Environmental Conservation 25 (4): 295–304 © 1998 Foundation for Environmental Conservation

Alternative land management approaches in the highlands of south-western Saudi Arabia

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Date submitted: 17 January 1997 Date accepted: 1 September 1998

Summary

There is debate world-wide over urbanization, structured planning, deforestation and land management; these issues are no less important in Saudi Arabia.

State tenure of traditionally protected lands in Saudi Arabia has created gaps in the protection of the ecosystem and control of urbanization that indigenous peoples can fill. The present situation has emerged since 1932 when local control of resources was lost in the drive to unify the Kingdom politically. An alternative to the practised system of land management and planning is proposed. The alternative is that which recognizes indigenous people as potential stewards of the vernacular landscape and it may play a leading role in the conservation and management of the highlands of the south-western region of Saudi Arabia.

To strengthen the 1993 Law of Regions which aimed at improving the standard of administrative work and development in the Kingdom will require the establishment of a new relationship between indigenous people, scientists and national governmental organizations. In this, indigenous peoples should have juridical recognition and control over large areas of forests around their settlements in exchange for a commitment to conserve the ecosystem and protect biodiversity. In essence, such an outcome may offer the integration of two knowledge systems into an innovative resource-management strategy and land-conservation plans.

Keywords: land management, tribal system, statutory system, Asir

Introduction

Throughout its long history, the Arabian peninsula has seen the development of many social, cultural, political and economic structures linked with local traditions. The unique characters of these traditions, many of which have become quite elaborate, often emerged from the insular nature of the locality in which they arose. Today, these structures offer valuable precedents for land-use planning and land management.

Traditionally, the pace of change in the natural and built-up environment was moderated through social conventions and cultural norms while it is now controlled by governmental laws and regulations. Recently, there has been an increased recognition of the role that indigenous people may play in natural resource management (Guppy 1992). This type of recognition is particularly applicable in the highlands of the south-western region of Saudi Arabia where the majority of the forest reserves remain in their natural form. Abu-Hasan *et al*. (1984) consider the abuse of the forests in this area a factor that diminishes their continuity as a renewable resource. The forest conservation rules established by the indigenous inhabitants of the area contributed to the good environmental quality of the vernacular landscape. For example, in almost every settlement in the highlands of the south-western region of Saudi Arabia, local village councils established rules which were effective in organizing relations between man and productive lands (Eben Saleh 1997). The local rules were traditionally established after consultation with community members in order to conserve and protect the landscape elements such as forests, agricultural and pasture lands (Eben Saleh 1996). The rules instituted prohibitions against uncontrolled cutting of trees in tribal lands and prohibited the erection of dams and embankments that might prevent the free flow of water to the agricultural lands. For years before the advent of the modern Saudi state, traditional practices and tribal codes maintained a balance between human settlements and the environment (Al-Soliman 1993).

Today, political stability, technological advancement and economic growth have contributed to the increase in agricultural production and urbanization in Saudi Arabia. But population growth and urban development have had substantial impact on the natural environment, especially on the vegetation (Joma 1991). As elsewhere in the world, the exploitation of natural resources, especially forests, has become a point of commercial benefit in Saudi Arabia. One result has been the deforestation activities and the impoverishment of green covers around settlements to accommodate the urban growth that has taken place in almost every highland settlement of south-western Saudi Arabia. In the highlands of this region grazing has now denuded certain areas leaving only isolated mature trees (Zahran & Younes 1990). This causes

