X	XX
Groundwater Irrigation	X	XX
Protection of Terraces	X	XX
<b><u>10. Agriculture Inputs Services</u></b>		
Laws, Regulations and Legislation	XX	X
Quality Control	XX	X
Procreation of Major Grain Seeds	XX	X
Production of Forest Trees Nurseries	XX	X
Exports and Distribution	X	XX
Procreation of Vegetable Seeds	X	XX
Fruits and Vegetables Nursery Production	X	XX
<b><u>11. Agricultural Mechanization Services</u></b>		
Specifications and Measures	XX	X
Exports and Distribution	X	<b>XX</b>
Leasing	X	XX
<b><u>12. Support to Farmers' Organizations</u></b>		
Policies, Strategies Regulations and Legislation	XX	X
Support to the establishment of Farmers' Organizations	XX	XX
Support to Participation of Women in Development	XX	XX
XXX Major role	XX Participatory role	X Assisting/Responding role

