South Asia Regional Learning Event

Country profiles from group work

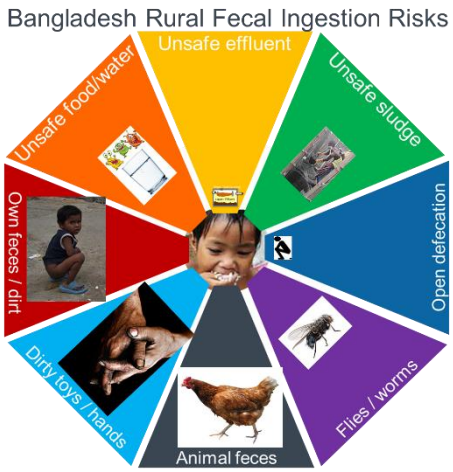
This paper presents the results of a country-focused sanitation analysis and planning activities and presents the outcomes of group discussions, agreed priorities and issues and potential future actions. During a whole-day workshop (Day 3) at the South Asia RLE, country-based groups assessed their countries sanitation context in light of SDG6 and considered what is needed to work towards safely managed sanitation. Led by the Topic Expert Mark Ellery, teams utilised a range of tools to identify the major sanitation bottlenecks within their country contexts, identify priority sanitation targets and develop scenarios for how these could be addressed to meet the sanitation SDGs. The country profiles described here have applied the bottleneck analysis to estimate the size of the steps of the safely managed component of the sanitation ladder.

Bangladesh

Faecal Ingestion Risks

Faecal ingestion risks for children <5 in rural areas of Bangladesh were considered to be:

- *High Risk:* from the exposure to animal faeces given the prevalence of chickens/goats in the household; from the exposure to dirty toys/hands given the low use of soap; from the ingestion of own faeces/dirt by children not using nappies and playing in the dirt.
- *Medium Risk:* from the unsafe food/water in the absence of boiling water for babies; from exposure to flies/worms given the open play areas; from unsafe faecal sludge given the unregulated emptying of latrine pits.
- *Low Risk:* from open defecation given its low prevalence; from the unsafe faecal effluent given the lack of septic tanks and pits discharging faecal effluent to the open.

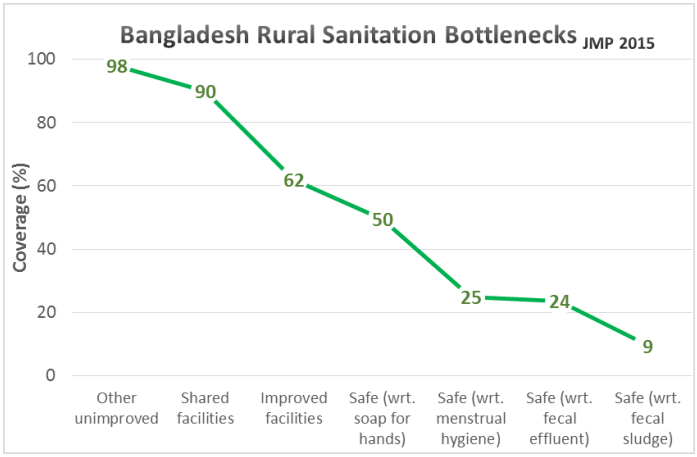


Rural Sanitation Bottlenecks

According to the 'safe sanitation' estimates applied to the existing Bangladesh data, only 9% of the latrine facilities in rural Bangladesh could be considered to meet the sanitation SDG.

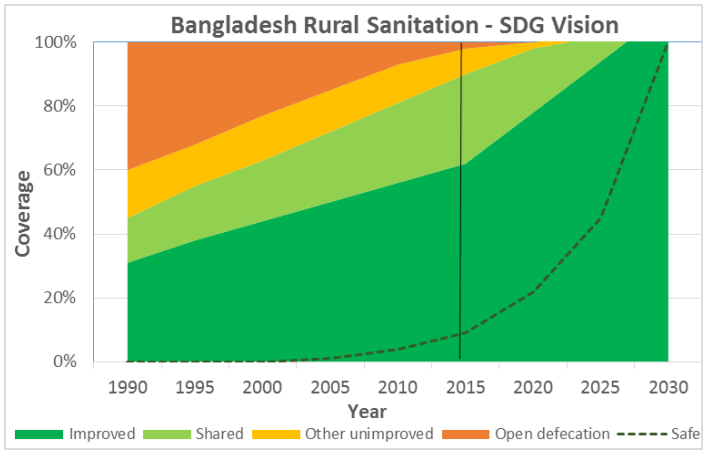
The major bottlenecks challenging the achievement of the sanitation SDG being the improved latrines that are considered unsafe because they are either:

- Shared by 3 or more families.
- Lacking the necessary space/facilities for menstrual hygiene management.
- Lacking the safe emptying, transport, treatment and disposal of faecal sludge.



