

Institutional Analysis for Wastewater Agriculture and Sanitation in Kurunegala, Sri Lanka



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ASIA PROECO II



WASPA Asia Project Report 4

This report is one in a series of project reports written by the Wastewater Agriculture and Sanitation for Poverty Alleviation in Asia (WASPA Asia) project. The WASPA Asia project aims to develop and test solutions for sanitation and wastewater management, to reduce the risks from wastewater use in agriculture. The approach involves the development of stakeholder coalitions at town and national level, called Learning Alliances, which will bring together the main stakeholders into a participatory process through which actions will be planned and implemented in a sustainable manner.

These project reports are essentially internal documents intended to inform the future activities of the project, particularly in relation to the development of Learning Alliances and participatory action plans. The reports have been made publicly available as some of the information and findings presented in them may be of use to other researchers, practitioners or government officials.

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Acronyms, Abbreviations and Definitions

ADC	Agrarian Development Council
ADD	Agrarian Development Department
AI	Agricultural Instructor
AO	Agricultural Officer
CEA	Central Environmental Authority
COSI	Community Self Improvement
CBOs	Community Based Organizations
DS	Divisional Secretary
DAC	Divisional Agriculture Committee
DCC	District Coordinating Committee
DiCC	Divisional Coordinating Committee
DOA	Department of Agriculture
DOAD	Department of Agrarian Development
EIA	Environmental Impact Assessment
EPL	Environmental Protection License
EU	European Union
FO	Farmers' Organization
GN	Grama Niladhari
IWMI	International Water Management Institute
ISB	Industrial Services Bureau
MC	Municipal Council
NEA	National Environmental Act
NGO	Non Governmental Organizations
NWSDB	National Water Supply and Drainage Board
PC	Provincial Council
PCC	Provincial Coordinating Committee
PS	Pradeshiya Sabha
PHI	Public Health Inspector
UC	Urban Council
UDA	Urban Development Authority
WASPA	Wastewater Agriculture and Sanitation for Poverty Alleviation
WEA	Wayamba Environmental Authority

1 Introduction

This report provides background information on the current regulation, planning and management mechanisms and procedures at local authority level in Kurunegala City, Sri Lanka that relate to wastewater management and agriculture. Kurunegala is one of the sites of the Wastewater Agriculture and Sanitation for Poverty Alleviation in Asia (WASPA Asia) project, which aims to identify and test solutions for sanitation and decentralized wastewater management, for its use in agriculture. The project is based on the premise that holistic solutions to managing wastewater and interventions in the whole chain from production to disposal will lead to sustainable wastewater use that is beneficial to agriculture. The project is also concerned with improving sanitation, hygiene, wastewater treatment and disposal, wastewater use in agriculture, reducing contamination of wastewater irrigated agricultural products and minimizing the risks from wastewater irrigation.

WASPA Asia uses an approach called 'Learning Alliances', a methodology to establish stakeholder coalitions that involve various groups such as the communities, local authorities, community organizations, NGOs, scientists and practitioners. Wastewater management for agriculture in peri-urban areas is an issue that requires coordination from many different agencies because of the many aspects that are related to it, as can be seen above. Consequently no single agency takes responsibility for these issues and it is necessary to bring together all the relevant agencies and stakeholders into a single platform to effectively address the risks associated with wastewater agriculture and to enhance the benefits.

The information compiled in this report is intended to provide an understanding of the institutions and policies that cover all these aspects. It is based on a review of the relevant acts, legislation and policies, and has been supplemented with one-on-one meetings with the key stakeholders at the local level. These meetings were held to collect information on policies, plans and activities within the project area. They also provided information for the analysis of the roles and responsibilities of various government departments and agencies operating at the local level with respect to waste, sanitation, health, irrigation and industry, and where it has been possible to gain such information, makes a comparison between the roles stated in official documents and those actually undertaken. This information is being used to select the institutions and key stakeholders that will be involved in the Learning Alliances, as well as their potential role in developing, promoting and implementing intervention options.

The information in this document is organized according to the main issues that will be covered by the project. The main purpose of this information is:

- To identify the key institutions that are stakeholders in the aspects of wastewater management that WASPA Asia will address. These include agencies responsible for urban planning, agriculture, waste, sanitation, health and irrigation.
- To give background and context to the way in which government agencies are organized and function at the local level in Sri Lanka.
- To gain understanding of the institutional environment of Kurunegala in order to help establish the Learning Alliances which are meant to bring stakeholders from various, often disparate, departments together.

2 Local Government Structure of Sri Lanka

Administrative Units of Sri Lanka

Sri Lanka is a democratic republic and is governed under a unitary system of Constitution. In 1987 the country underwent decentralization of its government structure with the 13th Amendment of the Constitution and the promulgation of the Provincial Councils Act No. 42. The Provinces that were established under this act were larger administrative units than the previous District administration, and each encompasses two or three Districts (Slater 1997). The rationale for moving to this system was to concentrate greater autonomy and resources at the Provincial level, away from the centre (Slater 1997). Kurunegala District is within the North Western Provincial Council.

Provincial Councils are responsible for carrying out the activities planned by the Central Government Ministries and their departments and agencies. There are nine Provinces and eight Provincial Councils in Sri Lanka (GoSL 2003) each of which is headed by a Governor. The Governor is appointed by the President and is responsible for the execution of policies and statutes of the Provincial Council aided by four Provincial Ministers that comprise the Board of Ministers, and the Chief Minister who is the political head of the Provincial Council. The five ministers are collectively responsible to the Council. The Chief Secretary is appointed by the President with the concurrence of the Chief Minister and is the chief accounting officer responsible for "all inter-departmental matters such as finance, planning and personnel" (Slater 1997; GOSL 2003).

The Provincial Council is thus organized into nine institutions according to the 17th Amendment to the Constitution (GOSL 2003):

- The Governor
- The Council (Legislature)
- The Chief Minister
- Four Provincial Ministries
- The Provincial Public Service Commission
- The Chief Secretary

