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ASSESSMENT OF RANGELANDS IN IRAQ Preliminary Report

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ASSESSMENT OF RANGELANDS IN IRAQ

Preliminary Report

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Assessment of Rangelands in Iraq
Preliminary Report

February 7, 2006

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I. INTRODUCTION

The Government of Iraq, (GOI) Ministry of Agriculture, (MOA) is responsible for the protection of rangelands in Iraq. MOA staff and livestock owners are expressing concern that not enough is being done to prevent overgrazing and degradation of the rangelands. It is widely believed that past management practices have already led to the degradation of significant areas of the rangelands. This calls into question the long-term sustainability of this land for livestock grazing under current management practices.

The USAID Agriculture Reconstruction and Development Program for Iraq (ARDI), supported by the USDA, Forest Service International Programs Office (USFS) is undertaking a program of rangeland management to address these issues. The program will be carried out in conjunction with the MOA/ARDI livestock production program, the purpose of which is to increase production and income through new technologies and better animal nutrition and health, and to increase the size of buffalo herds and sheep flocks. The promotion of pasture improvement, fodder production and modern rangeland management practices are important parallel activities if this purpose is to be achieved.

The overall challenge of rangeland management is to balance the diverse economic, cultural and social needs of the people using the rangelands with the desire to maintain Iraq's natural resources and conserve its biological and cultural heritage while increasing the numbers of livestock that are being supported on the rangelands.

The objectives for the ARDI rangeland program and this consultancy include:

1. Increase the capacity of communities throughout Iraq to take responsibility for specific issues facing their regions in a strategic and integrated way;
2. Increase the capacity of the GOI to protect and manage rangelands in ecologically sustainable ways, especially by developing policies and ensuring that programs are delivered effectively to support and enhance rangeland management; and
3. Increase the capacity of GOI staff, communities and other stakeholders to implement various technical solutions to improve rangelands and watersheds.

For four weeks during January and February of 2006 I traveled to Erbil in northern Iraq to begin an assessment of the current conditions of the rangelands. The purpose of this trip was to gain a greater understanding of what types of grazing livestock use the rangelands and in what manner; to identify the many stakeholders; and to begin to formulate ideas about how the condition of the rangelands can be improved. During those three and a half weeks I met with numerous persons from the Ministry of Agriculture, stakeholders from throughout the northern Kurdistan region, NGOs, and the dedicated staff from the ARDI project.

I visited and observed farmlands and rangelands in the governorates of Dahuk, Erbil, and Sulaymaniyah in northern Iraq to observe range conditions and livestock use. I observed several range improvement projects, mainly contour furrowing with plantings, were observed, as well as agricultural fields, which play an important role in livestock grazing in this region. Unfortunately, due to security concerns and restrictions I was unable to travel to the remaining governorates in Iraq for first-hand observations. For

information about rangelands in central and southern Iraq, I relied on discussions with local ARDI staff working in these areas and on published reports.

Following is a preliminary assessment of rangeland management and conditions made after four weeks in Iraq.

II. LAND OWNERSHIP

Nearly all land in Iraq is owned by the government. There are some exceptions, including urban real estate where houses and business buildings are built and instances where farmers have purchased the government interest in the lands they farm. (See Appendix 1 for an expanded discussion of Land Tenure).



In the farmland areas, each farmer has an interest in and controls the land that they cultivate or occupy. The interest is similar to a fee but not exactly; the interest can be bought, sold, or passed on to heirs. According to the discussions with the MOA, the farmer also pays a fee to the government to cultivate the land. He can farm the land himself or lease it to

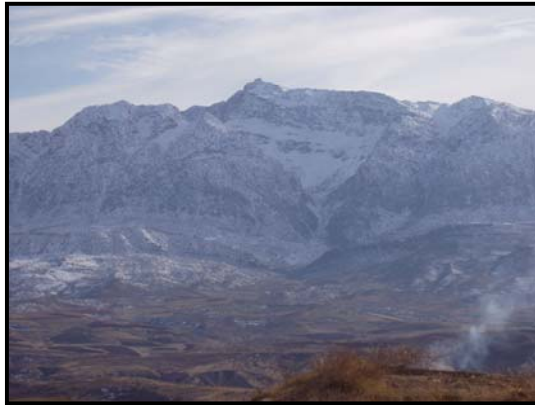
another farmer for crop production, grazing or both. Grazing occurs on the cultivated lands after harvest and on lands that are fallowed in the current year. Grain stubble is also harvested and fed to the sheep in the winter, along with barley and other supplements. In areas with very good soil, on occasions when abundant rainfall occurs, the current years' barley crop may be grazed for a short period of time before heads begin forming. This is not the case with wheat.

Each village owns an interest in and controls the lands surrounding the village. The size of the village holdings depends upon the size of the village. The average village area is approximately 800 hectares in the Kurdistan region, but may vary greatly. These lands are used for grazing the livestock in the village as determined by the tribal head (Mukhtar), or the village council (Anjuman). If the village does not use the land for grazing, a neighboring village can use it.

