AJK- Community Infrastructure Services Program (AJK-CISP)

Report on Study Visit to Australia on

"Effective Public Sector Development Planning and Management of Community Based Infrastructure towards Poverty Alleviation"

(October 29, 2008 to November 10, 2008)

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Executive Summary

The Government of Azad Jammu and Kashmir has taken an innovative approach in alleviating the poverty through developing sustainable infrastructure under "Community Infrastructure Services Program (CISP)" with the assistance of World Bank. Under CISP project besides development of rural infrastructure (roads, bridges, footpaths, water supplies, sanitation facilities etc) special attention has been given to the capacity building of stakeholders especially communities and implementing agency. A number of activities such as workshops, seminars, skill development trainings, study visits, experience sharing sessions have been organized for capacity building of stakeholders in planning, management, implementation, monitoring, finance etc.

This special study visit was organized to enhance the capacity of implementing agency for preparation, implementation, monitoring and management of community based infrastructure development project based on successful approaches and methodologies already used and found successful in other countries. During this study visit the participants were exposed to a number of innovative and environmentally friendly community based infrastructure projects especially related to water, sanitation, transport, recreation etc. The participants gained a great appreciation and better understanding of the role of communities in development of community based infrastructure and analyzed these development practices.

At the end of this program, the participants are able to:

- better understand and implement the community based approaches for development of sustainable, cost effective, energy efficient and environment friendly infrastructure;
- plan, design, implement, monitor and manage innovative solutions for development of infrastructure specially related to water storage & purification, reduce/reuse/recycle/ and management of solid waste;
- actively contribute for development of reliable and effective systems for participatory monitoring and evaluation of community based infrastructure development projects which would encourage and motivate stakeholders to effectively plan for and introduce local response system to long-standing community development issues
- develop and implement effective assets management system.
- develop forge institutional collaboration for experience sharing and future learning.

Background

Community Infrastructure Services Project (CISP) is an IDA/World Bank assisted project and was approved in 2002 with the objectives to improve the well-being of un-served and underserved low income communities through the delivery of cost effective and sustainable community development schemes, and basic infrastructure and services, using participatory community based approaches that include:

- Strengthening the role and capabilities of local governments at the district and lower levels to extend technical, financial and management support to community-based infrastructure development;
- Mobilizing and building the capacity of Community Based Organizations (CBOs) to increase their participation in development activities; and
- Effective governance, transparency and accountability through improvements in operational, monitoring and evaluation, and financial and budgetary procedures for project implementation.

CISP put special emphasis on capacity building of Project staff and LGRDD for effective planning, implementation and management of community based infrastructure with special emphasis on participatory infrastructure development approaches. Project moved to capacity buildings by arranging tailored-to-project trainings, participation in seminars and workshops, study tours both in country and abroad on various themes.

The project has successfully achieved its all targets; World Bank has appreciated the efforts of GoAJK for successful implementation of the project and expressed willingness to provide funding for similar projects in future. The World Bank approved a study visit for five officers of CISP/Department on "Effective Public Sector Development Planning and Management of Community Based Infrastructure" to strengthen the capacity of project/department for effective planning, management, implementation, monitoring & evaluation, of community based projects in future.

The study visit was organized in collaboration with "South Australian Local Government Association" and "South Australian Local Government Consulting (firm)".

Objectives

Community Infrastructure Services Program developed a comprehensive training plan for capacity building of LGRDD/project in various areas such as planning, management, implementation, monitoring of community based project and exposure to innovative development in other countries.

Following were the objectives of this study visit:

a) Understanding the concept and approaches of community based innovative infrastructure development having multi-layered economic impact.

b) To study the new ideas and approaches on RRR for waste management, Green waste repository, Recycling construction and demolition waste, waste for money, gold and energy.

c) Development & management of drinking water sources, solar water purification, Rain water harvesting, Greenfields and wetlands development and management for ground water recharge and reuse of storm water.

d) To be well versed with the idea and technology of green buildings in order to make the rehabilitation, reconstruction and future construction more energy efficient and environment friendly.

e) Study the intuitional setup, arrangements, linkages and working procedures and GIS based infrastructure management system of Local Governments.

f) Identify and apply best practices/approaches in community-driven initiatives and forge institutional collaboration thereafter.

Activities & Observations

This was a 10 days study visit with extensive office and field business, during these 10 days the study team visited a number of offices and places and met with officials and also visited field to observe the practical implication of plans. Following is the detail of activities.