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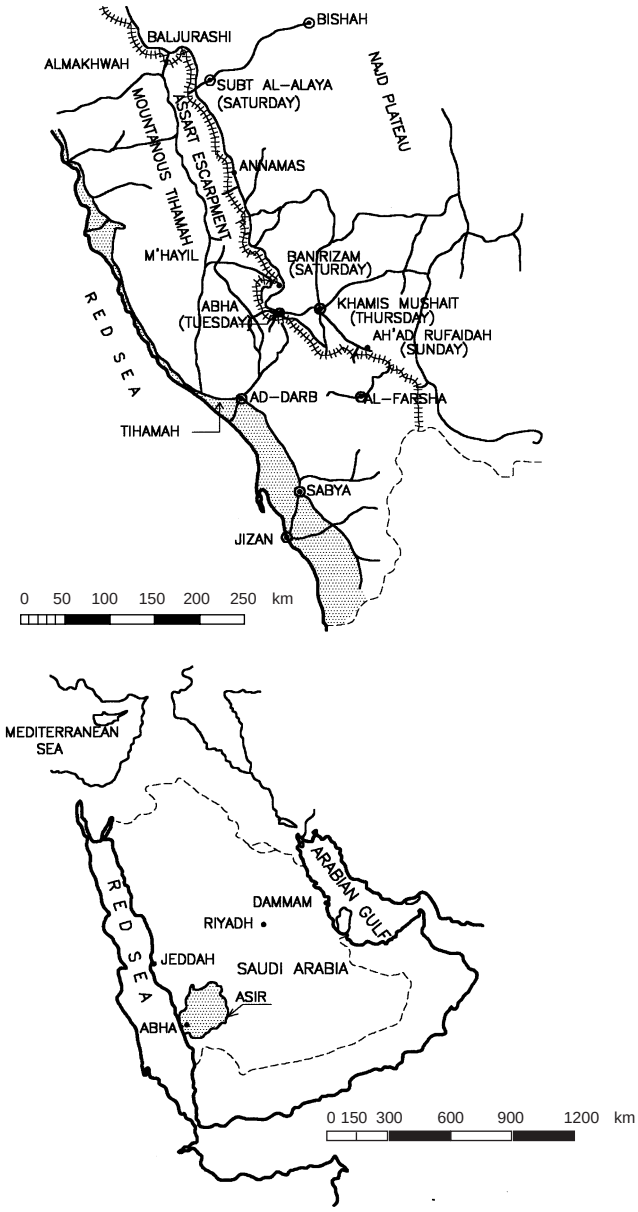

Figure 1 Map of Saudi Arabia and Asir region showing the different micro-geographical zones. The days show the locations of the weekly markets in the area.

erosion problems, and heavy rains, instead of supplying fresh water, soak the ground rapidly and run off occurs at high speed, often causing flash floods. Tree-felling for firewood and carpentry has exacerbated this problem. It is not uncommon today to see trucks piled high with tree branches speeding inland to supply wood to fuel-starved desert communities, although the government and commercial sector in Saudi Arabia have combined interests to enact measures to restrict the overexploitation of natural resources (Al-Osti & Abu-Hasan 1987).

Meanwhile, the need to establish policies and programmes that provide for the sustainable development of areas with natural resources including forests has become a subject of considerable debate (IUCN 1992).

Figure 2 One of the forests in Asir.

Figure 3 Arable lands in one village in Asir.

The aim of this paper is to review current and traditional means of land management and determine whether a new relationship between structured planning and socio-political structure might contribute to land management in the highlands region of south-western Saudi Arabia known as Asir (Fig. 1).

The physical context of the highlands

The Asir is a relatively fertile area of high mountains, some of which rise to 2500 m, and it receives substantial rainfall during April and May (Abdul-Fattah 1981); the latter provides for forest that covers an area of 762 473 ha (Abu-Hasan *et al*. 1984). Most of the Kingdom's forest habitat is present in Asir (Fig. 2), and although much of the flat land in the area has been cleared for agriculture (Fig. 3), there is still a distinct community of junipers above 1800 m altitude (*Juniperus phoenicea* and exelsa). These trees are complemented by a leafed olive (*Olea africha*), the berries of which are an important food source for birds. Where soils are relatively rich and the climate mild, the olive may replace the darker-coloured junipers, giving rise to a landscape of cuboid villages nestled amid hillsides dotted with grey foliage. In this region, arable consists only of small terraced plots which have often been set in a series of stone-walled steps up the sides of gullies (*wadi*) (Fig. 4).

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Figure 4 Terraced agricultural fields in Asir.

Tribal socio-political structure

In the highlands, as elsewhere on the Arabian peninsula, tribal groupings were a dominant socio-political structure prior to 1932. Each tribe was held together principally by established institutions and, in particular, by a system of management and control of land (Fig. 5). A key organizing principle of tribal society was the concept of kinship and lineage, which regulated the relations between the different tribal units (Aloshban 1987). Thus, prior to the establishment of the unified state, tribal groups achieved internal cohesion on the basis of both kinship and territory (Al-Otaiby 1989). Kinship ties gave the tribe the illusion of a religious unity through the cult of the common ancestor (Aloshban 1987). Yet, the sub-units of such an organization possessed almost complete functional autonomy, and were divided into *luhmah*, or kin-groups (Fig. 6). Each luhmah had its territory and its seasonal camping places where its members could bring their animals to pasture (Draz 1965).

