

CHAPTER 15

REGIONAL AND URBAN DEVELOPMENT

15

REGIONAL AND URBAN DEVELOPMENT

This chapter discusses regional and urban development in terms of the main planning issues and policies affecting the Kingdom's spatial environment. The future development strategy for the continuing and expanding provision of urban and rural infrastructure is discussed, in addition to the increasingly important regional and environmental aspects of development.

15.1. REGIONAL DEVELOPMENT

15.1.1 Role and Objectives of Regional Planning

The Council of Ministers' approval of the Fifth Development Plan Strategy (Decree No.38 of 21/03/1409) places special emphasis on the regional aspect of planning, in particular on balanced regional development, the orientation of development to population needs and the full utilization of existing facilities and services, through the selection of growth centers which would eliminate the fragmentation of services and efforts.

The regional dimension of national development is the interface between socio-economic development for the whole Kingdom and physical planning. Regional planning ensures the coordination of sectoral development efforts by reinforcing the spatial linkages and functional interactions between sectors. Although the Kingdom's development efforts in the past have maintained a predominantly sectoral orientation for reasons of centralized fiscal responsibilities and better utilization of technical know-how, the spatial dimension of planning is currently gaining in significance.

In previous Development Plans the regional aspect of planning was considered primarily at the level of the five planning regions, which have fairly homogeneous characteristics in many respects. Sectoral agencies established their own regional directorates and branches to serve the needs of the widely dispersed population. Lack of adequate administrative representation, however, remained a constraint against the achievement of more balanced regional development.

The administrative and professional planning capacities of the 14 Amarahs have, therefore, been strengthened so that they are now capable of defining their own development needs. This will allow the central ministries to concentrate more on tasks of a national nature, such as program coordination, technology transfer, technical and administrative standardization and systematic staff training. One policy that has proved successful in the past, through the example of the Higher Commission for Riyadh Development, is the establishment of an organization in the urban areas, in addition to the existing municipality and under the supervision of

the local Emir, to coordinate various projects and undertake tasks related to planning and development at the local level. Therefore, the scope of the Commission could be extended to the whole administrative region as a pilot policy for regional development that might be applied to other regions also.

The Ministry of Planning will maintain its role as the central government coordinator and advocate of overruling national interests. From the Fifth Plan onwards, the regional component of planning will clearly address the Amaraḥs as the relevant administrative units, although the former planning regions will be maintained for analytical and aggregative aspects of spatial planning. The prerequisites for planning at the Amarah level have also been enhanced by the introduction of advanced data processing technologies and the regular completion of regional and local socioeconomic surveys that assess the resources of a region and how these resources are utilized, and investigate the region's problems and development needs. In addition, the follow-up element of the planning process can determine the region's performance efficiency and its productivity levels, while the strengths and weaknesses thus identified indicate where further development efforts and improvements are needed.

Although the geographic reference for regional planning has changed, the long-term objectives of regional development have remained essentially the same. Regional development planning continues to pursue the appropriate balance within the priorities of developing the economic growth potential of the regions and of simultaneously achieving at least minimum standards of infrastructure and services for all citizens. In the early stages of the Kingdom's planned development, economic growth and diversification were confined to the urban centers because of their population density and the consequent provision of supportive infrastructure and services. For the whole Kingdom, however, service standards were aimed initially at the satisfaction of basic human needs, such as health care and nutrition, primary education, employment and shelter.

15.1.2 Achievements and Key Issues

As development proceeds the Kingdom's population migration has been decreasing to more normal rates. Recently, small and medium-sized towns have witnessed relatively high net gains, through attracting population from surrounding villages and the return of migrants from the large cities. While this trend itself is evidence of the improved availability of public services and employment opportunities in provincial towns, it also verifies the need to further concentrate development on rural areas.

Regional disparities that originated mainly from the uneven distribution of natural resource endowments and the scattered distribution of population, have been redressed to a large extent by the provision of most essential infrastructure and services. The provision of health centers,

schools, feeder roads, electricity and municipal services has not only raised the standard of living outside the cities, but has also laid the foundations for future economic growth and diversification. Opportunities for regional growth have been further expanded through the completion of serviced industrial zones in all regional centers, the establishment of modern transport and telecommunication systems, and the provision of industrial and agricultural loans and other government support measures.

The provision of markets, slaughter houses, cold stores and rural roads has enhanced the socioeconomic conditions of traditional farming and has created the necessary conditions for small-scale agro-industries, while the cultivation of previously unfit areas has been facilitated by advances in technology and by financial support from the government.

It was essential for the efficient utilization of government resources that sectoral contributions to regional development were spatially coordinated and preferably made within the hierarchy of National, Regional and District Development Centers introduced by the MOP and the complementary village cluster system established by MOMRA.

In accordance with the Council of Ministers' approval of a regulation for the development of villages in the Kingdom (resolution no.3 of 1.1.1403), MOMRA founded 14 general committees and 120 local committees under the chairmanship of local Emirs. The task of these committees is to establish priorities for development projects according to local needs and to follow up their implementation. This is a crucial step towards further regional development.

Extensive regional studies have been conducted during previous Development Plans, including socioeconomic studies of the five planning regions by the Ministry of Planning (MOP). In addition, MOMRA prepared more than 30 master plans for the cities and towns, five socioeconomic and physical resource studies for the Amaraahs of Baha, Hail, Makkah, Qasim and Tabuk, and a Kingdomwide survey of rural areas. In the Third and Fourth Plan periods the MOP updated socioeconomic studies of the five planning regions and extended them to the level of the 14 Amaraahs. Together with the redefinition of planning areas, a systematic framework for data collection was established to coincide with the preparation of the Five-Year Development Plan.

Key Issues in Regional Development

Regional Imbalance

Because each of the development plans prepared during the past two decades has its own character in terms of scale, coverage, and timing of implementation, the benefits of development and improvements in living standards have varied from one region to another. Therefore, priorities should be carefully defined according to the needs of each region.