Day-01 & 02

Arrival at Sydney airport after a short stopover in Bangkok, night stay at Sydney, Visit to historical Sydney Harbor Bridge, Opera House and Darling Harbor between transfer of flights from Sydney to Adelaide. Arrival in Adelaide at 11:30 pm, check in to accommodation, brief introduction with the host/ coordinator, Mr. Stephen Rufus.

Observations:

a) The history is preserved in an environment friendly manner which is a unique attraction for tourists.

Day-03

Briefing by facilitator about Australia, South Australia and Adelaide, discussion on activities for next 10 days and areas of interest, quick tour of the market in order to find out the locations for food, phone and internet etc.

In after noon the study team took a field visit to view the protection work, drainage, land slide management and landscaping along road side and environment protection initiatives taken along River Torrens, Colonel Light's Lookout, Oval Cricket Ground, Mount Lofty, Cleland Wildlife Park, Glenelg Beach.

Observations:

During the briefing and field visit a number of observations were made by the study group, and detailed discussion was held within the group and with the resource person. Some of the major applicable findings are as follows:

a) Environmental Management System for infrastructure development projects is developed using a well structured approach and is in practice.

b) Special attention has been given to the protection work, drainage and landslide management along the road side using mechanical and bioengineering techniques such as plantation, use of grout filled mattress, iron nets, stone masonry etc.

c) The rain water/storm water drainage system of cities and across the roads is connected to the water harvesting sites/ wetlands which stores the rain water for raw use and aquifer recharge.

Use of grout filled mattress revetment systems for a roadside drain to prevent soil erosion.

Effective use of local material (green waste) for environment protection (dust free environment)

Day-04:

A tour through Willunga Basin and McLaren Valley, Murray Mouth, Lower Murray Bridge, Murray Barrages, Victor Harbor, My-Ponga Water reservoir focusing on environmental effects/ impact on the community of Goolwa and other lower areas resulting from the lack of flows in the Murray River and mitigation measure taken up by Government, Rain water harvesting from roof and water reservoir development and management from rain water.

Observations:

a) The average rain fall is below average in Australia and the country is facing drinking water scarcity. Government has taken innovative steps for development of water reservoirs by using rainwater harvesting.

b) For housing construction roof rain water harvesting as mandatory in bylaws in some councils. In these councils every house has its own water collection and storage system for raw use.

c) Government of Australia has taken up mage projects for environment protection of coastal areas such as Golwa, and Marry Mouth to prevent the water of Murray River from contamination and salinity due to superfluity of seawater.

Myponga- Water reservoir developed to store rain water for drinking purpose

Roof water harvesting/storage at household level

Day-05

Welcome & presentation by Mr. Barry Parsons Manager Member Services & Strategic Projects followed by 04 presentations covering introduction, history, functions, management, role and

responsibilities of Local Governments in development of South Australia, importance , role and effectiveness of South Australian Local Government Associations, Local Government Mutual Assets and Liability Funds, Insurance, Sustainability of Projects(Financial System). *(Website: http://www.lga.sa.gov.au)*

Observations:

In South Australia, Local Governments are well established and their roles & responsibilities are very well defined. There is a healthy competition between the governments of councils due to which different councils are adopting various new and innovative ideas for development and improvement of the living standard of communities. All the 68 Local Governments of South Australia are member of South Australian Local Government Association (SALGA), a membership organization that provides quality service and leadership relevant to the needs of member Councils.
The main role of the association is as follows:

Leadership:-	Training, Conferences, Model policy approaches, Assistance to Councils on issues, Development of Standards/Manuals
Representation:-	Coordination, lobby and negotiation role on State Government Legislation outcomes and funding programs
Collaboration of Services:-	Provision of services for Finance, Superannuation and Insurance
Research and Development:-	Training Programs, Development of codes, standards and projects to be used as models across the industry

SALGA has many sections such as:

> ***Local Government Finance Authority (LGFA)*** a separate statutory authority which borrows and invests in bulk for Councils. The Finance Authority is proving to be successful in providing stable finance management to Councils, particularly within the current economic crisis that will prove future viability and sustainability of Local Government in South Australia. Due to the success of the Authority, other States and Territories within Australia and looking to adopt and implement a similar model.

> ***Local Government Mutual Fund*** is a commercial arrangement and provides asset insurance services to all Councils in South Australia such as workers compensation cover, risk management services, public liability and professional indemnity cover. The Fund has provided considerable benefits to Local Government with lower workers compensation claim numbers, improved safety ratings, reduced insurance claims and an estimated saving to Councils of $160 Million over the 16 years of operation.