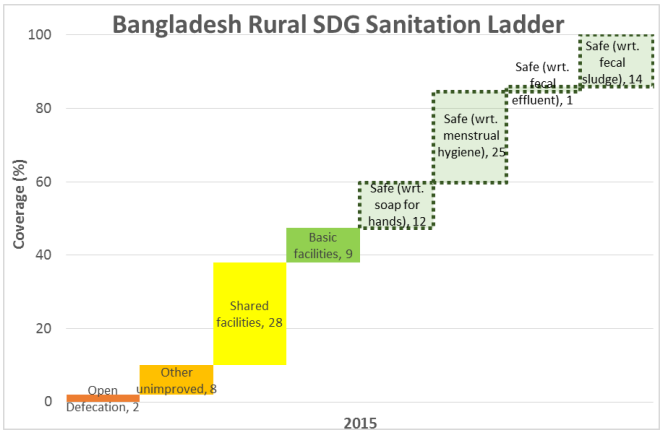
Rural Sanitation Vision

Bangladesh is 'on track' to achieve the necessary reductions in open defecation, unimproved and shared latrine facilities. In order to meet the sanitation SDG target in rural areas, Bangladesh will need to accelerate the percentage of the rural population accessing improved sanitation. Given the 9% of rural sanitation facilities estimated to be safely managed, there will need to be a dramatic acceleration in the number of latrines with a provision for handwashing, menstrual hygiene management and the safe management of faecal sludge.



Rural Sanitation Ladder

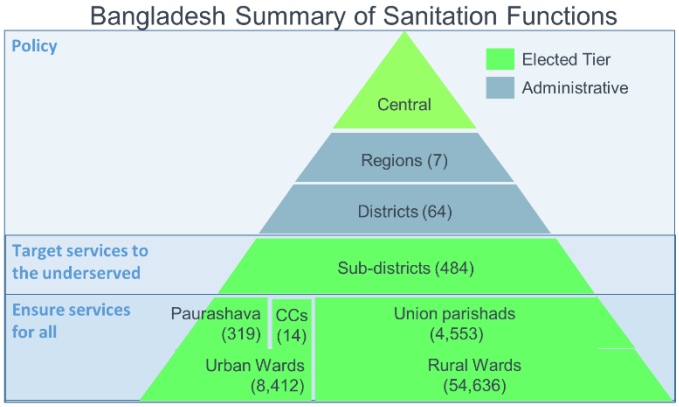
The low percentage of open defecation means that almost all of the rural population use some form of latrine. The vast majority of the rural population also use direct pit latrines, which present a major faecal sludge management problem. Safely managing faecal sludge will require an upgrade of latrines to an offset pit design, at which point it would be possible to improve the latrine design to incorporate menstrual hygiene management features.



Upgrading direct pit to offset pit latrines is possible but this is a service that will not be performed by a mason. Such latrine upgrades will need to be led by a sweeper (who manage faecal sludge) and supported by masons (who manage latrine construction). Prioritising the upgrade to safely managed latrines by the sweepers will require a change in the approach to sanitation marketing. This will require the development of business models for sweepers around the safe emptying, transport, treatment and disposal/re-use of faecal sludge. This will also require knowledge on the different offset pit design options that include the safe management of menstrual hygiene.

Rural Sanitation Responsibilities

Under the Local Government Act (2009), the primary responsibility of the government of ensuring the provision of sanitation services for all is assigned to the municipal tier of local government (i.e. union parishads in rural areas). While the central government is responsible for the policy function (executed by multiple ministries including Local Government, Environment and Housing) the upazila tier of government is responsible for targeting infrastructure to the underserved.



Instruments to Ensure Sanitation Services for All

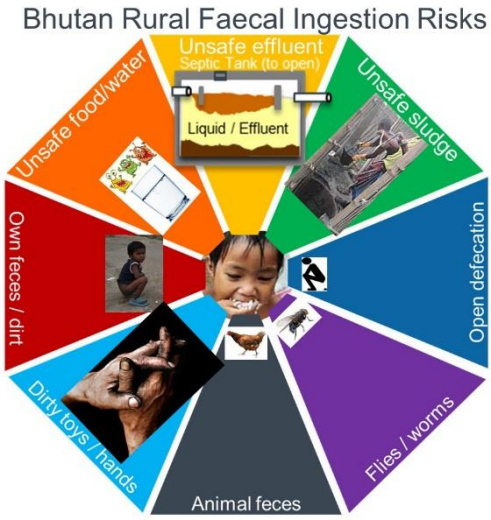
The local government act prioritises the role of the union parishad in passing resolutions, making regulations, issuing sanctions and fines to eliminate exposure to the risks of exposure to unconfined excreta in rural area. Many union parishads spearheaded the movement to eradicate open defecation establishing a social norm that there was something wrong and probably illegal about defecating in the open (Hanchett et al. 2011). In addressing the risks associated with faecal sludge management associated with the high percentage of direct pit latrines, union parishads could be engaged in issuing a quality mark to sweepers and masons that have been trained in the safe management of faecal sludge and the upgrading of latrines from direct pit to offset pit. The upgrade to an offset pit latrine offering the opportunity to introduce sufficient functionality for the safe changing, washing and drying (or disposing) of menstrual pads and the washing of hands with soap in addition to the safe emptying of faecal sludge from pits.

