Draft

Punjab Sanitation Policy

Government of the Punjab

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Contents

1. Introduction

Sanitation is one of the basic necessities of human life and its dignity. Poor sanitation whereas harms the human health also gives birth to multiple socio-economic and environmental concerns. Around 80% of all diseases are attributed to water and sanitation related causes. Inadequate disposal of human excreta and personal hygiene are associated with a range of diseases including polio, diarrheal diseases, jaundice, typhoid, malaria, dengue viral fever and cholera. The economic costs poor bear for cure of these diseases (i.e. expense on medical treatment, loss of productive time and loss of income) pushes them deeper into the vicious cycle of poverty and results in putting a high burden on government's purse.

United Nations General Assembly, on 28 July 2010, through Resolution 64/292, explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights.. It is widely recognized and documented that lack of access to this essential basic service is associated with adverse impact on public health and environment. The Millennium Development Goals (MDGs) entrust upon the signatory nations to extend access to improved basic sanitation to at least half of the un-served population by 2015 and to 100% population by 2025.

The South Asian countries initiated the ministerial level South Asia Conference on Sanitation (SACOSAN) in 2003 to accelerate regional progress towards the MDG of sanitation. So far, four conferences have been held: SACOSAN-I (Dhaka 2003) emphasized the need for promoting proper sanitation as a people-centered, community led, gender-sensitive and demand driven approach. SACOSAN-II (Islamabad, Pakistan 2006) recognized sanitation as the basic human need and urged for promoting equity through effective targeting and participative approaches. SACOSAN-III (New Delhi, India, 2008) spelt out specific actions that needed to be implemented at household, local, sub-national and national levels to accelerate the implementation of regional sanitation agenda. SACOSAN-IV (Sri Lanka, April, 2011) aimed to accelerate the progress of sanitation and hygiene work in South Asia so as to enhance its peoples' quality of life in fulfillment of MDGs. SACOSAN-V (Oct, 2013) commits to an Open Defecation Free (ODF) South Asia by 2023 and to move progressively towards sustainable environmental sanitation.

The second South Asia Conference on Sanitation (SACOSAN II) brought the sanitation agenda on the National level debate in Pakistan. Key stakeholders' continuous efforts resulted in formulation of National Sanitation Policy which was approved in 2006 by the Federal Government. The Policy highlights social mobilization as a key component in addressing sanitation issues at the household level especially in the rural areas. The National Sanitation Policy envisions creation of an open defecation free environment with safe disposal of liquid and solid waste and the promotion of health and hygiene practices in the country. The social mobilization approach was also highlighted as an effective tool for involvement of the community activists. National Sanitation Policy also aims to promote Community Led Total Sanitation approach (promoting self-help & no subsidy) to achieve the goal of provision of adequate sanitation facilities for improving the quality of life of the people of Pakistan.

In the light of recent changes to the constitution, i.e. the 18th Amendment, the governance of water and sanitation became provincial subject in which role of federal government is minimal.

This is an important factor to devise provincial sanitation policy. It is pertinent to mention here that province fully own the sanitation domain after 18th amendment.

Government of Punjab (GoPb),by developing sanitation policy, has promised to fulfill its commitments and responsibilities in achieving MDGs has developed and approved Punjab Drinking Water Policy in May 2011. Recognizing the significance of sanitation, GoPb thought of formulating Sanitation Policy for the province. The Policy intends to provide a broad framework and policy guidelines to provincial institutions, District Governments and Tehsil Municipal Administrations in order to improve sanitation coverage and services in the province. The Policy document also provides a structure for addressing the institutional, administrative, legal, regulatory, fiscal, social & environmental issues and challenges faced by the sector actors. The policy is aligned with the National Sanitation Policy 2006. However, the provincial context and the needs have been addressed as per factual situation analysis and requirements of multiple institutional set up catering sanitation services in the province.

The provincial government, by developing sanitation policy, has promised to fulfil its commitment of provision of basic sanitation services for all, as a fundamental human need and a basic human right. To follow on government is also preparing Provincial Sanitation Strategy to translate the policy into strategic actions.

2. Provincial Context

2.1. General

In terms of area Punjab is the second largest province of Pakistan after Baluchistan with 205,344 km^2 (79,284 sqm) of land while it is the most populous province of Pakistan inhabiting 99.8 million people which makes 56% of total population of Pakistan. Of the 99.8 million population living in the province, 32% (31.9 million) lives in urban and 68% (67.9 million)[1] in rural areas. With the population growth rate of 2.1, it is predicted that the population of Punjab will be doubled in twenty years' time. Province consists of five city districts, 36 districts, 141 Tehsils, 3,464 union councils and 25,914 villages. Climatically, Punjab is in arid zone as average rainfall ranges between 96 cm sub-mountain region and 46 cm in the plains. The literacy ratio above 10 years is 59% in which women literacy is 50% and men is of 65%. The under-five mortality rate in Punjab is estimated at 96 deaths per 1,000 live births while the infant mortality rate (for children under 1 year of age) is 76 deaths per 1,000 births.[2]

2.2. Demographic Patterns

Rapid urbanization created a gap between the demand and supply of housing units mostly for low income communities. To fill this gap mushroom growth of Informal housing in shape of

[1] *Punjab Development Statistics 2014*
[2] *MICS Survey of Punjab, 2014*

under serviced Katchi Abadis and slums has been witnessed over the period. It is a careful estimation that approximately 60% of larger cities are part of these informal under serviced areas. Sanitation policy needs to address the sanitation issues of these areas on priority basis. Densification and enlargement of villages is another demographic change occurred in the recent times. These large villages lack basic sanitation facilities. Many long corridors of development developed along the connecting roads are also a major demographic change occurred over the years. They too are devoid of sanitation services.

2.3. Coverage

In Punjab 75.1%of the population live in households using improved sanitation facilities with 74.4% of the population using flush toilets (MICS 2014). This percentage was 92 in urban and 64 percent in rural areas. Flush toilets piped to sewerage system was the most common sanitation facility in major cities (78.9%) whereas flush to septic tank was most common in both rural (49.1%) and other urban (52.4%). No facility, bush or field (i.e. unimproved facilities) were most common in rural areas (33.1%). Only 57 per cent of households dispose of wastewater properly (96% in major cities, 88% in other urban areas and 41% in rural areas). Improved sanitation is more seen in the districts with better wealth and economic indicators.