Lands that do not surround a village (typically higher elevation uplands and mountains) and uncultivated lands are usually free of private interests and are grazed by livestock to the extent that they are physically accessible. The uplands are grazed in the summer months when the lower lands are being cultivated and the weather is too hot to graze at lower elevations. There is no government control over these lands; no fee is paid to the government, no permit is obtained, no use supervision occurs by the government, no carrying capacity is established, no strict season of use exists, and no preference exists from the government.



However, tribal heads assert ownership of these lands and do in fact control the grazing use on them. Tribal members are typically the users of the land. Use areas are clearly



understood by the tribal members and the boundaries are respected. Trespassing is not tolerated, and disputes are rare. The tribal head (Mukhtar), or village council (Anjuman), may allow non-members to use some of the lands for a fee if the lands are not being used by village members. However, this is not common because nearly all villagers own some livestock and utilize the grazing lands.

The Ministry of Agriculture indicated that he wants to know if legislation or regulations are

needed for the upland grazing areas.

III. LIVESTOCK OWNERSHIP AND MANAGEMENT

The livestock in Iraq is privately owned. My observations indicate that individuals typically own a small flock (fewer than 100 head of sheep and goats) and a few head of cows in addition to the land that they farm. Larger flocks do exist and are owned by wealthier individuals in the villages. The small flocks are aggregated into larger bunches and herded while being grazed in the uplands. I am informed that in a few instances, larger numbers of livestock are owned by a third party and are taken in by a herder to manage for the grazing season.



During the fall, winter, and spring months the sheep are kept by their owners in the villages and taken out daily to graze in nearby areas. They return each night to the village where the owners live. During the summer months, the sheep and goats are driven to the higher elevation uplands for grazing. The owner and his family typically move with the sheep to the uplands during this time of year.

Sheep and goats spend about 60 to 70% of the year grazing rangelands, either near the village or in the uplands, and the remaining part of the year they feed on stubble fields or are fed while penned up.

My observations during field visits in Sulaymaniyah, Erbil, and Dahuk governorates indicate that most flocks of sheep are approximately 50 to 100 in number. I am informed that much larger bands of 3,000 to 5,000 head are common in the summer on the uplands. It is not clear as of this writing whether large numbers of sheep are brought up from the southern governorates to graze in the summer, or if the large bands are aggregates of many local owners' sheep being grazed together. Some MOA personnel believe that many sheep are trailed annually from the south, while local livestock owners tell me that very few sheep are brought in from other governorates for summer grazing.

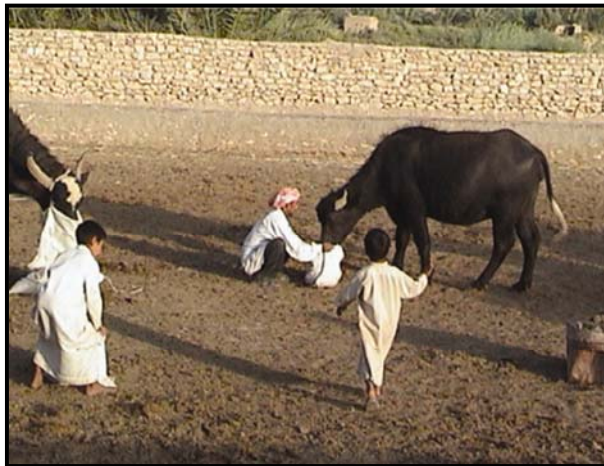
There is a need to find out the origin and ownership of these sheep, and where they go when they are not grazing in the uplands. If there are larger bands put together by many

smaller owners, we need to find out how they keep the books straight and how the herd management is done.

I observed very few cattle being grazed, and those that were seen are small and of poor quality compared to beef cattle on ranges in the western United States. I observed two small bands of very small horses while driving from the Turkish border to Erbil. I saw the occasional horse in a village or town pulling a cart, and noticed a few burros being used as pack animals (wood gatherers) and by sheep herders. Both horses and burros are very small; the horses are approximately 300-500 pounds, and the burros are smaller. On a field visit to Sulaymaniyah in late January I observed several small bunches of cattle (5 – 10 head); this was the most extensive cattle grazing I observed, and is minimal when compared to numbers of sheep and goats.

The day to day management of the sheep and cows is nearly all done by herding. No fences exist except for stone structures near the villages where livestock is brought at night.

There is a prohibition in Iraq against exporting female sheep out of the country. This may have a negative impact on prices for sheep sold in-country, as the only market



presently is the artificial domestic market. Demand for the sheep is high outside the country, and Iraq may be denying itself an important export market for the product. There is potential for a future policy change to permit export.

Buffalo are much more common in the central and southern governorates than in the north. I was unable to observe this species during the first four weeks of this assessment. I am informed that these animals are generally kept confined to pens and are mainly fed harvested forage.

Little rangeland grazing occurs by buffalo. Their impact or role in rangeland grazing appears to be minimal, however additional information must be gathered on this matter as a rangeland policy is formulated.

IV. RANGELAND RESOURCES

Site visits to uplands in northern Iraq revealed a mixed vegetative cover of grasses and forbs with woody shrubs present at higher elevations. Identification of most of the grasses and forbs was not possible at this time due to heavy utilization and lack of any new growth. Literature search and discussions with MOA personnel indicate that the major grasses present are *Agropyron* sp., and *Poa* sp. Forbs observed include dandelion, thistles, and composites. Undoubtedly many other species will appear as the spring green up occurs and new growth becomes more apparent. The most common shrub observed is a species of oak that grows to a height of approximately two meters. Most upland areas are extremely rocky, many areas are covered 40% or more by rock.

