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**POLITICAL ECONOMY ISSUES IN AGRICULTURAL SECTOR REFORM
IN JORDAN**

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NEAR EAST BUREAU

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A. Introduction and Background

In Jordan, all government decisions must be viewed through the lens of His Majesty, who must balance contentious internal and external forces. It is the calculus of the "balancing act," not economic logic, that determines all economic (and other) policies. The costs of offending important political actors, whether domestic or foreign, must be offset by tangible benefits.

The lines between foreign and domestic policy are blurred in Jordan. Domestic stability strengthens the King's ability to pursue the peace process, and foreign events have a strong effect domestic stability. Economic policy is thus also foreign policy; for example, a policy to liberalize agricultural imports has implications for relations with Syria and Saudi Arabia. Further, domestic actors have foreign connections (e.g., the PLO, Ba'athists, or Saudis). This situation contributes to the frequent changes in cabinet ministers (and therefore to economic policy drift): the King uses cabinet shifts to send foreign policy signals. Given the neighborhood, these signals must constantly change.

Foreign policy (and its correlate of domestic stability) dominates all other considerations in governmental decision making. Each of Jordan's four neighbors is more powerful, either militarily or economically or both. Foreign policy absorbs most of the attention of top decision makers, and any economic policy change is closely scrutinized for its consequences in terms of foreign policy and domestic stability.

Insofar as economic matters impinge on the King's consciousness, it is through the stabilization program with the IMF—which is also an element of foreign policy (relations with the U.S. and Saudi Arabia). Since reducing the government deficit is central to Jordan's stabilization program, budgetary considerations may provide the most direct route to sectoral policy change.

Agriculture is perceived as a sideshow, even within economic circles. It is viewed mainly as a source of patronage for key constituencies whose support is essential to achieve domestic stability/foreign policy goals, or as a source of income for the population.

From a political point of view, policy changes affecting water use and range management are difficult because they impose losses on key constituencies of the King, who has plenty of other enemies. Significant social gains must be demonstrated if the government is to adopt any policy that offends these constituencies.

Adoption of more economically rational policies will likely require "packages," in which benefits are simultaneously extended to adversely affected constituencies. Devising partial compensation mechanisms is an essential component of policy reform in Jordanian agriculture, a fact well recognized in the Decision Thinking Workshop on agricultural policy, held in Amman on April 20-21, 1993.

The recent (limited) expansion of political participation in Jordan may assist policy change. In the 1970s and early 80s, the King could rely on extensive externally generated

resources. This freed him from the need to widen political participation, which in any case he had come to perceive as a source of instability, thanks to the events of the 1960s and 70s. For several decades, there was no representation, in part because there was no taxation.

The sharp decline in external resources in the late 1980s has led the King to institute a process of carefully, partially, and gradually extending political participation in Jordan. The workshop mentioned above is itself an example of this process of getting stakeholders to participate in the formulation (or more modestly, discussion) of what may very well be difficult and unpalatable policy changes. Further initiatives along these lines may occur in the coming months; they deserve support.

B. Water Use

Problem. Overuse and inefficient use, decline in aquifers, serious shortages are predicted for the mid-1990s.

Policy Origin. Underpricing of water, conveyance inefficiencies, inequitable pricing (Uplands vs Jordan Valley).

Policy Change/Solutions

- Raise the price of water to social opportunity cost (as in the PRIDE recommendations).
- Reduce conveyance losses through investment and upgrading of system.
- Expand water supplies through investments in dams/weirs (e.g. El-Wahdah Dam, Zarqa Basin projects).

Political Constraints. Jordan Valley farmers are a potent political lobby, with good links to the cabinet (for example, the current Minister of State is a banana farmer). Every project building and extending the East Ghor Canal since 1962 has called for charging a price for water to cover O&M costs, but this has never happened. The strength of farmers has at least two main sources:

- They provide important support for the King on other, more significant, policy issues, such as structural adjustment, privatization, and so forth. They are also typically allies against young urban Islamist radicals. Many of the land-owners are from the Adwani tribe, whose members are well-represented in the Army and government bureaucracy. Maintaining their support is very important for the King.
- A number of the wealthy Jordan Valley farmers, especially in the northern Valley, are also Palestinians. They are important allies of the King in the Palestinian community, where, of course, he has many enemies. The Jordan Valley Authority was established in 1972—part of the "carrot" after the "stick" of Black September.

