ENVIRONMENTAL ASSESSMENT OF THE POLICY MATRIX

Supplementary Appendix to the
Report and Recommendation of the President
to the Board of Directors

on the

SINDH DEVOLVED SOCIAL SERVICES PROGRAM

PAKISTAN

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ENVIRONMENTAL ASSESSMENT OF THE POLICY MATRIX AND MANAGEMENT PLAN

A. Introduction

1. An initial environmental examination (IEE) of the proposed Devolved Social Services Program (DSSP) was carried out to identify necessary measures to prevent or mitigate any adverse environmental impacts, which could possibly arise from its implementation. The DSSP is classified as environmental category B. The environmental assessment of the policy matrix analyzed the scope of the potential environmental, health, safety and social impact of the DSSP.

B. Description of the Program

2. Stagnating school enrollment, high mortality and, malnutrition rates, and rapid population growth have major impact on well-being, the economy, and the environment. These are linked to poverty, gender imbalance and run-down social services in rural areas and urban slums, which are in turn linked to governance and financing problems. The DSSP aims to improve education, health and drinking water and sanitation in all districts of Sindh Province. It will support local governments (LGs) and community-based organizations with flexible financing to improve and expand social services with priority for the poor, women and vulnerable. The program is supported by policy reforms and a technical assistance loan for capacity building.

C. Environmental Assessment of Policy Interventions

3. The environmental assessment of policy actions identified some potential negative environmental impacts of DSSP, and mitigating measures are recommended. The major concerns are regarding hospital and health center wastes, and the limited capacity and commitment of LGs to address environmental issues. DSSP is expected to have a positive impact on the environment. The attached table provides the environmental assessment of policy interventions.

D. Environmental Management Plan

4. Civil works will be subject to the environmental classification. The Program Support Unit (PSU) with an environment expert will establish whether an IEE for facilities is required. IEEs will be (i) based on the results of the civil works surveys and social analysis; (ii) designed in accordance to the Sindh Provincial Government (SPG) and Asian Development Bank (ADB) requirements by local design institutes in charge of design of civil works; and (iii) approved by the Health Department. Environmental monitoring procedures during design, construction and operation will be specified and monitored through the implementation of an environmental management plan (EMP) designed for each health facility. The EMP will comprise of the design and implementation of mitigation measures, and specify monitoring activities to ensure compliance. EMPs will be designed by local design institutes and approved by the Health Department and include (i) action plan on staff hygiene education; (ii) handbook on operations and maintenance procedures; (iii) internal and external monitoring procedures; (iv) financial sustainability plan for operating facilities, and follow-up monitoring plan; (v) contracts with qualified technical permanent/contractual staff to operate facilities; (vi) contracts with local authorities for emptying septic tanks on a regular basis; (vii) contract agreements for disposal of medical waste to the landfills, and for disposal of human waste to furnaces; and (viii) training

courses in operating the environmental equipment; safe management/disposal of medical waste and water conservation practices; and employee health and safety training.

5. Civil works surveys, IEEs and EMPs will be designed in a participatory manner through input of local information, and intensive public discussions with health and education providers, hospital management and personnel, district administrators, and village development committees. Environmental public information campaign and training will be part of sector wide information system and public information campaigns.

6. The Provincial Steering Committee, chaired by the Planning and Development Department and including concerned line departments, communication and works department and finance department as well as members of civil society, will provide overall direction and supervision of the implementation of environmental mitigation measures. The PSU will be responsible for administering the environmental monitoring system. It will ensure the incorporation of environmental due diligence into the program cycle, incorporate environmental mitigation measures into the design, construction and operations supported by the DSSP, and provide SPG and ADB with timely information on progress towards the expected outputs. A civil engineer/environmental specialist will serve as a full time PCU staff. His/her responsibilities, apart from policy work on sanitation and solid waste management, will include (i) overseeing the development of environmental items in the selection criteria for constructions; (ii) assisting civil works survey concerning environmental issues, including source drinking water quality testing; (iii) participating in the selection of constructions; (iv) liaising with the health department on environmental classification of civil works; (v) establishing contact with local key stakeholders; (vi) overseeing the development of IEEs and EMPs by selected design institutes; (vii) administering monitoring surveys during the construction phase and audits after the completion of construction; and (ix) developing reports on the implementation of the construction specific EMPs on a semi-annual basis, reported to the Provincial Steering Committee and ADB.

7. The concerned environmental wing in the Planning and Development Department, SPG, will be responsible for (i) environmental clearance of physical investments; (ii) environmental compliance monitoring during construction; and (iii) routine environmental monitoring. Municipalities will be responsible for (i) testing and approval of water supplies; (ii) routine water quality monitoring; (iii) aspects of public health education and awareness; and (iv) public health monitoring. The SPG will be required to ensure that municipalities take action to carry out drinking water quality testing for bacteriological and conventional pollutants according to their mandate, and as a part of DSSP counterpart contribution.

E. CONCLUSION

8. The screening process carried out in this environmental assessment has identified some potential environmental impacts of DSSP, and their mitigation measures are recommended. DSSP will improve environmental conditions in communities and reduce poverty through access to improved health and education, improved environmental management of hospitals and health centers, and therefore will have major positive environmental impacts. DSSP will provide for the improvement of drinking water supplies and sanitation as defined above; and introduce appropriate medical waste management, adequate wastewater treatment, and safe drug and reagent management. These measures will have a significant positive effect on public health.