Grass and forb utilization by livestock in observed areas is very heavy, at 80% or more. This includes the native vegetation on the uplands as well as farmland, fallowed fields, and grasslands adjacent to farmland and villages at lower elevations. Soil compaction from continuous animal trampling in and around the villages is readily apparent in many areas.



Watersheds, except where disturbance (road cuts, etc.) has occurred are surprisingly intact when one considers the extent and intensity of grazing that is occurring on the rangelands. Very little plant/soil pedestals or soil movement was observed. Some areas of minor head cutting on ephemeral drainages were observed; however, it is not widespread. There is a potential for rock retention and dam projects.

Most upland drainages appear to be fairly stable with minimal soil movement occurring. Riparian areas are heavily grazed, but willows were observed growing vigorously in several riparian areas where perennial streams flowed. Sediment loads in perennial streams appeared to be low and the water was reasonably clear; however, little rainfall had occurred during the time of these observations. Stream banks appeared to be fairly stable.

I am informed by MOA personnel and farmers that many springs suitable for livestock



watering exist. In the low lands, some water sources have been developed in the past but are in need of repair or reconstruction. Most springs in the uplands have not been developed or improved. There is a potential for water infrastructure rehabilitation projects to improve water sources.

There are many areas in the northern Iraq rangelands where hillsides have been furrowed on the contour and plantings have occurred. In almost every instance trees and shrubs (oak, almond, and prunus sp.) have been planted at about fifty foot intervals, along with a mixture of grasses. MOA personnel and others interviewed consider this activity to be one of the primary and most successful tools available to them for rangeland improvement. Discussions and observations revealed that little attention is given to managing the livestock use on these projects once the construction and planting is finished. Heavy grazing use was observed on projects that were less than two years old; this deprives the new seedlings of the opportunity to become established and reproduce. There is a potential for additional projects, with adequate control of grazing after construction.

V. OPPORTUNITIES FOR RANGELAND IMPROVEMENT

In addition to those opportunities highlighted above, there appears to be much opportunity to improve grazing practices and the condition of rangeland in northern Iraq. From my observations, it is clear that use of cultivated farm lands currently plays an important role in the existing livestock grazing scheme, and may be where the best opportunities lie to increase the numbers of livestock that can be sustained in Iraq. Additional use of the farmlands could also afford opportunities to improve the ecological condition of some of the upland grazing areas. Below are some initial thoughts that could serve those purposes.

A. Rest /Rotation Grazing Systems for Upland Rangelands.

Presently, nearly all of the uplands are heavily grazed every year in the same manner and at the same time of year. This can result in the overuse of palatable plants, causing them to become less vigorous. Under the current grazing scheme, plants do not have the opportunity to flower and produce seed. Very little, if any, new recruitment into the existing population of plants is occurring. With continuous grazing, they may eventually die off and be replaced by less desirable species.

Use areas, while not fenced, are well understood by the people who use them. The livestock is managed by intensive herding; therefore there is an adequate mechanism available to control the grazing animals and allow predetermined areas to be periodically rested. To accomplish this, an intensive planning effort and knowledge transfer will be essential to establish a grazing system and to train the livestock operator to use it properly. An essential component of the training will be to impart the understanding that rangeland improvement takes time and when working with a natural system like an upland range site, progress will not be seen immediately.

B. Planting and Utilization of Tame Pastures on Unused Dry Farm Lands.

In some areas I observed a considerable amount of dry land farm ground that appears not to be presently used for cultivation of grain. It may be possible to develop this land into tame pastures with a mixture of legumes and grasses that could support much additional grazing of sheep. These pastures could be self sustaining if managed properly and could be very effectively worked into the Rest/Rotation Grazing Systems discussed above, as well as the farmer's crop rotation system. The financial investment and management commitment necessary to establish and maintain tame pastures is considerable, but if warranted by market conditions, there could be good reasons to pursue this as a viable opportunity. Additional analysis and knowledge transfer to livestock owners and farmers will obviously be necessary to further explore this possibility.

C. Supplemental Feeding.

Some supplemental feeding presently occurs, but it is typically used as a way to maintain the animals until they can be moved onto native rangeland or farm land that is fallow or has recently been harvested. The most common ration is straw, supplemented with a small amount of barley. Legume and grass hay, or concentrated supplements, are rarely used in the present scheme of sheep production. Like the use of tame pastures, the economics and practicality of supplemental feeding will need to be more thoroughly explored before any decisions are made. Ongoing work by ARDI staff

demonstrates a real benefit in weight gain for both the female as well as her offspring when supplemental feeding occurs. ARDI is currently assessing the benefit verses cost of such supplemental feeding.

VI. CHALLENGES AHEAD

Change in lifestyle or culture is a difficult thing to bring about. Farmers and livestock operators in northern Iraq are independent and accustomed to managing their land and livestock as they have for many generations. Tribal customs and practice appear to influence their livestock management decisions at least as much as market opportunities or rangeland management goals. Their animals are not just a means of financial support but are considered an important component in defining an individual. As we move forward attempting to improve rangelands and rangeland management in Iraq, we must remain ever mindful and respectful of this fact if we are to succeed.