A larger percentage (57%) of mega and intermediary cities has underground drainage facilities. But in villages and small towns the underground drainage is very low. Open surface drains are commonly constructed in rural areas for drainage purposes. This type of drainage system is not health friendly and become source of diseases and damages buildings/structures due to incessant seepage. Furthermore open surface drains are not durable and get damaged in shorter span resultantly require reinvestments.

In the absence of sewage treatment plants, natural water bodies are heavily contaminated. Studies shows that the river Ravi below Shahdra is already loaded far beyond its assimilated capacity[3]. Raw sewage in all the cities is either used for irrigation purposes or discharged into fresh water bodies through a network of drains, which ultimately falls into the rivers. Water from these water bodies and rivers is again used for irrigation and drinking purposes in the downstream areas. All this has serious environmental concerns and impacts on the urban and rural ecosystem and human health. For example in Punjab none of the cities has a proper wastewater treatment system, except in Faisalabad. Even Faisalabad's waste water treatment system has a limited capacity of treating only 20 per cent of the total wastewater generated in the city. There are some individual wastewater treatment plants owned by industries for export business and installed under the international environmental governance by the buyers.

Only 14 per cent of households had a proper solid waste disposal system (i.e. collected by a municipal institution, disposed of by solid waste management department or collected from the home by a private company vehicle). More than 75% households in Punjab (46% urban, 99% rural) dispose of solid waste in open fields. Absence of proper collection, disposal, dumping and

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[3]. *Tariq M.N and Waris Ali: Discharges Exceeding Assimilative Capacity: Institute of Public Health Engineering Research, UET, Lahore, 1988*

recycling systems is the main factor creating mismanagement of solid waste. The availability of landfill sites and recycling plants is minimal in towns and cities.

2.4. Environmental Dimension

Unplanned urban sprawl and the associated environmental sanitation issues causing severe environmental impacts. Slums devoid of sanitation facilities are growing at a rapid pace resulting in degradation of cities' environment. Degradation of surface water bodies and sub soil water by discharge of untreated municipal effluents from urban centres and less sewerage coverage in rural areas are the main environmental concerns which need specific policy measures to address them in totality. Furthermore, climate change affects and frequent disasters especially floods have strong bearing on the environment. Another, more precarious dimension is outflow of industrial waste into the water bodies causing sever chemical contamination resulting in great threat to groundwater contamination, fatality in aquatic life and damage to the vegetation and agriculture. In case of food crops chemical contamination reached to food chain and as result thereof causes numerous diseases in humans. This aspect needs stringent policy measure to curtail it to save ecosystem

2.5. Social Dimension

A national survey of knowledge levels, attitudes towards and practices for sanitation and hygiene revealed that the majority of Pakistanis do not have a clear understanding of the relationship between unsafe excreta disposal and diarrhea[4]. There was not much difference in the frequency of diarrhea episodes between households having latrines and those without latrines indicating that latrines alone do not have an impact unless behavioral patterns associated with hygiene practices are also ensured. During the course of interaction with the community, experts observed that a family roughly spends 1000-1500 rupees per month to cure health problems caused by poor sanitation. This expense if made for improvement in sanitation would reduce the disease burden and make them economically better off. This awareness needs to be given to the community. Furthermore, there are hardly public toilets available in the public going areas. In schools most of the toilets are dysfunctional. Sanitation workers are low-paid, looked down upon and their rights are usually trampled in the society. These are some key social issues needs to be tackled for effective delivery of sanitation services.

Exclusion of pro poor, low income and marginalized segments of Punjab province from the fruits of development is one of the key factors in keeping them lag behind in the development. These segments need to be catered for sanitation services and they should also be involved in the planning process.

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4. *GALLUP/BRB 2001: National KAP Study on Sanitation and Hygiene Practices; UNICEF, Pakistan*

2.6. Resource Dimension

GoPb allocates funds for the sanitation on annual basis. The spending in sanitation is less as compared to water. Government also seeks financial assistance from donors and external resources in shape of grant and loans. The loan projects in fact levies burden on the government. Secondly many of the loan projects met failures owing to their disconnection with the overall development framework. A lot of investment can be generated by instituting community contribution through component sharing approach (Changa Pani Program in Lahore is a success). Using local as well as external (Donor's) resources should be used as funding opportunities for the sector.

Fund allocation for sanitation as compared to other sectors is less. It is pertinent to note here that spending on sanitation would reduce spending on health cure. So, an equity based approach is needed for the allocation of funds for sanitation sector. Similarly the equity needs to be ensured by allocating more funds to the low income areas.

Piece meal allocations to development schemes not only delays completion of work but also lead to damaging of partially completed civil works. Such practices need to be stopped while allocating funds for schemes.

2.7. Technical Dimension

Government has developed sanitation infrastructure in many major and intermediary cities. However, except for few cities none of the city has maps of their area of jurisdiction. This is a major lacuna in the way of understanding that what has been done and what is left. Physical documentation not only helps in monitoring of existing system but also provides basis for planning for new areas. The mapping/documentation has become a specialized field by the use of Remote Sensing and GIS technology, which are hardly adopted by our sanitation agencies.

The engineering standards adopted by public sector are mostly followed from the foreign countries. In many parts of the province, community lays sewers on self-help basis where to reduce the cost and to make the sewer affordable; community has to compromise on public sector standards. Government needs to accept community's standards by allowing them to ensure the best possible low cost technical design. For example shallow sewers tested and practiced by community can be adopted in place of deep sewers. To make it more pragmatic, Government may institute Research & Development (R&D) in the sanitation agencies to explore technically viable options in low cost sanitation.

2.8. Institutional Dimension

Lack of coordination amongst, local governments and provincial departments exists which has so far blocked success towards total sanitation objectives. Gaps and overlaps in institutional roles and responsibilities also explain why progress towards the formulation of sanitation strategies and action plans remains slow. More than one agency is responsible for the sector

due to which planning is fragmented and duplicated. Lack of trust and cooperation between public, private and non-profit organizations hinder a concerted effort towards provision of affordable and quality sanitation services to communities. At provincial government level, sanitation investments have been planned in a piece-meal fashion and do not take into account the full cycle of safe confinement, treatment and disposal. Capacity gaps in the public and private sectors, including NGOs are major challenges for the design and delivery of effective sanitation sector interventions. Another problem connected with sanitation service provision is that public agencies rely on supply-driven practices, with little regard for demands and preferences of households as clients.

