

Health hazards of mosquito repellents

The general article 'Health hazards of mosquito repellents' (*Curr. Sci.*, 2001, **80**, 341–343) was an excellent piece, an eye-opener even to complacent biologists like me who have been using it for decades, since the time our own children were just a few years old. Its use even in the homes of educated people, extending even to agricultural scientists who have been taught the harmful effects of pyrethroids right from undergraduate days, has been fueled by two factors: the overwhelming fear of contracting a far more deadly disease, i.e. malaria, and the general complacency pervading in our country *vis-à-vis* the use of pesticides. This is compounded by the fatalistic view that death and disease are ordained by God, and that

nothing is in our hands. On the contrary, it is high time we woke up and took stock of the poisons pervading our lives. This article should be sent to the Drug Controller of every state and the Union Ministry of Health. These officials probably even watch the spate of TV advertisements of these repellents, where they are flouted as being safe even for infants and toddlers (most of the advertisements even show toddlers and infants sleeping blissfully in the presence of these mats). Scientists in Delhi, the INSA, CSIR, ICMR, etc. have a moral obligation to pressurize the Union Ministry to ban such advertisements and to advocate mosquito nets as the only safe alternative for little children. To continue displaying these

advertisements would be tantamount to looking at a future generation of mentally retarded children. Let *Current Science* too lend a hand by devoting more space to general articles covering human and even animal health (after all, in many urban homes the dogs share the same comforts (bed, sofa, etc.) with their masters. Let us hope we get to read more articles like this, which will wake up the scientists and administrators in the Health Ministry from their slumber.

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The Gujarat earthquake catastrophe – Lessons to be learnt for disaster preparedness

The *Current Science* special issue on 'Seismology in India' (1992) gave an overview as well as a map of seismic zonation in India. According to the map (IS: 1893–1962), the Himalayan region, including N–E India, western Gujarat and the Andaman and Nicobar Group of islands have been classified in the category of high earthquake-prone zone. So, since at least 1962 we have had definite guidelines for construction criteria taking into account the earthquake risks. Scientists agree that a disaster occurs when its two main components – hazard and vulnerability – coincide in time and place. Until such vulnerabilities and unsafe environments, fragile socio-economic structure and lack of disaster preparedness are not attended to, hazards remain a recurring natural phenomena. Blaikie *et al.*¹ proposed the 'pressure release model' for disasters, which presents the progression of vulnerability from root causes to unsafe conditions. This model connected the disaster to the processes that are sometimes quite remote and lie on the economic and political sphere. The limited

access to power, resources and the political and economic system, which are grouped under root causes in the framework of this model, create 'dynamic pressures' such as rapid population growth, rapid urbanization, foreign debt, war, lack of ethical standards in public life and environmental degradation. A consequence of these pressures is that the populations are exposed to 'unsafe conditions'. In conjunction with this model, the Latur earthquake (1993) which killed more than 10,000 people, and now the Gujarat earthquake (2001), where the death toll will be higher, have caused large-scale physical destruction in the economic heartland of the country. Should this be perceived as the manifestation of not being able to meet developmental challenges?

After each of the earthquakes, the politicians went to the public seeking solidarity, patience and compassion. Each time Indians were prepared to offer as much as they could in order to alleviate the suffering caused by these earthquakes. The future is likely to bring some initiative by the public and

the media, which would force the establishment to take disaster management seriously. This time the politicians, local municipality authorities, building contractors and civil engineers will not be able to get away with their role in creation of this disaster. More importantly, the public will ask as to why the vital 6–12 h were wasted instead of rescuing those alive from the ruins and as to why the civil defence organization was ineffective.

It is evident that all those who play a role in the construction of buildings – from contractors and civil engineers to corporation/city council inspectors and clients – have to share the blame in making a disaster out of a natural hazard. However, what can be done is to derive some immediate lessons from the tragedy, highlighting the main shortcomings of disaster management. The areas of concern can be summarized as the lack of mitigation preparedness and professional ethics. It is essential that local municipalities have the financial resources and trained personnel to be able to inspect the work of contractors

and are made accountable for their act, all through their life.

As India is not a high-income country, municipal councils usually do not have the resources to employ adequate number of civil engineers as inspectors. Even if they do, these positions are often poorly paid. So it may be difficult to attract experienced and qualified civil engineers, who can achieve more than simply checking the basic calculations of building projects. In addition to this, it is difficult to see how proper building inspection can be achieved, given the widespread corruption in obtaining building permits. Some may agree that increasing penalties for negligence in building safety could have some positive results in the future. However, considering the rate of growth in India, especially in the cities, it is a daunting task to carry out proper inspection, even if it is assumed that there will be the needed political and ethical will behind this intention. Another approach would be to increase public awareness and in effect, make the potential buyers of houses a group of 'inspectors'. This can be less expensive and at the same time, much more effective.

In India, where the population is business and initiative-oriented, the existence of 'demand' has a significant role in the way socio-economic and political structures in the society form these inter-relationships. In other words, if only people show as much interest in the earthquake safety of their apartments, as they do in choosing the size of tiles, doors and taps used, then it will be more likely that building contractors will stick to the rules and regulations. In addition to this, the initiation of a general insurance scheme for buildings can also have a significant role in ensuring constructions being built according to building safety regulations. It is very likely that insurance companies would refuse to provide insurance for a building that is not earthquake-proof or at least ask for higher premium. Unless there is a finance-related regulation, rules are very difficult to be implemented. Finally, an efficient civil defence system has to provide quick and effective response to the needs of disaster-stricken people.

The Gujarat, Latur and Chamoli earthquakes have shown that, in contrast to limited response of the state, the

involvement of the non-governmental organizations in emergency aid and service was partly effective. It is here perhaps that the international community can have a significant role. The transfer of know-how in rapid rescue methods and designing of effective disaster preparedness plans are the areas in which the international community can provide India with the necessary resources for capacity strengthening. This will certainly be better than help rendered in a catastrophe, although the care shown by the international community by providing a large number of relief aids, is nevertheless deeply appreciated by the public.

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1. Blaikie, P., Cannon, T., Davis, I. and Wisner, B., *At Risk: Natural Hazards, People's Vulnerability and Disasters*, London, Routledge, 1994.
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Taxonomy in India

The communication by Pushpangadan and Narayanan Nair¹ is highly informative. The field of taxonomy, neglected in the Indian subcontinent for the last three decades, regained importance after the Convention on Biological Diversity (CBD-1993) and its effective implementation in India from 1994. Taxonomy plays an important role in getting the sovereign right of countries to their biological wealth. As the authors noted, in recent years, the field of systematics failed to attract the attention of young researchers, students and even the university/college teachers. Most of the universities/college departments of botany do not even have a good taxonomist.

Study of monotonous floras and mere listing of taxonomic characteristic in-

formation may not be understood by the workers in related fields. More information on ecology, conservation and utilization needs to be included in every description. Only a field biologist can give all these information.

Considering the importance and the need to hasten our bioprospecting studies and to establish our rights over economically and medicinally important endemic flora, taxonomic research/researchers should be encouraged and priority should be given to taxonomy-oriented projects/programmes. Training programmes should be conducted at the national level for young researchers by institutions involved in biosystematics, as practised in National Botanical Research Institute (NBRI). These actions

may help to give life to the field of biosystematics and to the 'taxonomist' – the endangered species.

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1. Pushpangadan, P. and Narayanan Nair, K., *Curr. Sci.*, 2001, **80**, 631–638.
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