Bhutan

Faecal Ingestion Risks

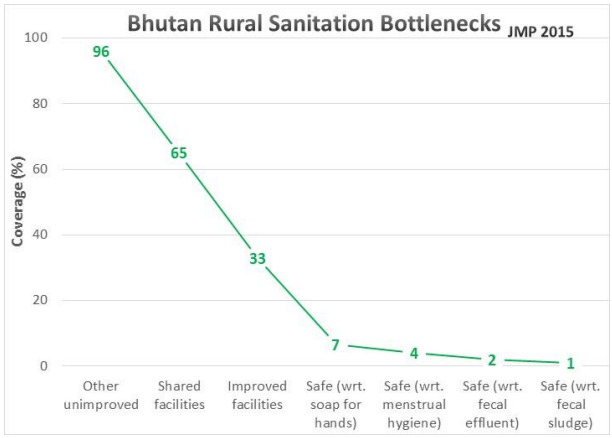
Faecal ingestion risks for children <5 in the rural areas of Bhutan were considered to be:

- *High Risk:* from the exposure to the faecal effluent and the faecal sludge from the high prevalence of septic tanks without leach pits; from the exposure to dirty toys/hands given the historic use of leaves or mud for anal cleansing and the low prevalence of soap for handwashing.
- *Medium Risk:* from the unsafe consumption of food nd water in the absence of the boiling of water for babies; from the ingestion of own faeces / dirt by children in their play areas.
- *Low Risk:* from open defecation given its low prevalence; from the exposure to animal faeces given the low likelihood that animals will be present within the household; from exposure to flies/worms given that they are often separated from play areas.



Rural Sanitation Bottlenecks

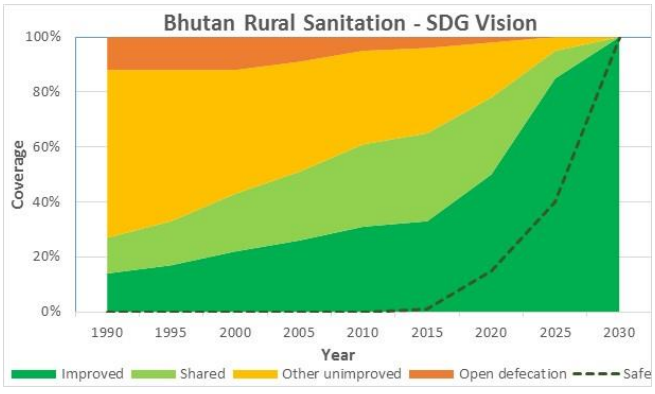
According to the 'safe sanitation' estimates applied to the existing JMP data, only 1% of the latrine facilities in rural Bhutan currently meet the sanitation SDG standard.



The major bottlenecks challenging the achievement of the sanitation SDG include the relatively significant percentage of unimproved and shared latrines in rural areas. In spite of the relatively high prevalence of access to running water in rural areas, the absence of handwashing facilities and menstrual hygiene management facilities proximate to the latrines is a major bottleneck to achieving the sanitation SDG. The prevalence of improved latrines, with or without septic tanks that discharge faecal effluent and sludge into the open drains, is another major bottleneck to the achievement of the sanitation SDG in rural Bhutan.

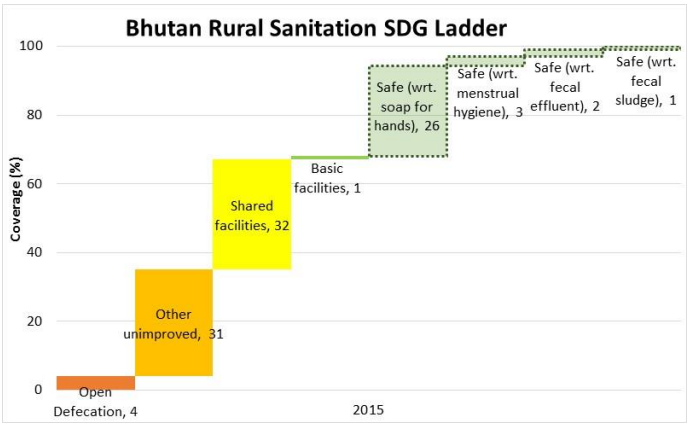
Rural Sanitation Vision

Bhutan is 'on track' to achieve the reductions in open defecation but will need to accelerate the reductions in unimproved and shared latrine facilities to achieve 100% access to improved sanitation facilities by 2030. However, given that only 1% of the population currently utilise safely managed sanitation facilities, there will need to be a dramatic acceleration in the number of latrines where faecal effluent and faecal sludge are safely managed, in addition to the provision of handwashing and menstrual hygiene management facilities.