The government is relatively unlikely to alienate such a constituency unless there are very tangible gains to be made from doing so.

The **efficiency gains** of setting the price of water equal to O&M costs may not be very large (see Attachment). If this is the case, there will be fewer benefits to distribute to strengthen the winners and appease the losers from the policy change. In general, the economic analysis underpinning the calls for water pricing is not sufficiently thorough. This makes it easier for defenders of the status quo to attack proposals for water pricing. If O&M pricing is to be adopted, it is likely to be because of budgetary and foreign policy considerations (i.e., the existing Letter of Intent with the IMF), not because of putative efficiency gains.

Water pricing is a symbolic issue for a number of reasons:

- Farmers perceive that the Government of Jordan does nothing for them anyway (as usual for farmers). Some farmers during the workshop said they would be willing to pay O&M fees if the government actually maintained the irrigation system!
- Actually pricing water is against Islamic law [*shari'ah*] Accordingly, only O&M recovery can be discussed, as is sensibly reflected in the Discussion Thinking Workshop papers. However, the Islamic Brotherhood [*al-ikhwan al-muslimun*] claim that O&M fees also violate Islamic law. This arouses an urban constituency in opposition to the change.

Accordingly, the potential political costs of water pricing exceed the cost of antagonizing Jordan Valley farmers.

From a budgetary perspective, water charges are a sideshow: the water subsidy is between one and two percent of the government's budgetary deficit.

This is a relatively poor time for action because:

- The government faces an election soon.
- Gulf horticultural markets remain largely closed.
- The foreign policy situation (the peace process) is especially delicate right now. The King needs a deal, and his forward-looking policies in this area face significant domestic opposition (cf. no. 1 above).

The GOJ believes that it needs to show that **Jordanian water consumption is at a maximum** in order to stake a claim on water in multilateral negotiations with Israel and Syria.

Options for Amelioration. It is possible that a countervailing lobby of Upland farmers could partially offset that of Jordan Valley farmers. This would give teeth to the (valid) equity argument for more socially rational water pricing in the Jordan Valley. There are two proposals for Upland Union:

- *Ittihâd al-fallâhîn* [Union of Farmers], believed by some (Sunna, Juma) to be a front for the Ikhwan (Alawni is a supporter of this proposal).
- *Ittihâd al-muzâri`în* [Union of Agriculturalists], the GOJ's preference, which would be organized along commodity lines.

The down-side of this proposal is that such a union might also effectively lobby against enforcing the regulations on over-pumping from wells.

If the GOJ finally bites the bullet on water prices, it will need to offer Jordan Valley farmers something else as a "carrot," for example:

- Remove restrictions on horticultural retailing, which probably hurts consumers and producers.
- Privatize AMPCO or at least abolish its privileges with Royal Jordanian, which adversely affect private exporters.
- Reduce useless staff of JVA & improve conveyance efficiency to cut O&M fees. (This proposal, of course, immediately encounters the far larger problem of fear of laying off government workers in the present political and economic context.)
- Permit entry of other airlines into the international air freight business, which would reduce marketing costs.

Announcing these changes simultaneously would help to solve the "symbolism" problem.

There is consensus among Jordanian experts that the changes must be gradual: e.g., raising water fees over a period of four to five years. This is linked to "compensations," as improvements in the water conveyance system will not happen overnight.

Conditionality may help, as it gives the GOJ "plausible deniability" for policy change—"The IMF made us do it." Indeed, many of the sensible proposals put forward by the workshop are either contained or implied in the Letter of Intent with the Fund (see e.g. World Bank's aide-mémoire of March 1993, para. 17). This is a double-edged sword, however, since Islamists use it as evidence of the GOJ's toadying to infidels.

In its Letter of Intent with the IMF, the GOJ has already agreed to many of the proposals discussed and advocated at the workshop. The workshop should help to "Jordanianize" these policy initiatives.