Local Super The Local Government Superannuation Scheme manages superannuation for Local Government in South Australia and the Northern Territory.The Group was briefed that compulsory superannuation funds in Australia are valued at $1 Trillion, with Local Super managing investments in the order of $1.3 Billion, of which 16% is invested in the Adelaide Airport Authority being one of the schemes best performing investment options.

Study Group in the office of South Australian Local Government Association (inset Meeting in SALGC officials)

Day-06

Presentation by Mr. Bruce Naumann, Manager of Water Systems at Water Shed Resource Center (an interpretive Center for Salisbury Wetlands) following a tour to resource center, water harvesting sites, wetlands, water capture and storage areas, and pumping stations where the treated water is pumped back into the aquifer for recharge. *(Website: http://www.salisbury.sa.gov.au)*

Onsite presentation and tour guided by Mr. David McKee (Site Supervisior), of Wingfield Water & Recycling Center explaining the mechanism developed/used for collection of waste, waste transfer, green waste repository, waste segregation, recycling and reuse of various types of waste, management of landfill site and power generation (Gas, Electricity) from waste.
 Website: http://www.adelaidecitycouncil.com/scripts/nc.dll?ADCC:STANDARD::pc=PC_175

Observations:

The city council of Salisbury has implemented a totally integrated water management plan to efficient harness and manage systems for rainwater, storm water, groundwater, recycled wastewater and potable water. It is a visionary, whole-of-catchment plan that delivers not only greater water efficiencies but also environmental, social and commercial benefits through:

- Flood protection ensuring sustainable environmental flows and enhanced biodiversity along creeks and rivers.

- Harnessing and natural treatment of storm water along with aquifer storage and recovery to provide fit-for-purpose water to industry, community and residential developments.

- Opportunity for community awareness and education about the environmental benefits of converting storm water into a valuable resource.

- Reduction of ocean discharge of storm water pollutants that can harm the marine environment.

- Development of a system that is not only self sustainable but is generating sufficient revenue to maintain urban storm water and management/development of catchment a

Wetlands of Salisbury

Understanding function of solar water filter

Understanding the storm water management project (Salisbury)

Field engineer explaining the procedure of pumping the naturally filtered storm water into aquifer

- Salisbury council is confident that this project will make the city of Salisbury almost self –sufficient in its water need and reduce reliance on river water.

- Bruce Naumann, Manager of Water Systems is of the view that "these initiatives will continue to make certain that the most valuable resource of all -water- is treated as liquid gold".

The Wingfield Waste & Recycling Centre aspires to process the majority of the waste material generated in the northern region of Adelaide and convert this into useful resources and energy in line with Zero Waste objectives. A comprehensive Waste Strategy for South Australia has developed with five key objectives:

- **Fostering sustainable behavior** is providing information and will influence people to adopt more sustainable waste behaviors. The Waste strategy recognizes that considerable effort and innovation must be devoted towards fostering attitudes and behaviors that encourage people to change and adopt resource efficient behaviors.

- **Reduce Waste** is addressing changing the way resources are used in production processes and in products, establishment of markets for recyclable products, designing products to last longer, eliminating barriers, providing incentives to reduce, reuse and recycle waste and about building knowledge and data on waste and recycling.

- **Effective systems are implemented** for collecting, transporting, sorting, consolidating, transferring, and re-processing recyclables and recoverable resources.

- **Effective policy instruments are implemented** to introduce economic, regulatory and other policy measures to encourage avoidance, reduction, reuse and recycling of waste.

- **A good cooperation** has been developed between three broad waster generating sectors of the community i.e. municipal waste, commercial and industrial waste and construction and demolition waste.