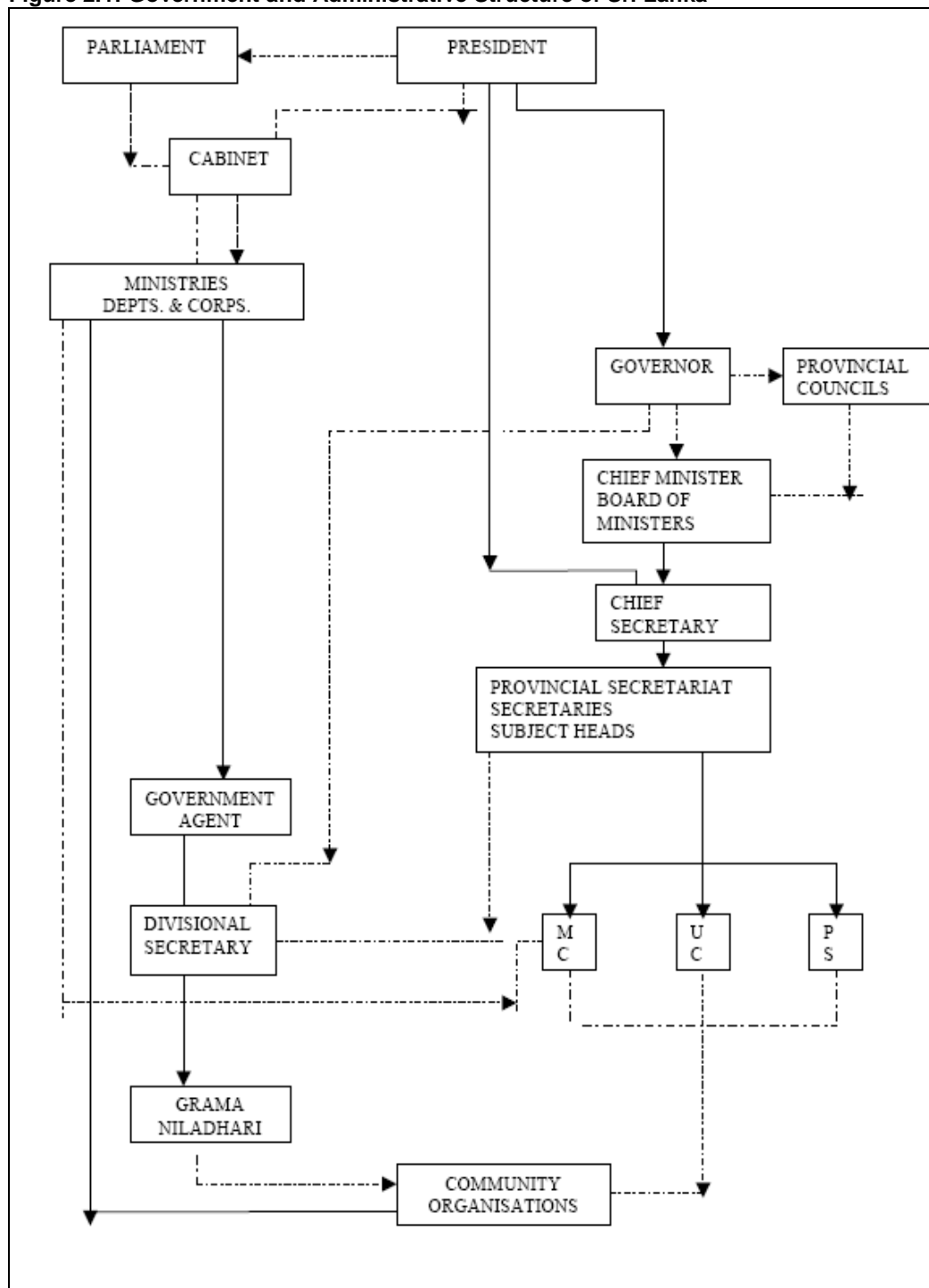
The Provincial Council works through the local government authorities and the main activities are carried out through them¹. There are three types of local government authorities that operate under the Provincial government. These political subdivisions are:

- Municipal Councils (MCs), for areas with a population of over 30,000;
- Urban councils (UCs), for areas of between 10,000 and 30,000; and
- Pradeshiya Sabhas (PS) for smaller towns and rural areas (ADB 2000).

¹ Some activities like welfare programmes eg: Samurdhi, are run by the Divisional Secretariat using National funds. This will be discussed later in the chapter.

The Provincial Councils are responsible for supervising the functioning of these local authorities. Funds are obtained for activities at the Provincial level from 36 revenue sources, which can vary between Provinces and are not balanced by central transfers (Slater 1997).

Figure 2.1: Government and Administrative Structure of Sri Lanka



Source: Dainis 2004

Note: the Government Agent is now the District Secretary

Instead, central funds from the government are channeled through the Districts and subsequently through the Divisions. Prior to the 13th Amendment the District Secretary was known as the Government Agent (GA) and all development programmes were planned and implemented under the GA's supervision. Under this system bureaucrats had more authority than politicians, who had no authority for financial control. Under the current system there are 25 Districts which function predominantly as an administrative structure supporting the Divisions (Slater 1997). To each District is appointed a District Secretary under the Ministry of Public Administration and Home Affairs.

The Divisions and the Divisional Secretaries were born out of the District Revenue Officers, who worked under the GA and were responsible initially for collecting government revenue. The District Revenue Officers later became the Assistant Government Agents (AGAs) who were given greater powers, including the responsibility for implementing regulations at the Divisional Level, as well as controlling state lands, issuing permits, maintaining public registries, and distributing social welfare and government aid. Later still the AGAs became the Divisional Secretaries, to whom the powers of the District Secretaries were devolved by Act No. 58 of 1992. The Divisional Secretaries are the senior administrative officers of the Division and report in parallel to the National Government on centrally sponsored schemes and to the Provincial Council on devolved programmes (Slater 1997; ADB 2000). The main tasks of the Divisional Secretaries are: formulating proposals for investment at the level of the Division; identifying projects; and monitoring the implementation of the Annual Provincial Investment Plan which sets out the overall development objectives for the Province (GoSL 2003).

The Divisional Secretariat Divisions are further divided into Grama Niladhari Divisions, which can comprise of one or more villages and are the lowest administrative level of the government. They are administered by village officers known as Grama Niladhari (GN) who are responsible for executing projects and activities at the village level.

The 13th amendment to the constitution and the establishment of the Provincial Councils between the Central government and Local governments did not result in the dilution of power that was intended, and the Divisional Secretary still represents the Central government in certain matters. The result of this new structure is that these three structures of government (Provincial, District and Divisional) are quite separate, with the District Government, which is the only directly accountable body at the local level, functioning along-side the Division but with no authority over most development functions (Slater 1997). The Divisional Secretaries have to work for both Central and Provincial governments. Local governments are placed under the Provincial setup and all operational authority is given to Provincial Councils.

Roles and Responsibilities of Key Authorities in the Project Area

The WASPA project is being undertaken in the Municipal Council area of Kurunegala City, within Kurunegala Division, whilst the agricultural component of the project is on the periphery of the city, and falls into Maspotha Division. Both areas are within the North Western Province and Kurunegala District. The next section discusses in more depth the Municipal Council's and the Pradeshiya Sabha's responsibilities, in particular how they relate to the project.

Municipal Councils

The Municipal Council Ordinance (1987) is the main act that lists the duties of the MCs, setting out the bureaucratic structure and all other issues concerning their roles responsibilities and functioning. Most of the powers of the MCs relate to administrative duties such as the hiring of staff, licensing, acquiring assets, budgeting and taking legal action where necessary (Sec. 40 of the Municipal Council Ordinance). Municipal Councils provide public infrastructure services and are authorized to acquire lands for public purposes. The general duties of the MCs are more important for the well being of the public. At the same time these duties also serve as performance indicators of MCs, assisting the public to consider election of members for a second time (Dainis 2004).

The duties as stated in Section 46 of the Municipal Council Ordinance are as follows (*ibid*):

- Maintaining and clearing of all public streets and open spaces vested in the council or committed to its management;
- Enforcing the proper maintenance, cleaning and repairing of all private streets; Supervising and providing growth and development by planning and widening of streets, reservation of open spaces and execution of public improvements;
- Abating all nuisance;
- Establishing and maintaining public utilities for the welfare, comfort and convenience of the public; and
- Promoting public health, welfare and the development of sanitation and amenities.