Local Governments' capacity in designing, implementation and operation & maintenance of sanitation schemes is not sufficient to carry out sanitation functions. They are also not familiar with the new technologies like computer usage and GIS mapping. Local Governments work in the traditional manner and hardly aware of new approaches like Public-Private Partnership, component sharing and Community Led Total Sanitation (CLTS) or Pakistan Approach to Total Sanitation (PATS).They also lack specialized human resource like sociologist, economists, financial and environmental experts to deal with socio-economic and environmental facets of sanitation under an integrated approach.

Prevalent lack of understanding regarding generally accepted and internationally consistent standards of data collection and reporting practices cause lack of or low quality monitoring of project implementation and evaluation of development impact, which in return results in depletion of transparency and accountability. Due attention is not given to Performance Benchmarking standards. Therefore, benchmarking, in the provincial context, needs to be pursued and institutionalized.

There is need to define and reconcile the WATSAN indicators and then incorporating into the monitoring system (PSLM, MICS etc.) Various data show disproportionate figures on water supply and sanitation services in both urban and rural areas. Both have been treated mutually exclusive time and again.

While successive provincial governments have highlighted full cost recovery as the state policy, the practice has been out of sync with this objective. Currently, the sanitation services are being undertaken by different tiers of government in both rural and urban settings. Service provision is plagued by a variety of institutional inefficiencies all of which directly or indirectly contribute to poor enforcement and weak collection system.

Low public awareness of the benefits of improved sanitation is a major factor in slowing the universal sanitation agenda. Effective sanitation marketing[5] has not been used enough as a tool to promote improved sanitation, especially in rural areas of Punjab. Gender mainstreaming in

[5]Sanitation marketing is branch of social marketing designed to influence behavioral change toward sanitation. It supports sanitation as potential area that can be marketed even among low income groups through information sharing, research, identification of proper technology options, market development, and partnership with local agencies in support of improved sanitation. http://www.wsscc.org/sites/default/files/gsf_pakistan_sector_review.pdf

sanitation programming is not given due consideration in educating and engaging with communities, especially women, as they are directly involved at the household and neighbourhood levels.

Lack of checks and regulation regarding solid waste management and sewage system exposes both rural and urban population to otherwise preventable diseases, and increase burden at the household and government levels.

Citizens suffer terribly in the event of disaster and emergency situations. The tragedy becomes manifold due to lack of drainage systems, poor hygiene, and sanitation systems.

The Policy

3. Vision

The goal of the provincial sanitation policy is to ensure that the entire population of Punjab has access to safe and affordable sanitation for a quality life by 2025.

4. Mission

Punjab Sanitation Policy envisions facilitating the processes for improved access to hygienic, affordable and equitable sanitation facilities leading to healthy and liveable environment for all residents, in all cities, towns and villages of the province.

5. Scope of Policy

The scope of Punjab Sanitation Policy entails management of human excreta, safe disposal of liquid wastes and promotion of health and hygiene good practices for the improvement of public health and environment. The policy will also institute an integrated approach towards sanitation by taking into account elements of *environmental sanitation*, e.g. solid waste management; industrial and other hazardous waste management; wastewater management; drainage management and also the management of drinking and household water supply. This policy though is sanitation focused, still broad aspects of solid waste management has been outlined in it. Separate policy for solid waste management may be drafted and promulgated. However, this policy will make synergy with solid waste policy and drainage policy whenever promulgated. Presently policy is in line with Punjab Drinking Water Policy which is already approved.

6. Key Principles

The policy principles stated below form an initial point of departure from how the sanitation business has been conducted so far. The policy principles apply to all population in rural and urban areas, and whether sanitation is for individual households or provided as a system for an entire community.

a) . An inclusive approach ensuring equitable distribution of resources shall be promoted on priority basis to address the sanitation coverage disparities in the Province, especially targeting excluded and marginalized areas (inter-district parity).

b) An inter-sectoral approach would be used in designing and executing sanitation sector programs taking into account the challenge of protecting the environment and responding to climate change. Sanitation programs shall be integrated with those of water, environment, health and education sectors with a view to identifying and capturing synergies.

c) Undertake mapping/documentation and analysis of existing infrastructure to avoid duplication of services and to build it as a tool for planning of sanitation services.

d) Mobilize provincial and local resources especially tapping community investment to generate self-sustained development. The reliance on donor loans should be minimized and only should be taken in dire need. Support separate budget lines for sanitation to monitor finances.

e) Modify technical and engineering standards to make them affordable for the community. Technological solutions that are not only cost effective but also consistent with cultural sensitivities of specific communities would be identified and steps would be taken to encourage prototyping and marketing of those solutions;

f) Institutionalize component sharing model in which community is responsible to construct lane and neighborhood level sewers (internal development) on self-help basis and government focus on trunks, disposal and treatment unit (external development).

g) Build capacity of local governments in technical and managerial aspects like mapping/documentation, technical designs, city level planning, social mobilization for community involvement and monitoring & evaluation. Existing good practices can be used as training centers for the local government.

h) Existing roles of provincial departments i.e. HUD&PHED, LG&CDD, Environment Department, Health, Education, Social Welfare etc. would be re-examined in the light of this policy. Coordination amongst them would be increased to build an integrated approach to deal with sanitation

i) Performance benchmarking would be gradually introduced and institutionalized.

j) Efforts will be made to gradually reach a stage where the O&M cost is recovered from the beneficiaries. Over all maintenance components would be defined for responsibility of community and government.

k) Steps will be taken to promote public-private partnership especially to strengthen the supply side of the sanitation market.

l) Good hygiene practices, i.e. hand washing with soap at critical times, use of latrine, safe water storage, food hygiene and good solid and liquid waste management should be promoted through implementation of appropriate awareness campaigns; and

m) An independent monitoring & evaluation system will be established and maintained to track progress under the sanitation agenda and also to operationalize incentives envisaged in this policy.

7. Policy Measures/Guidelines

The policy will adopt a paradigm shift from predominantly applied engineering-based and supply-driven approach to demand-driven local community-based sanitation management solutions. That is, a shift towards community-level empowerment and responsibility for their own sanitation management. This shall involve a combination of bottom-up decision-making and top-down technical support within a much more holistic conceptual and structural framework. The government departments providing sanitation services will operate as multi-disciplinary technical service providers and facilitators rather than unrepresentative entities. Many of the policy issues herein are intended to function from this new perspective.

