

SRI LANKA



1. INTRODUCTION

Issues of water for food and rural development in the year 2025 can be analyzed in terms of two distinct dimensions, one consisting of the issues connected with the quantity and the other consisting of the issues connected with quality. Though both quantity and quality issues are inter-related and inter-active, for the easiness of analysis, those would be analyzed separately, in the presentation. The probable and desirable scenario is arrived in terms of quantity and quality and the probable degree of severity is assessed given that scenario. Though it is unlikely that Sri Lanka will face a crisis in water, there are areas for caution and concern. Monitoring of the identified events is emphasized and an institution is identified for exercising the same.

This is the consensus reached after two national consultations where all water sector organizations took part. About 20 separate experts on various areas made their separate presentations on selected themes during the consultation.

2. QUANTITY ISSUES

2.1 DEMOGRAPHICS

Sri Lanka has unique features among the rest of the developing nations for many reasons. It has a very high physical quality of life index in the developing world. It has achieved very high success in containing its population growth and its almost par with the developed world when compared to the rate of increase in population. It is assessed that Sri Lanka has the fastest aging population in the world, not only due to birth control but also due to its literate, health conscious

public, who are supplied with modern health facilities by the state at subsidized prices or entirely freely. For these reasons the population in the island country is likely to stabilize around 23 million or even less but with an aging population than now during this review period.

2.2 FOOD HABITS AND AGRICULTURAL WATER DEMAND

The food habits are likely to change towards a more nutritious and balanced diet with a less calorie intake because of the aging population. There will be higher urban population and a hurried life style and hence there will be more demand for bread instead of rice. Therefore there is likely to be a stagnant demand especially for local grains that requires higher amount of water, compared with other agricultural produce that depends on water.

People will prefer fish or Soya products to meet their protein requirement than meat due to rising awareness about health and rising religious sentiments that are expected to rise further with higher economic achievements. This will also create lesser demand for grains whereas bulk grain produce goes to feed cattle and meat producing animals in other countries.

2.3 SANITARY WATER DEMANDS

It is expected that the urban water demand will fall due to the aging population with people using hot water and therefore consume less quantity as a result. A cost based tariff system will manage the demand, though such a tariff system will also ensure minimum quality water for all irrespective of their capacity to pay. It is also expected that new technological innovations will provide further avenues to reduce waste of treated water.

2.4 RURAL DEVELOPMENT

It is expected that even in the year 2025 sizable proportion of the population will live in the rural areas and they will engage in creative crafts for exports. Those crafts will require less water as they would be more labor intensive (both physical and mental labor).

2.5 WATER RESOURCES POTENTIAL

It still has untapped surface and ground water potential in some of the areas in the country even after developing a substantial amount of water resources to become a very high person made per capita storage of surface water, a very high per capita area under irrigation, etc., in the world.

2.6 COMPETITION FOR WATER

Due to above reasons, it is very unlikely that there will be a severe shortage of water in the country. However there will be some competition for water among various sectors of economy especially in areas where there is potential for urban and industrial growth. Such competition will be a highly localized event.

2.7 ALLOCATION OF WATER TO EFFICIENT SECTORS

A pricing mechanism, limited to the areas mentioned above, could solve the crisis by providing legal avenues for selling and buying water entitlements in the open market, subjected to some regulation in order to ensure that marginalized groups and larger interests of the nation such as environment and health, are protected. This would ensure the allocation of water to more efficient sectors of the economy while having minimum effects on the social harmony, standards of living of the poor and marginalized and also in other spheres of life and environment.

2.8 DEMAND MANAGEMENT

Some relief in the way of reducing this localized demand also could be obtained by adopting water saving technologies (which could be made mandatory for heavy and selected water users) that facilitate demand management. These could include drip and sprinkler irrigation, demand driven but pay for the quantity systems, etc.. Crop diversification is also seen as an activity that could be in a demand management agenda (this is currently being done in some of the water short schemes in the dry zone part of the Sri Lanka and the number of schemes cultivating diversified crops is increasing).

2.9 IMPROVING THE SUPPLY SIDE OF WATER

Apart from developing the untapped river basins and micro catchments within the already developed river basins, increase in supply through transbasin diversions, rain water harvesting and controlled extraction of ground water also could reduce the local shortages to some extent.

3. QUALITY ISSUES

Apart from the issues regarding quantity, water quality will also become an issue for concern. It will create problems in the supply side of water economics. Hence greater attention in this area is vital.

3.1 THE EXOGENOUS AND ENDOGENOUS NATURE OF QUALITY ISSUES, GLOBAL CLIMATIC CHANGES AND MAN MADE INTERVENTIONS

Global climatic changes are likely to raise the sea level further creating salinity in the ground water in the coastal belt and in the surface water bodies close to river estuaries. Even the man made activities like uncontrolled felling of trees is likely to create problems like soil erosion that already has reached quite sizable proportion in recent times and which has increased the treatment costs of water and suitability of water for other users. Though former is somewhat outside our control (exogenous) the latter is within (endogenous). Already restrictions are imposed on felling of trees and measures are likely to be taken up for preserving already exposed land. Even salt water exclusion measures could reduce salt concentrations that would otherwise occur as a result of sea level increase close to river mouths. Those are likely to arrest these negative trends to some extent.

3.2 AGRO-CHEMICAL USE

The excessive use of agro-chemicals has already created some concerns but this is not likely to continue as already programs are in force to educate the farmers regarding the availability of other options and those messages are being received well by a sizable portion of the farmers.

3.3 OTHER POLLUTANTS FROM INDUSTRIES AND URBAN DWELLING

The input of pollutants is also seen as a major concern. There are already pollutant permits that one has to obtain from the environmental authority before one is entitled to dispose waste drainage to a public stream or a storage reservoir. Principle of pollutant pays for the waste he produces will facilitate producers to reduce the harmful contents in the waste to manageable limits.

3.4 EXCESSIVE EXTRACTION OF GROUND WATER

The other major threat to water quality comes from excessive extraction of ground water. However this is only evident in the Northern parts of the country and with the increase use of ground water for agriculture it is likely that similar situations can occur in the north-central and north-western part of the country too. A system of permits issued by a central authority that is

vested with the responsibility of controlling ground water could reduce some of the harmful effects.

4. NECESSITY TO WATCH AND THE INSTITUTION IN WATCHING

Sri Lanka, though is not likely to face a crisis situation in water by year 2025, will definitely have a quite a few areas for concern which need constant monitoring starting from now on, in order to contain the issues addressed in this presentation at manageable limits as and when they become crucial. The Water Resources Authority which is proposed to be set up soon can undertake this watchdog role that is vital to keep Sri Lanka alive to the issues of water in the third decade of the new millennium.

5. CONCLUSION

Water both in terms of quality and quantity are unlikely to become determinant factors to Sri Lanka though it would be a major issue for many other countries. However there are major areas of concern. Monitoring the trends in those areas will be sufficient to prevent any major catastrophe, though such a possibility is remote given the probable and desirable Sri Lankan scenario.