In order to carryout these responsibilities, the MC has the power to create 'by-laws' that set out regulations and guidelines for implementation of particular aspects that concern their city. These range from regulation of noise pollution to checking licenses for small shops and businesses. There is already an exhaustive set of by-laws for Kurunegala City.

The MCs are headed by Mayors with deputy Mayors and members of the Councils making policy and policy implementation decisions. The Mayor is Chief Executive and is assisted by the Municipal Commissioner, who is a senior public official (Dainis 2004). There are several departments under the administration of a Municipal Commissioner, the four main ones being: the Secretariat Department; the Accounts Department; the Health Department; and the Engineering Department.

In Kurunegala MC area there are two Medical Officers of Health (MOH) appointed through the Health Department. They are responsible for supervising several Public Health Inspectors (PHIs) who oversee regulation and programmes for health awareness and sanitation in the city. An environment officer, appointed through the CEA also works with the Health Department and is seated in the MC. Within the Engineering Department of the MC, also called the 'Works Department', there is a Municipal Engineer. The Departmental heads supervise activities, following the instructions and orders of the Mayor, Deputy Mayor and Municipal Commissioner. Dainis (2004) comments however that "in MCs in general, the powers given to medical and health officers to inspect important places of business, especially hotels and restaurants are not exercised regularly", and not because it is not necessary.

For the purposes of planning and management, there are four different committees within the MC: the Health Committee; the Financial Committee; the Industrial Committee; and the Traffic Committee. Each of these is headed by a Chairperson, and comprises four or five other members, who are usually department heads within the MC. Any new policies of the MC are created during the monthly committee meetings and are then presented to the Municipal Commissioner. The MC also has a monthly General Meeting presided over by the Mayor and the Commissioner.

Dainis (2004) notes that “by law, provision has been made to appoint a committee of councilors for the purpose of preparing schemes regarding maintenance of residential premises, and for making recommendations on the payment of incentives to residents who maintain high standards of hygiene. This is an opportunity to prove the capacity to create participation of the public in maintaining higher standards of environment. However, a disheartening feature is that often such schemes or incentives are not made available to the public. Although laws have given vast amounts of power to create a sustainable and habitable environment in urban areas, it is found that the development processes have not been that effectively executed”.

Pradeshiya Sabhas

The Pradeshiya Sabhas play a similar role to the MCs in villages or non-urban areas. The Pradeshiya Sabhas' main responsibilities are set out in the Pradeshiya Sabhas Act (1987). Their powers are focused on regulating and maintaining thoroughfares, public health, public utilities and market places, in addition to their roles in environment and services. They are entrusted with the responsibility to protect and promote the welfare of the people and amenities in the area. Importantly for the WASPA project, the Pradeshiya Sabha takes on the major responsibility for waste disposal in the area that falls outside the Municipal jurisdiction but within the project area.

The Pradeshiya Sabha is headed by the Chairman who is the elected official and is assisted by the Secretary. The Pradeshiya Sabha works with the Regional Health Service on matters relating to health and sanitation. The area under the Pradeshiya Sabha is divided into several units which follow the same boundaries as the Grama Niladhari Divisions. A PHI is appointed to look into health issues for several Grama Niladhari Divisions and reports to the Divisional Health Office which falls under the Ministry of Health at the Provincial level. The Pradeshiya Sabha also has an Environment Officer appointed through the CEA, a Technical Officer in charge of buildings and roads, and a Community Development Officer.

The Pradeshiya Sabha has three committees that discuss various issues including those relating to sanitation and health, these are: the Housing and Community Development Committee; the Environmental Conservation Unit; and the Environment and Common Facilities Committee. The meetings are conducted once a month and presided over by the Chairman. The agenda for these meetings are produced by the Secretary based on reports made by the heads of departments.

Institutional Framework for Planning and Administration

Responsibility for physical planning and development of urban areas in Sri Lanka resides with the Urban Development Authority (UDA). The UDA is a multi-disciplinary organization that operates at the national level and is the largest organization working on urban development in the country. Its responsibilities include (UDA 2007):

- Carrying out integrated planning and physical development of declared urban areas;
- Formulating and submitting development plans, including capital investment plans;
- Undertaking the execution of development projects and schemes;
- Formulating and implementing urban land use policy;
- Developing environmental standards and preparing schemes for the environmental improvement of urban areas; and
- Providing technical planning services.

Although the UDA operates at the national level they have offices in several cities and create localized plans for each city. All urban planning for a city such as Kurunegala is overseen by a planning committee that consists of members of the UDA, the National Water Supply and Drainage Board (NWSDB), the MC, Road Development Authority (RDA) and other relevant organizations such as the District Secretary or the Divisional Secretary depending on the geographical extent of the plan and the components that it covers. The UDA is primarily responsible for formulating detailed development plans for 10 to 15 year periods, and provides consultancy services to the Provincial Councils and local authorities to supervise in executing major projects. At the local level the MC is mainly responsible for implementing the spatial plans of the UDA, which range from road development to sanitation.

The UDA's Development Plan for the Urban Development Area of Kurunegala, has two parts: a situational report; and development planning and building regulation recommendations. The information gathered for the report is derived from primary investigations, data collection, and analysis. The planning principles that govern the research methods used to compile the UDA's study are based on the requirements of the Urban Development Authority Law (1978).

For large projects the MC must work with the UDA or the NWSDB because Provincial and local government bodies cannot obtain loans independently under the current constitution, therefore large projects are finance by the central government through national bodies such as the RDA, NWSDB and UDA. Larger projects would generally be initiated by the Provincial Coordinating Committee (PCC; also known as the Provincial Council Coordination Committee). This meeting is held once a month and attended by members of the UDA, NWSDB, the Mayor and the Commissioner of the MC. It is at this forum that the MC has the opportunity to present issues that the area is facing and propose ideas for projects that require coordination and funds from the other government bodies; it is also a forum to review the progress of existing projects.

Smaller projects that the MC can finance from their own revenue can be initiated and implemented entirely by the MC. Consequently these new projects must also bring in revenue to the MC to ensure their sustainability.

The UDA is also responsible for physical planning within Pradeshiya Sabhas and is assisted by the Town and Country Planning Department (Town and Country Planning Ordinance No. 13 OF 1946). If the Pradeshiya Sabha wants to implement special programmes on issues that they feel are important they must request funds from the Provincial Councils.

At the national level, regional planning is overseen by the Ministry of Plan Implementation and funds from the Central government are channelled through this Ministry down to the Districts and the Divisions. Functions of this Ministry mainly focus on economic affairs and social planning but may also include infrastructure (www.priu.gov.lk).

Existing Relations between Government Agencies

There are some significant official networks that determine the formal interactions between the various government agencies that have a vested interest in urban matters. These include the PCC, the District Coordinating Committee (DCC) and the Divisional Coordinating Committee (DiCC). The PCC is attended by the Mayor and the Municipal Commissioner, in addition to members of the Provincial Council, UDA, NWSDB and other national agencies. The PCC and DCC mainly discuss utilization of the money allocated to the Provincial Council and parliamentary members of the District. It is at this level that ideas for special projects or programmes that would require greater financial backing are discussed, and progress and review meetings for projects are conducted. Apart from the PCC and the planning meetings that occur at the start of planning cycles, coordination between the UDA and the MC tends to be limited to construction and approvals for construction.