The three regions containing the large urban agglomerations thus enjoy the highest level of services and, through general multiplier effects, the widest economic diversification. These regions account for almost 92 percent of all licensed factories and establishments, produce more than 85 percent of the Kingdom's electricity, and avail of more than 87 percent of the country's telephone lines. In the agriculture sector, traditionally the domain of the Southwest region, the Central region alone now accounts for almost 63 percent of the country's total crop area.

The Northern region, and particularly the densely populated Amarahs in the Southwest, still have basic needs to be met. At the same time, these regions possess substantial natural and human resources which can be developed towards full self-sufficiency and can contribute to overall growth in the national economy. Additional infrastructure needs in the Southwestern Amarahs arise mainly from over-utilization of existing capacities. By contrast, large portions of the population in the Northern provinces are still without services, even though existing facilities and networks are far from being utilized to their design capacity, mainly as a result of the extremely scattered population in these areas.

The effects of public and private investments in the Development Centers will gradually spread to the surrounding regions. However, these efforts to promote social and economic development in the regions could be reinforced through the establishment of more regional branches by public agencies, through locating some technical and other professional institutions in Development Centers, and through better coordination of sectoral development at the level of each administrative region (14 Amarahs).

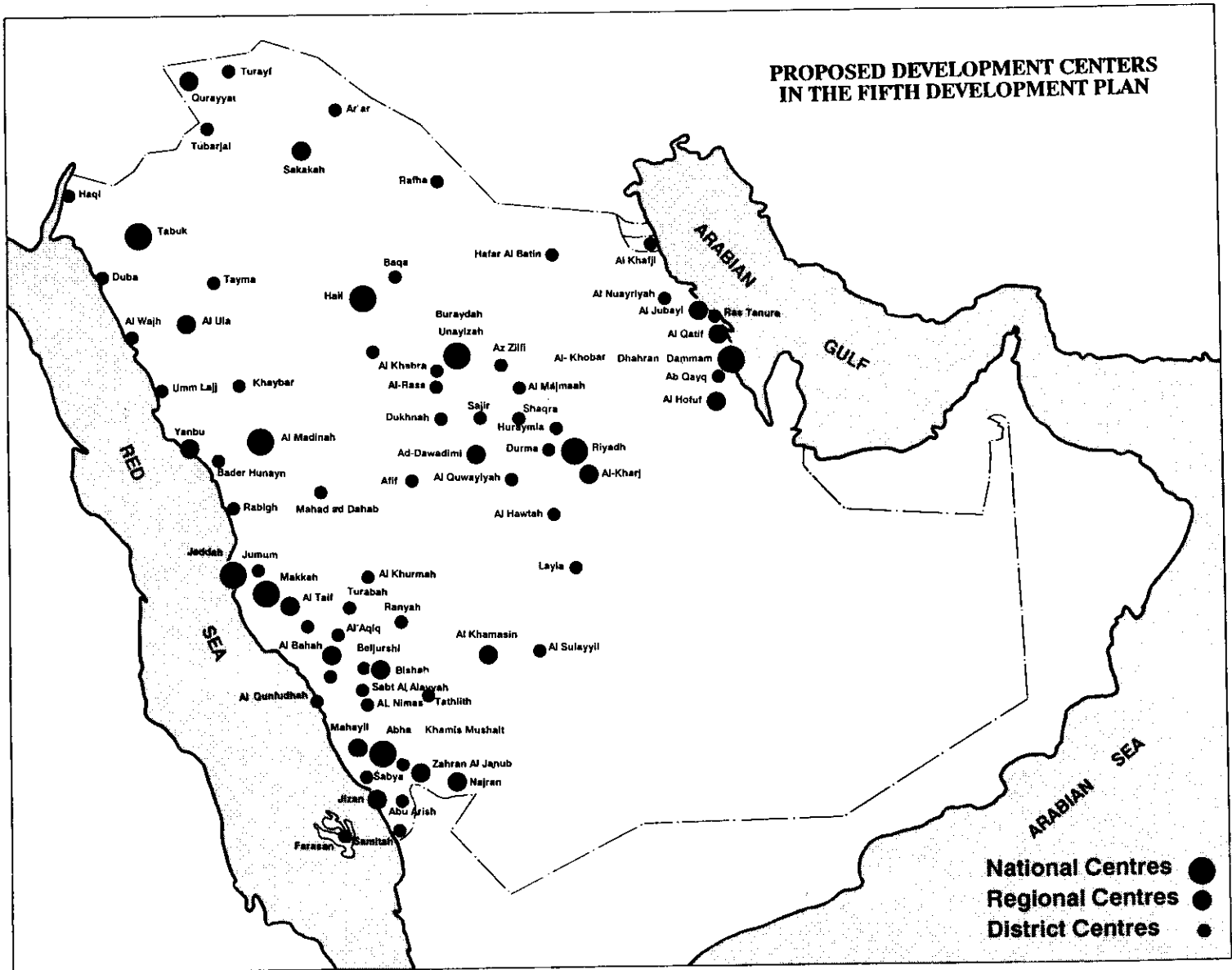
Water

The excessive exploitation of aquifers is seriously jeopardizing the future viability of traditional farming and its dependent settlements. At the same time, development agencies have great difficulty in evaluating the feasibility of their projects, due to the lack of adequate information on water resources at local and regional levels. The preparation of a comprehensive water management plan is now urgently needed for each locality and sub-Amarah, in order to determine water consumption limits from renewable and fossil sources for residential, agricultural and industrial uses.

Administrative Coordination

A comprehensive body of information for regional planning purposes is now available. However, efficient use of these information resources requires common data management systems and data access to be established between the MOP, MOMRA, the Ministry of Finance and National Economy and other concerned ministries. Sectoral information gathered by development agencies must be regularly aggregated according to Amarahs. Furthermore, cooperation between the Amarahs, the development agencies and the MOP must be greatly intensified so that information on present conditions can be kept up to date.

Figure 15.1



15.1.3 Regional Planning Initiatives

Development Centers

With the issuance of the Council of Ministers' approval of the Third Plan Strategy (Decree No.222 of 14.8.1399), the MOP adopted the growth center concept as a means of achieving the following:

- Standardization of criteria and measures to ensure provision of public services to rural areas with high population density;
- The provision of basic services to all citizens in the Kingdom;
- Economies in the spatial distribution of public facilities and services at national, regional and district levels;
- A more even distribution of diverse socioeconomic opportunities throughout the regions of the Kingdom.

