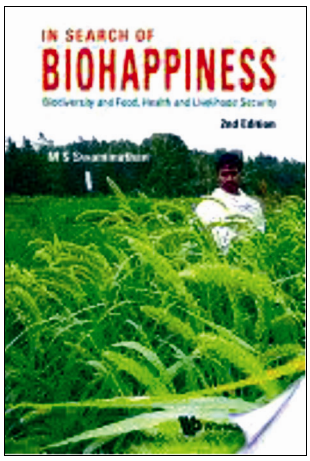

In Search of Biohappiness: Biodiversity and Food, Health and Livelihood Security. M. S. Swaminathan. World Scientific Publishing Co. Pte. Ltd, 5 Toh Tuck Link, Singapore 596224. 2015. 2nd edn. 232 pages. Price: $ 89.

This book by M. S. Swaminathan, based on his wide global experiences and also deep involvement in the welfare of several tribal communities in India, introduces a new concept of 'biohappiness', defined as the elated level of happiness arising from conservation, sustainable use and equitably sharing of bioresources leading to creation of more jobs and enhanced income for the local communities engaged in their traditional practices and lifestyles. It was evolved from the remarkable success of programmes undertaken by the M.S. Swaminathan Research Foundation, Chennai during the past nearly three decades in organizing and training several tribal communities, settled across the states of Tamil Nadu, Kerala and Odisha, to become self-reliant and achieve food and livelihood security while ensuring proper functioning of ecosystems in which they live. What is really appealing and inspiring in this socio-economic transformation is that this amazing success story appears to be doable, replicable and scale-neutral.

It is worth recalling here that the outcome document of the UN Rio+20 Conference in 2012, entitled 'The Future We Want', reaffirmed the vital role of biodiversity and ecosystem services for sustainable development and human well-being. In tune with this approach, the topic for the International Day for Biological Diversity for the year 2014 was 'Biodiversity for Sustainable Development'. This was also accepted as the theme for the 12th meeting of the Conference of Parties to the Convention on Biological Diversity (CBD), held in South Korea in October 2014. The Gangwon Declaration made during that meeting also stressed further the critical role of biodiversity in maintaining ecosystems whose services constitute the foundation for sustainable development and human well-being. Biodiversity has once again entered the centre stage as reflected in Goal 15 of the 2030 Agenda for Sustainable Development adopted by the UN Sustainable Development Summit on 25 September 2015.

All these positive developments notwithstanding, the rates of biodiversity loss and degradation of ecosystems remain alarmingly high world over as revealed by the Global Biodiversity Outlook 4, published in 2014, containing a mid-term assessment of the progress made towards implementing the Strategic Plan for Biodiversity 2011–2020. Biennial reports on Living Planet Index, adopted by the CBD as indicator of the progress made under its 2011–2020 target on halting the loss of biodiversity, also reveal declining trend in biodiversity levels and ecosystem functioning. Progress is also slow in firmly linking biodiversity conservation and ecosystem services with sustainable development projects. According to the Brundtland Report of 1987, development is regarded as sustainable when it meets the needs of the present without compromising the ability of future generations to meet their needs and aspirations. There is, however, no clear blueprint or acceptable model plan, or even in-depth case studies available to follow and critically assess this proposition.

In this context, the book under review describes an original pathway and several options for achieving the stated objective of promoting biodiversity conservation, particularly agricultural biodiversity in sync with sustainable development, which in turn leads to sustained happiness. Contents of the book demonstrate convincingly that wherever local communities are enabled to develop an economic stake in biodiversity conservation, they contribute to inclusive sustainable development based on sustainable food availability and also its accessibility through secure livelihoods.

This publication, which is second edition of the book with the same title published earlier in 2011, also conveys a powerful message that biohappiness should indeed be the main objective of all research and development studies on biological resources. It also illustrates the pathway to biohappiness, providing several options for achieving it by promoting biodiversity conservation, or its components, in sync with sustainable development leading eventually to sustained happiness. It describes how local communities and self-help groups have adopted some mutually supportive practices of *in situ*, *ex situ* and community conservation of agricultural biodiversity in hilly tracts or in coastal areas, and are able to improve their economic status and self-reliance in managing their lifestyles. Several tribal communities have also successfully established gene, seed, grain and water banks in their villages, linking conservation and cultivation of bioresources with sustainable consumption and marketing opportunities in a mutually supportive manner to bring in sustainable development in their area. Success of some of these tribal families has been widely recognized enabling them to win awards, including the well-known Equator Prize instituted by the UNDP. These examples have also served as a guide and source of inspiration for other families to follow this approach.

The concept of biohappiness, described in this book, needs to be distinguished from several other similar notions used in measuring national well-being and happiness as alternative approaches to Gross Domestic Product (GDP), which is used as the measure of economic wealth. Bhutan, for example, has championed since 1971, a new approach for assessing development by gauging happiness levels of its citizens and measuring prosperity through principles of gross national happiness along with spiritual, physical, social and environmental health of its citizens and natural environment. Bhutan remains the first and so far the only country to have officially adopted 'Gross National Happiness Index' instead of GDP as the main development indicator. In 2007, Thailand adopted Green and Happiness Index. Another approach is the Happy Planet Index using global data on life expectancy, experienced well-being and ecological footprint.

