

Jordan: Regional and Municipal Development Project

**Summary of the Environment Assessment based on the
Municipal Infrastructure and Service Delivery Assessment
Presented on September 11, 2006
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To Ministry of Planning**

Project Overview

1. The RLDP focuses on (a) improving the equity and adequacy of central-local resource transfers; (b) restructuring of the Cities and Villages Development Bank (CVDB) to improve its efficiency and diversify its financial products and service offerings to municipalities; (c) strengthening municipal financial management, revenue generation and service delivery capacity; and (d) improving regional planning and inter-municipal coordination to take advantage of economies of scale and strategic development opportunities. To this end, the project will be implemented within a governance framework of increased participation and downward/upward accountability, coupled with increased coverage and quality of municipal service provision particularly in underserved areas.
2. The project includes four components as follows: (1) *Strengthening National Level Institutions Involved in the Municipal Sector (estimated cost US\$2,80 million)*; (2) *Municipal Infrastructure and Services (estimated cost US\$22,20 million)*; (3) *Municipal Capacity Building (estimated cost US\$2,04 million)*; and (4) *Regional Economic Development Strategy & Investment Planning (estimated cost US\$0,70 million)*.

The Project will finance small-scale civil works (value below \$0,000,000) to improve municipal services and infrastructures, goods and technical assistance for capacity building of key institutions in the municipal sector. In particular, sub-projects would be identified by municipalities in consultation with their communities against a positive list of projects pre-approved in concept design for financing. The sub-projects eligible to receive funds would be as follows:

Infrastructure/service	Permitted sub-projects
Water network	- Construction of pipeline networks or rehabilitation of existing ones - Network equipment (valves, pumps, meters) construction and substitution
Wastewater network	- Construction of pipeline networks or rehabilitation of existing ones
Internal roads	- Opening and grading of new internal roads - Paving of existing internal roads
Curbs and sidewalks	- Construction of curbs and sidewalks along existing paved internal roads

Infrastructure/service	Permitted sub-projects
Solid waste collection	- Procurement of solid waste collection vehicles - Containers for solid waste collection
Street lightening	- New poles - Substitution of poles and lamps
Surface drainage	- Construction of drainage canals
Commercial markets	- Construction of stores for renting - Construction or completing the construction of vegetable markets
Urban parks, recreational & sport areas	- Establishment of public parks, sports centres and recreational areas or improving existing ones
Bus stations	- Construction of bus station or completing the construction of existing ones
Slaughter houses	- Construction of small to medium scale slaughterhouses

3. The positive list of eligible projects was identified in consultation with municipalities and local communities and compiled by the consultant, who carried out the infrastructure assessment under the PHRD project preparation grant. All municipalities were contacted with a questionnaire and 94% of them responded expressing their needs. In addition, in a sample of 20 municipalities, in-depth meetings and focus groups discussion with elected members of the municipal councils were carried out by the same consultant to finalize the list. Independently from the infrastructure assessment, the Social Assessment confirmed the validity of the positive list through intense consultations carried out in a sample of 9 municipalities. Consultations through meetings, focus group interviews and surveys of household (78 across the 9 municipalities, with 80% of women respondents) largely confirmed the validity of the positive list.
4. During project implementation, individual municipal applications for funds would be reviewed and scored on the basis of screening criteria including economic/financial, social and environmental considerations. In particular, projects that trigger environmental and social safeguard, and those requiring land acquisition or resettlement will not be considered for funding. It would be expected that some potential social and environmental negative impacts might occur due to the implementation of some specific sub-projects. These impacts would be easy to mitigate, as it will be described in more details respectively in the following specific Social and Environmental sections. The screening criteria were already tested during project preparation, as they were applied for the selection of the upfront 10% of investments to be ready for implementation at project inception. While the system proved to maintain enough flexibility to allow municipalities and their communities to express their needs, at the same time it was able to screen out and reject projects that could have triggered social (e.g. land expropriation) or environmental (e.g. disposal of special waste from large-scale slaughterhouses) safeguards.
5. Component 2 will be implemented by CVDB. The CVDB Project Coordination Unit will be strengthened through the recruitment of a dedicated social scientist and a full-time qualified environmental specialist, both with good understanding of the Bank's social and environmental policies in their respective fields of expertise, as well as experience on the ground in monitoring and mitigating the anticipated social and environmental implications created by the implemented sub-projects. The Project would further develop such capacity by financing additional safeguards training to CVDB and municipal operations staff.

Furthermore, the CVDB would aim at building further social and environment management capacities of local contractors through technical well structured training.

