

**World Development Report 1994 – Infrastructure for Development.** Published for the World Bank by Oxford University Press, New York, NY, USA 1994. pp x + 254. [ISBN: 0-19-520992-3, paperback]

This year's *World Development Report*, the seventeenth in this annual series, examines the link between infrastructure and development and explores ways in which developing countries can improve both the provision and the quality of infrastructure services.

Developing countries invest US\$200 billion a year – 4% of their national output and a fifth of their total investment – in new economic infrastructure such as safe water, sanitation, waste disposal, electric power, telecommunication, roads, railways, ports, waterways, airports and dams and canal works for irrigation. But to what avail? While it is heartening to know that during the past fifteen years the share of households with access to clean water has increased by half and power production and telephone lines per capita have doubled, it is also worrisome to note that the increase in the quantity of infrastructure stocks has not been matched by the quality of infrastructure services. The inefficiency and waste, both in investment and in delivering the services, are appalling. On average, 40% of power-generating capacity in developing countries is unavailable for production. Half the labour in the railways in many developing countries is estimated to be redundant. And many newly laid roads do not last the first monsoon shower. Had the spending and the services been more purposeful, today there will not be one billion people in the world without clean water and two billion without sanitation or electricity.

Can the performance be improved by doing things differently – in more effective and less wasteful ways? The Report addresses this question and is unafraid to provide straightforward answers with no hedges.

Money, difficult to mobilize, has been squandered throughout the developing world in four ways, says the report. (i) Poor maintenance (of power generation equipment, roads, etc.), (ii) Choice of wrong locations for major projects, thus sinking a lot of money on roads and power stations, which once built cannot be shifted or put to other

uses; (iii) Providing subsidy (e.g. many states in India provide free or low-cost electricity to 'farmers'), thus straining the governments; and (iv) Tolerating and at times even encouraging woeful inefficiency (e.g. the notorious telephone service in many developing countries).

The Report suggests that the poor past performance is largely due to inadequate institutional incentives for improving the provision of infrastructure. To ensure efficient, responsive delivery of infrastructure services, the Report recommends a change in incentives through the application of three instruments, viz. commercial management, competition, and stakeholder involvement.

The three commandments of the World Bank are

- (1) Manage infrastructure like a business, not a bureaucracy, with clear objectives and managerial and financial autonomy.

Any service industry should respond to customer demand. The 'bottomline' should be customer satisfaction. The government should take the back seat and allow greater and greater participation by private industry in management, financing and ownership. The Bank would very much like governments 'to act more often as facilitator, coordinator and guardian of the public interest (especially to ensure access for the poor), and less often as direct operator'.

- (2) Introduce competition – directly if feasible, indirectly if not.

The consumers should be in a position to choose between alternatives and put pressure on suppliers to be efficient and accountable to them.

- (3) Give users and other stakeholders a strong voice and real responsibility.

Users and other affected groups should be represented in the planning and regulation of infrastructure services, and even in the design, operation and financing

Critics may point out that the World Bank is going whole hog with pure capitalism, that it is trying to give simple solutions to not-so-simple problems (for example, while the report emphasizes fiscal discipline, it does not talk about institutionalized corruption),

and that these commandments can only go to some length – thus far and no further. What will happen to the millions of the destitutes and the rural poor with virtually no economic means, if all subsidies are withdrawn and everything is run on business lines? Or for that matter, does competition always lead to greater advantage to the consumers? Have we not seen national and international cartels in industry after industry neutralizing the expected advantage to the consumers? What was the 'strong voice' given to the people affected by huge projects such as the Narmada dam? Or, in the opinion of the protagonists of the dam and their supporters in international aid-giving agencies such as the Bank, are the countless number of people uprooted from their homes of several generations not to be considered 'stakeholders' or 'affected groups'?

Many critics in the developing world believe that the Bank twists the arms of developing country governments in subtle and not-so-subtle ways to toe a line that is favourable to the economically advanced countries. The Bank will do well to be sensitive to such criticism and respond to it. Ultimately, the Bank is responsible to the people of the world even though it has to deal with governments, the ruling elite and the bureaucrats

The Report is well organized and well produced. It begins with 'Definitions and data notes', and an overview. There are six chapters covering infrastructure achievements, challenges and opportunities, running public entities on commercial principles; using markets in infrastructure provision and looking beyond markets; financing and setting priorities and implementing reforms. There are 46 boxes, many of them providing examples of both successes and failures from different countries in support of the main thesis, 32 text figures, 18 text tables and 4 appendix tables. The countries of the world are divided into 4 groups on the basis of GNP per capita in 1992: low-income economies ( $\leq \$675$ ), lower middle-income economies ( $> \$675 \leq \$2695$ ), upper middle-income economies ( $> \$2695 \leq \$8356$ ), and high income economies ( $> \$8356$ ).