The DCC meetings are co-chaired by the Chief Minister of the Province and a senior minister from the District and attended by members of the MC, notably the PHI. In meetings with the PHI, it was revealed that the DCC meetings are used to discuss any smaller projects that might require support from, or coordination with, the District administrators. These would include awareness campaigns for public health concerns such as Dengue and Malaria. The funds for planning functions within the District are allocated from the Central government and the decisions regarding how these are to be utilized are decided by the DCC and the DS (Karunanayaka and Abhayaratna 2002).

The DiCC meeting is conducted once a month at the Divisional level and attended by members of the Pradeshiya Sabha. It has a similar function to the DCC but at the Divisional level. The Divisional Secretariat reports to the District Secretariat, and so issues raised at the DiCC meetings will be sent to the DCC if advice or funds are required.

These meetings are the main, and often the only forums through which sectoral agencies interact. There may be some bi-lateral meetings but they are not regularly held or part of normal business.

3 Waste Management and Sanitation

This chapter focuses on solid and liquid waste, both of which impact on the aquatic environment and irrigation in Kurunegala, and are therefore directly relevant to the WASPA Asia project.

The main environmental regulations for waste management are set out in The National Environment Act (NEA), No. 47 of 1980, which established the Central Environmental Authority (CEA), as a department within what is now the Ministry of Environment and Natural Resources (MENR) (prior to December 2001 the CEA was under the Ministry of Forestry and the Environment). At its inception, the CEA functioned mainly as a coordinating and policy making body without regulatory powers to control industrial pollution. Subsequently, the National Environment (Amendment) Acts No: 56 of 1988 and No: 53 of 2000 gave them wider powers (Ellepola 1999; CEA 2003).

The NEA regulates the discharge of waste materials, which are defined as any matter prescribed to be waste and any matter whether liquid, solid, gaseous, or radioactive, which is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration of the environment (NEA 1980).

A special feature of the North Western Province, within which Kurunegala District is located, is that it has its own Environmental Statute, the North Western Province Environmental Statute No.12 of 1990 which was created following the enactment of the 13th Amendment to the Constitution of 1987. All environmental matters within the North Western Province fall under this Act which has over-riding authority.

Solid Waste Management

In 2000, the Ministry of Forest and Environment in collaboration with other related agencies issued a 'National Strategy for Solid Waste Management' which covered waste avoidance and reduction, reuse and recycling, through to the final disposal of waste that meets environmental standards. At the local level the regulatory frameworks for solid waste management is found within the Local Government Ordinances such as the Municipal Council Ordinance of 1980 (sections 129, 130 and 131), the Urban Councils Ordinance (sections 118, 119 and 120) and the Pradeshiya Sabha Act No. 15 of 1987 (sections 93 and 94).

Within these regulations, the MC and Pradeshiya Sabha are responsible for the collection, sorting and treatment of residential, commercial and industrial solid waste. The National Strategy recommends that the local authorities be given more resources to develop and implement sustainable solid waste management practices. The strategy also sets out that there are roles and contributions to be made through collaboration between the government, private sector and the general public, and highlights the need for 'multisectoral partnerships' and interactions for solid waste management and institution building (MoFE 2000).

According to the 'Sri Lanka: State of the Environment Report 2001' a few MCs have established separate solid waste management departments and in Kurunegala a number of state funded projects have been developed. Plans in Kurunegala include a project administered by the Provincial Council through the Commissioner of Local Government on solid waste management designed along similar lines to that of an existing Provincial Council project that is being undertaken in Puttalam District, which is also covered by the North Western Provincial Council. The Kurunegala MC currently undertakes a small composting program, point source separation of wastes and collection; and the PHI has expressed interest in extending these initiative but has faced some financial and technical constraints in being able to take it forward (Personal comment PHI 2007). Proposals have been developed by the MC for these initiatives including a sanitary landfill, for which they are in the process of seeking funds for implementation. At present the solid waste generated by the town is disposed of outside the MC area on land at "Sundarapola" which is located in the Pradeshiya Sabha area near Kurunegala Tank (Nishshanka et al. 2006).

The UDA reports that some of the problems faced with regards to solid waste management are to do with a lack of labor, equipment and machinery to ensure that sanitary conditions are maintained at the landfill site². The surrounding area is reported to be highly polluted and suffers from contaminated groundwater, a bad odour, flies and mosquitoes (UDA 2006).

In addition to government activities there are also a number of initiatives by non-governmental organizations (NGOs). For example, the Integrated Approaches to Improving the Urban Environment in Asia Project is being implemented by the organization Practical Action in collaboration with a local NGO, SEPA, and the MC. It is funded by the European Commission, through the Asia Po Eco II programme and is mainly working with the slum communities of Wilgodapura and Elugala to improve waste collection, and to introduce recycling, ecological-sanitation and small waste-water treatment facilities.

Wastewater and Water Quality

The Draft National Water Resources Policy (2002), which has not yet been approved, advocates the approach of '*Designated Use Based Water Quality Goals Delineated at the Watershed Level*'. The main objective of the management of water resources in the policy is the protection of water resources for current and future water uses and the strategy proposed is based on the premise that this can be achieved by safeguarding the designated uses of a particular water body. Hence the following two aspects are emphasized: identification of use designations of a given water body considering both current and future uses; and establishment of water quality criteria to sustain the designated uses (Dias et al. 2004).

In line with this policy the CEA and the Sri Lankan Standards Institute (SLSI) have developed a set of Proposed Ambient Water Quality Standards for inland surface water which is based on a comparison of the standards from various countries. They cover physical characteristics, dissolved oxygen content, macro-pollutants, heavy metals and organic micro pollutants.

² This term is used loosely and does not refer to an engineered sanitary landfill.

Water quality of inland water bodies are classified into seven classes based on their designated use, one of which is water for irrigation and other agricultural uses.

Industrial Effluent

The regulatory provisions relating to industrial pollution control in Sri Lanka are: the NEA No 47 of 1980; NEA amended Act of 1988; Environmental Impact Assessment Regulations of 1993 and Gazette Extraordinary no. 859/14 of 1995; Provincial Councils Act of 1987; Municipal Councils Ordinance of 1980; and Urban Councils Ordinance and Pradeshiya Sabha Act no. 15 of 1987. The main policy and regulatory mechanisms that relate to industrial pollution are:

- The Environmental Protection License (EPL) procedure for the control of industrial discharges published in February 1990; and
- Environmental Impact Assessment (EIA) and the procedure for major development projects published in June 1993.

As a result of these regulations, since July 1990, all industries that discharge or deposit effluents or emissions into the environment are required to obtain an EPL from the CEA. The license stipulates the standards and criteria under which the industry is allowed to discharge its waste. There are different standards that apply depending on whether the final effluent is to be discharged into an inland water body, coastal waters or used for irrigation. These apply for all industries with more specific standards applying to the textile industry, natural rubber processing and leather tanning industries. All major development projects are required to undergo a full-scale EIA prior to implementation, which must include plans for solid and hazardous waste treatment and disposal sites (Ellepola 1999).

