

(p. 1). The caution to be posted in understanding this is that it would hardly suffice to point at the erosion of welfare of the poor people as a result of climate change 'shock' per se, as though government policies have proved to be all that magnanimous otherwise. The message that the report conveys implicitly is the existing lack of governmental support to the poor, which only makes their exposure to climate change an overwhelming task.

Majority of the labelled 'poor' nations find their existence in the Asian and the African continents, and climate change can impinge on the welfare of the citizens of these nations. A case in point is the statistics provided by the report: 'Flooding affected the lives of some 68 million people in East Asia and 40 million in South Asia. In sub-Saharan Africa, 10 million were affected by drought and 2 million by flooding' (p. 76). In a report published by ScienceDaily.com (1 February 2008), the study by researchers at Stanford University's Program on Food Security and the Environment (FSE) revealed '... two hunger hotspots where climate impacts on agriculture look particularly dire: Southern Africa and South Asia'. South Asian agriculture becoming a casualty to climate change is well documented, and so is the apprehensive, yet veridical fact that the snow caps of the Himalaya are melting. In such a scenario, one cannot help shudder at the pseudo-judiciousness of the linking of rivers in India! At a fundamental level, there is also the trade-off between energy security and 'climate security goals' in developing countries. Not all nations can afford to adopt climate-friendly technology, when even basic issues like complete electrification have not been achieved, as exemplified by the drive of China and India drive to exploit the coal reserves for producing energy. In cases like these, climate change goals seem far-fetched.

In HDR 2007/2008, there are two significant issues that engage a reader's interest, not in the general sense of arousing curiosity, but as a spark that would make one think in a panoptic manner. One of them is the question of media coverage of climate-change events. While media mileage can help in securing aid funds, they also perform the duty of creating awareness about mounting climate-related problems. The coverage for hurricane Katrina was far wider than Sidr in Bangladesh, thus acting as a hurdle against ac-

cepting climate change to be a world-wide phenomenon. Another significant issue raised is the one on women and girls becoming sufferers due to climate-change shocks in developing nations. Female populations are victims, as in loss of lives (restricted mobility), and also by not being able to recover from the shock, especially due to 'restrictions on the legal rights and entitlements of women to land and property'. This can cause penury and human deprivation for them and for their family as well.

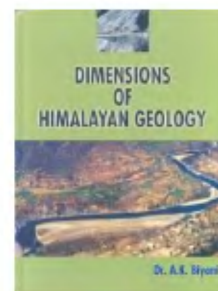
While mitigation (reducing carbon-dioxide emissions) is considered a solution to climate-change problems, adaptation is another that can save one from changes that are already happening or will happen within a short time-frame. Both the proposed solutions expose the hegemonic attitude of the developed nations. A significant inclusion in the report is a special contribution by Archbishop Desmond Tutu (p. 166). Tutu vehemently attacks the double standards of the West in encouraging adaptation, which, according to him, is a 'euphemism for social injustice on a global scale'. Adaptation in the rich nations is all about securing one's dwelling place from the flood waters, or installing cooling systems to ward-off heat. In contrast, adaptation is a painful process for people of the poor nations. For instance, reduced rainfall can force them to cut on 'already inadequate household nutrition'. In a case like this, pinning one's hopes on adaptation strategies will only bolster the existing 'climate change apartheid', rues a concerned Tutu.

HDR 2007/2008, by endorsing climate-change shocks to be an important determinant of human development, has steered away the subject matter of climate change from dismal and monotonously academic/scientific authorship, to mould it into issues of social justice, human rights and human development. This report will help shift the focus from checking the accuracy of the prognostications, to implementing action plans that ameliorate the conditions of the victims. However, the report by UNDP makes every effort to cover up for the inaction and indifference of the developed world by focusing excessively on the portentous effects of climate change on the developing nations of Asia and Africa. At a more nuanced level, the report calls for a multilateral framework beyond 2012, explicitly presaging the death of the Kyoto Protocol, which is a millstone around the neck of

the hegemonic United States of America. There is also the neo-liberal idea of establishing a carbon market that can work to contain carbon release into the atmosphere, notwithstanding the significant role for regulators and policy makers of the government. On balance, working today to save tomorrow will safeguard the future generations which will 'see our response to climate change as a measure of our ethical values', echoing Samuel Johnson's resonant avouchment that 'The future is purchased by the present'.