The three levels of Development Center are defined as follows:

1. **National Centers** where various economic and administrative functions relevant to the whole Kingdom are available and where highly specialized services are provided;
2. **Regional Centers** where less specialized administrative and service functions are performed for a number of local or District Centers;
3. **District Centers**, where institutions and services that are needed on a daily basis and serve a number of villages and village clusters, are located.

The service areas of these centers are defined according to the capacities of typical public facilities and acceptable travel time limits from most peripheral villages to the centers. MOMRA had already established its village cluster concept (which complements the MOP's Service and Development Center concept) by providing basic municipal and other services to groups of surrounding member villages from a central location, usually smaller than a District Center.

Towards the end of the Fourth Plan an evaluation of physical development confirmed the general viability of the combined 'central place' concepts of the MOP and MOMRA, and their applicability to the administrative regions of the Kingdom. This will lead to a proposed

increase in national, regional and district centers to 9, 17 and 51 respectively, in order to effect more economic delivery of services. At present, there are 44 village clusters (including Al-Jafr, which is administratively integrated with Al-Ahsa) of which nine function simultaneously as District Centers for yet larger service areas.

Over the next twenty years approximately 200 village clusters will have been established, extending essential service coverage to over 90 percent of the population. The nomadic population still without services will be assisted to resettle in or around existing centers, while continuing to attend to their land or livestock in their original locations.

15.1.4 Policies

The following policies will act as a framework for achieving the regional development objectives in the Fifth Plan period:

- Emphasize the regional dimension in development planning thus integrating urban and rural areas into the development process;
- Commit public agencies and the private sector to pursue regional development within the framework of defined Amarahs, Service and Development Centers, and existing and planned village clusters;
- Further improve cooperation and coordination between ministries and institutions involved in regional planning, by standardizing regional surveys, by aggregating sectoral data according to Amarahs and by working within the time schedules of the Five Year Development Plans;
- Standardize administrative divisions adopted by various government agencies such as the Ministry of Education, Ministry of Health and others;
- Evaluate and reclassify municipal categories to match the growth centers and Emirate centers in each administrative region;
- Define the potential of each administrative region for pursuing opportunities to encourage private sector participation in the development of each Emirate;
- Place more emphasis on efficiency and productivity by follow-up, performance evaluation and definition of strengths and weaknesses;

- Formulate measures related to the preparation, implementation and approval of regional development schemes so as to enhance the efficiency of development agencies, Amaraahs and municipalities, as well as regional and local committees in all planning stages and processes;
- Establish institutional criteria for development of regional plans and updating of their information, and to preserve regional features and the architectural heritage of the Kingdom;
- Combine the efforts of both Deputy Ministries for town planning and rural affairs to ensure linkages between the programs and plans of both agencies at the level of the administrative regions.

The Ministry of Planning will continue to monitor closely the balanced growth of regions and Amaraahs by carrying out socioeconomic surveys to develop short- and longer-term regional strategies. The Ministry will further undertake an extensive survey of the current hierarchy of development centers in order to ensure that these centers keep abreast of changing physical and socioeconomic conditions, thereby strengthening the development center concept as a flexible and efficient instrument in the regional development process. Geographic maps will be produced in different scales showing the spatial distribution of the main sectoral achievements in the Kingdom and serving as a tool for detailed planning and follow-up in regional development.

15.2 MUNICIPAL AND RURAL AFFAIRS

15.2.1 Role and Development Objectives of the Municipalities

The municipal sector's importance for national and regional development is manifested through the spatial planning of cities, towns, village clusters and larger villages, the provision of infrastructure and the upkeep of public hygiene and environmental safety. Sectoral contributions to GDP originate from a large number of construction projects, intensive government services and manpower development. Comprehensive local planning and investment in municipal infrastructure often serve as a catalyst for local development by other producing and service sectors. This gives the municipal sector a significance beyond its own immediate responsibilities.

Because of the rapid pace of development in the Kingdom, priority in the past was assigned to the provision of urban infrastructure in and around the major economic growth centers. This trend will take a different direction in the future as the municipal sector's long-term objective is to provide appropriate levels of municipal services to a maximum number of households in all provinces of the Kingdom. However, because of the country's vast area and the high

cost of bringing municipal services to every small settlement in the country, the nomadic population will be assisted to move to more promising communities where sufficient facilities and services already exist.

The main objectives of the municipality sector during the Fifth Plan and beyond are as follows:

- to provide an equitable and economic distribution of basic municipal infrastructure and services to all regions;
- to provide advanced municipal infrastructure to localities with realistic economic development potential;
- to further improve the economic efficiency of municipal infrastructure and services;
- to secure an adequate spatial development of localities through the coordination of activities between all relevant government agencies and local administrations.

15.2.2 Achievements and Key Issues

After a period of very rapid development, when the coordination and planned integration of services were difficult to achieve, the urbanization process at the beginning of the Fourth Plan resumed a more normal pace again. As a result, planned spatial development and the technical coordination of services were considerably improved. The large-scale migration from rural to urban areas, a feature of earlier years, decreased in recent years.

At present, there are five main urban centers in the Kingdom (Amanats). In order to rationalize administration and services in the municipalities, their number was further reduced from 97 to 96 with a total of 2,646 attached villages now receiving some basic community services. The number of village clusters remained at 43, with 2,084 serviced member villages.

Municipal development activities were concentrated on completing the main urban infrastructure projects of water, sewerage and street networks which had been planned during the Third Plan. Cities and towns were also provided with additional abattoirs, markets, and parks. Service coverage and the performance of existing facilities were improved and extended to more people at lower operational costs. In addition, improvements in public sanitation services, street landscaping and, in some districts, the application of zoning and building regulations, further contributed to an improvement in living conditions and raising the quality of life in the cities. Examples of special projects which have been completed or are being constructed

in Riyadh include: the diplomatic quarter, housing projects for Ministry of Foreign Affairs employees, development of the Riyadh Governor's palace area (Qasir Al-Hokm area) and the improvement of the city center. These projects are implemented by the High Commission for Riyadh Development.