Trade policy may be the most economically effective and politically feasible lever of water policy change. If the MVP of water in fruit cultivation currently greatly exceeds any suggested O&M charge (as some studies suggest, see attachment), then lowering the MVP by increasing competition from abroad may be the most effective way of encouraging water

conservation. Of course, allowing subsidized fruit from Syria, for example, into the country raises equity and foreign policy issues. However, in the case of Somali bananas, no "foreign subsidy" argument is plausible: there is, after all, no government in Somalia! As in the American automobile industry, foreign imports may be the most potent spur to more efficient production in Jordanian horticulture. Finally, such policy change have the advantages described in no. 4 above: they have already been agreed to in principle with the IMF.

The Jordanians would be well advised to **base their case for water rights in multilateral talks** on an "open market" framework. The Israelis heavily subsidize their agriculture; the GOJ can, should—and according to one Jordanian negotiator at the multilateral talks—does demand that Israelis stop these inefficient practices (output subsidies in Israel raise the derived demand for water dramatically). This is also a proposal with which many Israelis are sympathetic, and therefore has a chance of acceptance. Such a proposal can help the region move toward its only long-run hope, a relatively free market regional economic system.

It could be stressed that such an approach is actually stronger than the current GOJ official position, in which the GOJ simply asserts current use as its claim (which raises fears about planting fewer water-using crops like bananas). Jordanian agriculture is far less subsidized than Israeli farming; Jordan is relatively well-placed for a shift to a regional economic regime of unsubsidized competition.

Bottom Line

- USAID needs a better understanding of the size of plausible efficiency gains from water pricing.
- Pushing on water pricing must be accompanied by offsetting benefits to growers. Privatization and improved delivery efficiency are plausible benefits which are also consistent with Mission Goals.
- Political considerations strongly suggest that water pricing will be instituted, if at all, gradually and in phases.
- Trade policy change may be a more effective political economy lever than O&M water pricing to achieve water conservation goals.
- Jordan's relatively unsubsidized agriculture can be an asset in multilateral negotiations over water rights. Particularly, if increasing reliance on markets is seen as strengthening Jordan's hand, the GOJ is likely to push for further liberalization of the sector. There is much that the .S. GOVERNMENT can do to help here, particularly given the recent reorientation of Israeli policy.

C. Steppe Management and Livestock

Problem. Range degradation, erosion and desertification, inefficient resource allocation in livestock subsector.

Policy Origin. Property rights specification and feed subsidies.

Policy Change/Solutions

- "Fee simple," i.e., allocate the land as private property, period.
- Private property with restrictions, e.g., prohibiting use of tractors beyond the 200 mm. isohyete as in Syria. (Most "private property" in Jordanian agriculture is *miri* land: owned, saleable, and inheritable, but with restrictions for the public weal.)
- Institute cooperative range management.
- Abolish feed subsidies.

Political constraints. The GOJ holds land as state land as a mechanism to try to control the bedouins and other Trans-Jordanian pastoralists. Rangeland Law Number 70, promulgated in 1971, was part of the general reassertion of central control following the traumatic experience of the *fedayeen* war of 1970.¹ Abolishing such *de jure* control (ineffective though it may be), runs deeply against the grain (and historical experience) of top policy makers.

Those who have already acquired land as private property through plowing (some report that this has been happening over the past four or five years) will want to keep it.

Bedouin leaders may have taken advantage of loopholes in laws to aggrandize themselves. They (and other "big men") have the support of relatively well-off settled tractor owners.

The existing feed subsidies are an important patronage mechanism of the GOJ for bedouins and pastoralists, who are, of course, traditional supporters of the King.

Any calls to solve the problems of the *bâdia* [steppe] by "enforcing existing laws" are nonsensical. In 1982 the GOJ fenced off areas around Zarqa and told herders to stay out. The result was demonstrations in Zarqa and Amman, and rumblings in the Royal Jordanian Armed Forces from the Bani Hassan, who have supported the Hashemites since they first came to Jordan. Needless to say, the GOJ retreated.

¹ The same process occurred in the irrigated subsector. Prince Hassan reportedly got his idea for the JVA from a visit to the Republic of Korea, where farmers associations under the Park government were a highly effective mechanism of central government control over the countryside.

Any proposal to ameliorate these problems will create some opposition: allocating land in private property will alienate small herders, while cooperative proposals will face the opposition of the "big men." *Any improvement in range-land management may cause trouble among the bedouin. Since the bedouin community has always been a key constituency of the Hashemite family, the GOJ's caution in this area is not surprising.* Recall that repeated previous projects in the *bâdia* (such as the Australian dry-land project of 1980s) have foundered on these institutional constraints. There are few reasons for supposing that things are different now.