7.1. Financial Resources

The Punjab government shall provide the required financial resources from its own budget, private sector, donor grants and by tapping community investment with least loaning from international agencies. The provincial and local governments will make annual budgetary allocations in their development plan. A special effort will be made to allocate separate budget for sanitation annually. The criteria for investment will include (i) existing coverage, (ii) community health and poverty indicators, (iii) the scale of donor/government support given in the past and the results thereof and (iv) marginalized and excluded communities. Priority for investment in sanitation is need of the hour as water is available to 97% population but 49% of this water is contaminated primarily because of poor sanitary conditions. A lot of data is already available with government of existing sanitation conditions in urban and rural areas of Punjab which should be used to set priority areas for future sanitation investment. A sanitation investment plan would be developed keeping in view the priority areas.

7.2. Programmatic Approach

The policy envisages execution of Pakistan Approach to Total Sanitation PATS for sustainable sanitation improvement within communities. The PATS approach endorses the use of a number of branded total sanitation models which include:

- Community Led Total Sanitation
- School Led Total Sanitation
- Component Sharing
- Sanitation Marketing
- Disaster Response

To ensure cost recovery, approaches such as component-sharing model will be institutionalized and effectively promoted. The CLTS approach will be promoted and more efforts will be made to ensure Open Defecation Free (ODF) status. Similarly School Led Total Sanitation will be promoted as children and teachers can play an effective role in promotion of health and hygiene practices and the sanitation in general. Following the successful models under PATS, this approach may be incorporated in the mainframe programs of the implementing agencies. For this purpose the knowledge base would be disseminated to the implementing agency by instituting specific trainings of their staff on the approach. Targets would be set for each implementing agency to institutionalize the approach in their respective wings.

The programmatic approaches should be chosen on the basis of social and cultural setup of targeting community, available resources, nature of interventions etc. PATS or any other viable approach may also be used in the light of ground situation.

The approach to cater needs of special person will be adopted which would entail to safety measures such as safe access to sanitation facilities fitted with appropriate lighting, holding bars and cleaning facilities.

7.3. Mapping/Documentation

Mapping/documentation of existing sanitation infrastructure in universal terms will be undertaken to know exactly the scope of work in each administrative unit to avoid duplication of services by various departments. This is an important tool for planning, implementation and monitoring & evaluation of sanitation services. The data will be collected through physical surveys of existing situation of water, sanitation and solid waste services on the ground. Help of GIS and other tools can be taken in mapping and documentation of the areas/settlements/cities. The data will also be collected on demographic, institutional, technical, social and financial side of sanitation. The provincial government shall ensure that all departments, local bodies and donor agencies are utilising the data for developing, designing and implementation of sanitation projects.

7.4. Gender Mainstreaming

Gender mainstreaming will be given substantial consideration in components involving educating and engaging with communities, especially women as important clients, as they are directly dealing with sanitation issues at the household and neighbourhood levels in both rural and urban settings. Health & Hygiene Education of women not only plays a vital role in setting hygienic practices at household level but also socially mobilize them to take hard core sanitation initiatives like latrine construction, lane level sewer development and household and community level solid waste management. Women undertaking such initiatives may be rewarded with creating women enterprise and other women development initiatives by linking them up with other social sector organizations. Women community organizations would also be formed to involve them in sanitation and hygiene promotion.

7.5. Effluent Quality Monitoring

Environmental Protection Department (EPD) will be responsible for monitoring the industrial and municipal effluents in accordance with the National Environmental Quality Standards. Effluent treatment mechanism will be established. Moreover, municipal wastewater treatment plants will be developed to effectively manage effluent treatment. A data base of effluent quality monitoring at district, tehsil or union council level will be developed which will help in time series analysis and to see the improvement being made with the different steps taken by the government to improve environmental sanitation. Moreover, this data-base will assist in devising quality based, cost effective, socially acceptable and technologically feasible sustainable interventions in future.

7.6. Provision of Public Toilets

Provincial government will invest widely, or collaborate with private sector, in construction, operations and maintenance of facilities such as public toilets. Sanitary latrines at appropriate public places will be provided for men, women, children and persons with disabilities where appropriate through public-private partnerships on build, operate and transfer basis .Provincial government will evaluate the functioning of existing public toilets and devise a mechanism for operationalization in consultation with private sector. Involvement of community in operation and maintenance would be one option for sustainable functioning of public toilets. Construction and maintenance of suitable models of latrines should be made compulsory for not only at public places but also at other private entities including big departmental stores, cafe, restaurants etc.

7.7. Public Private Partnership

By-laws will be developed, implemented and monitored by the provincial government for ensuring development of sanitation and sewage and wastewater treatment facilities for different sizes of private housing schemes and townships across the province. While informal sector

developments will be made responsible for obtaining government approval from relevant departments for their development plans. Options for Public Private Partnership (PPP) models include service contracts, management contracts, franchise contracts, lease contract, concessions, Build-Operate-Transfer or Build-Operate-Own (BOT/BOO), Design-Build-Operate (DBO) and full or partial Divestiture. In order to be successful, all PPP models and contracts will have to consider the local conditions and rationalize the context, and they must be implemented in a careful, thorough and credible manner.

At the same time, private sector developers will be charged a proportional cost of the government developed sanitation, sewerage, safe water and solid waste disposal systems. The private sector, community and non-governmental organizations' linkages will be encouraged to advance for liquid and solid waste management to ensure safe environment. Relevant government agencies/departments, and Local Governments will identify good projects and delegate roles and responsibilities to private entities through consultation and advocacy.

7.8. Sanitation Models

Regular identification, recognition and up-scaling of successful sanitation models developed by various stakeholders (communities, NGOs, private sector etc.) will be one of the important policy measure to be adopted by sanitation service delivery departments of government. Installation of disposals, treatment plants and trunk sewers at the town and city level should be the priority of government planning. The building of neighborhood / sectoral infrastructure should be left to technically supported communities, formal and informal developers and housing societies. This Component sharing approach will be adopted for all urban and rural areas. Incentives for communities, households and industrial establishments will be given to participate in CLTS and SLTS initiatives on becoming ODF. The total sanitation approaches creates more impact in their replication if the successful communities are rewarded. For this purpose reward schemes will be introduced. In this connection, a list of agreed ADP schemes would be developed with almost equal budgetary amounts from where the community could select a reward scheme of their choice and need.

7.9. Synergy between Water Supply and Sanitation Services Provision

The government will strengthen synergy between water supply and sanitation services provision. Sufficient care will be exercised through coordination with relevant agencies in ensuring that these are not treated as mutually exclusive. Sizable investment will be made in sanitation for improvements of drainage system, minimizing sanitation hazards in and around water supply systems, and managing solid waste and wastewater at both household and community levels effectively. Cooperation with the Punjab Saaf Pani Company and Cooperative housing societies to enfold them in the overall sanitation system would bring synergy with them.

