

energy, water and transport policies. In 2007, the report of the Steering Committee on Water Resources for the 11th Five-year Plan mentioned climate threat as an established fact and underlined the necessity of assessing what climate change means in terms of water availability. The National Transport Policy 2014 mentioned climate change as one of the crucial concerns that the policy attempts to address. This is perhaps one of the issues which despite the uncertainty surrounding the subject, caught the imagination of both the public as well as the policymakers.

Just like the public, policymakers read newspapers and effective communication in the media influences their thinking, which in turn reflects in their decision-making. Studies show the influence of newspaper reporting on public policy<sup>5</sup>. In the US, newspaper reporting has helped shape policies on climate change<sup>6</sup>. With India formulating several policies to address the issue, the connection between newspaper reports and policies on climate change in India needs to be examined.

Being a controversial issue that involves decisions to change energy policies, industrial production methods and even basic lifestyle of the people, the very

existence of climate change and the reasons behind it have been hotly debated the world over<sup>7</sup>. Climate change has perhaps been one of the most uncertain sciences communicated to the public. This is not the fault of the subject, or that of experts. Uncertainty exists because of the very nature of the subject. However, the argument of uncertainty was used as a means to create doubts in the minds of the public about the veracity of the science. So much so that communicators have been persuaded to think about how to communicate to the public that every scientific finding has a certain level of uncertainty, and that decisions and actions need to be taken despite this.

In spite of the uncertainty and the debate, this is a scientific issue that has seen large media coverage and simultaneously witnessed an escalation of policies, both national and regional. One needs to study whether there is a relationship between the two. The answers may help future strategies of communication on many scientific issues.

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## Does *Prosopis juliflora* negatively impact upon the nesting success of heronry birds? A critique of a report in *Current Science*

The fact that *Prosopis juliflora*, a plant native to South and Central America and introduced in India to meet fuel requirements and restore degraded lands, poses a serious threat to native biodiversity is well known. Chandrasekaran *et al.*<sup>1</sup> have attempted to show, at Vettangudi Bird Sanctuary in South India, that heronry birds (of different species) which build nests on *P. juliflora* tend to suffer greater nest losses compared to those utilizing a native tree like *Acacia nilotica* as a nesting substrate. The authors suspect that differences in branching patterns of the two trees might have a role to play. The branching angle in *A. nilotica* is 40–130°, while in the case of *P. juliflora* it is mostly between 165° and 190°. This, according to the authors, may result in ‘greater sliding of eggs and chicks from nests’ in the case of the latter.

We feel that the authors have been hasty in concluding that ‘invasive tree

*P. juliflora* poses significant threat to the nesting success of wetland birds’, because both the evidence and analysis provided are inadequate. They do not mention the species whose eggs and nestlings were found fallen on the ground, but from the list of bird species recorded at the site (provided in table 1 of their paper), one assumes it is mostly smaller species like heron, egret, cormorant, etc., which build their nests in the interior parts of the tree. According to the authors, the number of eggs and chicks fallen on the ground per tree is indicative of the suitability of the tree as a nesting substrate. The number of fallen eggs and chicks under *P. juliflora* was significantly higher than those under *A. nilotica* (mean 1.3 as against 0.25 respectively). It is interesting to note that significantly more nests per tree were recorded on *P. juliflora* compared to *A. nilotica* (mean 50.7 as against 20.8 respectively). This

means that if a certain number of eggs or chicks is bound to roll off or fall down, then more of such cases will be recorded in the case of *P. juliflora*, since it has more nests. The author do not provide either any experimental or observational evidence, mechanical understanding or reference to relevant published reports which reinforce the idea that angle of tree branches is a significant factor in the placement of nests.

There exists an enormous variety in the shape of *P. juliflora* canopies. Generally, the merged canopies of several trees growing close together tend to assume the shape of a cone, a tent or an umbrella, and different species of heronry birds utilize these merged canopies for placing their nests. While smaller species build nests in the interior parts, larger species like stork, ibis and spoonbill place their platform nests on the outer surface of the substrate. Thus, in the case

## CORRESPONDENCE

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of *P. juliflora*, talking of a single tree in terms of nesting substrate for birds is somewhat meaningless. Also, it has to be borne in mind that birds have enormous plasticity and adaptability when it comes to utilizing resources for living and opportunistically using nesting substrates. That is why heronry birds tend to build nests wherever they can find suitable substrates and protection, even in urban ponds. For the past 50 years, Painted Stork (*Mycteria leucocephala*) has been regularly nesting on clumps of *P. juliflora* in the ponds of Delhi Zoo<sup>2</sup>. In Upalapaddu, Andhra Pradesh, pelican and Painted Stork have started nesting on metal structures erected in ponds by the local forest department. Birds like Black ibis (*Pseudibis papillosa*) have been recorded building nests on electricity pylons<sup>3</sup>, about 10–11 m above the ground.

Invasive species like *P. juliflora* are certainly a nuisance and create ecological havoc due to a number of reasons<sup>4</sup>. Being an aggressive species, it is known to compete with local species and drive them to extinction and this is by far its most negative feature. However, as far as the note of Chandrasekaran *et al.* is concerned, by presuming first and foremost that an invasive species is bound to have negative impacts on nesting birds, and

basing their conclusion on only one set of observations, is like putting the cart before the horse.

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### Response:

Even a small human movement inside the Sanctuary will lead to greater mortality of juveniles/eggs due to vigorous movement of the birds. Therefore, it is difficult to collect fine details such as species-wise fallen eggs and chicks from the study sites. Our statement regarding the possibility of sliding eggs and chicks from the nest of *Prosopis juliflora* and *Acacia nilotica* is based on the observations from the banks of the Sanctuary. A long-term study currently undertaken by us on the exotic plants–birds interaction will give more insight on the topic in the future.

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