Irrigation Resources

Editors

Prof. Sawalia Bihari Verma
Faculty of Commerce
SNS College, Muzaffarpur
BRA Bihar University, Muzaffarpur
Former Reader
Nagaland (Central) University, Kohima

Dr. Arvind Kumar Shrivastawa
Head, Deptt. of Psychology
Nandangarh College, Lauria
West Champaran, Bihar

Dr. Jeebu Kumar Jha
Government Inter College (Zila School),
Muzaffarpur
Santiniketan Senior Secondary School
Muzaffarpur (Bihar)
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PREFACE

India's agriculture sector consumers over 90 per cent of the total water resources yet the full potential of irrigation has not been achieved with increasing demand from other sectors and need to augment food production, efficient ways to the water resources are being work out.

India draws 80 percent of its irrigation water from ground water which often Leads to drying up of wells and crates groundwater shortages. Experts have cautioned that the entire replenishable ground water of the world could be utilized by 2025 AD.

Due to lack of adequate storage and related infrastructure, around 48 per cent of the rainfall ends up in the rivers due to lack of storage and related infrastructure.

While efforts are being made to store the runaway water to rivers, there are studies which say, that the rivers themselves are drying up due to climate changes. A recent study of 900 rivers in the world has found that the Ganga is one of the world's rapidly shrinking rivers.

Despite the constraints and problems associated with the scarce water resource the irrigation potential of India has been increasing over the years. The irrigation potential created up to the beginning of the first year plan was only 23 million hectares which has increased to 103 hectares by end of the tenth plan.

The 11th plan envisages creation of an additional potential of 16 million hectares at an estimated required out lay of about 2,10,000 crore rupees. Since irrigation is a state subject, most of this amount has been earmarked for financing by states and an analysis of states own preliminary 11th plan allocations shows that this might actually be exceed.

Irrigation, is one of the important inputs of agriculture, has experienced a steady decline in public investment in irrigation over the years. A large number of irrigation related projects are facing financial constraints and the investments already made in these projects are new treated as "sunk investments". It is estimated that there were 171 major, 259 medium and 72 Extension, renovation and modernisation (ERM) ongoing irrigation projects in the country at the end of 8th five year plan. These projects need timely completion through prioritization of execution of projects and effective and adequate resource allocation. The effort
under "Bharat Nirman" is, therefore, directed towards identifying all such projects and targeting their completion. The government has already identified major and medium irrigation projects covering four million hectares as well as minor irrigation projects covering 2.8 million hectares.

In the conventional irrigation methods like flooding, border, furrow methods as irrigation, the opportune time for infiltration of water is more at one end where irrigation started and less at another end, leading to more water intake at another end. In drip irrigation system, distribution water in all directions of the field is uniform as the opportune time is same for the entire field.

The micro irrigation technology is yet to become popular in India. It was introduced in the 1980s. It aims at water conservation. It is the most important instrument to bring down the severity of drought.

Water co-operative societies have promising future in the command area of irrigation projects of all kinds. It offers ideal solution of the rather complex problems as distribution of irrigation water on the basis of equity. It also makes easy introduction as the discipline of rotational water distribution and sale of water in bulk on volumetric basis. Water co-operatives should be encouraged to grow very fast and in great number with a view to optimize the benefits of irrigation projects and there by increase the rate of overall status of social life and economic prospects from good to better and best in days to come.

The key strategy to the irrigation component of the Bharat Nirman also seeks to reduce the gap in the creation and utilisation of irrigation potential. For this, it proposes to restore and utilize irrigation potential of one million hectares in rough extension, renovation and modernisation of the existing schemes and by introducing more efficient water management practices in the irrigation command areas.

I, Dr. S.B. Verma, articulate my deep sense of gratitude to my father, late Baban Pd. Srivastava, Mother Late Mrs. Lalmuni; as well as my wife Dr. Hema Verma. who although are not alive today but their invisible soul always inspired me to reach this venture.

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Sawalia Bihari Verma
Arvind Kumar Shrivastawa
Jeebu Kumar Jha

Place - Shivpuri, Muzaffarpur (Bihar)
CONTRIBUTORS

A. Gayathri  
Assistant Professor in Economics, 
Distance education, 
Annamalai University  
Annamalai Nagar, Tamil Nadu

Altaf Hussain  
Researcher, University of  
Agriculture Science and  
Technology, Soil Sciences Division,  
Srinagar, Jammu and Kashmir.

Amod K. Thakur  
Water Technology, Centre for  
Eastern Region  
Chandrasekharpur,  
Buhbneswar.

Arpita Sharma  
UGC-JRF in Agricultural  
Communication, G.B. Pant  
University of Agriculture &  
Technology, Pantnagar

B. Chandra Sekhar  
Divisional Forest Officer,  
DWWM, Anantapur

B. Hemalatha  
Central Research Institute for  
Dryland Agriculture  
Santoshnagar, Hyderabad

B. Venkateshwarlu  
Central Research Institute for  
Dryland Agriculture, Hyderabad

Dhurjati Mukherjee  
Freelance Writer, Kolkata

Deepa Kylasam Iyer  
Editor, Web Portal based in Peris  
for the people of Indian Origin

Dinesh Kumar  
Senior Scientist in Agronomy,  
Indian Agriculture Institute,  
New Delhi

Dr. Achelladurai  
Reader in Economics, Adityanagar  
College of Arts and Science  
Tiruchendry, Tamil Nadu.

Dr. Amrit Patel  
Ex. Deputy General Manager,  
Bank of Baroda.

Dr. Anita Modi  
Head Deptt. of Economics, GSS  
Girls PG College, Chirawa.