7.10. Capacity Building

Successful sanitation Projects will be converted into replicable models of best practice and introduced to government officials, HUD&PHED & Local Governments staff, community activists, technicians and also elected representatives.

At the union council (UC) level, a team of community technicians will be trained in surveying, mapping, estimation and supervision of infrastructure projects or other social development projects, so as to provide technical support to the UC for grass roots projects. The capacity of union council staff and elected representatives will be developed in sanitation aspects.

Punjab government will adopt and implement a strategy that is geared toward facilitating donors' interaction with, and capacity building of, provincial government staff working at different levels and tiers. GoPb will develop a "rigorous training program" for "Government Departments" and the "Local Government institutions" on planning, executing, monitoring, maintaining sanitation schemes, various methodologies and the philosophical aspects of various approaches. GoPb will also explore potential for scale-up through a wide range of areas such as research and development, knowledge exchange, partnership development, development of curricula and investing in higher education facilities.

7.11. Inter-departmental Coordination

The government will need to establish stronger coordination and communication linkages between relevant departments, i.e. Housing, Urban Development and Public Health Engineering Department, LG&CDD including Metropolitan Corporation, Municipal Corporations, Municipal Committees, District Councils and Union Council, WASAs, Waste Management Companies, Health, Education, P&D, Agriculture, Environmental Protection, Irrigation and Auqaf & Religious Affairs Departments. This coordination will iron out coherence and duplication issue in policy formulation, strategic planning, laws and regulations, technology, O&M and awareness raising aspects. A Coordination Committee will be created within the LG&CDD to examine these issues on a biannual basis[6]. Furthermore, focal points will be notified within the respective provincial departments to facilitate inter-governmental coordination and coordination with donor agencies. These arrangements will enhance implementation effectiveness of interventions in the sanitation sector. The real issue is that the HUD&PHED and Local Governments do not work hand in hand. Hence, Local Governments are reluctant to take over schemes developed by HUD&PHED. PHED need to involve LG&CDD from the very inception of development schemes, so that LG&CDD take ownership of the scheme. For this district level, coordination will be ensured through a formal structure.

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[6] *It will be a small sub-committee of the PSP Implementation Committee to carry out the vision and direction of provincial government stance on sanitation.*

7.12. Appropriate Technological Choices

The Policy recognizes that technologies are only a means and not an end in itself. They are to enable sanitary and safe confinement and disposal; hence the choice will keep these ends in view. Low cost technology options based on local machinery and skills-set shall be developed and promoted in communities to support the achievement of 100 % sanitation coverage at minimum service levels[7]. Product development (innovation) and support to applied research for identifying cost-effective and varied technology options across the sanitation chain is the need of the day.

Technologies come with attendant capital, O&M costs, and management systems that may or may not match to the budgetary constraints of provincial exchequer. Also, technology is linked to a whole set of environmental, behavioural and cultural parameters that need to be taken into account. While proposing new solutions, one of the considerations will be utilization of local wisdom and traditional practices of the communities. A holistic approach will be employed to technology choice. For example, the final disposal of effluent and sludge for both on-site and off-site systems will be considered at the time of technology selection in the community approaches towards total sanitation. Capacity development of private sector will be supported to develop a range of technologies and options for environmental sanitation.

Government will adopt alternative technical and engineering standards to ensure low cost affordable and sustainable technological options. Such standards have already been implemented by various NGOs and other organizations.

Research & Development should be one of the key aspects essential to update the technological options. Research & Development wings hence should be established at provincial level to convene research & development of various models and practices. Research & Development wing will convene researches on engineering and social development aspects. This wing will also coordinate with academia (especially engineering universities) and private sector (Research & Development) to link their research work into R&D and vice versa.

7.13. Waste Management and Sanitation

The provincial Environmental Protection Department EPD) will be strengthened to exercise its regulatory role more effectively. Furthermore, the private sector will be called upon to play a larger role in promoting reuse and recycling of wastes generated by different sectors and for popularizing waste disposal modalities that have a minimum negative effect on environment.

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[7] ***Minimum Service Level:*** *The Service Level providers have to reach within a specified time, which is defined by the regulator and measured by Service Indicators – SI. To this, the regulator issues guidelines. The service level will be regularly adjusted according to the development of the sector. Therefore, the provider will need time to comply with new requirements.*

Policy encourages introduction of initiatives like use of waste as a resource for production of alternate source of energy recycling of metals and use of compost. Waste recovery options may be explored to promote recycling and re-use of waste. This can generate resources and reduce environmental hazards. Initiatives like Lahore Waste Management Company (LWMC) may also be expanded in other parts of the province to create focus on solid waste management.

Waste Storage facilities will be mandatory for all kinds of commercial entities including shops, departmental stores, offices, fast food restaurants to use appropriately designed waste bins or garbage bags for storage of waste at the generation level and arrange its lifting/transportation in coordination with the local authorities responsible for Solid Waste Management (SWM).

Forest land and planted areas along roads and irrigation canals may not be used as dumping sites/solid waste treatment areas.

7.14. Hospital Waste

Health Department and EPD shall be responsible for ensuring that the concerned government agencies follow the Hospital Waste Management Rules (2014) as notified by the provincial government for the safe disposal of hospital waste. Subject of Environment, since the 18th amendment, has been devolved to provinces; hence the rules prepared by provincial government in future will be followed when notified. However this policy proposes placement of centralized waste management facility with the approval of EPA.

7.15. Liquid Waste Management

For liquid waste management and treatment in urban and rural areas simple steps will be taken like ensuring primary treatment in septic tanks like community level sewerage treatment units (EM-STU) and other anaerobic treatment facilities and secondary treatment in 'extensive' treatment facilities such as oxidation ponds, waste stabilization ponds and constructed wetlands. Care will be taken during designing phase to minimize use of machines.

7.16. Agriculture Waste Management

Site and region specific agriculture waste management strategies will be developed and adhered to in order to maximize cost efficiency and adequately to protect local environmental resources. Strategies will consider a healthy environment for farm animals, reduce the need for chemical fertilizers and provide other nutrients that increase farm productivity. The basic components of the policy will be: stakeholder partnership; emphasis on waste reduction; practical, cost-effective arrangements for waste collection and on-farm management options. These simple steps will provide incentive to agriculturists and facilitate small land holders without putting burden on them. Agriculture waste may be converted into compost, the use of which would be promoted as organic fertilizer in the entire province.