Thus, even when all members of a community were related, territory was an equally important factor in social order. Land was the most important resource, and every tribe owned a definite territory to which it had prior right, and lineage groups were associated with clearly marked territory (Aloshban 1987). A vital, almost sacred, line of descent gave the right to land and to political identity. This is why tribesmen often viewed neighbouring tribes as rivals for the vital resources of water and pasture land and why they often engaged in hostilities with the object of expanding or defending their holdings. Underlying this system was a sense of shared stewardship for scarce resources (Llewellyn 1992). Thus, related tribes, united into groupings, often shared their pasture lands during certain seasons. Such relations were governed by principles validated by traditions and customs. Thus confederated tribes involved permanent social groupings of fixed membership, despite some sort of inter-group cooperation (Aloshban 1987).

According to oral history, before 1932, inhabitants of the Asir practised spiritual stewardship of land and they invoked the principles of fairness in the cultivation and use of natural resources. This occurred according to cultural protocols es-

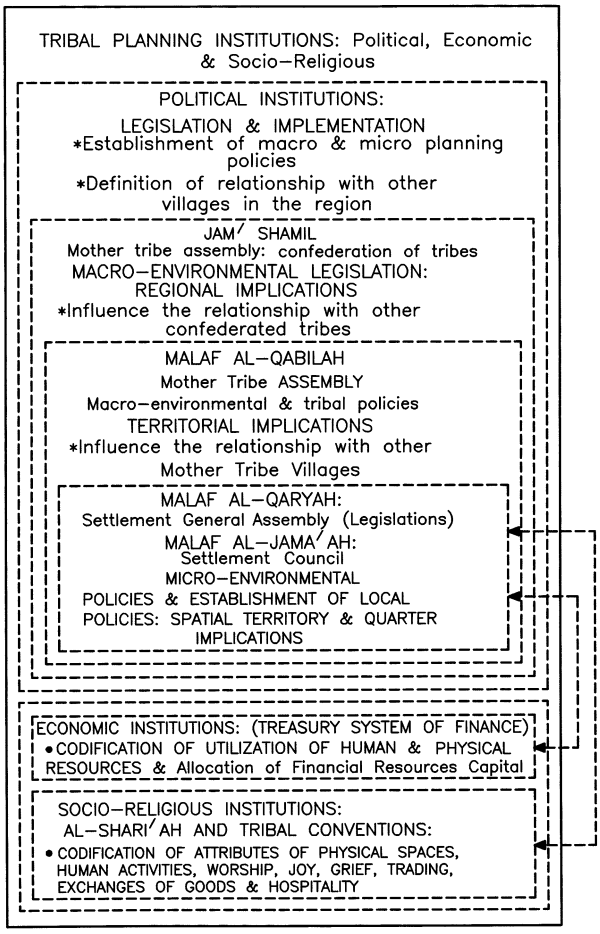

Figure 5 Hierarchical system of regional land management under the tribal tenure which prevailed in Asir prior to 1932.

tablished by tribal customs which considered human beings to be only part of an interacting life-force continuum (Tyler 1991). For these reasons, the traditional forms of resource management were closely tied to development of a tribal society with distinct political, social and economic organizations. This is manifest especially in the stewardship of forests and agricultural lands which was based on local, tribal, cultural and religious principles.

Unlike their more nomadic counterparts, however, the tribes developed a more settled attitude within the borders of Asir where natural resources were relatively abundant (Atwah 1992). Permanent settlements were established whenever justified for defensive or economic purposes. Settlement patterns were also based on the availability of fertile soils and the need for common defence. Within this setting, many institutions emerged to preserve religious, economic or political interests. Councils of villages were concerned with the fair use of the natural resources and allocation of financial resources to manage the overall landscape, and a conservation attitude was promoted to safeguard the environment from abuse (Eben Saleh 1996).

The Islamic principles governing water distribution (equity of rain) appear to provide a fairly good analogy for