In rural areas, the provision of basic facilities and services, and the establishment of village clusters, did not proceed at the same rate, with the result that most projects will have to be carried over into the Fifth Plan. The establishment of regional and local coordination committees and the encouragement of self-help and community participation in development, however, has enhanced the effectiveness of public spending.

In spite of the constraints on municipal expenditures during the Fourth Plan, a relatively high number of projects was implemented, since many had already been in progress by the end of the Third Plan. Increasingly, the focus of municipal projects will be on the need to adjust, relocate or replace installations and infrastructure built at an earlier stage of economic development and planning.

A total of 840 municipal projects was approved during the Fourth Plan until 1409, of which 480 have been finished or are nearing completion. Water, sewerage and street programs continued to absorb the major share of municipal spending.

Key Issues

Within the short span of less than twenty years the Kingdom has become an urban society, with the level and quality of services to a great extent similar to, if not higher than, that in most advanced countries. The scale and speed of development has been immense, as the physical environment was adapted to the needs of modern urban life. It is not surprising, then, that such major changes should be accompanied by the emergence of a number of negative consequences. In this regard, the following issues must be addressed during the Fifth Plan and in the years beyond:

- Inter-regional imbalances as well as urban-rural disparities persist in municipal development, although basic needs in villages have been largely satisfied.
- The boundaries of large cities have expanded out of proportion to demographic and economic requirements and there is a widespread locational mismatch between the urban infrastructure and newly built houses.
- Physical planning still lacks sufficient standardization and institutionalization of preparation, approval and, most importantly, of enforcement procedures; this inhibits the optimal utilization of municipal infrastructure and serviced land.

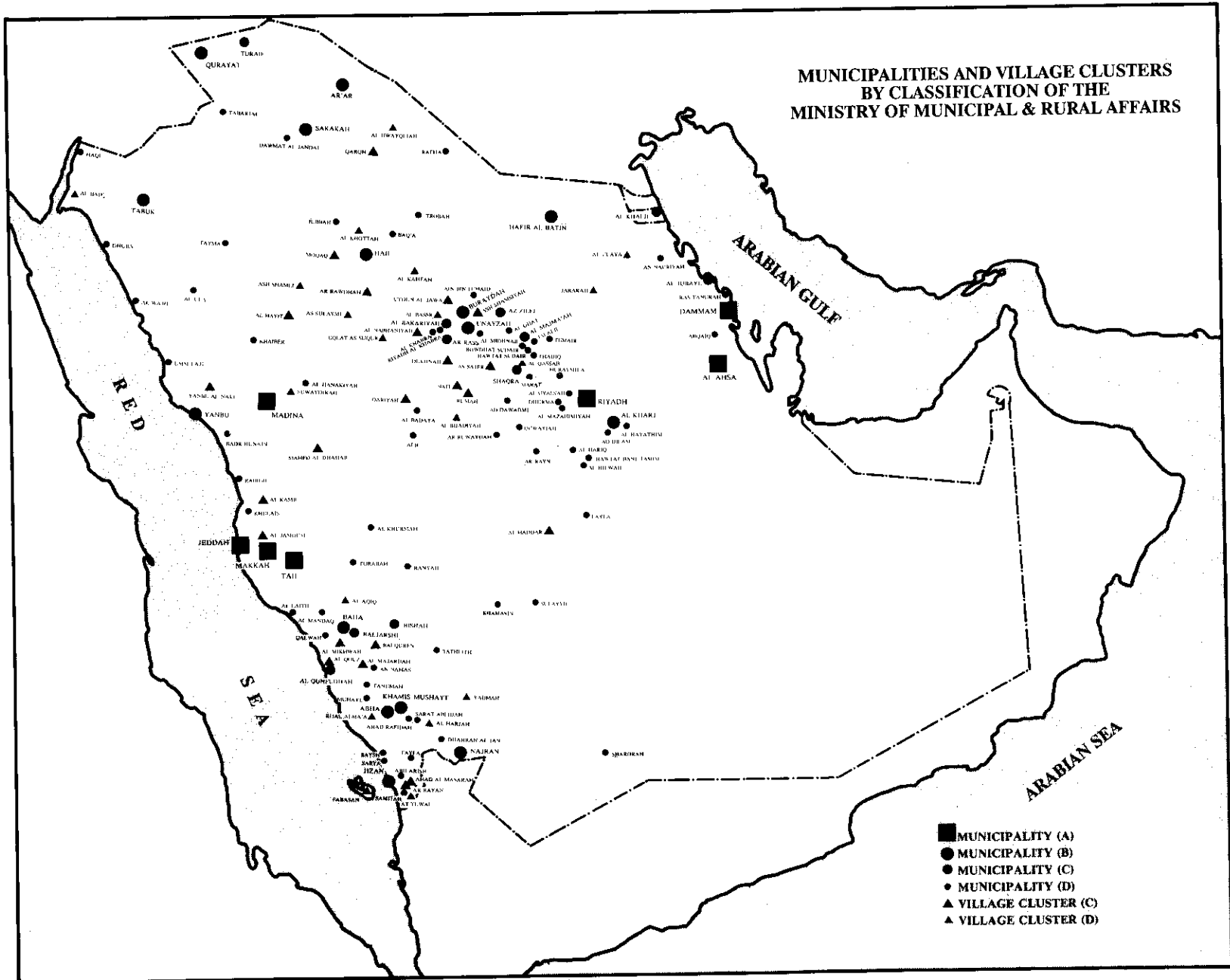
- Lack of coordination of responsibilities between MOMRA and some other government agencies, especially with regard to water and traffic planning and organization, lead to duplication of efforts on the one hand, and insufficient service coverage on the other.
- Greater delegation of administrative, technical and financial responsibilities to medium and small municipalities still controlled by MOMRA are likely to improve inefficient performance and indifferent attitudes at the local level, while permitting the main ministry to concern itself more with matters of national importance.
- Revenues from municipal services remain below production costs due to problems of urban development control, thus preventing the improvement of performance and the cost effectiveness of services and resulting in continuous large subsidy payments.
- Valuable cultural heritage, in the form of old town and village centers, are abandoned and allowed to decay, while new settlement structures, intended to replace them, remain incomplete.
- The stability of buildings and public utilities in low lying areas of cities is affected by rising groundwater tables as a result of some water and sewerage network losses and intensive irrigation.

