

5th Regional 3R Forum in Asia and the Pacific, 25th - 27th February, 2014, Surabaya / Indonesia

PLENARY SESSION 4A : (on the Day 2 - 26.2.2014)

Triangular Cooperation (Government-Scientific & Research Institutions-Private Sector) for Developing Viable Business Models in "3R"s / Waste Management

- 1. To what extent the current policy frame works at National and Local Government level are supporting to science based policy making considering all aspects of "3R"s with a view to managing (with top priority to prevention) all types of wastes in an environmentally friendly manner?**

All nations now considerate about socio-economic development while environment conservation has been give an utmost importance. Therefore, all their economic development endeavors are been tuned towards utilization of natural resources (that are coming from the environment) caring for their carrying capacities and sustainability. This means all nations direct their economic development endeavors towards sustainable development (SD). Whenever you mention SD, it says intergenerational equity, resource use efficiency, sustainable production and consumption and optimum growth rate with environment conservation. Sri Lanka is also moving towards sustainable development path with a speedy development drive in order to elevate the *per capita* income to 4000 US \$ per year with an 8% Growth of GDP. This means increased economic and industrial activities taking place in the country creating a considerable amount of waste generation. As a newly emerging country already having an average GDP growth of about 7% still Sri Lanka cannot go for zero waste principle. So, at the moment Sri Lanka's effort is Waste Minimization. Therefore, Sri Lanka is currently practicing 3R (reduce, recycle and Re-use) concept. Currently, the Ministry of Environment and Renewable Energy regulates and manage the Environment (with National Environment Policy, National Solid Waste Management Policy and National Environment Action Plan the Haritha (Green) Lanka Program) through the Central Environment Authority and implementing the National Environment Act. Therefore, the Ministry characterized Waste as Solid Waste, Gaseous waste and Liquid Waste basically and different activities have been identified to tackle each type of waste. The Solid Waste has been basically divided into Municipal Solid Waste, Hazardous Waste (construction waste, electric and electronic waste, healthcare waste/ clinical waste etc.

Among all, Municipal Solid Waste drawn the maximum attention of the Government and Municipal Solid Management subject has been wasted to the Local Government Authorities of the Ministry of Provincial Councils and Local Government since it has an island-wide network and human resources to do the job. Both Ministries through their solid waste Management implement arms time to time issue relevant / appropriate rules and regulations to manage the solid Waste efficiently and effectively. These agencies treat waste as a resource and now they engaged with resource recovery, composting programs by introducing waste Separation modalities. These programs predominantly adapt the 3R concept. Focusing 3R concepts, almost all the agencies conduct comprehensive

training and awareness programs for Primary and secondary education system, other government and non-government agencies, Private Sector Agencies and for the Journalists etc.

In order to refine these modalities, both Ministries obtaining scientific inputs from specialized institutions and personnel such as Universities and University academics. Whenever expert advice are needed, the two Ministries and the Apex body can resort to the universities to get expert and scientific advice and whenever institutions need to find solutions to solid waste management related problems and when there are research needs to be studied, always the National University system is assisting to the both Ministries and to the apex Body. Therefore, theirs is a reliable and credible source working with the two Ministries which always can sought scientific inputs for the Solid Waste Management Sector.

The National Cleaner Production Center (NCPC) established under the Ministry of Industrial development provide all the necessary awareness, training etc in all relevant sectors on Cleaner Production and sustainable Production and Consumption. The NCPC's Main focus is also on 3R concept.

Likewise, the Ministry of Environment work with other institutions as well to deal with management and disposal of other waste Categories as well. Ministry of Environment works closely with Private Sector when it comes to management and disposal of Electric and Electronic Waste and Clinical Waste Management.

Examples:

The Ministry and its relevant agencies work with HOLCIM Lanka Ltd for disposal of Scheduled Waste coming from the Industrial Sector and the Disposal of PCBs and other Chemicals as well.