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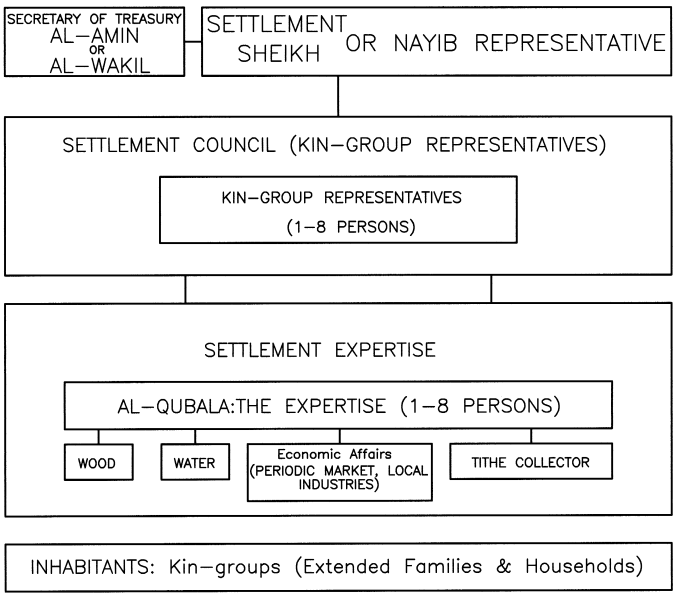

Figure 6 Hierarchical system of local land management which prevailed in and around the settlements of Asir prior to 1932.

understanding the allocation in the highlands of resources such as rangelands, woodlands and wildlife (Llewellyn 1992). The hierarchical or tribal assemblies of local councils known as *malafat* were significant political institutions and have been active fora for dissemination of public opinion. Through them, the establishment of specific managerial frameworks and procedures took place. The cultural and social participation in environmental conservation activities could set significant local initiatives aimed at conserving certain aspects of the environment (Grainger & Llewellyn 1994). Those initiatives were mainly tied to the traditional system of land ownership.

In the tribal assemblies, issues might be raised at regional level when division of lands between tribes and bands of a mother tribe was imperative. Each tribe held exclusive rights to the land within its area for agriculture, lumbering and pasture. Such boundaries were not always constant due to conflicts and tribal wars, but the reputation and strength of a tribe were often based on the adequate maintenance of its territories (Eben Saleh 1996). Within such a framework, land ownership at the kin-group level came to be based mostly on an inheritance system originating in Shari^{c}ah (Islamic law) (Al-Otaiby 1989). Land ownership could be retained by business transactions or grant only amongst the kin-group members.

Figure 7 The forests were the main tribal hema. The wall across the centre of the photograph constitutes a demarcation between the sacred and the profane.

Large areas in the highlands were marked as tribal territories known as *hema* or conserved lands (Fig. 7). Zahran and Younes (1990) defined the hema system as 'a set of regulations controlling the extent and intensity of utilization of resources in a specified land'. It had its roots in pre-Islamic policies which protected certain pasture lands from overgrazing (Llewellyn 1992); it was applied to settled residents and nomads alike. The hema concept can be considered one of the most significant practices of the traditional land management system in the Arabian peninsula. It was a respected tradition amongst indigenous inhabitants and showed that local people were capable of protecting and organizing their lands within an appropriate framework of agreed rules. The hema was the general responsibility of all community members. The responsibility towards the natural environment, as emphasized in Shari^{c}ah, is guided by two principles: utilization of natural resources, and preservation of the natural balance (Mortada 1993). Hema are perhaps one of the world's oldest forms of natural resource conservation.

Classification of hema can be based on two factors, namely the extent to which grazing and/or cutting is allowed, and the controlling social unit. Draz (1965) recognized four types of hema according to the extent of grazing and/or cutting:

- *Type I*: No grazing allowed, but cutting of grasses permitted during specified periods and droughts.

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- *Type II*: Grazing and/or cutting of grasses partly permitted, but restricted to certain seasons of the year.
- *Type III*: Grazing permitted year round, but limits placed on the kind and number of animals, mainly cattle and donkeys. No restriction on hay cutting after grasses mature.
- *Type IV*: Tree cutting prohibited (in the interests of protecting the forest). Local people were allowed to cut trees only in emergencies or where needs were imperative such as rebuilding a fallen house or mosque.

Hema could also be classified by their controlling social unit. The tribal hema were controlled and used by several (up to ten) villages belonging to the same tribe, the smaller village hema were controlled and used by single villages, and the even-smaller individual hema which were located next to the cultivated fields of each owner were controlled as soon as they were enclosed by stone walls. In all types of hema, regulation of use was part of the broader tribal traditions. Generally, violation of regulations would be punished by the slaughter of one or more of the trespassing animals. Violators might also be subjected to warnings, fines, or even imprisonment.

According to Tyler (1991), environmental management is fundamental to both the cultural and spiritual survival of tribal society. In the tribal context, control of land-use and urban form is normally achieved through consensus rather than by means of prescribed legislative or institutional control. This demands closer links between the institutions and land-use practices.

