

## In this issue

### Research Output

#### *Comparing Indian states*

India is now among the top five producers of research articles and reviews. The contributions by the individual Indian states to this achievement, however, are not uniform or stable over time. Which states have greater research output? How does the research output relate to the Gross Domestic Product of each state? How has the output from the states changed from the first to the second decade of this century? What can the states do to ensure consistent growth in research output?

A General Article in this issue explores these questions based on a total of 835,795 publication records consisting of scientific articles and reviews from 2001 to 2020 in the Web of Science. From the address of the institutions of the scientists listed as authors, the articles were tagged to specific states for the analysis. Institutions with less than 50 publications in the two decades were excluded.

While six states had more than 100,000 publications, the state in the seventh position had only about 54,000. Some states like Odisha, Chhattisgarh, Bihar, Assam, Himachal Pradesh, Jammu and Kashmir, which were low in productivity in 2001, show remarkable increase in the number of publications in 2020. Since research institutions provide impetus to local development, Indian states need to take proactive steps to establish and encourage research institutions, advises the General Article on **page 1245**.

### Indian Spiders

#### *Speeding up studies*

Spiders are not as popular as lions or leopards among wild life enthusiasts. But they have important ecological

roles and habitat structure changes due to human activities impact them too.

Though there are more than 50,000 spider species across the world, the research on the topic in India is limited. There are only 417 publications from 2000 to 2020 on the topic of Indian spiders, point out researchers from the Wild Life Institute of India. Though it is encouraging to find that the number of publications increased from 106 in the first decade of the century to 315 in the second decade, almost half of the studies come from five states. So we lack information about the diversity and distribution of spiders in India. This, at a time when 14 spider species are afforded legal protection under the IUCN Red List, is not a good sign for conservation science.

Moreover, most of the articles are inventories and taxonomic descriptions of spiders. There is a dire need for studies on the natural history, behavioural dynamics, and inter- and intra-specific interactions, community ecology, diversity, phylogeny, biogeography, ethnozoology and conservation of spiders, say the researchers.

The Review Article on **page 1270** in this issue is a wakeup call to rectify the lacuna.

### Urban Planning Schemes

#### *Indian capital cities*

In India, there are many cities with a population of one million or more. The population growth in these cities is rapid due to migration from villages and towns. There are quite a few urban planning schemes in India, some with comprehensible names like Smart City and U-Transport, others with fancy names such as AMRUT, HRIDAY and yet others with uncomfortable acronyms such as PMAY, NULM and SBM. There is a need to

put all these schemes into perspective using the lens of the nine principles of urban planning and their respective indicators, notes a Research Article in this issue.

Indian cities are constitutionally mandated to formulate and put into practice development plan policies. A guideline for the formulation and implementation of urban and regional development plans has been formulated by the Ministry of Urban Development. But are the development plan policies in alignment with the modern urban planning principles of sustainable and smart urban growth even in the 13 capital cities with a population of a million or more?

Read the Research Article on **page 1282**.

### Fisheries Vocational Education

#### *Mismatch with needs*

India, with more than 7000 kilometres of coasts, is the 4th in the world for exports of marine fish and fish products, earning more than 400 million rupees a year. However, the potential for capture fisheries and the expansion of its value chain in India are yet untapped. There is a competence deficit in attracting, exploring, adapting and leveraging on cutting-edge technology, points out a Research Article in this issue.

The article examines the vocational education system to find out the gaps in the curriculum and teaching as well as the mismatches with the knowledge, skills and attitudes necessary for a more vibrant and competent marine fisheries industry in India, using Kerala as a case study.

Read the article on **page 1329** for details.

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