The government faces a dilemma:

- If it removes the subsidies without simultaneously improving range-management, it will alienate pastoralists and all other livestock producers, without generating corresponding benefits.
- If however the government follows the proposal of the workshop to phase out the subsidies only as range improvements are phased in, the heretofore intractable problems of property rights' specification in the *bâdia* may simply become an excuse for continuing the inefficiencies inherent in the feed subsidy.

Cattle raisers are an effective lobby: they are few in number, and concentrated in one area (near Zarqa). Their cooperative has become an effective lobby for the feed subsidies.

Options for amelioration. The Workshop summary subsector report asserts *very large* social gains from better range management (up to 500 percent increases in production). Even allowing for hyperbole, if there are substantial gains, then the problem is easier, because it is easier to devise compensatory mechanisms.

Part of the solution may lie in improved education and information. Bedouin do not see how proposed changes will help them and their families. The Workshop proposals for greatly strengthening the extension service in this area are conceptually sound. However, given the manifest difficulties of the extension service, the probability of success in this area in the near term is not encouraging.

It is possible that some pragmatic, quite complex "mixture" of allocating land rights to individuals and to groups is the least likely to fail. Some Jordanians are skeptical as to whether this will be accepted, given the pride and individualism for which bedouins are justifiably famous.

Any attempt to solve the problems of the *bâdia* will require extensive participation of the local population. The trend in Jordan toward a cautious, carefully calibrated expansion in political participation may temper otherwise pessimistic assessments of successful policy change in this area. John Hall's suggested "four-step procedure" for institutional change in

this area seems highly sensible.² However, since something like this procedure has been tried since 1982 in selected areas and with mixed success, the proposals are no panacea for the intractable socio-political problems of the rangelands.

The internal social structure of the *bâdia* is very complex, as is always true among pastoralists undergoing rapid social and demographic change. There is a bewildering complexity of informal land use arrangements on grazing land. If the Mission is seriously interested in this area, (because, e.g., Washington wants greater environmental emphasis in the Mission program) a detailed, in-depth analysis, probably by a political anthropologist, will be necessary.

The budgetary costs of the feed subsidy are considerably larger than the water subsidy (JD 15 million vs. JD 1-2 million, respectively). Macroeconomic imperatives may be a very useful lever of policy change here: such considerations may help to overcome special interests such as the cattle owners. In fact, the GOJ has *already* agreed to remove the subsidy as part of its current agreement with the IMF, which calls for the elimination of subsidies on cereals over 1993-95.

Many animal owners are also rain-fed farmers. They would benefit from raising barley output prices to world levels. This economically eminently sensible policy also helps politically by providing partial compensation for some people.

On the other hand, increased barley prices will provide an incentive for increased cultivation of marginal land. The impact of this should be monitored, but the benefits of moving barley prices to world levels seem greatly to exceed any such potential costs.

Bottom Line

- Amelioration of the range requires changes in property rights, which implies the need for extensive consultation between the government and the local population if serious political costs are to be avoided. This was clearly recognized in the workshop.
- Reform of barley prices will partially compensate those livestock owners who are also rain-fed farmers; it should be strongly encouraged. The impact on increased cultivation of marginal land should be monitored.
- The Mission should be cautious about entering the area of range-land reform. Only if there is great interest from the GOJ, backed by a tangible,

² The four steps are: (a) Set up pilot perimeters to monitor systems and demonstrate benefits, (b) Set up informal grazing associations "using perimeters whose utilization would not be challenged by other groups," (c) Require herders who wish to join to first settle disputes with their neighbors, and (d) Once the concept is well-defined and accepted (presumably because of success), then extend the system legally to the whole country. See "Kingdom of Jordan: Agricultural Sector Adjustment Loan: Livestock Subsector Survey" World Bank, March 1990, pp. 45 ff.

serious program to involve local people in overcoming the institutional problems, should the Mission contemplate work in this area.

D. Rain-fed Farming

Problems. Low productivity and incomes, urbanization, land fragmentation.

Policy origin. Lack of investment, lack of profitable technological packages, pricing policy on barley, poor infrastructure, inheritance laws.