To conclude, each tribe or sub-tribe in Asir owned and managed certain areas, and they developed local land management structures (Eben Saleh 1996) which existed up to 1957. In 1957, the government assigned the management of barren lands and tribal lands, when they were not owned by individuals, to the Ministry of Agriculture and Water (MOAAW 1994). Such tribes or sub-tribes have long been affiliated with the land, either as settled communities or as nomads in search of grazing areas (Joma 1991).

Structured planning

Since 1932, local land management policies have been subject to substantial changes. According to oral history, the former tribal system of land management was gradually replaced by general laws and regulations that determine the use of barren lands, pasture lands and forests. This inevitably involved gradual abandonment of the tribal territorial boundaries which were the basis of land management at large scale. Under the new structured land management, a centralized system emerged, and *amir* (rulers) were appointed by the King to administer the affairs of each region accommodating several tribes. Local *sheik* (heads of a tribe) or *nayib* (representatives of a village in tribal assembly) were to refer all issues to the new officials. In political terms, the stability that resulted from the unification of the Kingdom in 1932 seemed to decrease the identity and independence of local settlements, which had previously been forced to cooperate with each other within larger tribal structures to ensure their survival. With its establishment in 1953, the Ministry of Agriculture and Water became responsible for the legislation pertaining to barren and pasture lands, and forests; this was followed by a Royal Decree of 1957, which cancelled the tribal role in hema management (MOAAW 1994). The Ministry of Interior was responsible for the enforcement of governmental rules as well as for all municipal affairs pertinent to rural and urban lands. In 1975, the Deputy Ministry for Municipal Affairs in the Ministry of Interior (MOI) was transformed into the Ministry of Municipal and Rural Affairs (MOMRA). MOMRA is responsible for the management and administration of public lands within the fringes of villages, towns and cities.

Figure 8 One of the changes imposed by urbanization in Asir: removal of natural vegetation.

Urban change from the early 1960s, as a result of the construction of paved roads facilitating transport of goods, machines and new building materials brought a new facet to the vernacular landscape of Asir. With economic prosperity from 1975, the new roads also allowed the importation of exotic trees, building styles and the expansion of residential areas beyond old settlement boundaries. Urbanization also changed the face of traditional settlements and the natural landscape (Fig. 8).

In 1986, the Saudi government established the National Commission for Wildlife Conservation and Development (NCWCD), the mandate of which covers preservation, protection and development of all native wildlife populations (NCWCD 1987). In terms of its operational objectives, the NCWCD encourages and conducts scientific research on wildlife ecology and tries to promote public interest in wildlife. To maintain ecological balance amongst species, the NCWCD has sought to protect natural vegetation which has been denuded by grazing and urban encroachment. In its attempt to protect and maintain wildlife in its natural habitat, it has created reserves and sanctuaries all over the Kingdom. Raidah Reserve in Asir is 900 ha in area and is 20 km southwest of Abha, the capital of the region.

Problems of modern land management

Environmental quality is one of the most important new commitments of contemporary Saudi society. Land planning

https://doi.org/10.1017/S0376892998000381 Published online by Cambridge University Press

assessment and impact assessments have become decisive aspects of environmental management, preservation and development. They have increased the need for information about land management.

The transitional stage between tribal and statutory roles in land management witnessed an overexploitation of natural resources. The earliest extension plan for statutory land management was prepared by the Ministry of Agriculture and Water in 1957 after the Royal Decree of that year (MOAAW 1994) and was the first attempt to take into account the geographic, demographic and human features in the management of public lands and adjacent communities in a set of rules and regulations applied to the whole state. The implementation of these rules and regulations is not without problems, two of which I will outline here.

Urbanization and land-use

Asir experienced a rapid urbanization after 1975 that brought new land-use patterns and expansion of the towns and villages. In 1982, the plan of Asir National Park outlined zoning districts, proposed conservation for each area, and recommended future development along the Park (MOAAW 1986). Other schemes later proposed the conservation and elaboration of certain environmental and aesthetic features of the Park, and plans were proposed for protection of traditional forest areas and development of these into public parks (Atwah 1992). Still other plans displayed a concern for protecting natural and traditional sites and providing an inventory of valuable trees (MOAAW 1996).

These plans have largely remained unrealized and thus have failed to curb the haphazard and unguided growth of the villages and towns as well as areas in the Asir National Park without fences. The failure derives both from the swift and extensive urbanization, which rendered plans obsolete soon after they were proposed, and from the persistence of personal and communal loyalties, which interfered with implementation. In other words, the proposals of the institutional agencies were clearly outstripped. The area has witnessed increased urbanization as a physical phenomenon without a proportional degree of urbanism.