ENVIRONMENTAL ASSESSMENT OF POLICY INTERVENTIONS

Policy Intervention	Economic & Social Outcomes	Environmental Impacts	Mitigation Measures
Financing and Governance			
Allocation and transfer of funds to LGs for social sectors.	Will increase financing of devolved social services, increase transparence and promote social and environmental benefits to the population.	LGs and CBOs may finance projects without integrating environmental considerations in the planning, implementation and monitoring process.	Guidelines and procedures will be established for the use of funds provided to LGs and CBOs. Project selection criteria will be established with proper environmental screening procedures and management in place.
Expenditure of funds will be carried in a participatory manner.	Needs of the local population will be addressed. Accountability to the population will increase.	Consultation of the environmental impacts of project may be inadequate. Monitoring of project activities may be weak.	Consultation on environmental impacts should be built into the general consultation program. An appropriate environmental management plan drawn up by the local government and CBOs for each project. Local government trained in environmental management.
Community participation and gender			
Ensure participation of women in decision making bodies.	Increased participation of women in decision making bodies and promotion of interest of women and social services.	Participation of women may have positive impact on environmental issues.	In order to maximize the participation of women, train women and increase awareness of environment-health related issues.
Improve local government capacity for planning, coordinating and monitoring social service sectors.	Increased accountability of local government in these sectors, increased efficiency in allocation and use of resources based on priority of communities.	Environmental considerations may not be integrated into the planning process, and monitoring capacity of environmental management plans may be weak.	Capacity building and awareness raising to integrate environmental considerations in planning and training in environmental monitoring and management.

Policy Intervention	Economic & Social Outcomes	Environmental Impacts	Mitigation Measures
Education			
Establish home schools in villages that lack schools, to increase literacy of girls.	Increased literacy of girls	Potential positive benefits depends on the curriculum	Incorporate environmental issues in the curriculum
Improve basic school conditions for classes 6–10.	Better education for children and greater incentive to go to school and role of teachers enhanced.	Apart from some minor disturbances during the construction, this should be beneficial for the school environment.	Incorporate environmental improvement in the upgrading plans.
Institutionalize district planning process to rationalize and develop education services.	Again, this is an opportunity to incorporate an environmental plan	Low priority to environmental issues	Conduct awareness campaign, also use media and role models
Health			
Explore policy to improve access to health, nutrition and family planning services on a sustainable basis. Develop a plan to rationalize and operationalize health services.	Child mortality of common diseases such as diarrhea and pneumonia will be reduced. Maternal mortality will be reduced. Increased operationalization of health services, increased staff and budget, better location and accessibility.	Potential transmission of infectious diseases through inadequate management of waste from medical facilities. Containers are defective; hospital incinerators are often not being used. Technical methods of disposal are poor and inappropriate due to lack of regular and safe disposal facilities. Transmission of diseases such as Hepatitis B due to contaminated needles and blood products as a result of inadequate disposal of used needles. Expired drugs are disposed of in ordinary waste.	As per World Health Organization standards, SPG and DGs will ensure that approaches to the management of medical waste are in line with national laws and regulations. As a condition for funding, each hospital and clinic will create a waste management focus point, set up waste collection and management system, and train staff. Existing hospital incinerators will be inspected and will be upgraded to meet national standards. If no combustion capability is available, other appropriate equipment will be installed at hospitals. Solid and non-infectious waste will be disposed of on site or at an upgraded designated landfill. The program will support the use of on-site septic tanks for health facilities. Chemicals to run the septic tank treatment processes will be provided (e.g. lime chloride).

Policy Intervention	Economic & Social Outcomes	Environmental Impacts	Mitigation Measures
Water and Sanitation Develop TMA database for quantity and quality of drinking water supply, drainage, sewage treatment and solid waste disposal. Develop an interim policy for rationalizing water supply schemes for improved service delivery and sustainability. Develop an action plan and recommendation to TMAs and Union Administrations for improving garbage collection and disposal.	Will increase awareness of the scale of the WS problems among elected officials, including the scale of industrial pollution. Reduction of morbidity associated with improper water treatment and distribution. Increased provision of WS and reliability of the system. Increase public awareness and improve attitudes towards public hygiene, garbage disposal, and disposal of hospital waste.	Plans for improvement of water supply will have a positive impact on quality of water resources, on morbidity with waterborne diseases, development and on supervision of leak detection programs, underground. It could have negative impacts on disposal of water treatment sludge, underground water pollution by construction run-offs, disturbances during construction.	DSSP will affect improvements in the physiological and microbiological quality of water supplied to consumers through a comprehensive water quality-testing program. Proper handling and concentration procedures for sludge collection, appropriate methods for storage of waste materials and dispose waste on site. Proper following of construction norms, control of operations, and chlorine emissions preventions. Appropriate environmental management plan in place for any repairs and upgrades of WS systems. Construction of waste disposal: minimize waste generation during construction, reuse of construction waste where appropriate. Ensure that landfill has been lined to protect soil and groundwater from leachate. Set up appropriate garbage collection system using a consultative and participatory approach.

CBO = community-based organization, DG = district government, DSSP = devolved social services program, LG = local government, SPG = Sindh Provincial Government, TMA = Taluka municipal administration, WHO = World Health Organization, WS = water and sanitation