Policy Changes/Solutions

- Raise barley prices.
- Encourage fruit production on land with slopes over 8 percent.
- Use urban wastewater for supplementary irrigation instead of for Jordan Valley farmers.
- Tax the conversion of agricultural land to urban real-estate.
- Impose a minimum plot size for (various crops).

Political constraints. Encouraging fruit production will require more water. It will be difficult to persuade Jordan Valley farmers of the need to pay water charges if they are simultaneously being deprived of urban waste-water. (There are also environmental concerns with using this water).

Slowing the expansion of cities will raise urban land rents and prices. This will add to the government's political difficulties with the urban poor, especially in the current context of structural adjustment, with its subsidy cuts and increased unemployment.

Proposals for coping with land fragmentation typically evade the real issue, which is Islamic inheritance law. Needless to say, there is no chance of the GOJ's considering any changes in this area. Accordingly, progress against fragmentation will be marginal at best. Therefore, it is unlikely to receive much attention from important policy makers.

Improving the NCARTT and other relevant institutions will require lay-offs. At present, "the employees pretend to work, and the government pretends to pay them". Some believe that at least half of NCARTT's staff is superfluous. Given relatively fixed budgets because of the exigencies of stabilization, only lay-offs can provide the incentives necessary to motivate staff. Yet such an approach directly confronts the politically explosive issue of unemployment.

Options for amelioration. As discussed earlier, reform of barley prices is a very good, politically low-cost idea, which should be strongly encouraged.

If additional external funds can be found to a) improve the quality of waste-water treatment and b) complete the various water projects already begun, then both environmental and political concerns may be met.

It may be possible to limit the expansion of Amman in every direction *except* to the East, thereby minimizing the impact of reducing agricultural land loss on urban real-estate values.

Progress on state overemployment will be slow, at best, and will mainly come about through conditionality.

ANNEX A
MARGINAL NOTE ON JORDAN VALLEY WATER PRICING

There is no question that increasing water use efficiency will be necessary in the years ahead. It is equally clear that a more effective pricing mechanism needs to be created to help Jordan to ration water effectively and efficiently.

However, it is important not to exaggerate the putative water-savings from pricing water in the Jordan Valley. Indeed, some simple microeconomic analysis suggests that the gains may be quite small. Note that this is *not* an argument against water-pricing; it is an argument for more detailed analysis of the economics of water-use in Jordan. This is necessary for political as well as economic reasons: one must be careful to have the economics right if one is to persuade people that the arguments of special interests are, in fact, mere special pleading.

Quantity-constrained Farmers

Although the evidence is contradictory, it can be argued that at least some Jordan Valley farmers are "quantity constrained" with respect to water--they cannot get "all the water they want", which means that they cannot plant all the land that they own in the crops which they wish. This is reflected, e.g., in relatively low cropping intensities for the Jordan Valley (less than 1.0--cf Nile Valley average of 1.9).

There are institutional issues here which remain unclear; specifically, exactly who are these farmers? It seems likely that some farmers are not "quantity constrained" while others do face on-farm water shortages. The "quantity constrained" farmers may be relative newcomers and therefore their water rights are by superseded more established farmers, or they may be those at the end of the canal (as suggested in the 1987 Louis Berger report). The precise institutional mechanism, that is, the existing allocation of water rights matters, because we would expect farmers who are quantity-constrained to be economizing on water even if they pay a low price.

If water is not a free good, then water has a positive shadow price; if farmers cannot crop all of their land, they would be willing to pay for water. Since they could make money by economizing on water use on their existing land, and then use the saved water on their previously uncultivated land, their technological and crop choices are already influenced by the implicit, shadow price of water.

A. Simple Exercise

The following simple exercise illustrates the point:

1) Assume constant returns to scale (a reasonable assumption in agriculture). Then AVP = MVP = "shadow price of water." The World Bank gives AVPs under various scenarios for various crops. Some examples are:

<u>Crop</u>	<u>AVP (= MVP under c.r.t.s.)</u>
Oranges	0.775 JD/cu.m.
Grapes	0.737
strawberries	0.926
onions	0.387
eggplant	0.201
tomatoes-w	0.189
tomatoes-s	0.290
bananas	0.179

These values are the approximate shadow-price of water for any quantity constrained farmer producing (or wishing to produce) these crops.