Dr. Anshu Rahal  
Assistant Professor in Animal  
Nutrition, College of Veterinary  
and Animal Science, G.B. Pant  
University of Agriculture and  
Technology, Pantnagar

Dr. B. Manihar Sharma  
Professor of Life Science,  
Manipur University, Imphal.

Dr. Gopal Kalkoti  
Professor of Business Economics  
Vice Principal and Member Board  
of Studies,  
Mumbai

Dr. Harender Raj Gautam  
Scientists, Deptt. of Mycology and  
Plant pathology. Dr Y.S. Parmar  
University of Horticulture and  
Forestry, Nauni,  
Solan, Himachal Pradesh.
Dr. K. Srinivasa Rao  
Dept. of Commerce Vivek vardhini  
College of P.G. Studies, Jambagh  
Koti, Hyderabad

Dr. L. Rathakrishnan  
Professor of RIM  
Gandhigram Rural Institute,  
Gandhigram

Dr. Manasmani Dev Goswami  
Engineer, Water Resource,  
Govt. of Assam.

Dr. N.T. Somashekaraihaah  
Head, Deptt. of Economics, Govt.  
First Grade College,  
Channarayapatna.

Dr. P. Jayashree  
Associate Professor, Deptt. of DOS in Geography, University of  
Masore, Masore.

Dr. R.S. Sapehia  
Scientist, Deptt. of Soil Science, Dr.  
Y.S. Parmar University of  
Horticulture and Forestry, Solan,  
H.P.

Dr. Ramu  
Project coordinator,  
Deptt. of Geography,  
Maharaja’s College, Mysore

Dr. S. Manicham  
Professor of Economics,  
Manonmaniam Sundaranar  
University, Tirunelveli

Dr. Yashbir Singh Shivay  
Scientist in Agronomy, Indian  
Agricultural Research Institute,  
New Delhi.

Dr. Ajay Kumar  
Lecturer in Commerce  
Dr. J.M. College, Muzaffarpur  
BRA Bihar University,  
Muzaffarpur (Bihar)

Dr. Jeebu Kumar Jha  
Government Inter College,  
(Zila School), Muzaffarpur &  
Principal, Santiniketan Senior  
Secondary School, Muzaffarpur

Dr. Sanjeet Kumar Gupta  
Associate Professor  
University Deptt. of Commerce and  
Coordinator, NSS programme  
DDU Gorakhpur University  
Gorakhpur (U.P.)

Dr. Satish Kumar Arya  
Lecturer in Commerce  
RLGY College, Muzaffarpur (Bih.)

Dr. A.M. Michael  
Professor and Project Director  
Water Technology Centre, IARI  
New Delhi &  
Director, IARI, New Delhi  
Vice Chancellor, Kerala  
Agriculture University, Trichur

D.K. Singh  
Indian Institute of Vegetable  
Research, Shahan Shapura,  
Jakkeni, Varanasi

R.M. Singh  
Deptt. of Farm Engineering  
Institute of Agriculture Sciences  
Banaras Hindu University,  
Varanasi

Mihir Shah  
Member, Planning Commission,  
National Advisory Council  
Portfolio of Water Resources

Francis Kuriakose  
Assistant Professor in Commerce  
and Management,  
M.I. College, University of Kerala  
Thiruvananthapuram

G. Sheshagiri S. Subhash  
Researcher, IIT. Mumbai

I. Satya Sundaram  
Research Director in Economics  
Machilipatnam, Andhra Pradesh.
Contributors

Jaya Chaterji
Senior Project Officer, India
Sanada Environment Faculty,
Vasant Bihar, New Delhi.

K. Govindappa
Professor, S.K. University,
Anantapur.

K. Perumalammal
Professor of Economics, Alagappa
Got. Arts College, Kalikudi.

K. Ravi Kumar
IAS Officer in Jharkhand

K. Srinivasulu
Scientist, Regional Agriculture
Research Station,
Guntur, Andhra Pradesh

K. Srivani
Assistant Professor in Economics,
Karimnagar, Warangal

K.G. Suresh
Special Correspondent PTI,
Freelance, Journalist.

K.K. Tripathy
Indian Economic Service, Project
Manager, planning commission,
New Delhi.

K.N. Tiwary
Ex. Director, International plant
Nutrition Institute, India

K.P. Manzoor
Assistant Professor in Economics,
Irshadiya College,
Calicut, Kerala

M. Adinarayana
Scientist, Regional Agriculture
Research Station,
Guntur, Andhra Pradesh.

M. Lathika
Department of Economics, NSS
College for Women,
Thiruvananthapuram.

Nivedita Thapliyal
Social Worker and Researcher
in the Deptt. of Social Work
University of Delhi
Delhi

P. Veerachamy
Assistant Professor in Economics,
Distance Education,
Annamalai University
Annamalai Nagar, Tamil Nadu

Prof. Sawalia Bihari Verma
Professor of Commerce,
SNS College, Muzaffarpur
BRA Bihar University,
Muzaffarpur.

Rajeeb K. Mohanty
Water Technology,
Centre for Eastern Region
Chandrasekharpur,
Bubhneswar.

Rakesh Tiwary
Soil Science Specialist
SVBP University of Agriculture
and Technology Krishi Vigyan
Kendra, Hastinapur, Meerut.

Sanjay Kumar
Media and Communication officer,
PIB, New Delhi.

Surinder Sud
Agriculture Journalist

Y.S. Ramakrishna
Central Research Institute for
Dryland Agriculture
Hyderabad

Y.S. Shivay
Senior Scientists in Agronomy,
Indian Agriculture Institute,
New Delhi

Y.V.R. Reddy
Central Research Institute for
Dryland Agriculture
Santoshnagar, Hyderabad
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