15.2.3 Role of the Government and the Private Sector

Municipal works and services offer much wider possibilities for participation of the private sector than previously realized, particularly in water supply and distribution systems, refuse collection and disposal, and the operation of slaughter houses, cold stores, markets, recreational and car parking facilities. However, to render such cooperation feasible it will be necessary to provide stronger legal support and to review present user charges so as to cover at least the operating and maintenance expenditures of facilities. The government would still have to finance the initial investments and subsidize those service charges which are untenable for some groups of the population. The government will also have to retain a strict quality control over the performance of privately delivered services.

After a dramatic decline in the construction sector during the Fourth Plan, some firms will find new opportunities in meeting the growing demand for operation and maintenance of completed physical infrastructure.

Figure 15.2



15.2.4 Policies and Main Programs

The main supporting policies to achieve the development objectives of the Fifth Plan will be:

- to reduce the urban-rural disparities by founding new village clusters and further developing existing ones as a means to bring municipal and other public services closer to the rural population at reasonable costs;
- to concentrate municipal development within the designated Service and Development Centers so as to avoid duplication of efforts and to make use of economic linkages and the catalyst effects of investment;
- to consolidate the Kingdom's settlement structure so as to bring the scattered rural and nomadic population closer to those villages with existing public facilities and services;
- to prepare for the institutionalization of urban planning and its enforcement in coordination with other concerned agencies;
- to improve the operational efficiency of municipal services and increase revenues, with further involvement by the private sector where appropriate.

Main Programs

In line with the foregoing sectoral objectives and policies the following priority programs will be undertaken or continued during the Fifth Plan:

Planning

This program aims at expanding the scope of spatial planning to include all administrative regions and updating the general layout and plans of cities in response to changed conditions, in order to achieve a more efficient utilization of physical infrastructure. Forty village clusters and seven model villages will be newly established.

Water Supply

More reservoirs, water towers and networks will be constructed, especially where new water resources have been made available. Existing installations will be modernized to improve the quantity and quality of water supply at all times.

Sewerage and Drainage

Conventional sewage and storm water collection will be expanded in densely populated urban areas. Other forms of sewage disposal will be applied in sparsely populated areas. Treated

effluents will be increasingly used for irrigation purposes. For endangered settlements flood protection programs will be improved. Comprehensive measures will be undertaken to control rising artificial groundwater tables in cities.

Parks

The number of parks and playgrounds will be increased, particularly in the large cities in order to provide convenient access to short-term recreation.

Markets and Public Facilities

Public utilities, especially markets and slaughter houses, will be set up in rural centers, while the private sector will be encouraged to build more cold stores. These facilities are likely to promote agriculture-based economic growth in certain areas.

Municipal Streets

Street networks will be expanded and furnished with lighting, side walks and roadside greenery. At critical junctions traffic flow will be eased through flyovers and underpasses, street corrections and other improvements. Traffic guidance and organization and off-road parking will further enhance the capacity utilization of existing urban street networks. Feeder roads will make public facilities in rural centers accessible to a larger number of peripheral villages.

Municipal Buildings

More municipal main and branch office buildings and technical depots will be built to enhance the quality and coverage of municipal services. These measures represent a step towards decentralization.

Environmental Improvement

More environmentally safe garbage disposal areas will be established and swamp filling will be carried out to protect water aquifers, air and soil from contamination.

Other Programs

Operation and maintenance for a growing number of municipal installations will be provided. Land will be expropriated or purchased only where urgently needed for additional public facilities or street alignments. Kingdomwide physical planning regulations will be developed and submitted for government approval. Systematic staff training will be undertaken so that smaller municipalities can become responsible for their own technical and administrative affairs.

15.2.5 Fifth Plan Targets

Given its financial allocation, the program and geographic priorities and the absorptive capacities of the sector, the main targets for municipal and rural development during the Fifth Plan are shown in Table 15.1.

TABLE 15.1

Main Development Targets for Municipal and Rural Affairs in the Fifth Plan

Sub-Program	Unit of Measurement	Targets
Water Networks	Kilometers	5,524
Water House Connections	number	20,800
Water Tower Capacity	cubic meters	78,798
Sewerage Networks	kilometers	3,721
Sewerage House Connections	number	235,000
Sewage Treatment	cubic meters p.d.	1,532,071
Pumping Station Capacity	cubic meters p.d.	90,000
Municipal Streets:		
Temporary Asphaltting	'000 m2	29,400
Permanent Asphaltting	'000 m2	39,300
Foundation of new:		
Village Clusters	number	40
Model Villages	number	7

With regard to the development of manpower, emphasis will be put on replacing non-Saudis, and the percentage of Saudis will increase from 58 percent in 1409/1410 to 67 percent in 1414/1415.

15.2.6 Financial Allocation: Municipal and Rural Affairs

The total planned public expenditure for municipal programs during the Fifth Plan is summarized in Table 15.2 .

TABLE 15.2

**Fifth Plan Financial Allocation: Municipal and Rural Affairs
(SR mil lion)**

Agency	Salaries and Supplies	Operations and Maintenance	Projects	Total
MOMRA	11,680.0	8,200.0	19,006.0	38,886.0

15.3 HOUSING

15.3.1 Role and Development Objectives

Adequate housing is a basic need of every citizen and a major determinant of living standards. It contributes directly to individuals' well-being and indirectly to health and productivity which are vital for national economic growth. The provision of housing, therefore, has been a consistent feature of the government's long term development strategy.

Investment in housing is expected to be the single largest category of investment during the Fifth Plan period, amounting to over 10 percent of total investment. Housing construction has a significant multiplier effect on the growth of a wide range of economic activity, not only in real estate and construction, but also in consumer durables, building materials and furniture, thus stimulating the market for national goods and services.