٦. The CVDB Social and Environment Specialists would be responsible for reviewing, advising and reporting respectively on social and environmental issues throughout the project life. Both specialists will be aided by competitively selected local firms, qualified in their respective fields, who would carryout on annual basis both a beneficiary impact assessment and an environmental audit, the latter reporting on the level of compliance with the EMP and recommendations to strengthen such compliance.
٧. The CVDB and eligible municipalities would also benefit from the services of qualified local consulting firms who will assist in the supervision of the infrastructure related activities. Over the years of Bank's operations in Jordan, several leading Jordanian consulting firms have developed good knowledge and experiences with Bank's social and environmental safeguards. This type of firms would be expected to be competitively selected to supervise sub-projects implementation on the ground, ensuring quality and the contractors' compliance with the EMP and appropriate management of any social issue that might emerge during implementation.

Social Safeguards

٨. Eligible sub-projects are not expected to trigger the resettlement safeguard, in accordance with World Bank Operational Policy OP ٤,١٢ (January ١٩٩٨), which refers to activities that will result in involuntary resettlement of people or economic activities or land acquisition.
٩. In order to ensure that this is actually the case, the positive list and eligibility criteria will be integrated by a set of specific questions related to safeguards. Any sub-project which answers 'yes' to any of the following four questions would automatically be classified by CVDB as ineligible:
 - (a) Will the project require the acquisition of land (public or private, temporarily or permanently) for its development?
 - (b) Will anyone be prevented from using economic resources (e.g. pasture, fishing locations, forests) to which they have had regular access?
 - (c) Will the project result in the involuntary resettlement of individuals or families?
 - (d) Will the project result in the temporary or permanent loss of economic activities, like crops, fruit trees, workshops, household infrastructures (such as granaries, outside toilets and kitchens, etc.)?
١٠. Moreover, as already pointed out, CVDB will be staffed with a social scientist trained and familiar with WB safeguard issues and OP ٤,١٢ who will be personally accountable for ensuring that this screening mechanism is fully functional and observed. Furthermore, an annual beneficiary impact assessment would be carried out by an independent firm contracted for this specific task.
١١. The municipalities will be made aware by CVDB about these screening criteria and apply them systematically. On the other hand, CVDB will undertake a review (both of the identified first ١٠% of priority sub-set of projects and as a mechanism for all subsequent demand-driven investments) to ensure that there is an accurate and unequivocal response to the preceding

questions. Provision to conduct such social screening will be put in the operations manual with clear TORs for any required consultant services. In addition, the project team (both CVDB and the Bank) would conduct spot checks on prospective or actual sub-project sites to ensure quality.

Environment Safeguards

12. **Environmental Category:** This Project would include small-scale investments in eligible municipalities selected based on the positive list and pre-approved selection criteria. They will include rehabilitation of basic municipal infrastructure and services and municipal assets that provide services while generating revenue streams (e.g. vegetable markets, bus/transport terminals, small-scale manufacturing areas, tourism facilities, etc.). The use of municipal asset management strategies/plans will be supported, together with methodologies for participatory planning, budgeting and implementation at local level.
13. During the implementation process, some negative environmental impacts which are easily mitigated may occur due to the implementation of the rehabilitation and maintenance sub-projects. As a result, this Project is rated a category “B” in accordance with World Bank Operational Policy 4.01 (January 1998) and requires the preparation and implementation of Environmental Assessment (EA) including preparation of project specific Environmental Management Plan (EMP). The EMP would aim to provide a review, analysis and recommendations of appropriate mitigation measures to be taken into consideration during sub-project design and implementation by the CVDB project team, municipal officials, sub-project design and supervision consultants and implementing contractors.
14. **Environmental Assessment (EA):** An EA was carried out by MOPIC through a contract with specialized international consultant firm who delivered the EA on September 11, 2006. The EA process was of participatory one which featured stakeholder workshops and focused meetings with municipal councils, business owners, residents, NGOs and special interest groups.
15. The aim of the EA is to identify possible impacts, positive or negative, which the financed sub-projects may have on the immediate environment including the beneficiaries. The final report presented the findings in terms of special socio-economic characteristics of sample eligible municipalities, legal, regulatory and administrative frameworks currently in use, definition of base-line environment conditions, potential environmental impacts which may be caused by the activities that would be financed by the project.
16. The environmental parameters addressed in the EA included:
 - Dust and gases emissions
 - Water (wastewater, surface water discharge, storm water)
 - Construction waste
 - Accidental risks
 - Loss of vegetation
 - Aesthetics
17. The typical sub-projects that would be financed by RLDP are related to rehabilitating basic municipal infrastructure and services focus will also be on developing municipal assets that provide services while generating revenue streams (e.g. vegetable markets, bus/transport terminals, small-scale manufacturing areas, small and medium scale slaughter houses, tourism facilities, etc.). Other investment would be in the area of developing municipal asset management strategies/plans together with methodologies for participatory planning,

budgeting and implementation at local level. The potential impacts would be those associated with:

