

CHAPTER 14

SECTORS: INFRASTRUCTURE

There is lots of it, but it is not much use. Much of the information that

Infrastructure

The Centrality of Infrastructure

Enormous catch is needed to get infrastructure in the “south” up to an acceptable basic level of performance. There needs to be investment not only to build new needed infrastructure, but also to catch up on maintenance.

There are many facets to infrastructure including (1) Roads; (2) Railroads; (3) Seaports; (4) Airports; (5) Housing; (6) Water; (6) Sewage and sanitation; (8) Hotels and restaurants; (9) Tourism destinations; (10) Public buildings; (11) Schools; (12) Health facilities; (13) Telephone and Internet; and, (14) Electricity.

The investment needed to upgrade infrastructure to “north” standards is not sustainable in the “south”. There needs to be incremental upgrading so that constraints caused by infrastructure are reduced. As economic performance improves, more upgrading becomes possible.

Construction Strategy

Most of the construction associated with infrastructure ought to be done by local construction enterprises ... and the planning of infrastructure initiatives should be based on the idea of creating the most value adding in the community as the infrastructure is built, and as much longer term benefit for the community when it is in use. The aim should also be to build infrastructure using the minimum of external resources, and the maximum of the resources that are available in the community.

Building infrastructure in the “south” should not be a totally uncontrolled profit bonanza for multinational construction corporations, with additional debt the only certainty from the projects.

Large scale modern infrastructure is expensive, and it is only in rich countries that the economy can justify making these very expensive investments. High cost infrastructure in a low productivity economy is a formula for financial crisis. Infrastructure investment to upgrade needs to be done in an incremental fashion.

This can be done working from the community level. When infrastructure is looked at from a community perspective, what is the most important to the community can easily be identified, and there can be an investment focus on what gets the best results for the community. This has the potential to increase the socio-economic return from infrastructure investment from something that will not justify investment to something that is gives an attractive socio-economic investment yield.

Housing

Urban housing

Much of the housing stock in Baghdad and some other urban areas of Iraq has been badly damaged in the past few years. There has been damage and complete destruction in some cases and there has been damage caused by looters. Many houses have been rebuilt using private financial resources and funding from the US programs, but a lot still remains to be done.

Capacity to build houses

There is a good construction capacity in Iraq which can grow to build more houses. It is constrained by the economic conditions, the lack of security and the state of the housing sector overall.

House construction is employment

House construction is employment as well as being a valuable addition to the community. New housing and upgrade building can be used to contribute to total employment and to the reintegration of returnees into the economy.

Strengthening the capacity to build houses

Workmen to build houses to an improved standard need training in either a formal setting and while on the job working in a training capacity.

Housing sector

The housing sector has not kept pace with the growth in population, and the quality of shelter for many in the poor “south” is less than satisfactory. Urban slums are common, and rural shelter is poor reflecting the poor state of the local economy.

The solution to housing should be one that involves both the private sector, government and the financial sector. With thoughtful planning, the housing sector can be a valuable component of economic activity and serve to upgrade the housing sector and the employment sector at the same time.

Seaports and Airports

Seaports

There has been a productivity revolution in modern ports, with almost total containerization and using powerful materials handling equipment. Modern cargo vessels are highly automated requiring small crews, and their cost is remarkably low, but they can only use ports with modern equipment. There is no reason why Iraq ports should not be to a very high international standard.

Iraq also must have terminals to handle its oil exports. These need to be world class, and there is no reason why they should not be.

Airports

Iraq needs to have a world class international airport, and there is no reason at all what it should not have one.

The country also needs to have a network of local airports to facilitate local air service development. Though air transport is expensive relative to land, there are times when speed is a priority, and there should be the infrastructure to handle this.

Roads

Arterial roads

The main roads are a major factor in national productivity. The road network is very important for trade. The roads should not constrain trade, but serve to help it. Roads are important for all sorts of product shipment including livestock shipments

Community roads

Every community I have visited has always made reference to the need for easier transport in the rainy season. All weather roads are valuable, but they need not be to European or US standards. They just need to be usable when it is raining, instead of totally stalling traffic.