15.3.2 Achievements and Key Issues

During the first three development plans, considerable progress was made in increasing the number of modern houses and in improving the overall quality of the housing stock. Lack of housing ceased to be a major development constraint by the second year of the Third Plan. However, the high growth of housing supply continued until the Fourth Plan, when the growth in housing construction fell sharply against both past performance and plan targets.

The total number of housing units by the end of Fourth Plan is estimated at 871,700 units, of which 172,607 were built during the Fourth Plan period as shown in Table 15.3.

Key Issues

In recent years a number of factors have influenced developments in the housing market, including: the stabilization in the number of foreign workers; a slowdown in the rate of

migration from rural to urban areas; and rationalization of REDF loans. As a result, the housing sector at the start of the Fifth Plan shows the following features:

- excess overall housing supply, with a large number of vacant housing units, both public and private, particularly in urban areas;
- a significant decrease in real estate and rental values;
- the stabilization of construction costs.

TABLE 15.3

Housing Completions and Total Stock in the Fourth Plan

	Fourth Plan		Total Units at end of Fourth Plan
	Target	Actual	
Public Housing			
- Deputy Ministry of Housing	7,800	2,207	20,026
- Government Agencies for Employees	67,200	46,400	221,600
Private Housing			
- Financed by REDF Loans	150,000	87,000	475,700
Privately Financed (estimated)	60,000	37,000	154,374
Total	285,000	172,607	871,700

In spite of the surplus of modern housing, there is much sub-standard and deteriorating housing stock occupied by non-Saudis and in need of rehabilitation, both in urban and rural areas. The recent government decision to put into use the uninhabited public housing stock of the Deputy Ministry of Housing will lead to savings on further government expenditure.

In the past, the main emphasis was on providing soft loans for the construction of new houses in response to rapidly increasing demand. An important initiative of the Fourth Plan

was to make the purchase of an existing house equally attractive to individual Saudis. Similarly, REDF lending policy during the Fifth Plan period should consider the extension of loans for the restoration of existing houses.

With regard to building quality, the need to develop a national building code and to concentrate on proper construction supervision has become more urgent. However, this should not result in an undue increase in construction costs.

There is a need to establish reliable housing data on the basis of a comprehensive statistical survey, in order to provide the private and public sectors with detailed information about the overall housing market.

15.3.3 Role of the Government and the Private Sector

The past development of housing was characterized mainly by public construction activities and large government soft loans to citizens for housing construction. During the Fourth Development Plan, the direct supply of new public housing, as well as public agencies' own housing construction, was considerably reduced.

The housing sector has now reached a more stable stage of development, so that the government can concentrate its future activities on defining necessary framework and regulatory conditions for an efficiently functioning free market. Thus, future housing development will depend increasingly on private sector activities and resources.

15.3.4 Housing Policies and Main Programs

The main housing sector policies in the Fifth Plan include:

- review the organization of responsibilities for housing affairs in the public sector;
- limit public agencies' housing construction activities to indispensable needs;
- develop a viable approach to improving the housing conditions of low-income citizens;
- review REDF lending policies and extend their scope to include the purchase of existing apartments, and modernization and rehabilitation activities, without increasing public expenditure;
- mobilize private capital into financing housing construction, purchase and renovation, through such channels as building and loan associations, in conjunction with the REDF;

- identify areas with sub-standard housing in need of rehabilitation;
- unify and enforce construction standards and building codes.

Main Programs

Apart from government agencies' own housing programs and the REDF loan programs, the housing sector's Fifth Plan programs are organized mainly through the Deputy Ministry of Housing (DMH) and include:

- Complete the direct housing projects currently under way in Makkah, Madinah, Al-Qatif and Al-Ahsa and continue the operation and maintenance of existing units in Jeddah, Dammam, Riyadh, Madinah, Buraydah and Al-Ahsa until they are distributed and occupied.
- Establish an information center for the construction and housing sector; complete and regularly update the Kingdomwide housing survey and statistical database.
- Evaluate the potential benefits and the necessary conditions of allowing real estate ownership by non-Saudi nationals in coordination with GCC countries.

15.3.5 Growth during the Fifth Plan Period

The housing sector is characterized by a general over-supply of housing. However, the combination of population growth, higher rates of household formation, and expected income growth will lead to a steady increase in housing demand during the Fifth Plan.

The incremental demand estimate of about 400,000 households will be met from various sources, as shown in Table 15.4.

TABLE 15.4

Fifth Plan Housing Targets

	Available Units at the End of 4DP	Targets for 5DP	Available Units During 5DP
Public Housing			
Deputy Ministry of Housing	20,026	5,676	25,702
Private Housing			
Financed by REDF Loans	—	78,792	78,792
Privately Financed	—	36,741	36,741
From Existing Stock	258,765	—	258,765
Total	278,791	121,209	400,000

In addition to these housing units, there is further latent demand from occupants of sub-standard housing. However, this demand can be met by private investment and through the use of existing vacant units. The expected growth in housing supply will be financed mainly by private investment, supported by 65,660 planned REDF loans amounting to SR 18.4 billion.

Regarding the development of manpower and greater emphasis on the replacement of non-Saudis, the percentage of Saudis employed by the Deputy Ministry of Housing (DMH) will increase from 83.1 percent in 1409/1410 to 89.6 percent in 1414/1415.

15.3.6 Financial Allocation: Housing

The financial allocation for government agencies in the housing sector during the Fifth Plan is shown in Table 15.5.

TABLE 15.5

Fifth Plan Financial Allocations: Housing*
(SR million)

Agency	Salaries and Supplies	Operation and Maintenance	Projects	Total
Public Housing (DMH)	138	155	2,721	3,014
Real Estate Development Fund**	438	0	0	438
Total	576	155	2,721	3,452

* Excludes agencies' own housing

** REDF will extend a total of SR 18.4 billion as loans to be financed through repayment receipts.

15.4 Development and the Environment

15.4.1 Role and Objectives of Environmental Protection

Interest in environmental protection has increased substantially during the past decade and has recently gained great momentum and strong global significance. Issues of conservation, protection, management and development of environmental resources have moved to the forefront of both state and international politics and cooperation. Because of its effects on the quality of life and the general well-being of its people, the Kingdom of Saudi Arabia accords considerable attention to environmental protection and conservation.