In several discussions that I had with local people, I was informed of some distrust of the central government by landowners. There is a real concern by some that if they change their operations or take land out of production to allow it to rest, the government may come in and take it away from them. Valid or not, this concern may have some influence on decisions about land use.

There presently is limited capability in Iraq to transfer knowledge to land owners and livestock operators. An active extension service with well-trained staff could be of great assistance to those wishing to bring about change in rangeland management. My assessment at present does not reveal a wealth of knowledge in the MOA in even the most basic concepts of modern rangeland management theory or techniques. A great deal of training remains ahead to equip MOA extension agents with the knowledge and skills needed to transfer rangeland management practices to local farmers and livestock operators. A dedicated cadre of staff equipped with the skill to transfer knowledge to the users will be essential to the success of any rangeland management program.

There remain areas in northern Iraq where land mines and unexploded ordinance from the Iran-Iraq war have not been cleared. Foot travel and potential construction of range improvements in this area will necessarily be tempered by this fact.

Finally, this assessment, due to security and travel restrictions, has been limited to observations and data gathered mostly in the Kurdistan region of northern Iraq. We must recognize that conditions and opportunities in the remaining governorates of Iraq may vary. Before a national effort to effect changes throughout the entire country is implemented, additional work is necessary to consider those regional differences.

I look forward to my return trip in April 2006, when additional meetings, a stakeholder workshop, and more field visits will occur. The April trip will be most useful too as the rangeland plants will be growing and a more definitive assessment of rangeland ecological conditions and opportunities can be made.

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Annex I

Tenure of Agricultural Land in Iraq- Preliminaries for the Agricultural Strategy

from

A Transition Plan for the Agriculture Sector in Iraq, Annex 10

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TENURE OF AGRICULTURAL LAND IN IRAQ— PRELIMINARIES FOR THE AGRICULTURAL STRATEGY

By Norman Singer

INTRODUCTION

For 10 days during March 2004, I was able to meet with a number of people, mostly from the State Board for Agricultural Lands of the Ministry of Agriculture (MOA). My investigations were wide ranging, but mostly based on personal conversation because much of the specific information was written only in Arabic and could not be translated in the time available.

The most important lesson learned is that through the years, the Iraqi government pursued a consistent program in which it viewed its land assets positively and administered them with care and vigor. The modern policy of tenure security has varied, based on the politics of the day. Thus, tenure policy can be said to have had three periods. The first was in the 1930s when a systematic adjudication was conducted under the leadership of the British administration. The second period began in 1970 in a period of agrarian reform influenced in many ways by the Egyptian agrarian reforms of the 1950s. The third period began with the imposition of sanctions in the 1990s and has continued into the period following the downfall of Saddam Hussein, when much looting and destruction took place.

The bottom line appears to be that Iraq has a clear system of land administration. The administrators take their jobs seriously and perform remarkably well in light of some serious deficiencies in technology and the lack of access to files destroyed during the post-Saddam looting and destruction.

In this report, I have attempted to reconstruct and describe the system of tenure of agricultural land in the three periods outlined above. The last section of the report deals with potential policy reform to assist Iraq's administration in updating and modernizing its system of land administration, including recommendations for appropriate technology and a more market-oriented system of land holding.

We begin by looking at the various systems of agricultural land holding in existence at the time of writing this report.

SYSTEMS OF LAND HOLDING

Private Ownership

There is some privately-owned land in Iraq, but it is estimated to amount to only 1 million donums (1 donum = one quarter of a hectare, or 2,500 square meters). There have been various programs over the years to restrict the amount of privately-owned land. In the agrarian reform of 1958, for example, the government limited ownership to 350 donums per person, and took the “excess” land of the big land owners. However, Saddam’s government encouraged powerful individuals to claim extra lands in an effort to buy the support of certain people who held grassroots power.

Ownership of land is handled legally in a rather orthodox manner. Iraq’s law governing traditional private ownership is primarily a combination of Ottoman and British law, with some aspects of Islamic law. A series of agricultural laws have laid out the basis of the land tenure situation, starting with the first agrarian reform law of 1958. Variations have been introduced in a number of laws since then.

Of note, my discussions at the State Board for Agricultural Lands raised the possibility that pre-1958 owners might try to get their lands back as part of any program recognizing property claims against the Saddam government. State Board officials felt, however, that there was very little risk that pre-1958 owners would come in to claim land, though they added that it should not be encouraged.

Use Land

Right-of-use land encompasses approximately 3 million donums and exists throughout the country. The designation of land as “use” land was made in a traditional land adjudication carried out by committees that went around the country and, as I understood it, designated use land as land that had no owner.

In such cases, the farmer becomes the user of the land, which is designated as use land under law No. 401 of 1983 if there was a “Tapu” (the document on which the interest was recorded) in existence prior to the designation. If a Tapu exists, the use land can be bought and sold, but the buyer only gets a quarter interest and the government retains the other three-quarters interest. However, the holder of the one-quarter interest can buy the government’s interest and the land can be converted to private land. The price of the three-quarters interest is predetermined according to law No. 12 of 1981. The purchase price is determined by Tapus in the district where the land is located, which record purchase prices of land.