To achieve the objective of Zero Waste a 07 steps waste hierarchy has been adopted in the waste management strategy as shown below:

MOST PREFERABLE

Avoid
Reduce
Reuse
Recycle
Recover
Treatment
Disposal

LEAST PREFERABLE
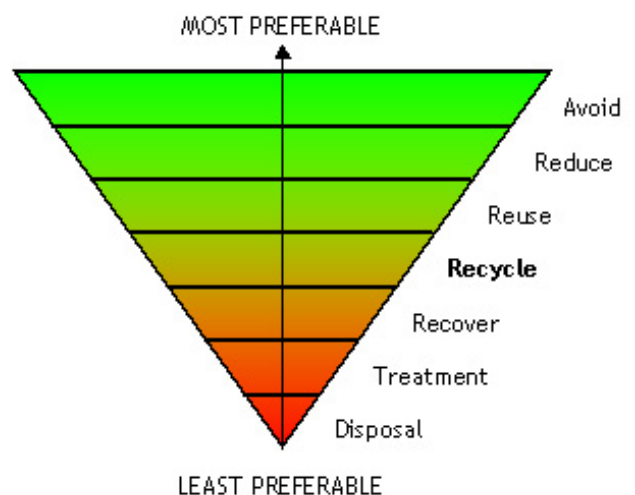
Although South Australia has done a remarkable job in solid waste management but still facing some major issues particularly in regional areas, some are:-

- The cost of service provision, landfill development & closures and change to collection methods for recycling is substantially high.
- Market value of recyclable material is less.
- Expertise required from staff to plan, manage and operate landfills, transfer stations and waste systems to effectively meet the targets set by Zero Waste are not available.
- Managing food waste that makes up 30 to 35% of the waste stream and disposal, handling CCA treated timber/posts and vehicle tyres.
- Community expectations are very high versus available funds to meet the requirements.

A view of solid waste recycling plant

Study group understanding the model before going to the field
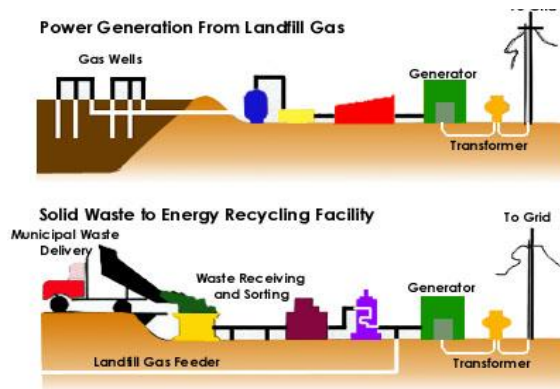
Model of solid waste to energy recycling

Heaps of recycled organic waste/green waste

The study team had a meeting with the mayor of Barossa Council (Mr. Brian Hurn) followed by presentation on use and over use of surface water & underground water, its environmental impact, mitigation measures taken up by the council, road and transport sector development and planning for residential growth. (Website: www.barossa.sa.gov.au)

The study team visited the public library established by the council where a presentation was delivered by Mr. Michael Lange, Director Works and Engineering on GIS based Infrastructure Asset Management System. The team also visited the GIS lab.

In the afternoon a meeting was held with Mr. Steven Griffiths, member for Goyder (Shadow Minister for Industry, Trade, Economic Development, Employment, Training and Further Education) who briefed the group about the government system of Australia and South Australia. The study team also visited Parliament House, including the House of Assembly and the Legislative Council, Mr. Steven Griffiths briefed the about the working and history of the parliament. (Website http://www.parliament.sa.gov.au/)

Observations:

The Barossa Council has done a good job in Planning for Residential Growth, Use of waste water and development/management of Roads & Transport Infrastructure and development of public places/recreation sites such as libraries, children places, parks etc.

- The Barossa council has developed a comprehensive MIS based asset management system for infrastructure and integrated it with Geographical Information System (GIS). This Asset Management system is now assisting the Council in identifying the gaps, planning and development of new infrastructure, and importantly maintenance/redressing programs, particularly for the roads and transport network, waste collection network, storm water drainage system etc.
- The Council has developed a community based Waste Water Management System and is reusing the water for irrigation, Golf courses and other public areas. The system provides 150Ml's of reusable waste water, which will be increased to 500Ml's per year in future.
- The council has developed a number of public places such as parks, children areas and libraries providing free information, IT facilities and movies & story telling facilities for children.

Study group visiting MIS/GIS Section

Secretary LGRDD presenting souvenir to mayor of Barossa council

Visiting parliament guided Mr. Steven Griffiths (shadow minister)

Understanding GIS based Asset Management System

Day-08

Visit to Adelaide City Council where Ms. Carol Burkevics, Manager Corporate Strategic Planning briefed the group on 03 phase approach for Strategic Planning and Management adopted by the Adelaide City Council to meet the challenges.

In the afternoon group visit Adelaide City Council Town Hall (a historic building) where Mr. Mikchael Sedgam, General Manager for Corporate and Financial Performance welcomed the group. The group took a tour of the building guide by Mr. Glen Woodward. During the visit Mr. Glen illustrated the history, importance and use of the building in an impressive and innovative manner.