Presently, most pollution control programs are being implemented by the Central Government through the CEA and with the devolution of powers to the local authorities. However an unusual feature of the North Western Provincial Council is that it has its own Statute, North Western Province Environmental Statute No. 12 of 1990 and the EPL is being administered by the Provincial Council. Hence the main regulating body in the Province is the Wayamba³ Provincial Environmental Authority. In some Divisional Secretariats, environmental officers are appointed from CEA, but not from WEA because they work more on policy issues. The environmental officers in Kurunegala DS office and in the MC have been appointed from CEA and have minimal powers to take legal actions without consultation with the WEA. The WEA is the more powerful of the two institutions in the Wayamba Province, with the WEA having the authority to give approvals and licenses to projects. It deals more generally with regulation, whereas the CEA is responsible for conducting awareness programmes related to environment and relevant health issues. The WEA also has the “power to give directions to any other local authority” to safeguard the environment, and can inspect the premises of industrial plants after issuing written notice, for the purpose of monitoring pollution (North Western Province Environmental Statute No. 12 Of 1990). Unfortunately the officers interviewed about the functioning of the system for environmental management complained

³ Wayamba is an alternative name for the North Western Province.

that there is very little coordination between the CEA and WEA (Advisory Meeting, April 2007).

According to Ellepola (1999) the Provincial Authority is somewhat hampered in the performance of its duties due to the lack of personnel and because it does not have the experience and expertise of the CEA in tackling major pollution problems arising from large scale high polluting industry. Furthermore, the division of responsibilities between Provincial and Local Authorities versus the Center requires clarification. At present there is no conflict between the Center and the Provinces, because of the lack of power at the Provincial level except for the case of the WEA, but if that were to increase the roles would need to be clearly stipulated.

Local authorities also have some powers to regulate waste, as per the Pradeshiya Sabha Act (1987) and the Municipal Council Ordinance (1987), they have the power to create by-laws necessary to regulate industrial waste and also impose fines or penalties if materials are not disposed of properly.

Importantly for the industries the strategies for pollution reduction include both regulation and incentives, for which a 'Pollution Control and Abatement Fund' (PCAF) has been set up in order to provide interest free loans as well as free technical assistance to industries that are already established but which are currently experiencing pollution problems. Under this scheme industries are able to obtain funding on a concessionary basis for the installation of waste treatment systems and for the implementation of other pollution minimization measures. The funds are disbursed through the major development banks (Ellepola 1999).

In Kurunegala, the Industrial Services Bureau (ISB) was established under the Provincial Council as a quasi-governmental organization in 1990, and has been working with industries to promote investment in the area and also assists in technology transfer, marketing, capacity building and training. Over the years ISB has diversified its mandate and become three autonomous entities: ISB; ISB Services Limited, a limited liability company that is a commercial organization; and ISB Environmental Services (ISBES). Within the environment field the organizations have been involved in waste management and auditing of 'cleaner production' in Sri Lanka. The Industrial Services Bureau has worked closely with the desiccated coconut industry on solid and liquid waste management; and has been involved in interventions to reduce wastewater by experimenting with technologies to treat and recycle wastewater from service stations.

Currently, ISBES is involved in the Community Led Environment Awareness Network (CLEAN), funded by USAID. It is a project that involves students in monitoring air and water quality within the city. Water quality is being monitored at the Kurunegala Lake, which occasionally provides a portion of the city's drinking water.

Medical Waste

One of the main producers of waste, both solid and liquid, within the project area is believed to be the Kurunegala Teaching Hospital (Dissanayake et al. 2007). The hospital has a wastewater treatment facility on its premises but it has not been functional optimally for a considerable amount of time.

In Sri Lanka, national policies on hospital waste take a fairly strong line in their position on waste management. In 2000, the Ministry of Health and Indigenous Medicine, through the National Steering Committee on Clinical Waste Management (NSCCWM) set out a National Policy on Health-care Waste Management, and also an accompanying document on national guidelines. In the policy, health care waste is defined as “all the waste produced by a medical institution (public or private), a medical research facility or a laboratory “. Health-care waste is classified on the basis of the following categories: non-risk; hazardous; and highly hazardous. Each category has a detailed set of procedures that are to be followed in their disposal, and these are listed in the guidelines document, which also includes recommendations on appropriate treatments and technologies for waste disposal. The main motive for the policy is protecting public health and environmental concerns. Implementation of the national policy is assigned to the Provincial Councils, while monitoring of the guidelines in the medical institutions is the responsibility of the Provincial Health Services.

This monitoring mechanism does not work in practice and the hospitals basically monitor themselves. In Kurunagala, hospital waste management is overseen by the Superintendent of Health. Information on the reality of health waste management was presented by the nurses responsible for infectious disease control at Kurunegala Teaching Hospital in the meeting held with key stakeholders at ISB in April 2007.

The PHI is supposed to report to the provincial health services about waste issues in the private hospitals in Kurunegala.

Sanitation and Water Supply

At the local level, the responsibility for waste management lies with the Public Health Department, which is supervised by the Chief Public Health Inspector (CPHI) or the PHI, both of whom work from within the MC. The PHI also collects and records data on water supply and environmental health in sanitation registers, however these records are often poorly maintained (UNESCO 2006).

The NWSDB Act (No. 2 of 1974, as amended) lists the specific duties of the NWSDB to provide water for industrial, public and domestic purposes. Water supply and sanitation is overseen by the NWSDB and implemented by various agencies including the PC and local government authorities.

Kurunegala does not have a public sewerage system, and the town is dependent on septic tanks and soakage pits for sewage disposal; consequently, drainage has been highlighted as one of the major infrastructure problems that Kurunegala faces (UDA 2006). The reasons

why these issues have not been addressed are, as always, complex and multifaceted but the UDA (2006) has identified institutional problems, including lack of coordination between various institutions, and financial constraints as major causal factors.

In an attempt to address these problems, a number of agencies have been involved in the development of the Greater Kurunegala Water Supply and Sewerage Project, under which a treatment plant and a sewage system will be constructed for the municipality. The project is funded by the Danish Development Agency (DANIDA) and is led by the NWSDB. As is usual with major water supply and sanitation infrastructure projects in urban areas, the construction of the facilities will be undertaken by the NWSDB who will then transfer responsibility for management and revenue collection to the MC (NWSDB Project Manager *pers. comm. 2006*).

The wastewater treatment plant will be located on the current site of the dysfunctional hospital treatment plant and will treat hospital waste and household sewage, which will be directed to the treatment plant via newly constructed underground sewers. The plant will not treat storm water. The treated effluent will be disposed of to the Beu Ela (one of the two main drainage channels in the city) and it is a stipulation of the project that the water quality in the Beu Ela must not deteriorate from its current state (NWSDB Project Manager *pers. comm. 2006*). At present, plans for the project cover only a part of the municipality, which could be extended in the future to cover the entire city, if land is acquired for a treatment plant (NWSDB 2005).