Development and environmental protection should not be perceived as separate or conflicting challenges; both are inexorably linked. Development cannot flourish upon a deteriorating environmental resource base; neither can the environment be protected when development ignores the costs of environmental destruction. If economic growth were to take place at the expense of ever deteriorating environmental resources and conditions, the quality of life and the well-being of people -- the ultimate goal of all development -- would be seriously affected. Environmental neglect destroys assets that are vital to life itself.

The Kingdom's rapid economic expansion and unprecedented rate of development and urbanization during the past two decades carried with it certain harmful effects on the country's natural and environmental resources, such as: pollution and health hazards arising from the inadequate handling and treatment of industrial, agricultural and urban waste and sewage; air pollution in large cities and industrial areas; marine pollution, especially in the vicinity of harbors, industrial complexes and desalination plants; the dangerous rise of the groundwater table under big cities; waterlogging and soil sanitization; open sea marine pollution which affects local marine environs; danger to wildlife and a reduction in genetic diversity; and last but not least, the decrease in ground water reserves and a deterioration in its quality.

The government's concern for these adverse side effects of economic development was expressed in the establishment of the Meteorology and Environmental Protection Administration (MEPA) and the Environmental Protection Coordination Commission (EPCC) in 1399, and the establishment of the National Commission for Wildlife Conservation and Development (NCWCD) in 1406. The establishment of these agencies as mainly coordinating, catalytic, regulatory, and monitoring institutions, reflected the special intersectoral nature of environmental issues, in that they cannot be limited to or isolated in any single sector of the economy.

Environmental policies and programs, by their nature, affect most sectors of the economy and society.

Sustainable development should meet the present needs of society without compromising the ability of future generations to meet their needs. The following long-term development goals are based on the notion of interdependence between development and the environment:

- i) To upgrade and enhance the quality of life and the well-being of citizens, and to ensure a pollution-free environment with fresh air, clean water and healthy food;
- ii) To achieve sustainable development on the basis of prudent management of available natural resources and environmental capacities, and the rehabilitation of the environment previously subject to degradation and misuse.

In recognition of the multisectoral nature of environmental work, all government agencies will be guided by the following objectives during the Fifth Development Plan:

- to protect the environment and preserve its natural characteristics and ecosystems, and to conserve natural resources;
- to protect and develop the different wildlife forms in the Kingdom, whilst maintaining ecological equilibrium and preserving diversity in animal and plant genetic resources;

- to achieve a sustainable balance over time between population distribution and environmental capacities, with due regard to the effects of population growth and consumption patterns on the natural resource base;
- to provide sufficient energy at reasonable cost in ways that minimize the risk of environmental degradation, that conserve non-renewable energy resources, and that realize the full potential of renewable and clean energy sources, such as the sun and wind;
- to achieve the highest feasible degree of industrial expansion through the use of the most recent available technology which strictly adheres to environmental protection standards at all stages of design, construction and operation;
- to attain the highest feasible degree of food security without resource depletion or environmental degradation, and to restore the resource base (water and land) where environmental damage has been occurring.

15.4.2 Achievements and Key Issues

During the Fourth Plan period MEPA provided important meteorological services to marine and air navigation activities, oil drilling platforms, agriculture, and the general public. MEPA also achieved some success in the implementation of its environmental protection program and services, particularly with respect to: environmental studies on the use of lead free fuel and the control of dust in cement factories and quarries; the preparation of a draft environmental code for the Kingdom; controlling marine pollution by oil in emergency cases; monitoring air quality in selected areas of the Kingdom; starting the development of an environmental information system; active cooperation with regional and international environmental organizations and agencies.

In the relatively short time since it was set up in 1406, the National Commission for Wildlife Conservation and Development (NCWCD) has achieved some notable success, particularly through the establishment of several wildlife reserves and two wildlife research centers in the Thumama and Al-Taif. The achievements of NCWCD have been most conspicuous in the campaign to create a strong public awareness about the conservation and protection of wildlife in the Kingdom.

The achievements of other government agencies involved in environmental and natural resources issues include works carried out by the Ministry of Agriculture and Water in the areas of natural resources surveys and evaluation (land, water, climate), establishment of a pasture land management and maintenance system, the formulation of policies to develop virgin land, and the establishment of national parks. The Royal Commission for Jubail and Yanbu achieved

high standards in environmental protection and pollution control in the two largest industrial cities, which were internationally recognized by the 'Sasakawa' international award granted to the Commission for its environmental protection efforts. The High Commission for the Development of Riyadh carried out a series of in-depth studies and investigations on the rise of the ground water table in the city and the associated problems. The High Commission has already started to implement some of the solutions recommended by these studies, in addition to the environmental maintenance activity at Wadi Hanifa, and the completion of basic environmental surveys for Al-Thumama wildlife park area. King Abdul Aziz University has successfully developed alternative solutions for the treatment of the rising ground water table in some residential quarters in Jeddah.

Key Issues

Several important environmental issues and constraints need attention during the Fifth Plan period:

Environmental Standards : There is a need for a clear set of environmental standards, regulations, specifications, and guidelines that must be observed in industrial, agricultural, commercial, and urban activities affecting the environment. In this regard, the review, consolidation and appropriate amendment of all existing rules and regulations concerning licensing, monitoring, inspection, implementation and enforcement will be carried out to protect the environment.

Environmental Impact Assessments should become an integral part of feasibility studies for new projects and programs. Up till now there has been no general system for the inclusion of environmental impact assessments and social cost-benefit analyses in program and project decision making.

Environmental Awareness : Public awareness of the environmental implications in all aspects of every day activity is not adequately developed. This requires the cooperation of various public and government agencies through education and the more widespread dissemination of information about the effects of public behavior on the environment. The citizens' role and cooperation in conserving and preserving the environment is essential and has no substitute.

