

In the years to come, this will lead to desertification. Secondly, construction of the huge barrier would also require large amount of soil, as in normal practice the soil would be dug from the nearby agricultural field¹. This will give rise to another problem. The low land generated in this way will collect the rainwater on the off-side of the river, which will promote the development of sodic and saline soil. Both the above processes will lead to progressive development of desert area. In addition, the temporary lentic ecosystem would become a source of various water-borne diseases, such as dengue, malaria, encephalitis, etc.

The planners have proposed to develop an 'investment region', along the way, under which 500 large and 7000 medium or small industries would be commissioned in 10,000 acres of land adjoining to the Ganga Express Way². Not only will the agricultural land reduce, but also

all the industrial effluents and garbage would be directly dumped into the Ganga.

Path of rivers are wavy. This will also increase the cost of construction, maintenance and fuel consumption in addition to the time required for the journey and cost of transportation.

Finally, our emphasis should focus on sustainable development, rather than on just development. India is an agriculture-based country, and we should aim to feed the ever-increasing population. Industries can produce bread but not grains. As an alternate suggestion, it would be advantageous to develop the Ganga Waterways. This will not only prevent the economic loss, but the water resources available to us are properly utilized. It would require less than 20% of the budget of the proposed plan towards development of the Ganga Waterways. The voyage would be economi-

cal, pollution-free as well as long-lasting.

1. Dwivedi, A. K., Shashi and Singh, J., *Curr. Sci.*, 2006, **91**, 407–408.
2. <http://www.upgov.nic.in/news11.asp?idn=2726>

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Running scientific institutions

This is prompted by the recent editorial¹ on Homi Bhabha and the importance of developing appropriate systems for running our scientific institutions. The editorial touches upon problems that one should expect to encounter on the way, problems whose essence lies in the absence of a shared perception on the part of scientists and administrators (including those who frame rules) concerning their mutual roles, not to mention the role of the institution itself. Often the gap is widened by the choices made during selection. On the one hand, there is the tendency to pick someone as administrative head of a teaching or research institution, or as head of a department, solely on grounds of scientific standing – or worse, seniority. There is little regard for whether the person is suited for the position by aptitude or training. On the other hand, there is the tendency to pick, for filling the next reaches of the administrative hierarchy, people who have risen in government service and are innocent of the way science works. Compounding the mismatch, the latter may be birds of passage. In that case, they cannot see why they should spend time and effort at developing empathy, either with the scientific institution through which they are

transiting or with the researchers in it. The upshot is anguish and frustration – on both sides. The reason is that by tradition, in India we lean on personal connections, on people rather than rules. This applies to those of us engaged in carrying out or supporting scientific research as well. (Think of the havoc wrought by that blissfully unconcerned individual, the 'concerned' case-worker.) Unless a huge amount of effort is invested in building a new, quasi-Western, ethos, which is what Bhabha tried to do, it would seem that one has to invent ways of matching the demands of doing science today to the constraints set by our culture.

But there is another issue, more deep-set, that is relevant to the functioning of any system of administration that has an 'outsider' on the top. It must confront scientists who guide public research organizations or funding agencies; even lowly department chairs encounter it. Though not confined to India, it stands out here. I refer to the ability of administrators and bureaucrats to so manage things that the outsider, who is supposed to direct their functioning, soon ends up being directed by them. Readers who have seen the TV serials 'Yes Minister'

and 'Yes Prime Minister' may recall the witty manner in which this serious message was put across. Among scientists, it is not unknown for the same person who used to complain about the administration endlessly to become, upon acquiring an administrative role, its most vociferous champion. Others, who notice the phenomenon and live with its consequences, lament the fall of a colleague and go on to place the responsibility for their woes on inappropriate procedures and the benighted ways of administrators. Perhaps there is a more innocent explanation lying hidden in the dynamics of bureaucratic systems. It may reveal itself to careful study of the sort pioneered years ago by Parkinson of Parkinson's Law fame. Unfortunately, instead of being examined seriously, his contributions too are prone to be dismissed as falling into the category of humour.

1. Balaram, P., *Curr. Sci.*, 2008, **94**, 423–424.

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