The study group was welcomed by Jane Gascoigne, Executive Director of Local Government and Executive Officer of South Australian Local Government Grants Commission for a presentation on role of Local Government, administration allocation of grants, legislative framework, working relation and mechanism with state and common wealth government and Outback Areas Trust.

Observations:

South Australian Local Government is successful in delivery of services because
- Most of the population of country is in urban or peri-urban areas.
- Total population of Australia is 21.549 and the density of population is 2.6/KM. So, the resources are much more than enough to meet the requirements.
- It was interesting to know that in South Australia, 15% of the States area is covered by Local Government Councils that has 99% of the population, with the remaining 85% having 1% of the population and under the control of the Outback Areas Trust.
- The history of South Australia is preserved in a very scientific and impressive way. Department of Culture, Heritage and Environment is responsible. A self sustainable system has been developed to preserve the history by promoting/developing the historic places as public/picnic places.

Day-09

The study team visited South Australian Water (SA Water), Water Supply and Management Authority. The group was welcomed by Mr. Roger Perry, Network Operations Manager and briefed on development of water sources, standards for installation of distribution network and water filtration plants, major issues faced by SA Water to meet the required quantity and quality of water and strategy developed to meet the challenge.

In the afternoon the group visited Mount Compass district to view the dairy farm and sprinkling system developed by using storm water to supplement rainfall for pasture growth.

Observations:

- In South Australia there is only one authority responsible for provision of safe drinking water in both urban and peri-urban areas.

- South Australian Water has adopted a five steps water filtration and supply process as given below:

    i. **Coagulation and Flocculation:** The first stage, to collect small particles and dissolved organic matter, is a complex physical and chemical process. A coagulant is added to the untreated water and this reacts with the impurities, forming them into "floc" particles up to 5mm in diameter.

    ii. **Sedimentation**: After 20 to 30 minutes in the flocculation tanks, the water and suspended floc particles pass through to sedimentation basins where, after several hours, most of the floc settles to the bottom of the basins and forms a sludge. The water, now containing only a small amount of very fine floc particles, passes on to the filters. The sludge is removed for further treatment and disposal.

    iii. **Filtration**: Water from the sedimentation process passes through a filtering media – usually a deep bed of sand or sand/anthracite dual media. As the water passes through the filter bed, any particles remaining from the sedimentation process are trapped in the fine spaces within the media resulting in clear, clean water.

    iv. **Disinfection**: Disinfection is achieved by adding chlorine, generally between the filters and the filtered water storage tank, to destroy any micro-organisms that are not removed in the flocculation and filtration stages. In longer water mains such as those in country areas, SA Water uses chloramination, a combination of chlorine and ammonia, for disinfecting water. Chloramine is more effective in these longer systems than chlorine alone. Both methods of disinfection are widely used across Australia and other parts of the world and have been for many decades.

    v. **Storage and distribution**: After disinfection the water passes to covered water storage tanks ready for distribution.

Day-10

A tour to Adelaide University, Art Gallary, Museum and debriefing session

Day-11

Departure to Pakistan.

Recommendations for AJK:

The study group thoroughly studied the technologies, traditions specially related to the rural development, water supply and environmental sanitation and recommends following actions to be replicated in AJK with necessary modifications:

a) Green waste should be properly used in construction of rural infrastructure such as footpaths, roadsides etc.

b) Greater water reservoirs of fresh water should be developed as it is developed in Australia (i.e. MyPonga)

c) Rain harvesting should be declared mandatory in bylaws of construction of houses, especially in peri-urban, urban and government buildings.

d) Wetlands should be developed in southern part of AJK. This will be helpful to recharge underground water.

e) Geographical Information System based Monitoring & Evaluation System should be developed to monitor the progress, evaluate the impact of infrastructure and to identify gaps for proper planning.

f) Solid waste in urban areas should be properly treated before disposal, and in rural areas household level waste management practices should be introduced.

List of Participants

S.No	Name	Designation
1	Sardar Muhammad Nawaz Khan	Secretary LGRDD, GoAJK
2	Arshad Ahmed Qadri	Superintending Engineer CISP
3	Sardar Gulzaman Khan	Dy. Director (Community Developmet)-CISP
4	Raja Zulqarnain	Dy. Director M&E- CISP
5	Babar Hussain Minhas	Dy. Director (Coord.) - CISP