Rural Sanitation Ladder

Almost all households in rural Bhutan have access to some form of sanitation facility however the significant proportion of households with unimproved and shared sanitation facilities represents the initial major steps for the country in climbing the sanitation ladder. This will require a significant increase in the scale and the capacity of the private sector to both raise and respond to demand for improved sanitation facilities. This increased capacity of the private sector will also need to raise demand and increase supply of handwashing and menstrual hygiene management options. In most cases this will require the provision of options for making water available on-site.

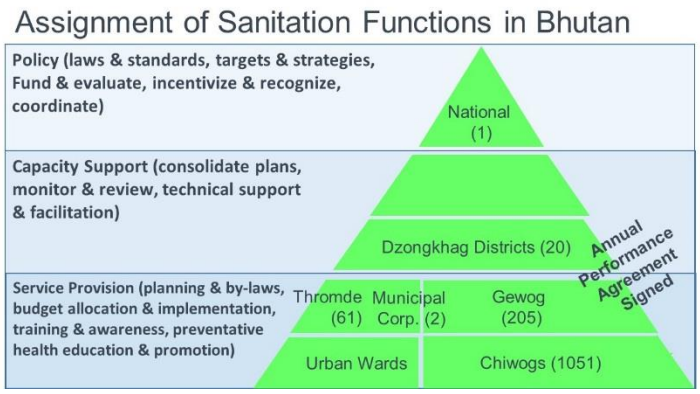


As the rural sanitation sector increasingly moves from dry pit latrines to flush latrines, and from out-of-house latrines to semi-attached latrine facilities, the sector will need to address the challenges associated with the safe containment of faecal sludge and effluent. This will require the development of sanitation markets promoting twin-pit latrines that aerobically treat the septic effluent and market models for the safe removal of faecal sludge.

Rural Sanitation Responsibilities

A Royal Decree issued in 1992 stressed the importance of having a household latrine and declared that every household is responsible for latrine construction and upkeep. This commits the government to support and invest in sanitation, identifying the poor maintenance of latrine facilities and the removal of subsidies for latrine construction as critical challenges.

The responsibility for ensuring the provision of sanitation services for all is assigned to the lowest tier of local government (i.e. the Municipal Corporations, Thromde (towns) and Gewogs) under the Municipal Act (1999) and Local Government Act (2009). The Dzongkhag Districts are responsible for the provision of capacity support to the local municipal governments while the central government is responsible for the development of the laws and standards with the requisite access to incentives and finance to ensure compliance.



Instruments to Ensure Sanitation Services for All

In rural Bhutan, where open defecation rates are low, and access to water and sanitation facilities are relatively high, the prevalence of diarrhoea and the incidence of stunting are still unacceptably high. In addition to targets to secure 100% access to basic sanitation facilities there is a growing recognition of the need to improve hygiene behaviours to secure health benefits for all. The responsibility of the Gewog (elected rural village government) for ensuring sanitation service provision could be strengthened through the drafting of national model by-laws on handwashing and hygiene. These model by-laws could then be amended by Gewogs according to their context but with the goal of making access to handwashing and hygiene facilities a necessity for all households and restaurants.

Nepal

Faecal Ingestion Risks

Faecal ingestion risks for children <5 in rural areas of Nepal were considered to be:

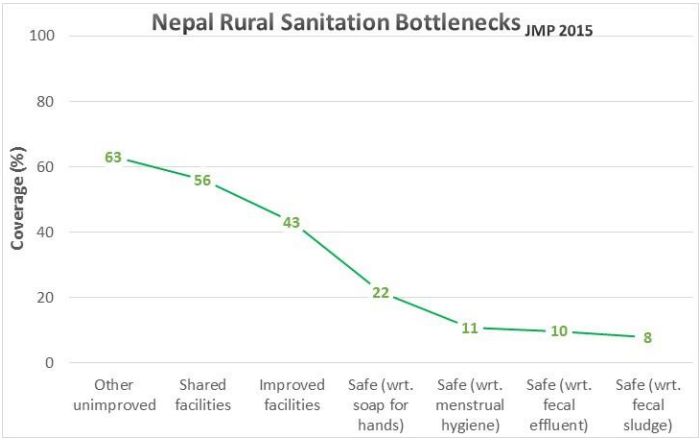
- *High Risk:* from the exposure to animal faeces given the prevalence of chickens/goats in the household; from the exposure to dirty toys/hands given the low use of soap; from the unsafe food/water in the absence of boiling water for babies.
- *Medium Risk:* from the ingestion of own faeces/dirt by children not using nappies and playing in the dirt; from exposure to flies/worms given the open play areas; from open defecation given its rapidly decreasing prevalence;
- *Low Risk:* from unsafe faecal sludge given that most of the latrine pits are new; from unsafe faecal effluent given the absence of septic tanks and pits discharging faecal effluent to the open.

Rural Sanitation Bottlenecks

According to the 'safe sanitation' estimates applied to the existing Nepal data, only 8% of the latrine facilities in rural Nepal could be considered to meet the sanitation SDG.