- (i) construction activities associated with rehabilitating streets and infrastructure (construction safety, noise, dust, waste material, and vehicular traffic);
- (ii) provision of sanitary and electricity services;
- (iii) construction of parking structure, and installation of street signing and lighting;
- (iv) landscaping and re-vegetation activities.

18. The potential adverse impacts would be restricted in scope and severity, such as:

- Dust, noise and odor due to demolition and new construction;
- Dumping demolition and construction wastes and traffic accidental risk, etc;
- Risk for aesthetic and vegetation;
- Risk for inadequate handling of waste material during construction and operation;
- Risk for road accessibility and health;
- Disposal of solid and liquid waste generated from slaughter houses, and
- Risk for Cultural Heritage Assets.

19. On the one hand, the EA, which was part of the Municipal Infrastructure and Service Delivery Assessment, has identified that most of these sub-projects will contribute positively to the municipalities that are situated in whether in terms of improved access to essential social and other services, improved quality of environment and sanitation, will provide opportunities temporary employment opportunities during construction and more sustainable ones during operations and maintenance especially in municipalities that are under-served, will contribute to the improvement of the surrounding environment and access to them. On the other hand, the Assessment has highlighted potential negative impacts in terms of possible increase in gas emissions due to generated and/or increased traffic, increased level of noise, improper disposal of construction waste, potential for threat to cultural assets if mitigation measures were not adopted.

20. **Environmental Management Plan (EMP):** The EMP has been prepared based on the existing environmental situation and the assessment requirements. Based on the assessment of the typical sub-projects that are likely to be financed, the EMP highlighted the following elements:

- Site-specific environmental screening review and assessment of key environmental issues;
- An environmental audit of similar sub-projects and regular maintenance and rehabilitation of essential infrastructure;
- Ensure adequate consultation during the assessment process;
- Develop an Environmental Monitoring Plan;
- Develop methodologies and procedures to be applied in context of the EMP;
- Grouping the projects into the four sectors of streets and street furniture, structures, landscaping and re-vegetation.

21. The EMP is prepared in compliance with the Jordanian environmental laws and regulations and municipal bylaws. It provides tools for the evaluation and management of the impacted environmental parameters and they are:

- Dust and gases emissions
- Water (wastewater, surface water discharge, storm water)
- Construction waste
- Accidental risks
- Loss of vegetation

٢٢. The EMP elaborated the requirements for the environmental management and monitoring of the RMDP and provided tools for the environmental auditing. The overall assessment is provided by means of general judgment and statements using tables, which can be summarized that the RMDP typical sub-projects are positive and their noted negative impacts are manageable and can be controlled.
٢٣. **Site specific Environmental Screening, Review and Assessment.** The CVDB environmental specialist (environment coordinator), aided by contracted qualified environment consulting firm, will have the responsibility of reviewing and assessing the environmental feasibility of the proposed sub-projects. The coordinator will also liaise with key stakeholders including eligible municipalities, MOMA, MOA, and MOE. Recognizing that Jordan is rich with cultural heritage assets, some of which has yet to be uncovered, the coordinator will also liaise with the appropriate officials from the Department of Antiquities at the Ministry of Tourism and Antiquities when needed.
٢٤. The coordinator and firm will also prepare generic Environment Assessment (EA) standard for small and medium scale slaughter houses (SH). Emphasis will be focused on disposal of solid and liquid waste as well as sanitary operations. If larger scale SH is identified they will ensure that full fledged Environment Impact Assessment (EIA) acceptable to the Bank will be carried out and cleared by the Bank prior to financing.
٢٥. An environmental audit of a sample of implemented sub-projects will be carried on an annual basis by an independent qualified environment consultant recruited by the CVDB and financed by the project. This consultant will also assess the eligible municipalities' capacity and performance and recommend areas that need further strengthening.
٢٦. **Mitigation Measures:** The primary objective of the EMP is to define the necessary mitigation measures that would be considered / implemented at the various stages of project implementation (design, construction and post construction). The type and magnitude of the impacts vary from one sub-project to another depending on the scale, local hosting environment and tools adopted for physical implementation. The EA preparation adopted a methodology of consultation and requesting feedback from potential beneficiaries through well designed and structured consultation process with key stakeholders. The discussion focused on public and environmental health, water and sanitation, solid waste, noise and psychological comfort, land use, air pollution and public safety.
٢٧. The results of the stakeholder consultation are considered as indicators of the improvements in the different environmental subjects. Both positive and negative impacts on the environment and social life are presented in details as the findings of the EA. Daily supervision of the construction activities will be carried out by the supervision consultants. Annual specialized and more focused environmental audits and reporting will be carried out by another specialized environmental firm contracted specifically to review and report on the compliance of the EMP. The attached responsibility matrix shows the expected impacts covered by the types of sub-projects and lists the mitigations to be implemented prior, during and post construction phases of the sub-projects.
٢٨. **EMP Cost Estimate and Schedule:** The cost associated with implementing the EMP is accommodated by the project and estimated at around US\$١٩,٤٠٠. First, the project will finance as part of the project management fee the cost of a full-time environmental specialist to join the CVDB operations team as well as the cost of a supporting specialized firm to carryout annual audits and review of compliance with the EMP. Second, the project will finance training workshops addressed to CVDB and municipal operation staff and eligible contractors. Finally, it will finance public awareness campaigns at each of the municipalities to ensure public knowledge of the project objectives, description and what activities will be