2) Compare now various estimates of O&M fees: these vary, especially due to assumed over-staffing levels, but they tend to range around 24 fils/cu.m, i.e., 0.024 JD/cu.m. This number falls to 11.5 fils/cu.m. under the World Bank's assumption of 20% overstaffing (i.e., assuming economic O&M fees).

3) Consider various estimates of economic cost.

- a. Trucked water: 200-300 fils/cu.m.
- b. World Bank estimate of LRMC, based on El-Wahdeh Dam: from 56 to 112 fils/cu.m. (depending on discount rate used).

4) Bottom Line: MVP of water > O&M fees.

This simple exercise confirms the World Bank's argument (which was based solely on the small percentage of water costs to total costs) that allocative efficiency gains from water pricing within irrigated agriculture will be modest *since in most cases the shadow price for quantity constrained farmers far exceeds O&M charges.*

This argument is widely believed by knowledgeable Jordanian water experts. It is also consistent with observed technology choices: many Jordan Valley farmers have adopted drip irrigation, including "most farmers in the middle and southern Jordan Valley."³ This

³ It appears, incidentally, that most banana growers are using drip. The banana area in 1990 was 27,000 dunums in the North Jordan Valley and 91,000 dunums in the Middle and Southern Valley. (PRIDE Water Report); the same source also asserts (C-21) that Southern and Middle Valley bananas use 24.0 MCM/yr, while the North uses 10.5 MCM/yr.

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"evidence" is consistent with the above "shadow price" argument. Why spend money on water-saving technologies if water is really "free"?

Should We Worry About the Fruit Area?

Much is made of the high water consumption of fruit. Three points need to be made here:

- Plant water use is very similar, regardless of species, for photosynthesis and evapotranspiration (bananas, like rice, are an exception because of the use of standing water around the plant). Most differences by crop are a function of the length of the growing season. The real question is the timing of water allocation, and again, the marginal value productivity of water in different uses. The PRIDE document asserts that fruit people get water, which then deprives vegetable farmers of water. One needs to specify in detail the institutional mechanism which brings this about before any political economy recommendations can be made.
- In any case, *the bottom line should be the marginal value product of water, NOT total water use. Economizing on water "for its own sake" makes no economic sense.* Is water "scarce" for municipalities and industry? What is the marginal value product of water in phosphates? What is the marginal utility of water to urban consumers? I am unaware of any studies of these questions. Yet they need to be done to be able to talk sensibly about the political economy of water. *Until it is conclusively shown, e.g. through DRC studies, that bananas, oranges, etc. are socially wasteful, it is unwise to lobby for reducing the fruit area.* Fruit uses a lot of water, but maybe this is a good use of that scarce resource. Without DRC studies, we simply don't know.
- It is widely recognized that one of the attractions of fruit is lower price variance. This is not likely to change easily, even after the desirable recommendations in marketing policy are implemented. Risk-reducing behavior, such as planting fruit, raises social welfare. There is a need for a sophisticated analysis of the returns to water use in the presence of uncertainty.

Bottom Line

- 1) The jury may still be out on fruit as socially wasteful in Jordan.
- 2) Water pricing in the Jordan Valley is highly contentious politically. There need to be important social gains for the GOJ to be persuaded to incur the political costs which will be necessary to implement such a policy shift. These gains have, in my judgement, been insufficiently documented to date (which is not to say that they don't exist).
- 3) As argued in the text of the memo, trade policy may be more effective than water-pricing in inducing water conservation in irrigated agriculture.

Additional Points

1) It is likely that some farmers are quantity constrained, while others are not. Accordingly, there are equity issues among Jordan Valley farmers, as well as between Jordan Valley and upland farmers.

2) Such simple calculations also implicitly assume perfect (or at least good) information on technology. But, of course, many farmers may not know how to save water effectively. The above argument addresses only the issue of incentives, not farmers' ability to respond to those incentives.

3) The "package deal" approach of the Workshop group is very sound: some farmers will lose—so what is in it for them? How are they to be compensated so that they will not block such policy changes? The answer seems to be: by improving the management of the irrigation system so that farmers get more timely delivery and by improving the profitability of their operations by relaxing marketing controls. There are, of course, political problems with this approach, which are discussed in the body of the memo.