Enforcement of Environmental Regulations : Enforcement of existing environmental regulations is inadequate, because there is no clear definition of mandates, responsibilities and authority to enforce these regulations. This is all the more serious in the absence of a sense of awareness and voluntary cooperation on the part of the general public. Violators of environmental codes should be made fully aware of the penalties for violation, which should help in their enforcement.

Environmental Monitoring : There is a need to develop and implement an effective system of monitoring pollution parameters and environmental degradation.

Coordination of Environmental Activities : The activities of many government ministries have direct or indirect effects on the quality of the environment, including the Ministries of Agriculture and Water, Defense and Aviation, Municipal and Rural Affairs, Petroleum and Mineral Resources, Industry and Electricity, Interior, Health, Communications, Commerce and Planning; other public sector agencies include the Ports Authority, the Standards Organization, the High Commission for the Development of Riyadh and King Abdul Aziz City for Science and Technology (KACST). There is a lack of coordination between MEPA and these other decision-making bodies involved in the planning and implementation of environmental work. Positive steps should, therefore, be taken to remove these obstacles and to enhance cooperation among relevant agencies.

These issues and constraints are not unique to the Saudi Arabian situation; their roots lie in the inter-sectoral and long term nature of environmental work, both in the Kingdom and in other countries as well.

15.4.3 Role of the Private Sector in Environmental Protection

The private sector can play an important role in protecting the environment in three ways:

- First** : Private sector establishments can help protect the environment by adhering to environmental regulations already in effect.
- Second** : The private sector can have an important role in developing an ‘environmental industry’:
- by adopting the new conservation technologies that are now emerging, and possibly developing them in Saudi Arabia in the long run;
 - by participating in and leading the development of environmental recreation facilities and nature parks in view of the Kingdom’s natural endowments of major environmental resources, such as its vast coastal and sea shore areas, mountains and desert;
 - Nature parks, recreation areas and resorts are presently being developed in many countries by the private sector. Such activities establish important linkages with other sectors of the economy and the labor force, in travel, services, tourism and education.

Third : There are many potential commercial benefits from sponsoring environmental conservation projects. Throughout the world, corporations are learning that their images are enhanced through their support of environmental efforts, and damaged by a lack of responsibility towards the environment. In this regard, the establishment of effective channels for private support of environmental efforts (such as foundations) would be an important private sector initiative.

15.4.4 Policies and Main Programs

The environmental impact of actions in one sector are often felt in other sectors, so that harmonious environmental policies must be adopted for all sectors of the economy, and coordinated amongst many government agencies. In this regard, MEPA -- as the principal environmental protection agency -- will have an important role in coordinating and implementing the following policies in the Fifth Development Plan:

- developing and enforcing a comprehensive set of environmental regulations relating to: air, water and land pollution; disposal of solid, liquid and gaseous waste; use and disposal of all chemical, pesticide and radioactive materials; control of pollution to food and drinking water;
- establishing and implementing a system of environmental impact assessments in all projects undertaken by government agencies, so that factors influencing project feasibility and licensing decisions will include environmental considerations, rather than its construction, economic or urban significance alone;
- enhancing the technical capabilities to monitor and analyze information necessary to anticipate environmental damage and take preventive measures;
- maintain and update a permanent inventory of the Kingdom's natural and environmental resources, key eco-systems and wildlife;
- reducing the adverse environmental impacts of transportation, especially in highly populated areas, through the enforcement of emission standards for vehicles, the encouragement of fuel efficiency and the use of lead-free fuel, and improved traffic management and urban planning programs;
- adopting national plans for the use of agricultural land, pastures, forests and water resources, with due regard to the conservation of these resources for use by future generations and the prevention of their degradation;

- adopting appropriate measures to carry out the required liaison among the different agencies involved with environmental issues and protection, and to enhance MEPA's role and mandate in this regard;
- cooperating closely with other environment-related organizations, both within the GCC countries and internationally.

Main Programs

Environment-related policies will be implemented through the programs of a wide range of government agencies. The main programs of MEPA and NCWCD, through which these policies will be implemented, are the following:

- review and amend a complete set of standards, regulations and specifications dealing with environment and pollution abatement, that must be adhered to in all sectors of society;
- monitoring environmental indicators, including levels of pollution;
- complete the development of nationwide environmental information and database;
- intensify educational and awareness campaigns with regard to environmental protection and wildlife conservation;
- improve and expand the weather information system and services;
- complete the establishment of a network of wildlife reserves, and the development of two major wildlife research centers.

15.4.5 Future Outlook

The effective realization of the strategic long-term environmental objectives requires an understanding of the wider aims of development so that 'quality of life' (with its cultural, spiritual, environmental and recreational dimensions) rather than the mere pursuit of material possessions, should become the principal criterion of success and achievement. Patterns of production and consumption in society should be reoriented towards the conservation and reuse of resources, and away from waste and extravagance. While this is a long term process of reorienting some lifestyles, it is one that is actively encouraged by the tenets of Islam and its Shariah. Social policies must aim to ensure that the entire Saudi population has more opportunity to participate in the fields of culture, education, sports and recreation, the arts and humanities -- those non-physical areas of development which represent the highest levels of human achievement.

As part of the international community of nations the Kingdom is witnessing the emergence of a new worldwide cultural, economic and political awareness of nature, the environment and the pressing need for its protection. This movement is growing stronger each day and is bound to appreciably affect people's thinking and ways of life. It is, furthermore, compatible with the Kingdom's cultural heritage and the thrust of its development plans, through which the government has assumed an early leading role in accommodating the principles of this environmental awareness. The government will continue to play such a role in the public interest in the future.

15.4.6 Fifth Plan Financial Allocation: Environmental Protection

The financial allocation for the environmental sector during the Fifth Plan is shown in Table 15.6.

TABLE 15.6*

**Fifth Plan Financial Allocation: Meteorology and Environmental Protection Administration
(SR million)**

Agency	Salaries and Supplies	Operation and Maintenance	Projects	Total
Meteorology and Environmental Protection Administration	422	355	197	974

* Table does not include environmental projects carried out by NCWCD and other government agencies.