launched in their communities. Moreover, the supervision consultants and the contractors will share the project implementation plans including any specific actions that will take place during construction. This includes vehicular traffic detour plans, temporary interruption of water and electricity supplies, etc.

۲۹. The EMP also delineates post construction activities that will be necessary to be carried out and financed through the annual municipal and central government budgets to ensure sustainability of benefits and safeguarding the new assets. This includes operations and maintenance of new assets and rehabilitated infrastructure.

Table \): Environmental Management and Monitoring Plan Matrix

#	Sector	Phase	Impact	Mitigation Measure	Implementing Party	Daily Supervision & Reporting	Annual Audit and Reporting		
1	Rehabilitation of streets and Infrastructure Sub-Projects	Construction	<u>General Issues</u>						Specialized Environment Consultant
			Discomfort from local residents and business community	Carryout a Public Awareness workshop prior to stating Construction introducing the Construction Plan and Mitigation Measures.	Municipalities with support from Supervising Consultant & Contractor	Supervising Consultant			
			Illegal waste disposal	Identify and inform the public of the approved disposal site.	Municipalities with support from Environment Consultant	PM			
			Traffic Congestion	Design a Vehicular Traffic Detour Plan and inform the public.	Municipalities with support from Supervising Consultant & Traffic Police	Supervising Consultant			
			Temporary disconnection of water and electricity supply	Timely and advance notice issues to public prior to disconnection of supply.					
		Post Construction	Interrupted compliance of the Public with municipal ordinance.	Bi-annual cleanliness campaign to ensure continuous reminder of the need to maintain the new assets. Issuance of warnings and then fines to frequent violators.	Municipalities	Municipalities			
		<u>Air Pollution</u>					Contractor	Supervising Consultant	Specialized Environment Consultant
		Construction	Dust generated by construction activities.	Monitor the excavations. Applying (spraying) water where possible. Avoid work during windy days.	Ensure regular maintenance of construction vehicles and equipment used in the construction area.				
				Increase in Fumes generated from vehicular traffic		Design and implement a sound traffic detour plan.			

	congestion.	Large construction vehicles to avoid movement during peak traffic hours.			
Post Construction	Fumes generated from vehicular traffic.	Monitor levels of fumes and control traffic movement on congested streets. Control access of loading and unloading vehicles to preset timing avoiding peak traffic hours.	Municipalities and Traffic Police	Municipalities	
Construction	Increasing the concentration of noise.	Proper scheduling and working hours and of any risky activities.	Contractor	Supervising Consultant	Specialized Environment Consultant
		Avoid construction work during weekends, holidays and special events.			
		Ensure regular maintenance of construction vehicles and equipment used in the construction area.			
Post Construction	Noise generated from vehicular traffic.	Prohibit use of vehicle horns in special areas. Issuance of fines to frequent violators.	Municipalities and Traffic Police	Municipalities	
Construction	Loss of aesthetic features due to illegal dumping.	Identify proper disposal site.	Municipalities with assistance from the Environment Consultant	Supervising Consultant	Specialized Environment Consultant
		Construction waste disposal should be only at the properly identified and approved disposal sites.	Contractor		
		Removal and clean up of illegally dumped municipal waste and issuance of warning notices to violators. Frequent clean up of waste generated from vegetable market and the business district.	Municipalities	Municipalities	