The current status of the project is that the tender has been awarded but plans now need to be approved and it is unlikely that construction will start before the middle of 2008.

4 Agriculture and Irrigation

Agriculture and irrigation are obviously central to the activities of the WASPA project but in urban and peri-urban areas it is often assumed that agriculture is of limited importance. Consequently much of the peri-urban agricultural land in many cities is marked down for development but in Sri Lanka, under Section 62 of the Agrarian Services Act No: 58 of 1979, no person can utilize any paddy land for any other purpose unless the Commissioner has given prior approval (Padmini 2000). Although this Act was repealed in 2000 by the Agrarian Development Act No. 46 of 2000, this Act has similar provisions under "Part II: Utilizing Agricultural Lands in Accordance with Agriculture Policies".

As a consequence, although the UDA can make plans that result in the conversion of land out of paddy production it is not as straightforward and quick as in many countries, which means that it is vital that provision be made for irrigation water of acceptable quality, as well as the normal agricultural extension services that are provided to rural farmers.

Agricultural Extension

There exist a number of organizations responsible for agricultural development in Sri Lanka, operating at various levels. At the national level there exist the Ministry of Agricultural Development and Agrarian Services; the Department of Agriculture (DOA); and the Department of Agrarian Development (DOAD). At the Provincial level are the: Ministry of Land, Agriculture, Minor Irrigation and Animal Production and Animal Health and Tourism; and the Provincial Department of Agriculture (<http://www.gov.lk/index.asp?xl=3>) (see Annex I for a schematic representation of the main government organizations involved in various aspects of agriculture in Sri Lanka).

The provision of technical, financial and extension services to farmers is an extremely important part of the duties of the government with respect to development of agricultural efficiency and improvement of the livelihoods of farmers. These functions are addressed by the Ministry, though the DOAD at the District level; Agriculture Committees and Agrarian Services Centers at the Divisional level; and Agrarian Development Councils (ADCs) below that. All the departments and functions of the Ministry are listed in Annex II.

Parallel to this is the DOA, which functions both at Central Government level and Provincial Level and is the key agency for development and dissemination of agriculture related technologies including those for on farm water management, water and soil conservation; and for implementing the Agricultural Plan. The DOA is responsible for enforcing rules and regulation in the Soil Conservation Act. At the District level, the DOA has an Assistant Director of Agriculture to support it, along with Agriculture Officers and Agricultural Instructors (AIs) at the Divisional level.

The Divisional Officers who are under the DOAD and the AIs, function from the Agrarian Service Centers, which house a number of government departments, including: the DOA; the Agrarian Development Department (ADD); the Animal Health and Production Department; the

Coconut Cultivation Board; and Rural Banks. Despite being located within the Agrarian Services Centre, they function as separate departments but the field level officers of the various departments are representatives in the Agrarian Services Committee or Council, which is also attended by the leaders of the Farmers' Organizations (FOs). This Council provides the necessary coordination for implementation of agriculture related activities at the local level. Coordination above this level takes place through the Divisional Level Agricultural Committee chaired by the DS. There may be several Agrarian Services Centers under a Division.

The Centers provide administrative support, marketing, insurance and training to farmers. They also provide extension services in the form of fertilizers at a subsidized cost, seeds, small plants and credit; and are involved to some extent in the development and management of water resources and agriculture in Sri Lanka, building irrigation systems and issuing water to the farmers. Activities are undertaken at the GN level by Agrarian Research and Production Assistants.

The ADD has different functions and is not involved in agricultural extension related work. The main function of the ADD is registering FOs, which must be done to give them legal recognition. The ADD also coordinate and provide agricultural supplies (seed, fertilizer, agrochemicals draft power and machinery) to farmers.

Part III of the Agrarian Development Act No. 46 of 2000, provides for the appointment of the Commissioner-General, the Additional Commissioner-General, the Deputy Commissioners, the Assistant Commissioners and the Agrarian Development Officers. The Act also provides for the establishment of Agrarian Tribunals, to hear disputes over land; and for Agrarian Development Councils to be established in the agrarian centers for each Agrarian Development Area as determined by the Commissioner-General.

The broad mandate of the ADC is to help manage the changing relationship between tenant farmers and land owners. Every ADC must consist of at least one representative from each FO for the area (which are also established under this Act) and such other people as the Commissioner-General deems necessary to represent the government departments and public corporations engaged in agriculture in the Area. One of the main functions of the ADC is, before every cultivation season, to formulate an agricultural program for its Agrarian Development Area and to prepare necessary development plans, of which a copy must be submitted to the Divisional Agriculture Committee.

At the field level the Agrarian Development Act No. 46 of 2000, Part V specifies the "Institutional Structure of Farmers' Organizations". There must be one or more FO for any Agrarian Development Area, as determined by the Commissioner-General, and it must consist of anyone whose livelihood is agriculture, if: they are a Sri Lankan citizen; over 16 years of age; a resident of the area; and have been engaged in agriculture for a period of over two years. Every FO is established as a body corporate and must have its own bank account. The FO has various roles which include cooperating with the ADC and providing information about land-use and ownership; they must also "assist the ADC in the following manner:

- By inducing the owner cultivators and occupiers of agricultural lands within its area of authority to cultivate their agricultural lands in accordance with the provisions of this Act...;
- By encourage soil conservation, efficient water use, use of compost manure, within its area of authority and by recommending the cultivation of agricultural crops which are recommended for that area, and the breeding of such breeds of livestock and inland fish as are best suited for that area;
- by taking measures to ensure that such crops and animals are free from diseases and pest;
- by implementing programmes to educate owner cultivators, occupiers and agriculturalists in its area of authority, and by encouraging them to adopt methods which are environmentally friendly”.

The DOA, also under the Ministry of Agricultural Development and Agrarian Services, has several Directorates including but not limited to: Rice Research and Development; Field Crops Research and Development; Extension and Training; and Socio-economics and Planning. The activities that they engage in include: research, extension, seed and planting material production, regulatory services, plant quarantine, soil conservation, and registration of pesticides. The DOA operates at the Provincial Level though the Provincial Council. In the North Western Province the mission of the DOA is the “improvement of farms and farming systems in order to prepare farmers to face market economy while smooth dissemination of sustainable agricultural practices for increase production and income”. To achieve this they undertake the following activities (Department of Agriculture 2006):

- Dissemination of necessary technical knowledge and skills, to increase sustainable and high quality yields;
- Cultivation of uncultivated and low intensity crop lands;
- Introduction of recommended seeds and planting materials and making arrangements for them to be available to farmers;
- Enhancement of knowledge and skills of officers and implementation of suitable managerial system to achieve high productivity;
- Providing the knowledge and managerial skills to achieve sustainable cropping systems of a commercialized nature;
- Providing the home management skills for farming families to have additional income and good nutrition;
- Taking measures to create technical knowledge with farmer participation;
- Implementing suitable mechanisms to exchange technical knowledge and data with the Agricultural Ministry and Department of Central Government; and
- Encouraging the farmers to form FOs.

It is therefore clear that there are a number of organizations with which the WASPA project can engage, the members of the ASC being key.