Responding to Bhutan's proposal, the July 2011 Resolution of the UN General Assembly invited member countries to

measure the happiness of their people and to use this to help guide their public policies. As a follow-up, the first World Happiness Report for 156 countries was published in 2012, presenting a wide range of internationally comparable data, including a ranking of national average life evaluations based on Gallup World Poll data from 2005 to 2011. It also contained three case studies: one on Bhutanese Gross National Happiness framework, the second efforts by the United Kingdom to devise and collect measures of well-being, and the third on well-being measurement guidelines of OECD for the use of National Statistical Offices. The 2015 World Happiness Report, published by the Sustainable Development Solutions Network, shows India at the 117th position out of 158 nations compared for Global Happiness Index based on indicators, including GDP per capita, life expectancy, social support, perceptions of corruption and freedom to make life choices. Countries in the top five positions are: Switzerland, Iceland, Denmark, Norway and Canada.

Increasingly, happiness is considered a better measure of social progress and goal of public policy, and more refined concepts of happiness and well-being are likely to help guide progress towards inclusive sustainable development. The biohappiness concept, proposed by Swaminathan, on further elaboration and with suitable indicators, may assist in evolving another national well-being index as a more realistic measure of social progress, particularly in biodiversity-rich developing countries like India.

This revised edition, with an added section, takes the reader in search for biohappiness through several pathways and options described in its 28 chapters grouped into four broad sections. It covers a wide range of topics; though these may not appear to be evolving in a sequential pattern, yet all of them are strongly bonded by the common thread of biodiversity and food, health and livelihood security. The first section broadly covers conservation, cultivation, consumption and commerce as pathway links for achieving biohappiness through sustainable food security and application of biotechnology and integrated gene management for improvement of crop plants, while also drawing attention to mangroves in coastal zones. This is followed by a section on science and sustainable food security with a discussion on Ever Green Revolution, so as to extend the 1960–1970s Green Revolution to eastern and other states that have not yet received full benefits of modern tools and techniques. This section also discusses natural disaster management and striving for food security under adverse conditions. The third section draws attention to food security in the face of climate change and inequalities in drawing benefits from economic growth while pleading for development of common international goals in this context.

These three sections have not been revised in this second edition, but a new section entitled 'Towards furthering biohappiness' has been added bringing a renewed focus on new technologies for transforming small farm productivity, making full use of traditional knowledge, overcoming malnutrition and meeting the zero-hunger challenge. A Preface has also been provided to this edition, further clarifying the thematic approach giving background information for planning and scoping of this publication. Its concluding chapter elaborates the distinguished author's vision of a food-secure India, with an expectation that a focused drive during the 2016 International Year of Pulses would help in bridging the demand–supply gap though the forecast for the current year seems to be disappointing in view of the prevailing unfavourable weather conditions and abnormal rainfall pattern.

A noteworthy suggestion emerging from this book is that farmers should receive proper insurance support and the relevant procedures should promote group insurance on an agroecological basis. The Pradhanmantri Fasal Bima Yojana, announced in January 2016, appears to meet this recommendation by offering low premium rate for farmers and one premium rate each season for all food grains, oilseeds and pulses (*kharif* crops @ 2% and *rabi* crops @ 1.5%), removing all variation in premium rates across crops and districts within a season. Another significant proposal is that the Government should promote an 'Indian single market', so that agricultural commodities can move across State frontiers without hurdles, since this single step would help eliminate a major cause of price volatility, particularly for perishable commodities like vegetables.

The author's pointed reference to the role of traditional knowledge, and implied cultural diversity, in achieving biohappiness deserves urgent attention. This will need developing appropriate guidelines on this aspect and also proper legal framework for its protection as required to meet our national obligations under the legally binding Nagoya Protocol on Access and Benefit Sharing which entered into force in October 2014, and to which India is a contracting party.

Written in an easy-to-read style and printed in comfortable typeset, the book is a must read for students, researchers, managers, policy-makers, community workers and general public interested in promoting biodiversity conservation and inclusive sustainable development in a win-win situation and learning more about the biohappiness concept.

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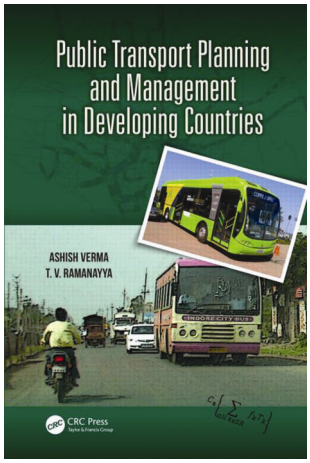

Public Transport Planning and Management in Developing Countries. Ashish Verma and T. V. Ramanayya. CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487-2742, USA. 2015. xiv + 264 pages. Price: £ 54.39.

World over, urbanization and economic development have invariably progressed hand in hand. While economic development is certainly desirable, its negative fall-outs need to be proactively addressed at the outset. Moreover, for sustainable development, it is imperative that each of its individual components