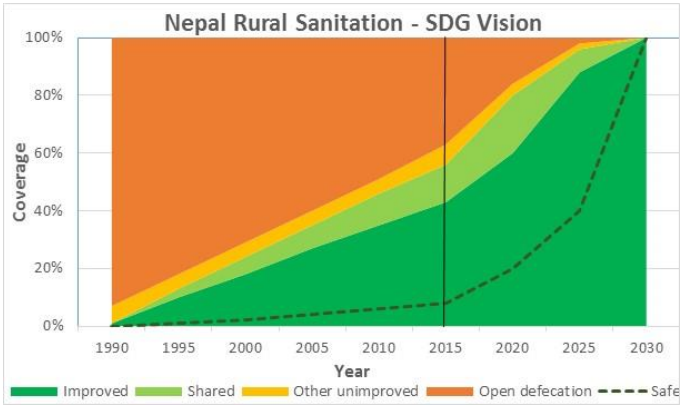
The major bottlenecks challenging the achievement of the sanitation SDG being the still significant percentage of the population that practice open defecation. In addition there are a significant proportion of improved latrines that are considered unsafe because of the:

- Absence of proximate handwashing facilities (with soap and water), and
- Lack of necessary space/facilities for menstrual hygiene management.



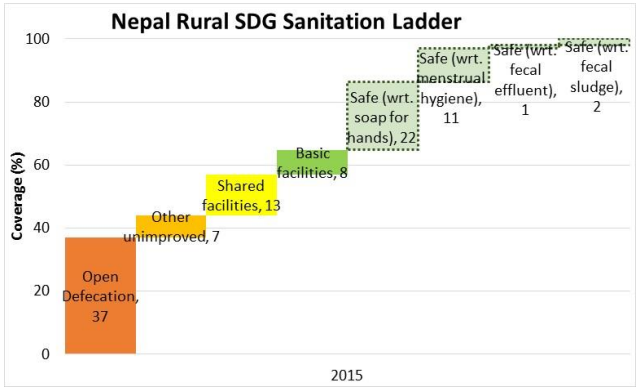
Rural Sanitation Vision

Nepal is 'on track' to achieve the necessary reductions in open defecation, unimproved and shared latrine facilities. In order to meet the sanitation SDG target in rural areas, Nepal will need to accelerate the percentage of the rural population accessing improved sanitation. Given the 8% of rural sanitation facilities estimated to be safely managed in 2015, there will need to be a dramatic acceleration in the number of latrines with a provision for handwashing, menstrual hygiene management and the safe management of faecal sludge.



Rural Sanitation Ladder

Nepal has lagged behind other countries in the South Asia region in access to sanitation however access to basic sanitation has accelerated in recent years largely based on the success of the movement to eradicate open defecation. The establishment of government targets to move beyond ODF to achieve total sanitation seek to build on this momentum. However, moving-up the sanitation ladder will require a switch away from public sector engagement with collectives to public sector engagement to facilitate and regulate the private sector provision of total sanitation options that include the installation of improved latrine facilities with facilities for handwashing, menstrual hygiene management and faecal sludge management.



While local health facilities routinely record child weight-for-age, there is no routine tracking of child height-for-age. Given the enormity of the stunting challenge and the growing commitment of the government to address nutrition, the routine collection of child height-for-age data will be beneficial to the sanitation sub-sector.

Rural Sanitation Responsibilities

The Local Self-Governance Act (LSGA) stresses the devolution of powers and responsibilities to local self-governance bodies that comprise of councils and corporate bodies that comprise both of locally elected and seconded members. The Village Development Committee (VDC) and the Municipality are directly elected, while the District Development Committee (DDC) comprises of elected VDC and Municipality members (including president and vice-president) and central government members (ex. officio).

The assignment of functions to the various tiers of government for the sanitation subject under the Local Self Governance Act are as follows:

- VDC / Municipality: Ensure Sanitation Services for All (Sanitation Assessments, Planning, Financing, Constructing, Mobilising, Operating, Maintaining and Monitoring)
- DDC: Build Capacity (Human Development of VDC / Municipality)
- Government of Nepal: Set Policy (Sanitation Standard Setting and Evaluation of Outcomes).

Instruments to Ensure Sanitation Services for All

There is both a need and an opportunity to fill the void left by the success of the movement to eradicate open defecation. With a shift of targets to secure total sanitation, it will be incumbent on VDCs to secure this achievement with the coordination and capacity support from DDCs within a policy framework of laws and targets established by the central government. This can be achieved at the VDC level which carries the primary responsibility for sanitation service provision through the passage of by-laws requiring households to comply with total sanitation standards. Given the high rates of chronic undernutrition, VDCs could also pass by-laws requiring the registration of births and monitoring of growth of all children.