The problem goes beyond a technical fix. No matter how modern attempts at planning are defined, they ultimately involve the injection of rationality into a particular area of human life. The goal is to control the environment both by eliminating hazards to health and well-being, and by adjusting the broad direction of future growth according to methods such as forecasting and cost-benefit analysis. All such efforts ultimately involve attempts to exert control from above, over the local distribution of land-uses and allocation of resources.

Changing social structure: homogeneity versus heterogeneity

In a narrow physical sense, structured planning may seem only to involve such issues as spatial arrangement of urban functions and control and allocation of land, but in a broader sense, it also represents a deliberate effort to order the environment toward the realization of certain goals. It is here that modern notions of land-use have collided with a traditional socio-cultural milieu in which values and loyalties were once expected to militate against just such outside control. Today, every element of the social structure which previously provided sources of viability and solidarity such as kinship and communal loyalties, patron-client networks, and other primordial attachments, is now opposed to national strategies for controlling and allocating resources. In other words, heterogeneity as a trend emerged at regional level as opposed to the homogeneity which used to prevail on spatial principles. While inhabitants of the villages and towns continue to derive tangible benefits from cultivating such traditional ties, these same ties now impede or distort urban planning and zoning efforts. In other words, norms which enable in some respects, disable in others.

In Asir, the dilemma is made additionally poignant by one of the most distinctive and persistent features of society, namely its relative wealth when compared to the society of the adjacent desert regions. In mobilizing and managing its human and economic resources, a system of weekly markets was developed in Asir during traditional and contemporary times to encourage communal enterprise and private initiative. Such a focus on self-reliance manifested itself in a near total absence of intervention by tribal authorities. Conscious perhaps both of its own limitations and the resourcefulness and enterprise of its members, the tribe reduced its interference in economic matters to a minimum. While such a liberal tradition might once have served the interests of private enterprises and was consistent with the political reality of tribal society, it is now incompatible with many of the premises of modern land management.

Indigenous dwellers: a future in land management

Because tribal and state land management systems both lack the impetus to control land, a new approach to improve control of the forests and natural resources as well as urban areas of Asir is proposed here. Understanding of the current land-use and land tenure system is a prerequisite for any new management practice which is proposed. The new approach would involve incorporation of indigenous environmental knowledge and government policies into one system for management purposes. The lack of understanding of the dynamics of indigenous land-use and the symbolic and cultural meanings which indigenous people give to space has created a schism between actual and theoretical management frameworks. Policymakers should look upon indigenous inhabitants as resource managers who possess sophisticated ecological knowledge.

Tribal notions of territory and territoriality include the arrangement of landscape components, resource access and management, moral concepts of owning and ruling, but the

trespass of territory by non-tribal members used to create problems with tribesmen (Lancaster 1992).

In fact, local land tenure and management systems were governed by social conventions, known as *ᶜurf*, which varied considerably from region to region in the Kingdom. The *ᶜurf* may have been initiated by order of a local authority, or they may have been inherited from previous generations (as with the perpetuation of certain pre-Islamic customs), or they may have evolved locally in response to certain conditions or changes in the environment (Hakim 1994).

Prior to 1932, indigenous people formed local and regional organizations to manage communal land resources, and these may be necessary today as a means by which tribes might represent their interests before the government and participate in controlling and managing public lands. Professionals, scientists, social scientists, and people with local knowledge might work together to improve and conserve agricultural and natural resources in an innovative management system. The focus of this system would be a new concept of management that would differ from the traditional and include the various elements of landscape as a resource for tourism, environmental and economic purposes. Such a new land management system would give indigenous peoples the capability of protecting forest ecosystems with a greater degree of autonomy from the national planning agencies.

Environmental committee: a proposed model

The Law of Regions of 1993 aimed at improving the standard of administrative work and development in the Kingdom (Dar Al-Ufuq 1994) and it is the legal entry to the establishment of any law pertinent to the environment. Establishment of environmental committees which will be recognized by the government and do not need much bureaucracy might offer the means of land management for Asir. An Asir environmental committee could be constituted easily by the Region Council according to the Law.

The Kingdom of Saudi Arabia is composed of 13 regions, or *Imarah*. The Imarah is in fact the headquarters of the administrative body of each region of which Asir is one.