There are lot of Private Sector agencies such as Orange Industries which handles the disposal of Fluorescent and CFL Bulbs containing Mercury.

Industries like E-wis working on disposal of Computer based e-wastes etc.

Also the Ministry Very recently launched a Total Solution Program for Clinical Waste Management in collaboration with Ministry of Health and Sri Lanka-South Korea Partnership Private Sector agency at a hospital in Colombo.

In order to coordinate and make appropriate decisions, a Solid Waste Management Apex Body has been established with the participation of all stakeholders in the field of Solid Waste Management and this body has been co-chaired by the Ministry of Environment and Ministry of Local Government and Provincial Councils.

Although, the agencies focus on 3R concept and direct their activities towards that concepts (in Waste Reduction, Re-use and Recycling), two Ministries always pay its emphasis on waste minimization leading to Waste Prevention and always formulate policies and strategies towards waste prevention by all means. At all activities, Environmentally Friendly Waste Management has been the basic requirement and foundation to work on.

Therefore, both Ministries singly or collectively make appropriate decisions to formulate necessary Policy frameworks at National and Local Government level are supporting to science based policy making considering all aspects of “3R”s with a view to managing (with top priority to prevention) all types of wastes in an environmentally friendly manner.

2. How far the government policies and programs have been effective in combining the advantages of private sector investment and dynamism in “3R”s / Waste Management (in terms of access to financial resources and latest technologies, promoting entrepreneurial spirit, income generation opportunities for the local community, etc)?

As mentioned in the section one above, The Ministry of Environment has the ability to use the National Solid Waste Management Apex Body to liaise with any agency or institution in order to get assistance, advise, support and expertise for any Solid Waste Management related activity or to take any policy decision on waste Management in Sri Lanka.

Likewise, The Ministry has several expert and advisory committees in order to get policy decisions on other waste categories such as electric and electronic wastes, chemical wastes etc.

On the other hand, this Ministry is the National Focal point for Both Basal and Stockholm Conventions. It is also the convenor for the National Expert Committee for the three Conventions namely the Basal, Stockholm and Rotterdam Conventions which work on various types of wastes in-country and their Trans boundary Movement.

The above Multilateral Conventions and International Financial Entities such as the Global Environmental Facility (GEF) [example: the Preparation of the National PCB Inventory and the PCB Disposal Project and the SICAM provided financial assistance for the preparation of Chemical profile of Sri Lanka and for the preparation of Chemical Accident Prevention and Preparedness plan] provide much needed financial assistance in order to bring essential policies and strategies for the sound management of specialized waste disposal modalities. The Consolidated Funds from the General Treasury of Sri Lanka is also provide financial allocations for provide technical technological and financial support for the relevant sectors in supporting for the projects on waste Management (example: Piliisaru Project and the Post-Consumer Plastic Waste Management Project).

All the above programs either government sponsored or externally funded, emphasis on the importance of Private Sector Participation. Currently the Government also has issued directions to go for Public Private Partnership (PPP) Projects since it has realize the effectiveness and efficiency of private sector in securing and bring about financial resources and latest technologies, promoting entrepreneurial spirit when combining public projects with Private sector and the ability of harnessing the advantages of private sector investment and dynamism into such projects.

3. Are the current government policies and programs adequate enough in promoting collaboration and partnerships with private and business sector to enhance R&D and Scientific knowledge-base in “3R” areas [“3R” technologies, resource efficient infrastructure (eco-towns, eco-industrial parks, science parks) green products, waste recycling techniques, waste recovery, waste exchange programs, green procurement, etc.] ?

Yes, Certainly.

The National Development Policy Framework of Sri Lanka popularly known as the “ Mahinda Chintana” clearly give guidance for this. It says that the relevant institutions should take necessary actions to create a land full of greenery and to provide a clean and comfortable environment for all. It also emphasizes the need of creating / establishment of eco-towns, eco-industrial parks, science parks in the country.