The Report includes the World Development Indicators, which offers comprehensive, current data on social

and economic development in more than 200 countries and territories. These tables provide data on a wide variety of indicators: Basic indicators (population, GNP per capita, average annual rate of inflation, life expectancy at birth, adult literacy), growth and structure of production, agriculture and food, commercial energy, structure of manufacturing, manufacturing earnings and output, growth of consumption and investment, central government expenditure and revenue, structure of merchandise imports and exports, balance of payments and reserves, development assistance from rich countries, total extent of debts, flow of public and private external capital, external public borrowing, external debt ratios, population and labour force, demography and fertility, health and nutrition, income distribution and PPP (purchasing power parity) estimates of GNP, urbanization, infrastructure coverage and performance, and natural resources.

Data for 132 economies are given in the main tables, and basic indicators for 75 economies (for which either extensive data are not readily available or whose population is less than one million) are provided in a separate table. Although China and India are included in each one of the 33 tables, the column heading reads 'Low-income economies excluding China & India'. This perhaps is an editorial oversight in an otherwise excellently produced volume.

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**Geology of Karnataka.** B. P. Radhakrishna and R. Vaidyanadhan. Geological Society of India, Bangalore. 1994. pp. 298, Figs. 88, Tables 10. Price: Rs. 200/-

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The Geological Society of India has launched a commendable programme of publishing textbooks on the geology and mineral resources of various states. This fulfils a vital need of the student community, who had until now to make do with the textbooks on the geology of India, in which the states' share was

necessarily small. The first in the series is the present volume on Karnataka, which is a classical and well-studied terrain of the Indian shield. The earlier text by B. Rama Rao (1962) needed thorough updating, and the recent *Memoir of the Geological Survey of India* by J. Swami Nath and M. Ramakrishnan (1981) covered only the southern part of the state and that too only the Precambrian rocks. The present volume is therefore very timely.

The book is divided into two parts, one on geology (252 pp.) by Dr. B. P. Radhakrishna and the other on geomorphology (40 pp.) by Prof. R. Vaidyanadhan. The volume commences with a fitting homage to the early pioneers of Karnataka geology like Captain Newbold, Bruce Foote, Smeeth, Slater, Fermor, Maclaren, Jayaram, Sampat Iyengar and Rama Rao, stopping short of Pichamuthu, who has transited into the current era. The second chapter summarizes the geology of Karnataka elegantly in a nutshell and is illustrated beautifully by a colour map on 1:3,000,000 scale. The geological story is nicely interwoven with contemporary ideas on plate tectonics, Archaean-Proterozoic boundary and early crustal development. Geochemical and geochronological data are only sparingly used to reinforce one point or the other. The authors have carefully tried to eliminate personal bias, but their conviction finds its expression nevertheless. The age-old belief that ultramafic-mafic cycles should necessarily be older than the sedimentary cycles is reflected in the treatment of ancient supracrustals and younger greenstone belts. For example, the ultramafic belts like Nuggihalli are regarded as being older than sedimentary belts of Holenarasipur and Sargur, and the eastern gold-rich greenstones (Kolar type) as being older than western Dharwar belts (Bababudan and Chitradurga). Such views are out of tune with the recent advances in the fields of geochronology and rapid revisions taking place in the geology of the better-known shields like Africa, Australia and Canada. However, to be fair to the authors, it may be said that they have hedged their opinions with alternatives in the text, although the accompanying tabular column, which is liable to make a more lasting impression, still reflects the author's

predilection. A comparative table of the more recent and significant stratigraphic successions by other workers would have provided the perspective for a better appreciation of the tabular column (Table I, p. 11). Further, a brief comparative account of the geology of the cratons of Kaapvaal and Zimbabwe in Africa, which have a very close resemblance to Karnataka geology, would have whetted the curiosity of the more discerning students. Similarly, the perception of a nucleus and a mobile zone, both forming a part of the Dharwar craton, creates conflict with the widely accepted craton-mobile belt concepts, which may obfuscate the reader's vision of tectonic divisions of the shield. The next six chapters deal with detailed descriptions of the schists (Sargur, Kolar, Dharwar), gneisses, granulites and younger granites. Carbonatites and alkaline rocks have probably been overlooked. The simple and direct approach to the problem, lucid style and valuable illustrations result in an excellent narration in the inimitable style of Dr. Radhakrishna. A new student of Karnataka geology cannot ask for more. The next chapter on the Archaean-Proterozoic boundary, a pet theme of the author, covers the enigmatic situation where the round numbers of isotopic clocks do not always correspond to the profound breaks in rock record, leading to unresolved debate on the philosophy of erecting artificial boundaries.

The next two chapters on the younger Proterozoic sedimentary basins (the Purana basins) of Kaladgi and Bhima give an up-to-date and authentic account of the current advances, including the recent identification of Badami Group. The Precambrian story ends with a modern and balanced appraisal of Precambrian life, where every new enthusiastic find by someone meets with equally sceptic resistance by the traditionalists. The next major chapter on Deccan volcanic episode is preceded by an introduction to the concept of Gondwanaland. New ideas on Deccan volcanism are beautifully enumerated with the movement of the Indian plate northward and evolution of the Indian coastline. The next chapter on dyke rocks runs through several episodes of dyke emplacement in the craton. Dykes emphasize periods of crustal stability, but the multiple past