Pakistan

Faecal Ingestion Risks

Faecal ingestion risks for children <5 in rural areas of Pakistan were considered to be:

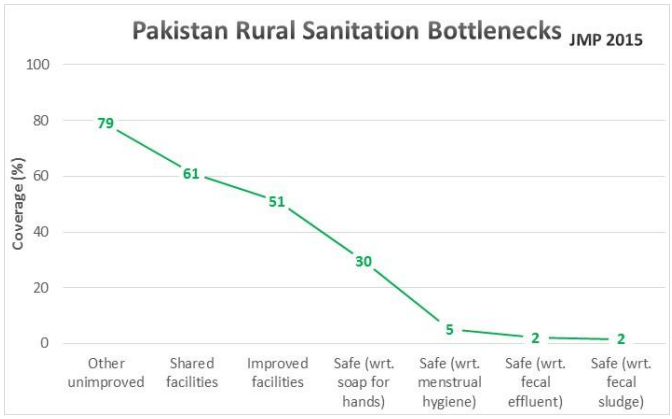
- *High Risk:* from the unsafe food/water in the absence of boiling water for babies, from unsafe faecal effluent and faecal sludge given the number of septic tanks and pits discharging faecal effluent to the open; from the ingestion of own faeces/dirt by children not using nappies and playing in the dirt.
- *Medium Risk:* from the exposure to animal faeces given the prevalence of chickens/goats in the household; from the exposure to dirty toys/hands given the low use of soap; from open defecation given its rapidly decreasing prevalence;
- *Low Risk:* from exposure to flies/worms given the open play areas.

Rural Sanitation Bottlenecks

According to the 'safe sanitation' estimates applied to the existing Pakistan data, only 2% of the latrine facilities in rural Pakistan could be considered to meet the sanitation SDG.

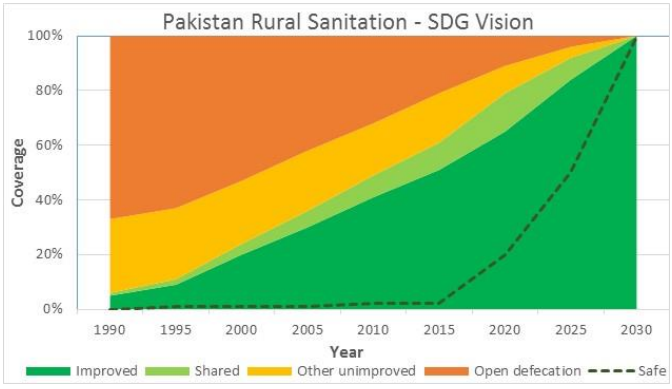
The major bottlenecks challenging the achievement of the sanitation SDG being the not insignificant percentage of the population that still practice open defecation. In addition there are a significant proportion of improved latrines that are considered unsafe because of the:

- Absence of a safe means of handling faecal effluent and sludge
- Absence of proximate handwashing facilities (with soap and water), and
- Lack of the necessary space/facilities for menstrual hygiene management.

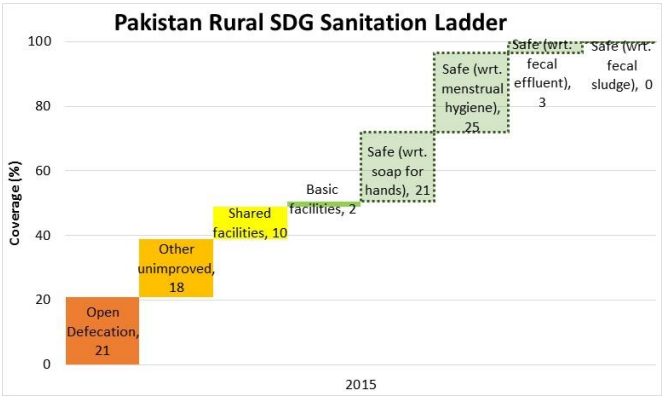


Rural Sanitation Vision

Pakistan appears to be 'on track' to achieve 100% access to improved sanitation in rural areas by 2030 accompanied by the necessary associated reductions in open defecation, unimproved and shared latrine facilities. Given the estimated 2% of rural sanitation facilities estimated to be safely managed according to the SDG definition in 2015, there will need to be a dramatic acceleration in the number of latrines with a provision for handwashing, menstrual hygiene management and the safe management of faecal effluent and sludge.



Rural Sanitation Ladder



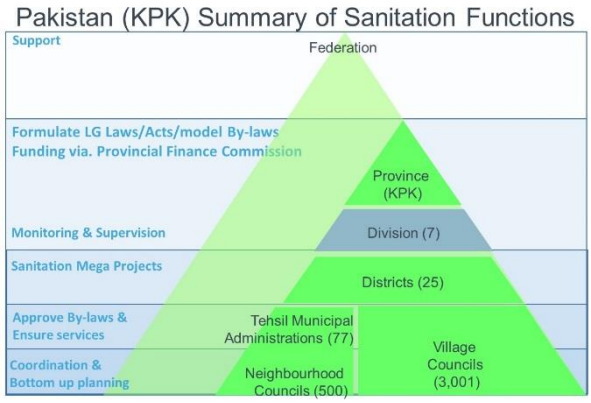
Pakistan has been steadily improving access to improved sanitation over the MDG period, accelerated in recent years with the launch of the Pakistan Approach to Total Sanitation (PATS) stressing the cooperation of government and non-government agencies in achieving total sanitation. The initial steps in moving-up the sanitation ladder are addressing the challenges of open defecation and unimproved latrines. This needs to be accompanied by the introduction of facilities with the provision for handwashing and menstrual hygiene management, as well as the safe containment of faecal sludge and effluent. Highlighting the need for sanitary latrines to include menstrual hygiene management facilities could potentially assist in breaking the silence on the challenges faced by women in accessing safe sanitation. This will require public sector engagement in changing perceptions of appropriate sanitation behaviours particularly for women and private sector engagement offering affordable sanitation options. This needs to include safe and affordable options for handwashing and menstrual hygiene management, as well as the safe containment of faecal sludge and effluent.