Irrigation

Similarly to agriculture, the management of irrigation water takes place from the national down to the local level with the FOs also playing a role. The organizations involved in irrigation management are presented schematically in Annex IV.

The Agrarian Development Act No. 46 of 2000, Part VII: Irrigation Work and the Management of Irrigation Water, specifies that “every tank, dam, canal, water course, embankment reservation or other irrigation work, within the area of authority of any Farmers' Organization, shall be subject to the supervision of that Farmers' Organization. Where any government department, public Farmers corporation, person or body of persons proposes to construct a tank, dam canal watercourse or commence any development project, within the area of authority of Farmers' Organization, it shall be the duty of the head of such department or corporation or such person or such body of persons to inform the Farmers' Organization of the proposed construction or project and invite its comments thereon”.

Not only that but the mandates of the Ministry of Agricultural Development and Agrarian Services and the Ministry of Irrigation and Water Management also overlap, since the Mahaweli Authority of Sri Lanka (MASL), which is under the Ministry of Agricultural Development and Agrarian Services (Annex II) is responsible for the allocation of water from reservoirs within the Mahaweli basin and related basins, while the Ministry of Irrigation and Water Management (Annex III) is responsible, through the Irrigation Department, for the allocation of water to reservoirs and stakeholders of major irrigation tanks, which do not come under MASL; furthermore, the Agrarian Services Department allocates water to water users in minor irrigation reservoirs (Elakanda nd).

In the project area the Irrigation Department is responsible for water allocation from Wennura Wewa. It is mandated to undertake the planning, design, construction, operation and management of all major and medium irrigation schemes and works related to flood control, drainage and salinity extrusion.

At the Provincial level, irrigation activities are headed by a Range Director with the help of Divisional Irrigation Engineers (DIE). Under the supervision of DIEs there are several divisional officers and technical assistants that manage local irrigation schemes.

The Irrigation Ordinance (no. 32 of 1946 with amendments) is one of the most important laws that have been enacted with regards to water for agriculture and water quality. Several other laws and ordinances of relevance to the sector are: the National Water Supply and Drainage Board Law 1974; the Ceylon Electricity Board Act 1950; Mahaweli Authority of Sri Lanka Act 1979; Agrarian Services Act 1979; the Municipal Ordinance 1947; Urban Council Ordinance-1939; PradeshiyaSabhasAct 1987; and the Fisheries and Aquatic Resources Act 1996.

5 Analyzing the Institutional Environment

Local to Central Links

When Sri Lanka devolved powers with the 13th Amendment, the intention was that local authorities and the Divisional Secretaries would have more important roles in planning and be able to devise more innovative solutions to meet the demands of the public. This has been hindered by the fact that the local government must appeal to the Provincial or the Central Government for the more substantial funds required to implement larger projects, and must also gain the approval of relevant institutions such as the UDA and NWSDB. Consequently even if the local authorities have a clear understanding of the issues that need to be addressed within their jurisdiction, and have the technical capability to undertake the necessary interventions, they are prevented from doing so by the need for approval from a higher authority and finances. Financial constraints are a considerable impediment to achieving the goals that the local authorities may have because they are restricted to budgets provided by Central Government (usually for specific activities) and the small revenue that they receive directly. The local authorities are however allowed to take loans, as the MC of Kurunegala did from the ADB for the construction of the bus-stand, but this must of course be re-paid, which means that the local government must think carefully before making such agreements. Assessments by international organizations have also highlighted how the lack of coordination between local authorities has had an impact on specific issues such as the environment. UNEP (2001), states that some of the policy gaps that relate to water quality and the pollution of water resources are administrative inefficiencies in controlling pollution, lack of a central database for water quality and industrial activities and poor monitoring of industrial effluent discharge.

Rural-Urban Links

The coordination between urban authorities and rural authorities is also an obstacle to planning solutions to problems that cut across the urban-rural divide. Wastewater management that addresses agriculture and sanitation issues requires that the relevant institutions interact so that the problems are tackled without compromising any of the stakeholders. Some level of planning does take place through the PCC but this system could be strengthened and coordination improved.

Government to Community Links

From this assessment of institutions working in Kurunegala, it appears that there is not a lot of meaningful interaction between the departments and agencies, and there is none between them and the communities. Apart from voting for their representatives the public is not involved in any planning decisions. Some efforts have been made to address this but only on a project basis, for example by Practical Action, which is working with urban communities in Kurunagala, especially low income communities. They have formed community organizations and are trying to involve the communities in planning and to raise important issues.

There is increasing evidence that the introduction of a participatory process can be beneficial for planning: “as numerous countries around the world are beginning to experiment with new ways of improving democratic decision making at the grassroots, local government is increasingly being seen as a means to institutionalize a number of the new participatory approaches to the planning and management of local development” (Slater 1997). However, the introduction of public participation in the institutional framework is not a feature of the current planning mechanism, except in some cases (see sec. 5.1) and change in practices could result in a more inclusive planning process.

Relationships between the community and the authorities in the agricultural sector are better, due to the existence of FOs and ADCs. Under the existing system “Kanna Meetings” are held at the start of each cultivation season to decide how irrigation water should be distributed by the District Secretary as stipulated by the Agrarian Services Act. These are attended by AIs and FOs. In small irrigation systems, the Divisional Secretary participates in the meetings. In larger and medium scale irrigation systems, the Integrated Management of Major Irrigation Schemes (INMAS) programme instituted by the government is a participatory management system in which all relevant officers in the line agencies are required to attend along with FOs in “Project Committee Meetings” (Brewer et al 1996).

Institutional Relationships in the WASPA Project

The main objective of the WASPA Asia project and its use of the Learning Alliance approach is to link disparate agencies and departments together. The WASPA concept originated as an attempt to make the connection between sanitation and wastewater irrigation clearer by demonstrating that the effects of poor sanitation on the uses and users of water downstream is an important consideration for planning. The implications of the lack of clarity in responsibilities for management, implementation, monitoring and enforcing of regulations at any point in the various aspects that relate and contribute to wastewater production are felt by the farmers and their livelihood activities downstream. The lack of coordination between various authorities can contribute to the risks of wastewater use being experienced more severely. The Learning Alliance approach is a participatory methodology that facilitates ‘learning’ on the responsibilities and constraints felt by all members of the alliance from various institutional levels - community, local government and higher levels of government with regards to wastewater management.

In a workshop held on the 26th of September 2006 called ‘Building Networks for Waste Management for Agriculture and Environmental Sanitation’, WASPA Asia conducted a first meeting of stakeholders from various government institutions. The objective of this meeting was to introduce the project to the relevant stakeholders, and to bring them together to discuss issues that they faced that related to the project’s goals. The project team also introduced the concept of the Learning Alliances as an approach that could help encourage greater interaction and participation between various departments, agencies, organizations and the communities themselves. The participants were asked to share their views on wastewater management, the premise and objectives of the project and where they saw the

relevance of working on wastewater management in a holistic manner (i.e. by looking at the chain from production to disposal and reuse).

In the workshop with stakeholders it was decided that the key players were the Divisional Secretaries, with the Municipal Council and its related departments playing a major role to ensure public participation. The stakeholders present at the meeting felt that connecting with the existing networks at the beginning of new planning cycles is an important way in which they could win the trust of partners and the communities. One potential problem with interacting with such a network is that the agendas of their meetings are often quite large and little time is spent discussing one issue.

