

A saviour for frothing lakes is coming

- [Mohit M. Rao](#)



Bhagya Prakash K
Bellandur lake. Photo: Bhagya Prakash K.



A recent report by researcher T.V. Ramachandra on pollution in Bellandur lake has been submitted to Union Environment Minister Prakash Javadekar. — Photo: Sudhakara Jain

Javadekar promises to consider restrictions on phosphates, a major detergent component, to reduce frothing of lakes



DEALING WITH THE POLLUTED BELLANDUR LAKE

BELLANDUR LAKE	VARTHUR LAKE
700.18 acres	445.14 acres

POLLUTION
 April 27, 2015: Six-foot-high froth seen in Bellandur lake
 May 14, 2015: Pockets of froth caught fire, which is believed to have been caused by built-up methane in the bubbles

17 inlets lead to Bellandur lake	110 Only two curries treated water villages around the two lakes remain unconnected to underground drainage	500 Industries estimated
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A saviour for frothing lakes is coming

MINISTER
 As a ban on phosphates in detergents be the saviour for the frothing Bellandur lake in the city?

Based on a report by researchers from Indian Institute of Science (IISc.), Union Environment Minister Prakash Javadekar said on Thursday he would consider restrictions on detergents which were considered the primary reason for the froth that has engulfed the nearly 700-acre lake.

"I will take it up with the department concerned, to check if an alternative that is environmentally friendly and cost-effective to phosphates can be used. If we can ban diclofenac (a painkiller for cattle which was found to be the reason for the mass deaths of endangered vultures), then we can surely consult and think of a better alternative," he said at a seminar on climate change here.

The Minister was briefed about the problems of Bellandur lake, where froth started to rise alarmingly in April 2015, and within a month, a portion of froth was even seen catching fire.

A recent report by researcher T.V. Ramachandra on the pollution in the lake, submitted to the Minister, conclusively shows that the froth appeared because of higher concentration of phosphates in the lake.

Phosphates form a major component in household detergents, and make their way to the lake through the estimated 500 million litres of sewage that flows into Bellandur and Vathur lakes. Phosphates do not disintegrate, and continue to remain in the water, which ends up being used for agriculture further downstream of the lake.

The researcher had previously said that more than 70 per cent reduction in phosphates was needed to reduce eutrophication (excessive nutrients in the lake that cause dense growth of plants, including water hyacinth) in the lake. This sort of reduction has been seen in lakes of developed countries where stringent measures on phosphates were imposed to preserve waterbodies.

Union Environment Minister Prakash Javadekar believed that the design of the lake system in Bengaluru nearly 500 years ago was as a "strong example" of water conservation. "It was beautiful water planning for an urban city," he said.

However, with decades of urbanisation and effluents taking their toll on the lakes, many waterbodies have either disappeared or turned into cesspools. Mr. Javadekar promised a comprehensive review of the waterbodies in the city during his next visit in February.

SEMINAR
 Over 200 international students, representing more than 20 countries, who are studying in the city made their way to the seminar on climate change organised by Indian Institute of Science and World Organisation of Students and Youth on Thursday. Discussions included the effects on climate change on water resources, as well as the studied links between urbanisation and greenhouse gases.

Area
 Bellandur lake: 700.18 acres
 Varthur lake: 445.14 acres

Pollution
 April 27, 2015: Six-foot-high froth seen in Bellandur lake

Javadekar promises to consider restrictions on phosphates, a major component in detergents, to reduce frothing of lakes.

Can a ban on phosphates in detergents be the saviour for the frothing Bellandur lake in the city?

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Review of lakes

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Only two carried treated water

110 villages around the two lakes remain unconnected to underground drainage

500 industries estimated

The phosphate problem

High phosphates: 4.22 to 5.76 parts per million (for drinking water, less than 0.1 ppm prescribed by the WHO)

Enhanced biological oxygen demand: 119 to 140 parts per million (should be 30 ppm or less)

Decreased dissolved oxygen: 0 to 1.06 parts per million

Excessive phosphate encourages wild growth of algae and aquatic plants which sucks up oxygen from the lake and chokes inlets

Adversely affects flora and fauna of the lake

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