7.17. Industrial Waste Management

In the wake of growing environmental problems and the direct and indirect costs associated with employing landfills and waste treatment and waste disposal, new policies to manage industrial waste will be developed that support the 3Rs;

- Waste Reduction (*at Source)*
- Waste Reuse
- Waste Recycling

The EPD shall be responsible for ensuring that the concerned government agencies follow the Industrial Waste Management Rules. Industries Department should also play role in enforcement of legal regime by binding the industries to treat their effluent at source and dispose off only treated effluent that meets the National/Provincial Environmental Quality Standards into the water bodies.

7.18. Community Empowerment and Awareness Generation

The policy will promote province-wide Information, Education and Communication (IEC) campaigns to be designed and implemented for raising awareness on the public health and environmental importance of sanitation. All possible means of communication including electronic and print media and audiovisual aids will be used for wide spread of information in the province.

For effective awareness generation, the socio-cultural biases against sanitation and sanitary workers need to be targeted and the public-good nature of sanitation necessitating collective action will be advanced amongst all stakeholders. Special interventions will be designed to improve the working conditions of sanitary workers. Following simple steps will be included in all projects related to sanitation.

- Generate awareness about sanitation and its linkages with public and environmental health amongst communities and institutions
- Promote mechanisms to bring about and sustain behavioural changes aimed at adoption of healthy sanitation practices
- Guide at household level for maximizing sanitation facility e.g. designing of toilets linkages with sewerage system and to overcome the problems of septic tank of toilet especially in the rural areas.

7.19. Legislation/Statutory Update

The Punjab Sanitation Policy necessitates that Punjab Local Government Act 2013, Cities Development Act 1976, Canal and Drainage Act 1873 (amended 2006), Punjab Environment Protection Act, 1997 (amended 2012)., Punjab Katchi Abadis Act 1992, proposed Punjab Water Act, WASCO Act and the Punjab Municipal Services Regulatory Authority Act will be seen in

coherence and will be reviewed and amended to support the objectives of this policy. The policy insists on the effective implementation of all the acts in terms of ensuring safe sanitation practices. Furthermore existing NEQS/PEQS shall be revisited by Punjab EPA before formally adopting them as PEQS.

7.20. Disaster Risk Management

"By our actions, we can either compound disasters or diminish them". Disaster Risk Reduction (DRR) should be a priority for the Government because of the profound impacts that disasters have on insecure and vulnerable populations. In areas vulnerable to natural disasters or imminent disaster warning zones, special measures for sanitation will be explicitly incorporated in their Disaster Preparedness and Mitigation Plan. The policy espouses a predictable, effective, timely and coherent humanitarian response, allowing the organizations responsible for sanitation and hygiene to ensure dedicated resources. This will orient Government in its activities to reduce disaster risks and build resilience through an approach that should be consistent with Government's mandate, mission and comparative advantages. Although the primary focus should be on reducing natural disaster risks, principles should be developed from the lessons learnt of incurred catastrophes' / disasters and complex emergencies. The Government of the Punjab, after the massive floods of 2010, established a Provincial Disaster Management Authority (PDMA). This authority has its staff and capacities to prepare a province-wide disaster response plan. As a matter of policy, the sanitation disaster management planning would constitute a subset of the PDMA's provincial plans. Given the nascent nature of this institution, it would take concerted efforts on the part of the implementation committee that PDMA and the sanitation service delivery departments may agree on a viable modus operandi for collaboration. Efforts need to be made that HUD&PHE Department at Provincial level and LG&CD at Districts level map sanitation facilities especially in disaster prone vulnerable areas and ensure that they are retrofitted and made disaster resilient, so that they can withstand the impact and not lead to health and hygiene related disasters by being non-functional and/or non-existent. Departments also ensure that during emergency situations, when camps are set up, sanitation facilities are also provided on top priority basis. Likewise, equipment for makeshift toilets be stored as Contingency stock for use in emergency situations.

It is also envisaged that HUD&PHE at Provincial level and LG&CD through TMAs at Districts level to ensure that while constructing new Sanitation and/or water schemes, especially in disaster prone areas, PDMA shall be consulted to make them Disaster Resilient. Storm water parameters should also be included in the design of sewerage system.

7.21. O&M Cost Recovery

The sanitation policy will encourage the formulation of an Operations & Management (O&M) strategy, guided by the objective of province-wide maintenance of existing and development of new infrastructure. Appropriate tariffs for sanitation services will be determined and implemented to achieve cost recovery objectives in the long run. This policy encourages the provincial government to take steps that promote the culture of user fee/charges. At the same time, the government will also be expected to take measures to make sure that sanitation

services are affordable for the poor. Additionally, the O&M will be linked to personnel performance to achieve implementation of improved service delivery systems.

7.22. Citizen Engagement

Customer complaints and redressal systems is another area that requires immediate attention for citizen to recognize their role and importance of paying user charges. One of the important changes that need to be introduced and embraced amongst the service provision agencies is to treat citizens as customers of services. Accordingly, complaints, redressal and feedback systems will be instituted for sustained improvements. Preparing proper customer records and taking structured feedback are tried and tested ways with satisfactory results in improving public services. Providing orientation and training programs and implementing customer relationship systems are essential steps to improve service delivery. Citizen engagement from wider perspective that is ensuring citizen's participation during planning and designing of services/schemes, preparation of budgets and monitoring & evaluation of sanitation works will also be ensured as per laws, rules and regulations.

7.23. Monitoring & Evaluation

Provincial government will take measures to guarantee sanitary service delivery performance; hence processes to devise data collection and reportage systems by using outcome indicators will be developed. This will also require tracking compliance of households (industry or other establishments, etc.) with outcomes and process standards that it has adopted. Introducing citizens' report cards, citizens' monitoring committees, self-assessment system, competition and reward methods will be considered.

Provincial Government will develop unified and reconciled WATSAN indicators, which are acceptable to international standards. Incorporating these reconciled indicators to existing systems (like MICS, PSLM etc.) will be a priority. Additionally an annual sector review and evaluation/sector status reports will be generated.