Roughly one-third of so-called agricultural land in Iraq has no category, but this is generally desert or other land not suited for agriculture.

Free Distribution Land

As one of the basic elements of the agrarian reform that started in 1958, agricultural land was distributed to individuals and groups under the authority of law No. 117 of 1970. The distribution of free lands continued until approximately 1987. However, there are consistent problems arising from this process, especially as the population among this group ages and holders of free distribution land die without heirs or depart their land. Where these issues arise, the free distribution land is often converted into leasehold land and it has remained under government ownership. It has been reported that the area of free distribution land has been reduced from approximately 12 million donums at its peak to somewhere between 7 and 8 million donums today. The area has been reduced for various reasons: sometimes for lack of an heir following the death of an allottee; in other cases because the conversion of rainfed land to irrigation has resulted in the diminution of dry land because of acreage taken for canals.

To qualify for free distribution of land (referred to here as distribution land), recipients had to meet the following criteria (1) be 18 or older; (2) be committed to agriculture and not working for the government; (3) not have other land; (4) farm the land themselves; and (5) be Iraqi citizens. The maximum distribution was 50 donums for an individual, 120 for a group.

As this category of holdings diminishes and the holders age, minor issues arise, but only if the holders leave the land or die without leaving heirs. Fragmentation of the land is not an issue as there is a legally mandated minimum holding, which is usually respected, and to acquire the land a new owner has to meet the conditions set out for the original grant.¹ If there is no one to claim the land, the land simply becomes government lease land and the usual leasehold provisions apply (see below).

In the larger villages, free distribution is often made to groups. These groups are typically 6-10 people, and their holding can vary in area—the villages we analyzed typically had distributions of 120 donums for, say, 10 people. The land is held collectively and the individuals determine how to subdivide the parcels among themselves. Issues generally do not arise unless one of these individuals leaves the group or dies. The death of a group member is not necessarily a problem if there is an heir to whom the interest can pass. However, if there is more than one heir—and these heirs are not already members of the group—or there is more than one heir and only some of them are members of the group, or if there are no heirs at all, there can be problems reorganizing the already-existing group. Mechanisms exist for dealing with such disputes, but they are time-consuming and often disruptive to the group of land holders.

¹ Sources stated that often a death is not reported until some time after the holder of distribution land has died. This suggests that members of the extended family might have dealt with the change in their own way, and it is not attended to by the government until sometime later.

Review of Land Records

Pertinent to this discussion of land tenure are some data from the State Board for Agricultural Lands that the Director General was kind enough to let me review. The State Board keeps rather detailed information on every land holder in all categories of agricultural land. In the brief time I was in Iraq, I was able to look at statistics for a few villages that had different types of land holding.

For example, I looked at two villages where free distribution had taken place. One was a large village of 98,605 donums, of which 79,458 donums were allocated for crops. This village was in northern Iraq where wheat and barley are the primary crops. Each allocation was made to a group, and amounted to 120 donums per parcel. I was able to review the case histories of 281 of the 785 persons in this rather large agricultural village.² The parcels were distributed, where possible, to groups of relatives or people whose personal goals were similar, an approach intended to reduce the potential for conflict within the groups.

The actual distribution in this village took place in 1975, under law No. 117 of 1970. In the files from this village there is no notation of activity on any file before 1975 (other than the initial committee approval for distribution); from 1975 to as late as January 14, 2003, 64 administrative notations appear in the files. Many of the earlier notes in the files relate to persons who had left Iraq. Their portions of the holdings reverted to the State Board and were ultimately redistributed as leasehold land. Thus, the amount of free distribution land that now exists in this village is reduced, primarily because any land that reverted to the government was reallocated as 25-year leasehold land.

The file notations indicate that from 1975 to 2003, approximately 22 percent of the holdings were altered in one manner or another. This figure is lower than would be anticipated. However, much of the land distributed in the 1970 agrarian reform was distributed to individuals who were over 18 but did not have lands of their own. Thus, most were relatively young at the time and the death rate among them should be relatively low. There were 30 deaths reported for this group; 23 of these had no heirs, so the land reverted to the government for reallocation; 6 of the deceased population had heirs, and the land passed to their wives or daughters. The implication that other persons were deceased and the land passed to sons is also raised, but there were no notations of a deceased person's land passing to his or her son. One of the deceased individuals lost the land because he was not farming it according to the prescribed plan, and it reverted back to the government for redistribution as leasehold land. The Director General agreed with me that the number of deceased persons seemed low. He pointed out that the State Board sometimes does not hear about a farmer's death for some time—as much as five years after the fact in some cases—which raises the possibility that the number of deceased individuals could be higher than reported, especially

² The Director General agreed that in the near future we should conduct field research at the village level to assess more accurately the administration of the tenure types. This cursory view is meant to show that the State Board for Agricultural Lands is indeed paying attention to its administrative duties and that management of agricultural lands is indeed in much better shape than most commentators have reported. We will soon have data from around Iraq that elucidates the manner in which land is being utilized, as well as a rather complete and more accurate picture of how land is now being managed.

since in a group holding the other members of the group would have an incentive to continue farming the same amount of land with one less member. In addition, it was mentioned in passing that extension services are weak, which compounds the problem of poor-quality information.

