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Comment

SEWAGE TREATMENT PLANTS

BWSSB's wrong approach

Asking the already constructed apartment complexes with sewerage connections to now install STPs is highly impractical.

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Bengaluru's wastewater woes—stinking rivers, fish kills, and froth and fire on lake spillways—have attracted global attention. This notoriety has triggered various policy responses. Mandating large apartment and commercial buildings to treat and reuse their wastewater has been one such response. Scarcity of fresh water lends support to this idea as wastewater reuse can reduce freshwater demand as well.

Unfortunately, the manner in which the two key agencies—Bangalore Water Supply and Sewerage Board (BWSSB) and Karnataka State Pollution Control Board (KSPCB)—have implemented this idea is now creating a backlash, with citizens threatening to take them to court.

Good intent, poor implementation in unsewered areas: Bengaluru was dragged into being a pioneer in apartment-scale sewage treatment and reuse by KSPCB. Since 2004, KSPCB has mandated that all new large residential (and commercial) buildings must install sewage treatment plants (STPs) and reuse all the treated wastewater (zero liquid discharge or ZLD). For unsewered areas, large was defined as more than 50 dwelling units (or 5,000 sqm), whereas the threshold was set at 20,000 sqm for sewerage areas.

The policy only made sense for unsewered areas, because large buildings disposing untreated sewage into soak pits or elsewhere poses a serious public health hazard. So, KSPCB focused its attention on peripheral Bengaluru, especially the newly added BBMP area, which lacked a sewerage network.

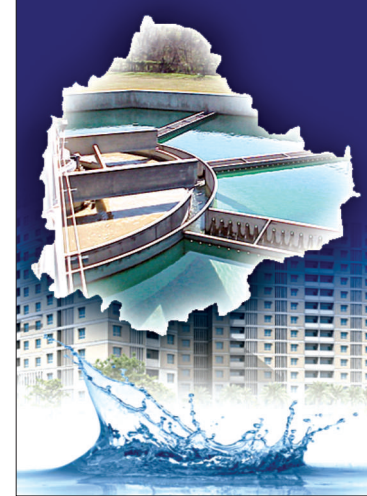
Over the last nine years, more than 2,000 apartment complexes have implemented this order in some form. While the intent of the order cannot be faulted, there are major problems with its formulation and implementation.

Firstly, ZLD or 100% reuse is simply impossible. Even the most diligent Resident Welfare Associations (RWAs), which reused treated water for flushing, car washing and gardening, could not meet the ZLD target. A 50% reuse target would be much more reasonable, with permission to either sell or release the treated water into storm water drains.

Secondly, operating STPs imposes a huge economic burden on smaller apart-

ment complexes. A 50-apartment RWA has to charge Rs 1,400/month per apartment (flat) towards STP operations, as compared to only Rs 320/month/apartment in a 500-apartment complex! And in comparison, households in BWSSB sewerage areas pay only Rs 100/month for sewage disposal!

Moreover, KSPCB does not have the capacity to monitor thousands of STPs. Given the monitoring effort and the economies of scale, it would be more sensible to set the threshold at (say) 150 units. And as a part of its enforcement, KSPCB must ensure that builders do not pass on shoddily designed STPs to the RWAs.



Finally, some long-term planning is also required. Areas without sewerage today will eventually get sewerage lines—BWSSB has several massive projects for the peripheral areas of BBMP. When that happens, should these STPs be decommissioned? If so, shouldn't BWSSB at that point give them a full rebate in the betterment charges, given that they did BWSSB's job at their own cost?

In unsewered areas, going overboard: All along, residents in the sewerage, core areas assumed that if their building was connected to the sewerage network, they did not have to worry about what to do with their sewage because BWSSB's STPs were already taking care of it.

The Bellandur lake pollution crisis in 2015, however, triggered knee-jerk reaction from various agencies. The Central Pollution Control Board issued an order that loosely instructed the KSPCB to ensure all apartments larger than 50 units must have STPs and implement ZLD, making no distinction between sewerage and unsewered areas, or existing and new buildings.

In what seems like one-upmanship, the state Department of Forest, Ecology and Environment (DFEE) issued an order in January 2016 lowering the threshold to residential buildings with

20 or more units.

Responding blindly to this order, BWSSB amended its regulations in March 2016, whereby residential buildings with 20 or more units—whether new or existing—are required to have STPs and dual piping (so that treated water can be used for flushing).

The regulation also specifies fines ranging from 25% to 50% of their bill till existing buildings come into compliance. Over the past few months, BWSSB has served notices and imposed fines on more than 1,900 of the 3,350-odd apartments of size 20+ in pre-BBMP Bengaluru.

Impractical, useless

This move has rightly triggered a storm of protest. The idea is untenable for a number of reasons. Firstly, asking the already constructed apartment complexes having sewerage connections to now install STPs in their premises and install dual plumbing systems is highly impractical. Most apartments would not have the space, and the cost of redoing the plumbing would be exorbitant.

Moreover, since the BWSSB regulation does not insist on ZLD, it will achieve a reduction of only 20-30% in water use (the flushing component). And the rest of the treated water will be released back into the sewerage network that is connected to a BWSSB's STP. This would, in fact, be counterproductive: supplying a mixture of raw and treated sewage to an STP reduces its efficiency.

Ultimately, BWSSB is statutorily required to provide water supply and sewerage service to Bengaluru's citizens. While they can charge citizens for the service, they cannot dump the responsibility onto the citizens themselves. If changes in zoning laws permitted the replacement of single-family houses with large apartment complexes, thereby increasing the load on existing sewerage lines manifold, how does the fault lie with the residents?

The game of multi-agency knee-jerk meddling has to stop. The BWSSB should withdraw its absurd regulation, and focus instead on its own problems of broken and clogged drainage lines and under-performing STPs.

The DFEE should also withdraw its thoughtless order, and instead get BBMP, BWSSB and KSPCB to sit together with experts and citizens to develop a more sensible, integrated, transparent and equitable plan for water use reduction, sewage management and reuse in Bengaluru, and set an example for the rest of the country.

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