BOOK REVIEW

"**FOOD AND WATER SECURITY**" by U Aswathanarayana (Ed), Taylor & Francis, London, 2008, 315p Price not known.

Hunger is a global phenomenon with 30% of the world population food starved Concerted efforts for reduction of the number by half before 2015, face hurdles with the addition of 4 million every year Naturally food riots and starvation deaths are not uncommon Hence food security is justifiably engaging global attention, which has two distinct dimensions shortage of food in real terms, and lack of accessibility to food despite surplus food stock at the aggregate level In this context this book assumes enormous significance, and could not have been published at a more appropriate time

This book, edited by U Aswathanarayana, deals with techno-economic-social dimensions of the problem like no other publication before Editor rightly asserts that soil, water and crop are to be managed in an integrated manner for a hunger free world The book has twenty seven chapters organized in three sections, containing articles presented in the Panel Discussions on Biophysical and Socioeconomic Dimensions of Food Security in Developing Countries, held on January, 2006 in Hyderabad

Section I deals with the core issue, - agricultural productivity and technological options to weed out food scarcity Land, soil and water management is vital in agricultural productivity Remote sensing allows comprehensive view of all aspects of water, soil, crop, and ecological management GIS can integrate the data for management decisions (Nemani et al (1), Dwivedi (2), Sesha et al (3), Vashney et al (4), Johri et al (5))

Water is a vital link between soil resources and crop productivity, Soil moisture sustains crop growth Its deficiency is made up with supplemental irrigation This needs rain water and runoff management along with crop water planning and irrigation efficiency (Murthy 8) However, there is need for water management in the over all water development system In West Bengal, arsenic detected in crops is traced to tube well irrigation, which prompts irrigation only from arsenic free surface water, and rainwater harvested from roof top to be conserved for drinking (Chandrasekharan 6)

The crux of the problem is to produce more food with less water against the back drop of soaring food demand, and shrinking agricultural land and water availability Vadez (10), Uphoff (11), and Sashidhar(12) reflect on dry land agriculture and innovative System of Rice Intensification Aerobic rice saves 45% of water bringing hope for dry land areas Mei and Luo (14) Wani et al (9) highlight unlocking of the enormous potential of rain-fed agriculture 'as gateway to food security Thus multiple options exist for land, soil and water management which needs administrative and institutional support too The strategy needs to be customized to agroclimatic and biophysical settings of the regions

Food security necessitates food intake in requisite quantity Inaccessibility to food is an evil arising out of shortage of seeds and fertilizers, rising food prices, lack of purchasing power etc These are socioeconomic issues dealt within Section II Nearly 200 million people in India, out of 850 million globally, suffer from malnutrition Prajapati (15) contends that fermentation of foods has potential of combating malnutrition and contributing to diets Vespa et al (16) and Lundquist (17) inform that with economic upliftment nutrients intake is high among urban people, but rural population is still impoverished, leaving much to be improved upon Micro enterprises may cater to the farmers training needs, as also supply of seeds and fertilizers, compensating for want of extension services of the district administration (Rigternik 18) Water harvesting systems traditionally used in India may sustain agricultural productivity round the year, providing the food basket for every family (Raghavan et al 19) In India demand and supply management through water conservation and subsidy schemes have paid dividends in coping with the socioeconomic stresses (Varshney et al 20)

Section III deals with governance of food security Increased knowledge of the farmers is a driving force in achieving food security through soil and water conservation (Bhargava et al 22) State policy intervention is another step in the overall water management to achieve food security as adopted in India and China (Zhengbin et al 23, Lunkad et al 24) Lastly, community based water shed management shows Stake holders participation in management decisions as most crucial in governance (Antolin et al 26)

India achieved self sufficiency in food grains production in the sixties, Due to deficiencies in policy, per capita

availability of food grains has now fallen to the level of seventies The aberration can be corrected only by upgrading rainfed agriculture In this context this publication gains much relevance

Aswathanarayana has a penchant for writing and editing books on environment and water The editor along with his authors deserve full credit for presenting a book with an in-depth analysis of a complex subject, penetrating and interesting, supported by valuable tables, revealing photographs and neat figures His is a down to earth approach, preferring transfer of technology to the grass roots This book is a notable departure from the normal The students, teachers and technologists will immensely benefit from the book

It is hoped that more such books will come from his pen in future

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BASICS OF GROUNDWATER SCIENCE AND RAIN WATER HARVESTING TECHNIQUES by S Ramakrishnan, 75p Price not quoted

There are number of publications in print or websites intended at educating the public about groundwater This booklet authored by S Ramakrishnan, is also one such publication Ramakrishnan has started nicely with a fervour of story telling in the first article of the booklet "I am water speaking", but has lost steam in the succeeding pages which are flawed in many respects

1 Innumerable grammatical and typographical errors
2 Quality of the sketches has not been ensured either in drafting or in reproducing Sketches are mostly not original, but the sources have not been recorded
3 Contradictory statements in different pages of the text
4 The article of Dr Abdul Kalam, though illuminating, is out of place in the book
5 Most parts of "Rainwater Harvesting Techniques" are taken from the publications of PWD (Groundwater Unit) of Tamil Nadu, CGWB (New Delhi), Centre of Science and Environment, (New Delhi) or Website, but are not acknowledged Rather, in the latter publications these aspects have been dealt with more systematically
6 Surprisingly, nowhere there is mention of the advantages of groundwater use over surface water
7 Lastly, the booklet does not bear the names and addresses of Printer and Publisher which is mandatory

The booklet has been written with a noble intention of popularizing groundwater use and roof top rainwater harvesting, but unfortunately in a casual manner, which if carefully avoided, would have surely enhanced its quality These observations should in no way discourage the author in future endeavors, and may be treated only as guideline

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CORRIGENDUM

In the paper "Lithology and Structure of the Auriferous Hutti Schist Belt, Northern Karnataka Implications for Neoarchaean Oblique Convergence in the Dharwar Craton, South India" by V N Vasudev and Brian Chadwick, published in the February 2008 issue of the Journal, in the last line of the abstract on page 239, the term **'Neoproterozoic'** is printed instead of **'Neoarchaean'**