Among the notations were cases of 23 individuals who lost their land because they left Iraq; their holdings were treated as abandoned land. Six additional people who did not leave Iraq lost their land because they were either not farming it or not following the prescribed crop plan. In addition, there were five notations in the files relating to name changes and other minor administrative matters. We also reviewed the files with an eye to determining if the principal allottee was male or female. Of the files reviewed, 18 of the original allottees were women. In addition, a number of women received allocations as heirs.

In sum, the files reviewed were orderly, much as one would anticipate in a system managed by suitably educated and motivated officials, with clear notations concerning each individual who had received a free distribution. As noted, the administrative notations in these particular files appeared as late as January 2003.

Leasehold Land

There are two types of agricultural lease lands: private and governmental. In both cases it is expected that the process of planning will affect the manner in which the land is used for production. Thus, there is no significant difference whether the land is privately owned and privately leased or government-owned and leased to a private person.

Lease of Private Land

The lease of privately owned lands involves nothing out of the ordinary. If people have agricultural land in ownership, they can do what they please with the land as long as it does not violate any laws or regulations. Land law in Iraq includes no rules unfamiliar in other legal systems. A contract of lease can be structured taking into consideration any expectations or conditions an owner might have of the lessee's use of his asset. Iraqi land ownership excludes the subsoil as well as any mineral rights, which all belong to the government.

Lease of State Agricultural Land³

The lease of government agricultural lands is another matter. There are a variety of different configurations of government leases. They are all leases for 25 years, with reevaluation of the activity and rents every five years. The leasehold lands have been specifically allocated for the strategic crops: wheat, barley, maize, and rice. These rules were developed in 1983. They

³ I was not present in Iraq long enough to examine the books and any administrative records on government leases. It is clear, however, that they exist as we had long discussions of rental payments and so on.

have varied slightly over the years given changes in the social situation in Iraq. For example, during the Iran-Iraq war, the government policy was to utilize all available lands. Thus, lessees were entitled to sublet the unused portions of their land. After the war the situation was changed and these subleases were, for the most part, held to be invalid and were cancelled. Lessees were not allowed to plant orchards or raise poultry, but in 1997 the policy was revised to allow orchards and poultry. Again in 2002 the policy was revised to allow olive trees on the leased land, as long as the olives cultivated were of a variety with high oil content and no more than 20 donums out of the entire parcel were set aside for this purpose.

There are restrictions on how many donums can be rented to a lessor. The limits allowed by the Presidential Council in 1997 were:

	Individual Lessee (donums)	Corporate Lessee (donums)
1) Irrigated Lands	2,000	4,000
2) Semi-Reclaimed Lands	4,000	8,000
3) Rainfed Lands	10,000	20,000
4) Desert Areas	30,000	70,000

The sizes of rental properties were made within the parameters set out above. The size was determined by the type of land (irrigated, rainfed, desert), the crop to be produced, and the fertility of the land, among other variables. It has been said that rental properties range in size from 1 to 53,000 donums. However, the usual size of a rental plot is 50 to 100 donums. Fertility is a major factor; middle-Euphrates rice land, for example, is among the smallest of the rental parcels.

In the early days of the government leasing program, in order to encourage leases the rental charges were minimal—one or two dinars per donum per annum.⁴ As noted, the leases were for 25 years, but they were reviewed every five years and new charges were imposed. This policy existed until 1997, when the Revolutionary Council designated specific charges for each type of land. The following is a table of current charges. These are currently under review and it is expected that the rental prices will increase, although the Minister has delayed the rent increases until 2005.

⁴ Of course, the exchange rate of the particular period was used. It sounds very low, but when the program commenced, the dinar was worth a lot more than it is now.

Mapping and Registration

At the State Board we examined a number of maps of agricultural land. Parcels are noted chronologically on these maps. However, there is nothing on paper linking parcel numbers to registrants. Instead, registrants hold Tapus which validate their holdings should any change need to be dealt with. Certainly, lease records are current since rents are collected reliably.

We proceeded to discuss the 1932 and 1938 adjudication laws and the systematic adjudication that began during the British period and was carried out with the assistance of Indian committees. The adjudication was never completed and the last maps I was able to see were dated in the mid-1970s. (The formal adjudication took place between 1938 and 1970, and was continued in a modified form following 1970—it apparently has never been completed.)

It is estimated that approximately two-thirds of all land in Iraq is registered in one form or another, mostly with Tapus. However, as mentioned above, there is no linkage (on paper) between the maps and the actual information about the specific parcel of land. I was told that the lack of linkage is not a problem because the current staff of the State Board for Agricultural Lands is able to make the connection. I asked how this was possible, but it became clear that the staff's ability to deal with the lands rested on the fact that the staff people with whom I was speaking had, respectively, 41, 39, and 37 years of service. When these officials are no longer employed at the State Board, much of the information will be lost, as some of it has been already during the recent lootings and burnings of files.

In addition, the Tapu—a relic of the Ottoman Empire—records the land in the name of the head of household. This raises some rather thorny questions of family holdings and does not accurately reflect the real nature of parcel holdings. A system recording the individual who is actually in control of and working the land would be a necessity to avoid many of the problems raised by dealing with land holding that is recorded solely in the name of the head of household. The Tapu system also inherently excludes ownership by females (as very few are designated head of household), even though in practice women do inherit and hold land. It also does not allow for an equitable consideration between the sexes.

