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Water Pressure:

Sri Lanka should act on efficient water use early: IWMI

Mar 22, 2013 (LBO) - Urbanization, industrialization and agriculture is straining Sri Lanka's water resources, with a post-waar economic revival in Jaffna seen to be threatening its fragile groundwater system.

Sri Lanka's economy is expanding faster, and tourism is also on the rise.

"With population, urbanization and increasing industrial growth, there are competing demands on water, it is not only agriculture," Jeremy Bird, director general of the International Water Management Institute, which is headquartered in Colombo.

"Plus we have seen over the past years we have seen some degradation of the environment.

"And now we need look at a more careful balance between the water we extract from the system and the water that is needed to maintain the environment, particularly to maintain the services that eco-systems provide to the nation."

"We are in a situation where Sri Lanka is on the verge of having to look, certainly at stronger economic growth and regulating its water resources."

Water World

March 22 is celebrated as World Water Day.

According to the United Nations 85 percent of the global population lives in the driest half of the planet, 783 million people do not have access to clean water and 2.5 billion do not have access to adequate sanitation.

More than 6 million people die each year from disasters water related diseases. With the world population expected to grow over two billion from the current five over the next 40 years food requirements are expected to grow over 70 percent.

In Sri Lanka rainfall patters seem to be changing with some data showing more intense wet years followed by drier periods.

In Sri Lanka about 80 percent of the surface water system is allocated to agriculture, says Bird. He says Sri Lanka's government has a target of eventually reducing it to 60 percent in the future.

Multi-Pronged

Water scarcity can be tackled in many ways, with demand side management as well as improving supply.

"One option may be to look at water conserving plants," Bird says.

More efficient irrigation practices can be used on existing crops, involving piped system with drip and sprinklers which is happening in India, where the government has a plan to increase irrigation efficiency by 20 percent over the next five years.

"But here you need incentives for farmers to take up those technologies," Bird says. "Some financial incentives perhaps."

Ground water resources are over exploited in some areas. Dismantling state interventions that promote water waste can bring benefits.

One of the most well known examples in South Asia is India, where the state intervened to give subsidized power to farmers, who used them to extract groundwater lowering the water table, which in turn required more power to extract water.

"In Gujarat there was over extraction of water for irrigation, which meant the water tables were dropping," Bird said.

"For the farmers electricity was free so they kept the pumps running all the time. And irrigation was inefficient."

The government later rationed power to eight hours as part of the solution.

"That had three results," Bird says. "It reduced the amount of electricity consumed, it recovered the ground water

levels quite fast, and it also improved yield because crops were no longer overwatered."

Peninsular Problem

Sri Lanka's Jaffna peninsular which sits on a porous limestone base, depends on groundwater. After the end of a 30-year war there has been a revival in agriculture. Analysts sasy fuel is much cheaper than during the war and kerosene and fertilizer is subsidized.

Industry and tourism is also picking up in Jaffna.

"The work we have done over the last few years, in surveying ground water, has shown early signs of pollution and over extraction," says Bird.

"What happens when you over extract groundwater particularly in coastal areas, it allows saline water from the sea to come in.

"Or if you overuse chemicals for agriculture that can contaminate the water - with nitrates for example which has health concerns.

Greater Co-operation

Pressure from greater urbanization and industrialization can be tackled in several ways.

Bird says industries and home appliances can be made more efficient requiring less water as part of the solution.

"Rainwater harvesting is another option to reduce demands on the system," Bird says. "You can reduce leakages. In some countries leaks from piped systems can be more than 30 percent, 40 percent.

"If you reduce food waste in food consumption - again in some countries more than 30 percent of food is wasted. That food requires water to grow, so not only are you wasting food, but you are also wasting water, which can then be re-allocated to urban areas.

"So there are number of different issues. Overall it requires co-operation across different institutions with the public, the private sector and with government agencies.

"That is also one of the reasons this year has become the year of water co-operation. How get people to work together in improving water management practices."