The Learning Alliance approach has great potential to bring about greater coordination between local government authorities, administrative units, agencies and communities in planning for wastewater management.

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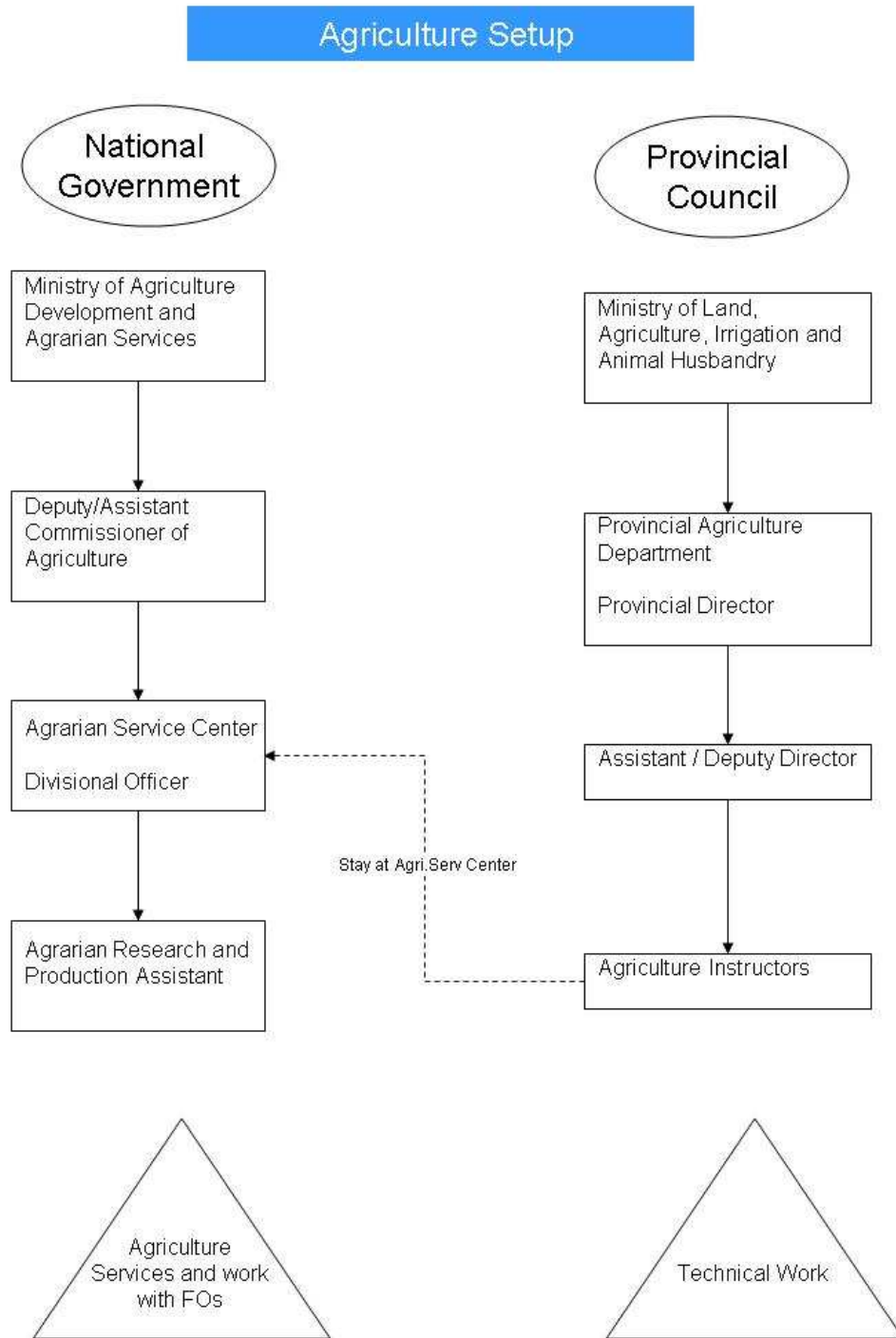
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Annex I: Schematic of Organizations Involved in Agriculture



Annex II: Ministry of Agricultural Development and Agrarian Services

Departments and Statutory Institutions	Subjects and Functions
Department of Agriculture	Implementation of policies, plans and programmes in respect of Agricultural Development and Mahaweli
Department of Export Agriculture	Agricultural Diversification
National Agricultural Diversification and Settlement Authority (Hadabima)	Agriculture Production Improvement
National Fertilizer Secretariat	Agricultural Education
Sri Lanka Council for Agricultural Research Policy	Administration and Operation of the Soil Conservation Act
Hector Kobbekaduwa Agrarian Research and Training Institute	Agriculture Research and Extension
Vegetable Development Board	Development of Export Agricultural Crops
Fruit Development Board	Development of High - Tech Agriculture
Institute of Post Harvest Technology	Plant Quarantine
Janatha Fertilizer Enterprise Ltd.	Work connected with the Food and Agricultural Organization of the United Nations Food Council and International Fund for Agricultural Development
Ceylon Fertilizer Co. Ltd.	Import and Export of Planting material
Pulses and Grain Research and Production Authority	Administration and Operation of the Control of Pesticides Act
Colombo Commercial Fertilizer Company Ltd.	Administration and Operation of Plant Protection Ordinance
Thamankaduwa Agro Fertilizer Company	Administration and Operation of the Felling of Trees (Control) Act
Department of Agrarian Development	Agricultural Enterprise Development
Agricultural and Agrarian Insurance Board	Measures for increased production of food
Sri Lanka National Freedom from Hunger Campaign Board	Post Harvest Technology and Research
Agricultural Product Marketing Authority	Floor Price Scheme for Agriculture Products
Species and Allied Products Marketing Board	Implementation of Policies, Plans and Programmes in respect of Agriculture Marketing Development
Mahaweli Authority of Sri Lanka and Agencies created under the Mahaweli Authority Act.	Administration and operation of the Agrarian Services Act
	Agrarian Services
	Farmers' Social Security Benefit Scheme
	Agricultural Insurance
	Administration of the National Freedom from Hunger Campaign Board Act
	Paddy Land Tenure
	Re-development and maintenance of Mahaweli Areas
	Administration and operation of Mahaweli Authority Act

Annex III: Minister of Irrigation and Water Management

Departments and Statutory Institutions	Subjects and Functions
Department of Irrigation	Formulation and implementation of policies, plans and programmes in respect of Irrigation, Reservoirs and Water Management.
Water Resources Board	Irrigation and drainage work
Central Engineering & Consultancy Bureau (CECB)	Salt water exclusion schemes Rain water harvesting Flood protection
Mahaweli Venture Capital Co. Ltd.	Prevention of the pollution of rivers, streams and other watercourses Promotion, construction, operation and Maintenance of schemes of irrigation, drainage, flood control Engineering Consultancy Services and Construction

http://www.priu.gov.lk/Ministries_2007/Subjects%20&%20Functions%20of%20Ministries.doc

Annex IV: Schematic of Organizations Involved in Irrigation