Al-Amir, the Governor of the Imarah, is the executive authority of all rules and regulations pertinent to the land and environment. Al-Amir answers and proposes to the Minister of the Interior any matter pertinent to the management of the region. According to the Law of Regions, the Amir governs and administers the region according to the state's general policy, the provisions of this Law and other laws and regulations.

Each Imarah has a Region Council which consists of:

- Al-Amir as chairman,
- The vice-governor as vice-chairman,
- A governorate *wakil*, the deputy of the Amir,
- Head of the region's official bodies (Directorate of Municipal and Rural Affairs in Asir; Directorate of Roads and Communication in Asir; Directorate of Water Sanitary Disposal in Asir; Post and Telecommunication in Asir) which shall be specified in a resolution to be passed by the Council of Ministers on the recommendation of the governor (i.e. the chairman) and approval by the Minister of the Interior, and
- A number of local people (not less than 10) judged as eligible in terms of learning, experience and specialization, and appointed by order of the Prime Minister upon the Amir's recommendation and the approval of the Minister of the Interior with a renewable four-year membership term.

Any member of the Region Council may submit in writing to the Amir as chairman any proposals falling within the Council's jurisdiction. The chairman then places each proposal on the Council's agenda for discussion.

The Law of Regions permits the Region Council to set up special committees to study any matter falling within its jurisdiction when the need arises, and it may seek the help of specialists for this purpose. The environmental committee which I am proposing would have the competence to discuss all that is conducive to improving environmental standards in the Region. The Region Council is entitled by law to discuss matters such as:

- Determination of the needs of the region and proposals as to inclusion of their consideration in the State's development plan,
- Determination of what projects are useful, arrangement of them in order of priority and proposal as to their adoption as part of the annual State budget,
- Study of the regions urban and rural organizational layout and follow-up of the implementation of projects after adoption, and
- Follow-up of the implementation and coordination of those parts of the development and budget plans related to the region.

Within the above matters, the environmental committee which I propose would address environmental issues in the region. The committee members, I assume, would have basic knowledge on indigenous issues whether through practice (e.g. planners, architects and landscape architects) or through research (e.g. forest scientists, botanists, zoologists and wild life scientists). Indigenous experts would be assumed to have had a basic role in traditional and/or transitional land management (Fig. 9).

The proposed committee would submit to the Region Council any plans calculated to serve the general good of the Region's environment and people. In such a system, the agenda for discussion could be derived from local environmental problems. Local organizations could play a major role in monitoring environmental resources and ensuring that their use was compatible with development demands and national planning objectives. These local organizations would deal with all legislative matters, and approvals of proposals, plans and recommendations related to the conservation, pro-

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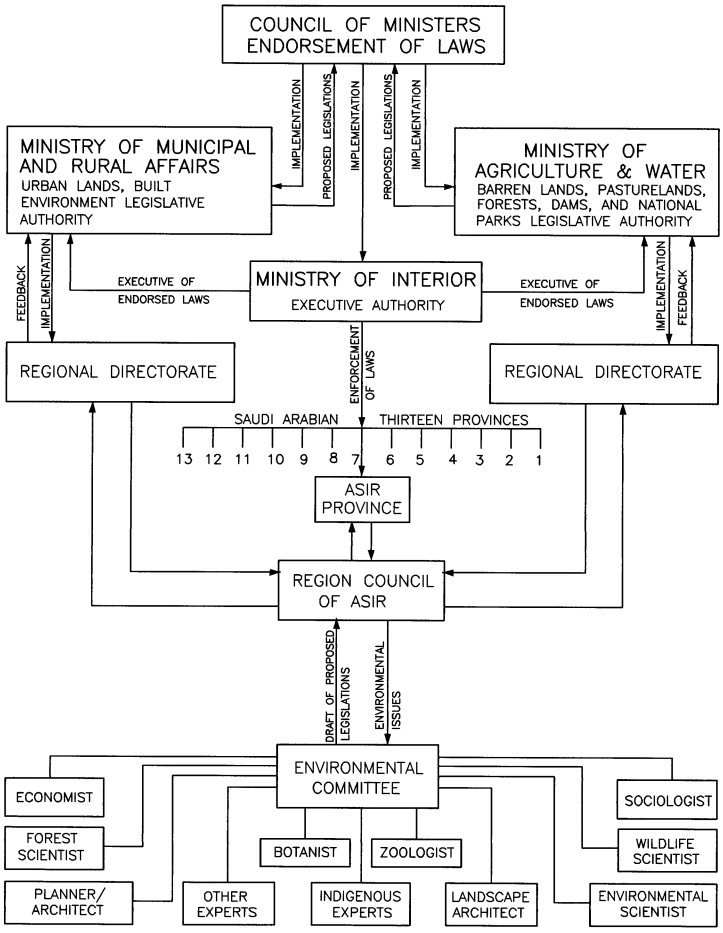