Furthermore, an institutional hub for sanitation will be established within the LG&CDD and provided necessary resources to track progress regarding the (water and) sanitation projects. The LG&CDD will establish and maintain the data generated by the service delivery departments and use it in rewarding local governments that make significant progress toward improved sanitation in their respective communities. The policy outlines consist of following four benchmarks to assess the progress of local governments towards desired sanitation outcome(s):

a) Excreta Safe Unions: excreta free open fields + excreta free open drains / sewage discharges + excreta free hands
b) Litter Free Unions: free of indiscriminate solid waste disposal (household, animal, municipal, agricultural & industrial)
c) Foul-water Free Unions: free of indiscriminate industrial / agricultural run-off and stagnant water bodies

d) Cleanest Unions: to raise the profile of a Union (and the role that the Union plays in social mobilization)

Accountability: The policy document on several instances has highlighted that there is a dire need to strengthen the accountability mechanisms. The P&DD's Monitoring section has already been monitoring the performance of various GoPb departments and development schemes. However, due to certain reasons, the unit limits itself to strategic interventions in critical areas. This unit has a great potential to enhance the accountability of the sanitation related systems. It is therefore suggested that this unit be supported with the necessary financial and technical capacity to expand its coverage and role. The P&DD's Monitoring section, in coordination with HUD&PHED, LG&CDD and civil society organizations, could put in place a simple but effective accountability mechanism that consists of identifying a simple set of standards to measure the fulfilment of basic fundamental water and sanitation rights, such as the right to clean water and effective sanitation. Using simple language, these standards could be broadly disseminated among the population with the help of civil society organizations, making use of national and local media. Every six months the P&DD's Monitoring Section could produce report cards measuring the degree of fulfilment of those standards in each district or province, and could promote town hall meetings to discuss the inability to comply with authorities and civil society, and jointly find remedies and solutions.

8. Roles and Responsibilities of Stakeholders

8.1. Role of Provincial Assembly (standing committees):

The relevant standing committee of the provincial assembly examines and approves changes needed in the regulatory regime and oversees coordination and implementation.

8.2. Role of Provincial Government:

The provincial government will create an enabling environment by allocating funds and human resources to support sanitation policy implementation. Provincial government will examine and take action on the recommendations of the Provincial Sanitation Policy Implementation Committee (PSPIC). The government will also rationalize functions assigned to different provincial departments to avoid duplication, overlaps, and contradiction in accordance with the sanitation policy.

8.3. Role of HUD&PHE, LG&CD, Environment, Health and Education Departments

The government will promote sanitation initiatives and awareness by utilizing the communities and through an active role of HUD&PHED, together with the LG&CD and Environment Protection Department. Urban sanitation will be the responsibility of local governments which

will ensure proper O&M. The policy will highlight the detailed roles, responsibilities and functions of these entities accompanied with a strategy to make these assigned roles work smoothly. Health, Education, Environment and Aouqaf & Religious Affairs Departments will support and institutionalize sanitation campaigns across the province and mainstream such efforts in their annual development programmes and budgetary allocations. Provincial departments will broadly have following roles:

- Policy formulation
- Standard setting
- Support for implementation (planning, option selection, HR, funds, capacity)
- M & E/ Surveillance
- Sector and donor coordination

8.4. Role of Local Governments (District, WASAs, Tehsils & Union Councils

Local governments will implement sanitation projects subject to the guidelines contained in this Policy and as per the standards set and the notifications that the provincial government issues from time to time. In rural areas, LG&CDD and HUD&PHED will be responsible for execution of schemes while O&M will be handled largely by communities and in some cases by LG&CDD. In small towns and intermediate cities local governments with the assistance of HUD&PHED will design and execute schemes while local governments will be exclusively responsible for O&M. And in five big cities WASAs will be responsible for execution and O&M.

Local Government may ensure more effective system of service delivery & complaint redressal, development of efficient waste management systems and sanitary landfill etc.

8.5. Role of Agriculture Department

Agriculture department will assist local governments and HUD & PHED in assessment of quality of river/canal water utilized for irrigation/agriculture as drainage effluents/industrial waste water is being disposed into rivers without any treatment leading to several dangerous impacts on soil, crop and human health. The department will also assist above departments in assessment of harmful impacts of fertilizers and pesticides contaminating the ground water and water bodies. A collaborative effort would be made to reduce these negative impacts.

8.6. Role of Irrigation Department

Untreated waste water pouring into irrigation water bodies like canals, rivers and distributaries is one of the major sanitation threats in present time. Irrigation department if implement its canal and Drainage Act in its true spirit, such disposal is illegal. The inclusion of Irrigation department in the coordination club would help in proper implementation of irrigation laws.

8.7. Role of Education Department

Education Department should play a strong role in education of students towards adoption of sanitary practices to make them as responsible future citizens. School sanitation programs may be launched in collaboration of sanitation service delivery organizations, Education and Health Departments of GoPb.

8.8 Role of Health Department

Health Department should play role in health & hygiene awareness raising in the community through its staff primarily deputed to provide basic health awareness. Furthermore the department can launch specific health and hygiene campaigns through health camps, special exhibitions and fairs. Health Department should also provide support to the Education Department in implementation of school sanitation program.

8.8. Role of Auqaf Department

Awareness raising on adoption of sanitation models with best health and hygiene practices is one of the key component of the Policy. Ulemas and Khteebs can play a vital role in inculcation of messages in the community on these aspects. Auqaf Department can undertake this activity through its wide mosque and shrine set up prevailing throughout the province. The messages given by Ulemas and Khteebs will be more penetrating and lead to a great impact on the general public in sensitization on sanitation and hygiene aspects.

8.9. Role of Private Sector

The private sector organizations will be encouraged to discharge their social corporate responsibilities by undertaking initiatives for safe and healthy physical environment in the province. These organizations will also be encouraged to participate in the provision of sanitation infrastructure and undertaking operation & management. Private sector will also play a role in sanitation supply like sanitation industry may work on low cost sanitation solutions.

8.10. Role of NGOs and CBOs

NGOs will be encouraged to help in the formation of Community Based Organizations (CBOs) and to guide them in formulating sanitation projects. They will also be invigorated and assisted by the government in mobilizing communities for sanitation related programmes and projects and will assist the government in planning and development of community based sanitation infrastructure. NGOs may be engaged to do group messaging and door-to-door campaigns with special stakeholders like women, children and other marginalized groups. They also should advice in policy programs and play a role of monitoring & evaluation of sanitation works.

8.11. Role of Community

Communities will be encouraged for the development of internal components under component sharing approach; Government shall provide technical assistance to the communities to lay infrastructure on self-help basis.

The communities will also be encouraged to maintain a safe and pleasant physical environment in their settlements, participate in the provision of sanitation infrastructure and its management and disposal of solid waste at the neighbourhood level through community mobilization, public consultation and media campaigns. Maintaining cleanliness in neighbourhoods, keeping drains and nullahs clean, street sweeping, etc. are examples where communities can easily monitor the performance of service providers. The mobilisation process will focus on the creation of awareness among women and the creation of women's neighbourhood organisations.