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Dimensions of Himalayan Geology. A. K. Biyani. Satish Serial Publishing House, 403, Express Tower, Commercial Complex, Azadpur, Delhi 110 033. 2007. 330 pp. Price: Rs 1895.

The splendour and glory of the magnificent Himalayan mountains have been immortalized by the great ancient Indian poet Kalidasa: 'In the northern part there is a mighty mountain, Himalaya by name, the abode of perpetual snow – fittingly called the Lord of Mountains, animated by Divinity as its soul and internal spirit or, in other words, Divinity incarnate. Spanning the wide land from the scale of earth, sea, he stands as it were, like the eastern to eastern'¹.

The Himalayan mountain system is part of the world's largest mountain range. The Himalayas embodying the concentration of lithospheric mass borders the Tibetan Plateau to the south. The Himalayas terminates both in the east and west with spectacular syntaxial belts, with arcuate disposition of the mountain ranges extending over 2500 km. The Everest

BOOK REVIEWS

(8848 m), the highest peak in the world lies in the central part.

This book consists of 13 chapters. In the first chapter, the author tries to describe the geographic framework and some of the classical works on the Himalayas. Plate 1.1 is absolutely not readable. The second chapter provides a description of the Indo-Gangetic plain from the compilation of ONGC published data. He describes the frontal faults and basement as well as change of course by rivers, which is obviously, a neotectonic phenomenon. The third chapter on the geomorphology of the Himalayas, collects data on the rivers, glaciers, weathering products, etc. Glaciological findings have revealed that glaciations were not synchronous in the Himalayas, but varied between 60 and 18 ka in different regions. The high chemical weathering is related with topography resulting from tectonism and climate. The total carbon dioxide consumption in the Himalayas is four times higher than the Amazon basin. This might influence global climate in the long run². Plates 3.1 to 3.3 are of poor quality. Chapter 4 on structure and tectonics has been compiled using data published in the literature and is not cohesive. Recent work by international researchers is missing. Plates 4.1 and 4.2 are also of poor quality. In chapter 5 the geological map of the Himalaya is not very well printed. Similarly, figures 5.3–5.5 and 5.11 do not serve any purpose. The whole purpose of writing this book is defeated and it is rather annoying for any geologist who would like to learn the science of Himalayan geology!

The next chapter on palaeontology is poorly crafted. The Himalayas are the cradle of classical areas of fossil research – right from the days of Karl Diener³, the famous palaeontologist from

Vienna. References are poorly cited in this chapter. Unfortunately without any plate of vertebrate or invertebrate fauna as well as flora, the chapter is disappointing. The chapter on petrology is disorganized. Description of ultra high pressure metamorphism and the deep-seated phenomenon along the subduction zone is missing. Plates 7.1 to 7.3 are not worth understanding. They should have been properly printed. The chapters on geochronology and geophysical researches are not well tabulated and reproduced. The chapter on environmental geology should have taken seriously the subject of global warming and recession of Himalayan glaciers. The remaining chapters on engineering geology, and resources of Himalayas have been compiled with data from published material in a rather sketchy manner. The final chapter on the origin and evolution of the Himalaya has been compiled from published data and lacks synthesis.

There are numerous quotes from Sanskrit scriptures, which are simply superfluous. In the bibliography there are numerous wrongly quoted literatures and mistakes as well as typographical errors. With the high price tag the publisher should have taken more care to edit the book and reproduced the diagrams properly.

1. Sinha, A. K., *Himalayan Orogen and Global Tectonics*, Oxford & IBH, New Delhi 1992, pp. 3–18.
2. Sarin, M. M., *Curr. Sci.*, 2001, **81**, 1446–1450.
3. Diener, C., *Mem. Geol. Soc. India*, 1912, **36**, 1–175.

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Gemstones – Enchanting Gifts of Nature

The Geological Society of India, Bangalore, has this year in its 'Popularization of Science Series' has brought out a beautifully illustrated book titled *Gemstones – Enchanting Gifts of Nature* by R. V. Karanth, a specialist in the study of gems and a former Professor of Geology at the Maharaja Sayajirao University, Baroda. A gemmologist's delight, the book deals with every possible aspect of gems and furthers the study of gemmology.

There are chapters on what are gemstones, their qualities, colours, rarity, chatoyancy, refractive index, lustre, man-made stones, organic stones, gem-cutting, flaws in gemstones and gem testing, gem carving as well as gem-cutting and jewellery.

The book consists of 48 pages, inclusive of explanatory notes and vivid pictures and is priced at Rs 200.

S.N.