Accordingly, the Ministry of Defense and Urban Development has now engaged in developing twenty centers as eco-towns and the first has been already completed in Colombo and Battaramulla Areas. (pleas request Mr. Rohan Seneviratne, Addl. Secy, Ministry of Defense and Urban Development to elaborate more if needed).

There are more than 30 Industrial Parks situated all around the Country under the close Supervision of the Board of Investment of Sri Lanka and the Central Environment Authority and very recently, His Excellency the President of Sri Lanka has given clear directives making mandatory of locating polluting and high polluting Industries inside the Industrial Estates.

A Science Park including a Nano-technology Park has already been established in Diyagama in Colombo District with Modern Facilities and any scientist can work or do their collaborative research with those Facilities. In 2012 National Budget has approve duty waivers for the research done in the country and lot of concessions have been given to the scientists both local and overseas who are doing their analytical activities locally.

Therefore, it can be stated that, current government policies and programs adequate enough in promoting collaboration and partnerships with private and business sector to enhance R&D and Scientific knowledge-base in “3R” areas.

4. What are the crucial policy/institutional measures and enabling conditions to making the triangular cooperation (Government – Scientific & Research – Private Sector) truly operational and effective in areas of “3R”s/ waste Management? What lessons do we learn from two cases of cooperation presented?

Currently the Government has issued directions to go for Public Private Partnership (PPP) Projects since it has realize the effectiveness and efficiency of private sector in securing and bring about financial resources and latest technologies and promoting their entrepreneurial spirit.

As described in the above, the government has made a genuine effort to facilitate scientific and research activities and the researchers in almost all sectors in Sri Lanka. The Researchers (either in the Higher Education Sector or in other institutions) are been given a 25 % out of monthly salary as a research allowance.

Also many tax reliefs and facilities have been given to researcher in the country. This has been done in he intention of stopping people go abroad to do research overseas and to encourage them to do their respective research and analysis inside the country.

Therefore, not only on 3R concept, the above decisions and directives create a very much favorable condition to local researchers / scientists, overseas researchers / scientists, investors both local and overseas and private sector institutions to increase their activities in Sri Lanka.

Lessons Learnt:

- a. Public sector activities are been severely restricted by factors such as financial abilities and technical and technological barriers,
- b. Private sector involvements have been restricted or delayed by government procedures (example: getting necessary project clearances, approvals and documentary requirements,
- c. If public sector or private sector try to do their activities in isolation, then most probably the projects may get delayed and sometimes those can be failures in the long run.
- d. But if the projects executed jointly go forward with a higher efficiency and effectiveness.

Example :

Clinical Waste Management project executed at Mullariyaawa Hospital

5. Is the current political framework conducive to such triangular cooperation for realizing viable and scientifically credible business models in “3R”s/ waste management? What are the best examples from the regions?

Yes. Current political framework conducive to such triangular cooperation for realizing viable and scientifically credible business models in “3R”s/ waste management.

Currently, the Ministry has received several number of Municipal Waste Management project proposals that has been assessed and agreed upon due to their technical and financial merits. These proposed projects are in line with the National Environment Policy, Strategy and Haritha Lanka [Green lanka] Program together with the National Development Policy Framework of Sri Lanka popularly known as the “ Mahinda Chintana”. In these documents clear instructions and guidance have been given to manage the waste generated in Sri Lanka in a sustainable manner. Furthermore, financial modalities have been established and the General Treasury has made arrangements to provide funds for some Waste Management projects which practice 3R concept.

Some of the best examples :

- a. Post-consumer Plastic Management Project – Promote 3R concept in plastic waste management
- b. Balangoda and Weligama Local Authority – Promote 3R concept in Municipal Waste Management (MSW) – produce compost, recover non biodegradable material (glass, metal etc) in the MSW and sell
- c. Clinical Waste Management project executed at Mullariyaawa Hospital
- d. Disposal of Scheduled Waste coming from the Industrial Sector and the Disposal of PCBs and other Chemicals as well in the HOLCIM Lanka Ltd facility