Therefore, it is suggested that along with a technology upgrade, the entire land registration system in both the Ministries of Agriculture and Justice be carefully reviewed to determine if it would be appropriate to introduce an integrated parcel-based land registration system. This would entail designing a register, a system of administration that could allow easy access to accurate information and the remapping of the entire country in a digitized format. It is noted that remapping could proceed very rapidly if this project started with existing, satellite-generated, global positioning system (GPS) images such as those available through the Eros Data System or other aerial data.⁵ Ground surveys would follow.

⁵ The Eros Data Center of Sioux Falls, South Dakota can provide through its Earth Explorer program satellite images, aerial photographs, and cartographic products of most areas of the world. This source should be explored to determine how much of Iraq is already available on updated maps.

Privatization

Senior staff at the State Board feel that privatizing the government agricultural leasehold lands and the free distribution lands would be a positive step. The level of productivity differs in these two forms of land holding. For example, in the group holdings of the free distribution lands, unnecessary complications arise any time one of the group members dies or leaves the group. Since the holdings are corporate, there are no separate rights for each individual. Conflicts often appear at the time of change and the land can sit fallow for a number of seasons while the issues are resolved through the committee system that oversees this type of land. One can understand why it is often easier for the State Board and the extension officers to ignore potential changes in order to avoid long-term conflict. It would certainly avoid conflict and potential misuse of the agricultural lands (especially illegal subdivision) if these lands were privatized at this time and matters such as inheritance handled through the private sector, with the principal owner making the decisions about how his or her agricultural land should be passed on and divided within the limits of the law.

Further, it is arguable that it would be less of a strain on the machinery of government if the government leases of agricultural lands were also privatized. The argument is not to do away with planning for the cropping system, but to allow lessees more latitude in managing their own lands for agriculture. One should retain a minimum amount of each parcel under the government planning program, but also allow the person who takes ownership of the land to exploit a portion of it in the manner that would be beneficial to his or her situation. In addition, while the land would become registered to the owner, he or she would be able to lease it to others or make other arrangements for its use.

Finally, the “use lands” should be discontinued as a form of tenure. The government should establish a program making low-interest loans available to holders of use lands so they can exercise their option to purchase. The pricing mechanisms should be such that the government continues its revenue flow, but the goal should be to encourage persons holding use lands to purchase them.

The upshot of these measures would be that virtually all lands would be privately held. It would also allow persons with ownership to lease their lands, or deal with them in other ways that would be compatible with their way of life. Coupled with a modern parcel-based registration system and the necessary upgrade of technology, Iraq’s land assets should become increasingly productive.

CONCLUSION

The issues of land tenure and land management in Iraq are basically the same as in other countries. There is and has been an administrative system dealing with the different forms of land tenure, and this administration appears to have worked properly over the years. The issues today are a little more complicated because of the looting and destruction that took place during the downfall of the previous government. The main issues that must be faced now are the lack of some records which have disappeared and the fact that for the past 30 or

40 years, the government has failed to keep up with any form of technological reform in record-keeping. In addition, the land registration system is timeworn and should be updated. With all the events that have come together during the past 15 months, this is the time to recognize some of the changes that must be made and institute a program to modernize and update the land tenure and registration systems in Iraq, while acknowledging that the existing records and administrative personnel are in fact superior to those in many other post-colonial countries.

People Interviewed, March 17-23, 2004

1. Dr. Sabri Shamoan, Director General, State Board for Agricultural Lands, Ministry of Agriculture;
2. Mr. Mundra Muhamed, State Board for Agricultural Lands;
3. Mr. Peter King, Senior Advisor to the Minister of Agriculture;
4. Mr. Duncan Gilchrist, IPCC, CPA;
5. Dr. Sawsan Al-Sherify, Deputy Minister, Ministry of Agriculture;
6. Dr Zuhair A. Stephan, Director General of State Board for Agricultural Research, Ministry of Agriculture;
7. Ms. Saaba Mwahamad Amain, Ag Engineer, State Board for Agricultural Lands;
8. Mr. Magid Jasin, Ag Engineer, Director of Local Distribution, State Board for Agricultural Lands;
9. Mr. Maki Ahmad Ali, Ag Engineer, Director of the Land Department, State Board for Agricultural Lands;
10. Mr. Dead Ali Abad, Manager of the Technical Affairs Department, State Board for Agricultural Lands.

LAND TENURE AND AGRARIAN REFORM⁶

Iraq's system of land tenure and inefficient government implementation of land reform contributed to the low productivity of farmers and the slow growth of the agricultural sector. Land rights had evolved over many centuries, incorporating laws of many cultures and countries. The Ottoman Land Code of 1858 attempted to impose order by establishing categories of land and by requiring surveys and the registration of land holdings. By World War I, only limited registration had been accomplished and land titles were insecure, particularly under the system of tribal tenure through which the state retained ownership of the land although tribes used it.