Post Construction	Loss of aesthetic features due to illegal dumping.	Removal and clean up of illegally dumped municipal waste and issuance of warning notices to violators. Frequent clean up of waste generated from vegetable market and the business district.	Municipalities	Municipalities	
<u>Water and Wastewater</u>					
Construction	Water and Wastewater: Potential accidental break of other water lines and other utilities.	Survey of existing facilities during the design. The contractor consults relevant utilities, agencies or companies.	Contractor	Supervising Consultant	Specialized Environment Consultant
	Construction liquid waste generated.	Proper disposal of construction waste including waste generated from construction machinery (used oil, lubricants and fuel) and construction vehicles.			
	Temporary disconnection of water supply due to replacement of pipes.	Proper coordination with Municipalities and the Ministry of Water. Ensure timely replacement of pipes and resumption of supply.			
Post Construction	Routine maintenance of the new infrastructure assets.	Allocate adequate financial resources in the annual municipal budgets.	Municipalities	MOMA	
<u>Uncovered Historical and Cultural Heritage Assets</u>					
Construction	Accidental excavation of cultural heritage and archaeological assets.	Stop construction activities. Immediately notify Ministry of Tourism and Antiquities.	Contractor	Supervision Consultant	Specialized Environment Consultant
	Delays in implementing the project.	Identify the significance of the uncovered archaeology, prepare a time-based action plan and share it with key actors. Advise contractor to temporarily move to a new location:	Antiquities Department at MOTA	MOTA	
	Potential tempering with newly found archaeological assets.	Fence the location and limit access to site.	Antiquities Department at MOTA	Supervising consultant	
Post construction	Potential tempering with newly found archaeological	Continue to ensure Fence the location and limit access to site.	Antiquities Department at		

			assets.		MOTA		
ε	Road Lighting and Street Furnishing	Construction	Risks during maintenance activities (electric shocks, fallen objects, cutting wires).	Maintenance activities should be carried out in off-peak periods.	Contractor	Municipalities & Supervising Consultant	
			Electricity cut off due to maintenance activities.	Follow safety measures and conditions.	Contractor	Municipalities & Supervising Consultant	
		Post construction	Electricity poles hinder the movement and traffic.	Relocate electricity poles.	Consultant and Contractor	Municipalities & Supervising Consultant	
				The cables, which are very close to houses, should be replaced and insulated.	Contractor	Municipalities & Supervising Consultant	
			Routine checks to installed poles.	Municipalities	Municipalities		
				<u>Slaughter Houses</u>			
ο	Slaughter Houses	Design	Poor consideration of environmental issues during design	Ensure that an EA is carried out for small size SH (Types B and C SHs, as per the Jordanian classification of SHs), while a full fledged EIA acceptable to the Bank is carried out prior to financing of medium-size SH (e.g. Type A SHs, as per the Jordanian classification of SHs).	CVDB/Environment consultants	MOMA	
		Construction	Inadequate compliance by design and EA/EIA recommendations	Ensure full compliance	Contractors/Municipalities	CVDB	
		Operation	Illegal dumping of SH liquid waste into the public wastewater network.	Ensure that proper operations procedures are adopted and implemented throughout life of the investment. This includes the collection and safe disposal of solid and liquid waste in	Facility Operator	Municipalities	Ministry of Environment and MOMA

sanitary landfills.

Table 2: EMP Cost Estimates:

Activity	Quantity	Unit Rate in US\$	Total in US\$
1. Recruit Environment Specialist to join the CVDB operations team	1	16,400/month	196,800 ¹
2. Recruit Specialize Local Environment Consulting Firm to supervise and report on compliance with the EMP.	1	10,000/year	40,000 ¹
3. Recruit Social Specialist to join the CVDB operations team	1	16,400/month	196,800 ¹
4. Capacity Building and Training for CVDB and municipal operations staff and contractors (workshops).	2	10,000	20,000
5. Costs associated with mitigation measures to be added to physical contracts	multiple	0% of contract value	TBD ²
6. Miscellaneous.		5,000/year	20,000
Total			413,600

NOTE: ¹This cost is based on a full-time local consultant assignment of 4 years (RLDP project duration).

² This cost is part of Component 2 of the project and not part of the EMP.