Construction and maintenance

There are some major contractors with the capacity for major construction and major maintenance of roads. There needs to be a strategy to upgrade and maintain the whole system and not just a privileged little bit of the system.

It would be best to make many small interventions rather than a few large interventions. The country needs to have balanced development all over the country, not just in a single area or corridor. The country needs employment opportunity everywhere, not only on a single axis of the country. Furthermore, the country's internal capacity is better suited to doing small works successfully than single large projects.

Employment

The road sector has the potential to be a major employment source for the next several years. This can be done not only by using "labor intensive work methods" but merely by doing the work using local capacity to the maximum extent possible. Employment is needed not only at the laborer level but also among trained engineers and local contractors, some of whom have had important international experience.

Telecom and Internet

Telecom

In general terms, the telecommunications infrastructure in the global “south” is poor.

Iraq should embrace the idea of very low cost communications as a way to encourage development, but Iraq has not yet embraced the telecom sector in this way.

Internet

An Internet infrastructure can be built in coordination with the telecom ... the underlying Internet backbone uses much that in common.

Water

Importance of water

Water is more important than anything else. When water is abundant, this is not obvious. But in places where there is very little rainfall, the importance of water becomes very evident. Without water, everything ends. With water, a lot is possible. Water is essential to human life, and is essential also to animal life and growing food crops. Water is also important since it is also a contributing cause of violence, injury and death. There is a lot at stake in the water sector.

Knowledge about water

Knowledge about water is spread about a lot of organizations and should be systematically consolidated into a complete database that can be accessed easily by people with a legitimate interest. The database should be operated by a national institution, private or public. The data should be available easily from a number of access points. The data should be accessible for technical planning, and is also a part of the knowledge needed to have informed community dialog about what priorities are needed.

Competing demands for water

Where there is limited water in the area, and several competing uses, there is the potential for conflict. People need water for drinking and personal hygiene. Animals need water for drinking. The rangeland fodder and agricultural crops need water to grow. The interrelationships among water, range, animals and humans, both nomadic groups and settled groups, rural and urban, etc. are complicated and not well understood.

Sources of water

Iraq does not have a lot of rainfall, but it is blessed with two major rivers that have been a source of water for thousands of years. The average rainfall numbers are not a good indication of the way the rainfall is experienced. Often when there is rain, it is torrential, and a lot of rain falls in a very short time. Nearby, there may be no rain at all.

Quality of water

The availability of water is the first issue, but after that there is an issue of quality. Much of the available water has high salinity. In many rural areas the water quality is low and often has high bacteria content, and by most standards is unfit for human or animal consumption. Water quality is one of the most important issue in the health condition of both humans and animals in Iraq.

Community water sources and water storage

Remote communities have several different ways of obtaining water:

- From the rivers, with water treated at water treatment facilities.
- Boreholes, which often must be very deep and still then with low production. They are expensive and steel linings do not last long in the corrosive conditions of the area,
- Shallow wells, which serve both people and animals in many communities,
- Birkas, a swimming pool like structure, usually about 3 m deep, 3 m wide and 20m long lined with concrete that is used to catch and store water, often owned by an entrepreneur who sells the water,
- Hafir Dams, a dug out area with earth dam structure on the downhill side used to catch runoff during the rains, and mainly used to water animals

Urban water systems

Urban water systems are essential for the health of any urban community. Not all of the main towns in Iraq have enough water available. The systems are not sufficient to satisfy the present need, and certainly do will not satisfy the demand of longer run economic growth. Urban water systems need to be upgraded in various urban centers in the area. There are shortages of water in some urban areas, and sanitation is not sufficient. There needs to be both study and expansion of the urban water capacity.

Plans for water supply improvement

Plans for water supply improvement need to be prepared based on what is best for the local community, and what uses the least of money and other resources.

There are many contractors capable of doing work in the water sector. These contractors need to have the opportunity to gain more experience and improve their skills. Professional water engineers need to be encouraged to take a leadership role in the planning and management of water resources in the area.