By the early 1930s, large landowners became more interested in secure titles because a period of agricultural expansion was underway. In the north, urban merchants were investing in land development, and in the south tribes were installing pumps and were otherwise improving land. In response, the government promulgated a law in 1932 empowering it to settle title to land and to speed up the registration of titles. Under the law, a number of tribal leaders and village headmen were granted title to the land that had been worked by their communities. The effect, perhaps unintended, was to replace the semi-communal system with a system of ownership that increased the number of sharecroppers and tenants dramatically. A 1933 law provided that a sharecropper could not leave if he were indebted to the landowner. Because landowners were usually the sole source of credit and almost no sharecropper was free of debt, the law effectively bound many tenants to the land.

The land tenure system under the Ottomans, and as modified by subsequent Iraqi governments, provided little incentive to improve productivity. Most farming was conducted by sharecroppers and tenants who received only a portion—often only a small proportion—of the crop. Any increase in production favored owners disproportionately, which served as a disincentive to farmers to produce at more than subsistence level. For their part, absentee owners preferred to spend their money in acquiring more land, rather than to invest in improving the land they had already accumulated.

On the eve of the 1958 revolution, more than two-thirds of Iraq's cultivated land was concentrated in 2 percent of the holdings, while at the other extreme, 86 percent of the holdings covered less than 10 percent of the cultivated land. The pre-revolutionary government was aware of the inequalities in the countryside and of the poor condition of most tenant farmers, but landlords constituted a strong political force during the monarchical era, and they were able to frustrate remedial legislation.

Because the promise of land reform kindled part of the popular enthusiasm for the 1958 revolution and because the powerful landlords posed a potential threat to the new regime, agrarian reform was high on the agenda of the new government, which started the process of land reform within three months of taking power. The 1958 law, modeled after Egypt's law, limited the maximum amount of land an individual owner could retain to 1,000 dunums (100

⁶ U.S. Library of Congress, Federal Research Division, Country Studies: Iraq.

hectares) of irrigated land or twice that amount of rain-fed land. Holdings above the maximum were expropriated by the government. Compensation was to be paid in state bonds, but in 1969 the government absolved itself of all responsibility to recompense owners. The law provided for the expropriation of 75 percent of all privately owned arable land.

The expropriated land, in parcels of between seven and fifteen hectares of irrigated land or double that amount of rainfed land, was to be distributed to individuals. The recipient was to repay the government over a twenty-year period, and he was required to join a cooperative. The law also had temporary provisions maintaining the sharecropping system in the interim between expropriation and redistribution of the land. Landlords were required to continue the management of the land and to supply customary inputs to maintain production, but their share of the crop was reduced considerably. This provision grew in importance as land became expropriated much more rapidly than it was being distributed. By 1968, 10 years after agrarian reform was instituted, 1.7 million hectares had been expropriated, but fewer than 440,000 hectares of sequestered land had been distributed. A total of 645,000 hectares had been allocated to nearly 55,000 families, however, because several hundred thousand hectares of government land were included in the distribution. The situation in the countryside became chaotic because the government lacked the personnel, funds, and expertise to supply credit, seed, pumps, and marketing services--functions that had previously been performed by landlords. Landlords tended to cut their production, and even the best-intentioned landlords found it difficult to act as they had before the land reform because of hostility on all sides. Moreover, the farmers had little interest in cooperatives and joined them slowly and unwillingly. Rural-to-urban migration increased as agricultural production stagnated, and a prolonged drought coincided with these upheavals. Agricultural production fell steeply in the 1960s and never recovered fully.

In the 1970s, agrarian reform was carried further. Legislation in 1970 reduced the maximum size of holdings to between 10 and 150 hectares of irrigated land (depending on the type of land and crop) and to between 250 and 500 hectares of nonirrigated land. Holdings above the maximum were expropriated with compensation only for actual improvements such as buildings, pumps, and trees. The government also reserved the right of eminent domain in regard to lowering the holding ceiling and to dispossessing new or old landholders for a variety of reasons. In 1975 an additional reform law was enacted to break up the large estates of Kurdish tribal landowners. Additional expropriations such as these exacerbated the government's land management problems. Although Iraq claimed to have distributed nearly 2 million hectares by the late 1970s, independent observers regarded this figure as greatly exaggerated. The government continued to hold a large proportion of arable land, which, because it was not distributed, often lay fallow. Rural flight increased, and by the late 1970s, farm labor shortages had become so acute that Egyptian farmers were being invited into the country.

The original purpose of the land reform had been to break up the large estates and to establish many small owner-operated farms, but fragmentation of the farms made extensive mechanization and economies of scale difficult to achieve, despite the expansion of the cooperative system. Therefore, in the 1970s, the government turned to collectivization as a solution. By 1981 Iraq had established twenty-eight collective state farms that employed

1,346 people and cultivated about 180,000 hectares. In the 1980s, however, the government expressed disappointment at the slow pace of agricultural development, conceding that collectivized state farms were not profitable. In 1983 the government enacted a new law encouraging both local and foreign Arab companies or individuals to lease larger plots of land from the government. By 1984, more than 1,000 leases had been granted. As a further incentive to productivity, the government instituted a profit-sharing plan at state collective farms. By 1987, the wheel appeared to have turned full circle when the government announced plans to re-privatize agriculture by leasing or selling state farms to the private sector.

Data as of May 1988