

In this issue

Housing in India

Is it affordable?

Having achieved reasonable self-sufficiency in food and clothing by the beginning of the twenty-first century, India launched the Pradhan Mantri Awas Yojana in 2015, aiming to provide housing for all, including the economically weaker sections of the nation, by 2022. Under the mission, the policy focused on affordable homes.

In this issue, Darpagiri Mondal and Bishwajit Bhattacharjee argue that housing affordability is a dynamic measure, that affordability of housing has different meanings. They point out that factors other than income and expenditure drive the dream of a house.

Just building four walls with a door and windows is not enough. Modern families seek homes near work locations, where they can be part of a social community and where there are other economic opportunities. If these factors are also accounted for, lower segments of the economic ladder cannot afford houses.

Affordable housing must cater to the target population as per their income and expenditure. The researchers used data from the census report of 2011–12 and household consumer expenditure to derive representative results. Based on the data, only 11% of the population in cities and 23% in villages can afford a house.

The government can help with accessible financing and balancing affordable interest rates. New technologies and materials may help lower construction costs. But can even a person with reasonable income balance the dream of a house with loans and EMIs? How can the slogan, Housing for All, be converted into reality?

Concerned citizens need to read the General Article on **page 1559**.

Heat Waves

No time to waiver

From the 1980s, there has been an increasing global trend in deaths due to heat waves. The rising trend in the number of heat waves is seen in India too. Between 1978 and 2014, there have been 660 heat wave events in India, killing more than 12,000 people.

A Research Article by researchers in Haryana examines the data from the India Meteorological Department. Interestingly, the associated fatality has remained steady over more than three and a half decades, report the authors.

Though there are more heat waves in the north western states, deaths are greater in Andhra Pradesh. In fact, Andhra Pradesh, Rajasthan, Odisha, Uttar Pradesh and Bihar account for 80% of heat wave deaths. Nine states had none.

Heat waves peak in different places in different months from April to June and the majority of those who die are males.

Now that the problem, the time and places are spelt out, disaster management can be more prepared, hope the researchers. To take evidence-based action to save hundreds of deaths every summer, turn to **page 1593** in this issue.

Co-developing Climate Services

For public health systems

Heat waves, cloud bursts, landslides, cyclones, tsunamis, earthquakes, fires, floods... Extreme climatic events overburden local public health systems and often catch them unprepared. Climate services oriented to health services are needed to create a more resilient system.

In India, the National Programme on Climate Change and Human Health is in place and the India Meteorological Department has already initiated Climate Information for Health on an experimental basis. Forecasts on favourable periods for

vector-borne diseases are now possible.

But there are many missing links, resources that are not being used. A Review Article in this issue reviews the progress so far and spells out the strategic steps that need to be taken. Turn to **page 1578** in this issue.

Pulverizing Meningiomas

Shock wave treatment

A meningioma is a benign tumour of the meninges, the membrane between the brain and the skull. Surgically removing the tumour is risky since it is too close to and often extends into sensitive parts of the brain. Neurosurgeons B. J. Sudhir from the Sree Chitra Tirunal Institute for Medical Sciences, Thiruvananthapuram, and a neuropathologist, Anita Mahadevan from NIMHANS, Bengaluru are trying an alternative to overcome the problem: shock waves.

Shock waves are acoustic pressure waves that last only for a microsecond and reach a high-pressure level of 1000 bars. Applying shock waves as medical treatment is not a new idea. Shock waves are used to treat kidney and urethral stones. Reasonable costs and effectiveness make shock wave therapy practical.

The researchers tested a shock-wave delivery tube, developed by K. P. J. Reddy of IISc Bengaluru to rupture meningiomas. The syringe-based hydraulic system device generates high-pressure shock waves in a concentrated volume.

In vitro experiments on tumours from four patients showed that the shock waves create surface-level changes in the soft tumour.

Can the device be improved to deliver controlled shock waves to break the meningioma? If so, what are the short- and long-term effects?

Turn to the Research Article on **page 1587** in this issue.

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