8.12. Role of Media

The government will encourage the electronic and print media to propagate sanitation related messages and to develop educational programmes on sanitation and health related issues. The government will also engage with the influential media professionals to raise awareness regarding sanitation issues and challenges and motivate people to improve sanitation and hygiene practices in their houses, neighbourhoods and settlements.

8.13. Role of Punjab Saaf Pani Company

In addition to providing safe drinking water, Punjab Saaf Pani Company will promote health and hygiene education throughout rural and peri-urban areas of Punjab. It will also coordinate with irrigation department and TMAs for proper disposal of wastewater that would otherwise continue to deteriorate ground water quality.

9. WATSAN Core Group

For effective and successful implementation and to provide guidelines during implementation of this policy, a WATSAN core group will be notified at provincial level which will consist of representatives from relevant government departments, Water and Sanitation Program –South Asia (WSP- SA) of World Bank, WaterAid Pakistan, UNHABITAT, United Nation development Program (UNDP), United Nation Children Fund (UNICEF), Plan International-Pakistan, provincial level NGOs and representation from top three CBOs. The group may be extended by seeing interest of other institutions.

10. Punjab Sanitation Policy Implementation Committee

For the effective and successful understanding, practice and execution, the PSPIC will act as regulator, facilitator and enabler rather than a direct provider of services.

10.1. Committee Membership

Punjab Sanitation Policy "Implementation Committee" comprise of the following members:

Minister, HUD&PHE Department	In Chair
Four Elected Representatives (representing four water zones)	Member
Chairman, P&D Board	Member
Secretary, LG&CD Department	Member
Secretary, Irrigation Department	Member
Secretary, Environmental Protection Department	Member
Chief Executive, Urban Unit, P&D Department	Member
Chief Executive, Punjab Saaf Pani Company	Member
Representative of private sector	Member
Representative of civil society Secretary, HUD&PHE Department	Member Member / Secretary of the Committee

Note: Implementation Committee may co-opt other member(s) as and when deemed appropriate.

10.2. Policy Review

The committee will conduct meetings for the oversight of implementation of policy on quarterly basis and suggest remedial measures in case of issues and problems in the implementation of policy. These meetings will be of monitoring nature but not leading to major shifts in the policy since policy implementation requires considerable time to make major changes. However implementation committee will conduct annual reviews towards implementation progress and evaluate achievement of policy objectives In the light of the review, the committee will also recommend strategy changes, may be major changes, – if required.

The review committee will base its review on the experiences and feedback received from stakeholders - provincial departments, local governments, NOGs, CBOs, private sector organizations, donor agencies, communities. As a result of the review corrective actions and measures shall be undertaken to keep the efforts on track. The committee could advise and involve the provincial P &D Department to clarify issues, problems and difficulties as appear to be expedient to redress.

The committee will also address soft technical support issues pertaining to:

- Setting priority for serving un served areas
- Budgetary resources

- Resource mobilizing
- Accountability & transparency
- Institutional reforms (provincial)
- Public Private Partnership.
- Infrastructure projects

Other issues, as indicated in the Policy will also be monitored by the committee such as:

- Community participation
- Accommodating social and environmental considerations
- Increased gender sensitivity and participation
- Capacity building of participating institutions
- Providing environmental, health and hygiene education

Glossary

Agricultural Solid Waste: Solid waste that is generated by the rearing of animals, and producing and harvesting of crops or trees.

Community Led Total Sanitation: is an "innovative methodology for mobilizing communities to completely eliminate open defecation. Communities are facilitated to conduct their own appraisal and analysis of open defecation and take their own action to become open defecation free."

Component Sharing: Approach by which responsibility for development of sanitation infrastructure is bifurcated between community and government. The community pays for and constructs internal infrastructure (household latrines, lane and small collector sewers) while the government agency construct external infrastructure (primary and trunk sewerage, disposal stations and treatment plants). The division of components is explained below.

a. Internal Development comprises of
-Inside the house-sanitary latrines,
- In the lane-underground sewerage line, and
-Small, secondary or collector sewers.
(Community is responsible for internal development)

b. External Development which constitutes
-Large secondary or collector sewerage,
-Trunk sewer/nullah development,
- Disposal station, and
-Treatment plant.
(Government is responsible for external development)

Hospital waste management: It means the management of waste produced by hospitals (during diagnosis, treatment or immunization of human beings or animals or in research) using such techniques that will help to check the spread of diseases.

Improved sanitation facilities: Facilities that ensure hygienic separation of human excreta from the human contact. They include pour-flush latrines/ toilets, linked to piped sewerage system septic tank, pit latrines, ventilated improved pit latrine, pit latrine with slab, composting toilets.

Industrial (Residual) Solid Waste: Solid waste generated by industrial processes and manufacturing.

Intermediary Towns: Those towns which are not metropolis but bigger in respect to area and population. These towns have more than one hundred thousand population.

National Environmental Quality Standards: National Environment Quality standards (NEQS) notified under Pakistan Environmental Protection Act 1997.

Open defecation: Defecation in fields, forests, bushes, bodies of water or other open spaces, or disposal of human feces with solid waste.

Sanitation: is defined as hygienic means of preventing human contact with the hazards of wastes. Wastes include human and animal feces, solid wastes, domestic wastewater (sewage, sullage, and grey water), industrial wastes, and agricultural wastes, hygienic means of prevention by using engineering solutions (e.g. sewerage and wastewater treatment), simple technologies (e.g. latrines, septic tanks), or even by personal hygiene practices (e.g. simple hand washing with soap).

Sewage & wastewater treatment: Chemical, biological, and mechanical procedures applied to an industrial or municipal discharge or to any other sources of contaminated water to remove, reduce, or neutralize contaminants before discharging it into a water body.

Shared sanitation facilities: Sanitation facilities of an otherwise acceptable type shared between two or more households. Shared facilities include public toilets.

Solid Waste: It means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges

Small Towns; Small towns are those having a population of less than hundred thousand, comprising of two to three union councils devoid of any municipal council.

Total Sanitation: Combination of four interventions that include; hygiene, foul water disposal/drainage, excreta disposal and solid waste management (sustaining ODF status and ensuring its sustainability).

Unimproved Sanitation facilities: Facilities that do not ensure hygienic separation of human excreta from human contact. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines.

Village: 'Village' means an integrated and contiguous human habitation commonly identified by a name and includes a dhok, chak, killi, goth, gaown, basti or any other comparable habitation