Rural Sanitation Responsibilities

With the passing of the 18th Constitutional Amendment the responsibility for the sanitation subject has been unambiguously devolved to the Provinces. The Provinces have variously adopted the Pakistan Approach to Total Sanitation (PATS) and enacted local government laws assigning the responsibility for sanitation service provision to the Tehsil Municipal Administration (or Taluka in Sindh) for the urban areas and the Union Council (or Village Councils in KPK) for the rural areas.

The assignment of functions to the tiers of government for sanitation under the Local Government Act (2013) within KPK, are as follows:

- TMA/Neighbourhood Councils and Village Council: Ensure sanitation services for all (i.e. planning financing, constructing, licensing, operating and maintaining)
- District: Build Capacity and manage lareg projects that cross Tehsil/Village Council boundaries
- Government of KPK: Set Policy (Sanitation laws, model by-laws, finance and evaluate outcomes).



Instruments to Ensure Sanitation Services for All

In a context where cultural patriarchy and religious fundamentalism reduce the ability of women to engage in planning processes, the greatest bottleneck in reaching the sanitation SDG is most likely going to be the access to hygienic menstrual management facilities in rural areas. With the assignment of the responsibility for sanitation service provision to union (and village councils) and TMAs (and neighbourhood councils), they could ensure the provision of facilities for women through by-laws making it mandatory for households to install latrines and bathing facilities. The provision of facilities for women to dispose of sanitary napkins should be an essential planning approval requirement for all places of work and restaurants, all public buildings and secondary schools attended by girls. Raising the issue of menstrual hygiene management through local legislation could also contribute to 'breaking the silence' through official channels that are potentially less subject to cultural restrictions.

Sri Lanka

Faecal Ingestion Risks

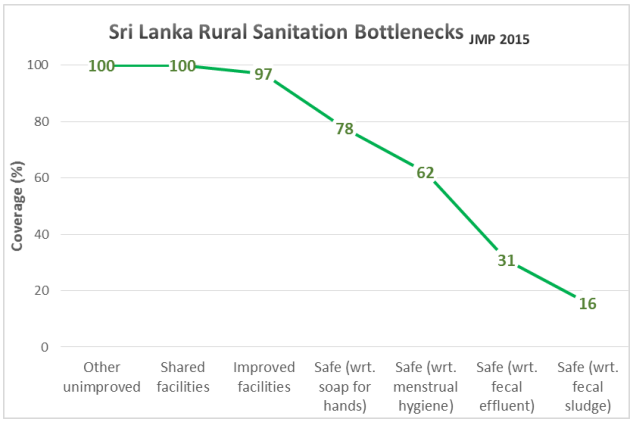
Faecal ingestion risks for children <5 in rural areas of Sri Lanka were considered to be:

- *High Risk:* from the exposure to faecal effluent and the faecal sludge from the high prevalence of septic tanks without leach pits[1]. The connection of septic tanks to open drains allows initially the effluent and eventually the sludge to be discharged into drains without sufficient retention time.
- *Medium Risk:* from the unsafe food/water in the absence of boiling water for babies; from exposure to flies/worms in open play areas; from the exposure to dirty toys/hands; from the ingestion of own faeces/dirt by children.
- *Low Risk:* from open defecation given its low prevalence; from the exposure to animal faeces given the likelihood that animals will not be present within the household.

Rural Sanitation Bottlenecks

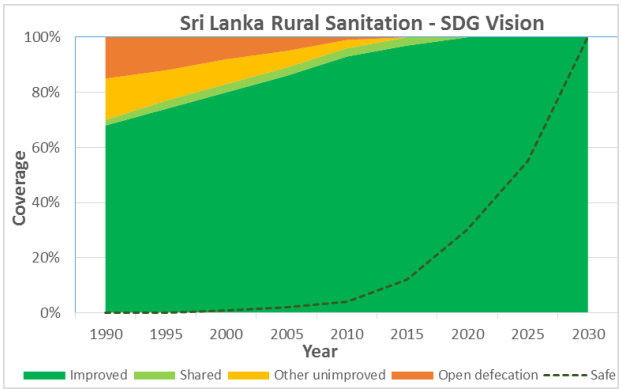
According to the 'safe sanitation' estimates applied to the existing JMP data, only 16% of the latrine facilities in rural Sri Lanka currently meet the sanitation SDG standard.