Figure 9 A proposed land management model suggests that indigenous people are included in the future of any matter pertinent to the land.

tection and management of the environment. They would also coordinate efforts and development plans drafted by other governmental agencies. They could review large-scale, environmentally-sensitive projects for potential approval or modification. And they should review, coordinate and approve all plans for the implementation of policies and regulations proposed by its members or other governmental agencies. The local organizations should also be charged with enforcing all relevant local regulations.

The new integrated management system which is proposed here has the potential for enhancing the long-term development of natural resources. One of the local organizations' tasks would be to focus on the identification and demarcation of potential lands for conservation purposes.

The national planning authorities are needed to set policy, sort priorities and coordinate the efforts of different organizations, but the authority for implementing policies and administering lands on a day-to-day basis could once again revert to local organizations such as the proposed environmental committee.

Concluding remarks

One of the basic tools of land management is the promulgation of orderly legislation to allow the just and equitable development of property to benefit the greatest public good. People whose sense of legitimate authority is rooted in networks of tribal and kin affiliation, however, resist such restrictions and perceive any plan as an unwarranted infringement on the private use of property. Consequently, much of the environmental crisis of Asir can be attributed to the failure of planning methods to curb or restrain the inauspicious consequences of management strategies.

Such internal considerations have, of course, been exacerbated by economic and political forces originating outside Asir. These include such national trends as the creation of great numbers of new government jobs in urban centres, the migration of indigenous people and their need to take up residence in urban districts, and the escalation of land values as a result of the influx of capital and a consequent trend toward real estate speculation. All these factors have impeded the government's ability to implement master plans or local zoning ordinances at macro scale.

Theoretically, such legal stipulations should act as a de-

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terrent to undesirable development, but in practice they will probably be ineffective, one reason being that conflicts are ubiquitous between planning and management agencies, which are reluctant to relinquish existing power. Another reason, even more grievous, is the absence of executive power to back up regulations.

Because of a collision between private interests and the political establishment, it is virtually impossible to control abuses such as that of zoning ordinances. In many instances, tribal members have been involved politically in a well-connected chain and become privy to knowledge of which areas are to be zoned for future development. These individuals have then purchased large tracts of the land concerned, in anticipation of the change and such intervention has many adverse consequences.

The discussion above offers a starting point from which to examine the role of national planners and land managers in Saudi Arabia. From the results of their activities, it might appear that at present such planners and managers have simply failed to understand the problems and difficulties involved or have been unable to convince competent authorities of the validity of their recommendations. However, planners have often not been responsible for planning failures. Frequently, the real cause has been overoptimistic government objectives or a sudden change in economic circumstances. Even if planners and competent national and regional authorities are able to agree on planning methods and objectives, difficulties may also arise out of misreading of local conditions, leading to national statutory provisions that are impossible to implement.

Another key to effectiveness in land management planning may be to encourage a greater degree of local participation and control in the planning process. This is where the above analysis of traditional planning methods in Asir may have the most bearing. For, as this paper has shown, though limited by a lack of continuing, established political structure, the former mechanisms of tribal spatial planning did establish a hierarchy of political organization and responsibility that offered sufficient mechanisms for implementation. Clear and open discussion at tribal assemblies also led to practical ideas and provided a means for building consensus and accountability. This led to the development of a harmonious built environment of great distinction, something which appears to have been lost in recent years.

The rapid increase in centralized planning efforts necessitated the establishment of departments for regional and urban planning within ministries which had hitherto dealt primarily with national issues. Regional development plans and local master plans, however, cannot be effective unless they are based on clear insight into local spatial processes, such as migratory movements and the growth of some regions and the stagnation of others. In other words, planners require indigenous expert knowledge of why urban growth should be slowed in certain areas and promoted in others, why new employment should be promoted in backward regions, and how to propagate effectively information on new agricultural techniques amongst rural populations.

The need for a revived traditional planning strategy is now a recognized aim in the Kingdom. One of its aims is to allow the local cultural environment and climate of Saudi Arabia to receive contemporary expression in terms of environmental issues at both small and large scales. For the moment, revived traditional planning is still under development and research, and it has not yet reached the form of specific planning principles and regulations which could be adopted and implemented by local government offices.

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