The major bottlenecks challenging the achievement of the sanitation SDG being the improved latrines that are considered unsafe because they have a septic tank without any leach drain or pit. This means that neither faecal effluent nor faecal sludge can be considered safely managed. This design enables the emptying of faecal sludge to be avoided because the sludge eventually passes through into the drain. This means that even the effluent passes straight through without sufficient retention time to be treated.



Rural Sanitation Vision

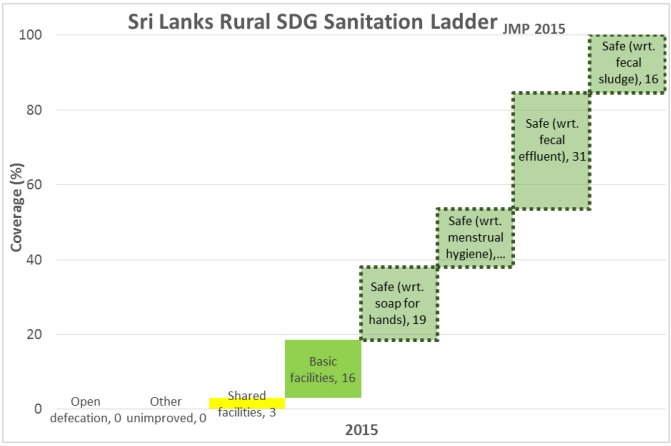
Sri Lanka is 'on track' to achieve the reductions in open defecation, unimproved and shared latrine facilities and expansion of improved sanitation facilities necessary to meet the rural sanitation SDG. Given the estimated 16% of safely managed sanitation facilities, there will need to be a dramatic acceleration in the number of latrines where faecal effluent and faecal sludge are safely managed, in addition to the provision of handwashing and menstrual hygiene management facilities.



[1] While the anaerobic process within septic tanks are effective in reducing the environmental risks associated with nitrogen and phosphorous the treatment of the pathogens (i.e. bacteria and viruses) to reduce the public health risks are most effectively treated by the aerobic processes associated with leach drains.

Rural Sanitation Ladder

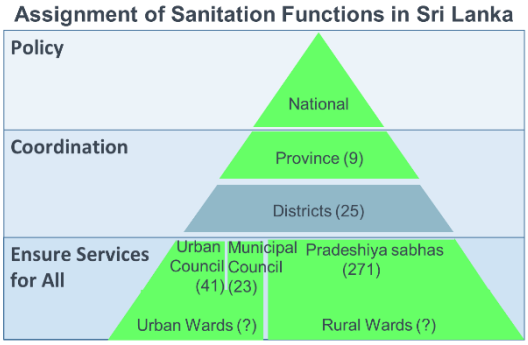
Almost all households in rural Sri Lanka have access to basic sanitation facilities. However, the majority of rural households on improved latrines connected to septic tanks without leach pits. This means that both the faecal effluent and sludge will eventually be discharged into open drains. While local governments have the capacity to empty, transport and treat the contents of septic tanks this is rarely necessary because the sludge will tend to follow the effluent into the drains.



Achieving the safely managed SDG will require leach pits or leach drains to be retro-fitted where improved latrine facilities have been installed with only a septic tank. Alternatively, septic tanks could be plumbed into sewers or sealed drains where the faecal effluent is exposed to an aerobic process prior to discharge. The routine emptying of the faecal sludge from septic tanks every 5-7 years will also need to be prioritised to ensure the integrity of anaerobic and aerobic processes.

Rural Sanitation Responsibilities

The responsibility for ensuring the provision of sanitation services for all is assigned to the Pradeshiya Sabha under Act No. 15 of 1987. The provincial tier of government is responsible for coordination amongst the municipalities (Pradeshiya Sabha, Urban Councils and Municipal Councils) while the central government is responsible for the sanitation policy function. The national government may issue model by-laws which municipal councils may then amend and pass into local law reflecting the challenges associated with their local context.



Instruments to Ensure Sanitation Services for All

The Pradeshiya Sabhas Act (No. 15 of 1987) empowers the pradeshiya sabha to enact by-laws and pass resolutions, make regulations, issue sanctions and fines to ensure the appropriate accommodation of latrines and their safe operation and maintenance in all buildings (households, public and private buildings). This empowers the pradeshiya sabha to enforce quality standards on all rural sanitation asset owners and sanitation service providers, in addition to the responsibility to act as the provider of last resort of faecal waste management services.

To address the unsafe containment of faecal effluent and sludge the central government may update the building code to include leach pits with septic tanks and draft model sanitation by-laws for local governments to ensure that this code is applied. This would involve the pradeshiya sabha council to pass the sanitation by-law and licensing the compliance of all sanitation facilities (i.e. through planning approvals and No Objection Certificates) and sanitation providers (i.e. trade licenses against certificate of competence of masons, plumbers and sweepers). The licensing of compliance by the pradeshiya sabha of 100% of sanitary assets should be clearly separated from the regulation of failure by national ministries through spot checks on quality standards.