

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, ECONOMICS & MANAGEMENT

I
J
R
C
M



A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.

Open J-Gate, India [link of the same is duly available at Inlibnet of University Grants Commission (U.G.C.)].

Index Copernicus Publishers Panel, Poland with IC Value of 5.09 & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 1866 Cities in 152 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

<http://ijrcm.org.in/>

CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	MANAGEMENT OF NON-PERFORMING ASSETS: A STUDY ON RAS AL KHAIMAH BANK, UNITED ARAB EMIRATIES <i>DR. K. DURGA PRASAD & BANDA RAJANI</i>	1
2.	INVESTIGATING THE KNOWLEDGE MANAGEMENT IMPLEMENTATION IN THE DISTANCE EDUCATION SYSTEM IN IRAN <i>MOHAMMAD LASHKARY, ESMAEIL KHODAI MATIN, BEHZAD HASSANNEZHAD KASHANI & KOLONEL KASRAEI</i>	9
3.	REPORTING EDUCATION AND EDUCATIONAL MATTERS IN NIGERIAN MEDIA <i>IFEDAYO DARAMOLA</i>	15
4.	EMPLOYEE SELECTION IN ETHIOPIAN CIVIL SERVICE: PREDICTIVE AND CONTENT VALIDITY OF SELECTION INSTRUMENTS: A CASE STUDY IN BUREAU OF CIVIL SERVICE AND CAPACITY BUILDING <i>ABEBE KEBIE HUNENAW</i>	19
5.	CAUSES AND CONSEQUENCES OF HETEROSKEDASTICITY IN TIME SERIES <i>DR. FREDRICK ONYEBUCHI ASOGWA & AMBROSE NNAEMEKA OMEJE</i>	24
6.	EFFECTS OF FRAUD AND FORGERY AND PERFORMANCE IN HOTELS IN NAIROBI, KENYA <i>MOSES MURAYA, JACQUELINE KORIR & KIMELI KORIR</i>	29
7.	MEGHALAYA: SWITZERLAND OF THE EAST? <i>DR. BALWINDER NONGRUM BEDI</i>	34
8.	CORPORATE GOVERNANCE IN EMERGING ECONOMIES IN INDIA - A REVIEW <i>KAISETTY. BALAJI & DR. Y. VENU GOPALA RAO</i>	38
9.	STUDY OF STUDENTS' PERCEPTION TOWARDS SELECTION OF HOTEL MANAGEMENT STUDIES AND THEIR WILLINGNESS TO PURSUE THEIR CAREER IN THE HOSPITALITY INDUSTRY AFTER COMPLETION OF THEIR COURSE <i>MILIND A. PESHAVE & DR. RAJASHREE GUJARATHI</i>	42
10.	WOMEN AWARENESS ON CONSUMER RIGHTS – A STUDY WITH REFERENCE TO VELLORE CITY <i>DR. N. SUNDARAM & C. BALARAMALINGAM</i>	51
11.	DETERMINANTS OF DROPOUT OF TODA CHILDREN IN NILGIRIS DISTRICT-AN EMPIRICAL ANALYSIS <i>DR. R. ANNAPOORANI & K. KRITHIGA</i>	55
12.	IRRIGATION WATER PRICING IN KARNATAKA: TRENDS AND ISSUES <i>GOWRISH P & DR. B. K. TULASIMALA</i>	60
13.	INFLUENCE OF BANKS' DEMANDS FOR SECURITY ON PERCENTAGE OF LOAN SANCTIONED FOR FARMERS UNDER: SERVICE AREA APPROACH (SAA) <i>DR. C. VETHIRAJAN & S. CHANDRASEKAR</i>	66
14.	BUDDING CHAIN OF CO OPERATIVE SOCIETIES IN INDIA-ITS REASONS AND IMPACT (WITH SPECIAL REFERENCE TO JODHPUR AND PALI DISTRICT) <i>DR. PUNITA SONI & DIVYA SHARMA</i>	69
15.	OPEN DISTANCE EDUCATION AND SUSTAINABLE DEVELOPMENT <i>DR. SHIVAJI BORHADE</i>	72
16.	A STUDY ON HIGHER SECONDARY STUDENTS' FAMILY ENVIRONMENT AND ACHIEVEMENT IN ECONOMICS IN TIRUNELVELI DISTRICT <i>M. RAJAKUMAR & DR. M. SOUNDARARAJAN</i>	77
17.	GROWTH IN STUDENTS ENROLMENT, NUMBER OF COLLEGES AND UNIVERSITIES IN INDIA <i>V. D. DHUMAL & DR. A. J. RAJU</i>	81
18.	ANALYTICAL STUDY ON AWARENESS LEVEL OF ELECTRONIC BANKING IN KADAPA TOWN <i>DR. PADMASREE KARAMALA & DR. BHARATHI DEVI ANCHULA</i>	84
19.	UPLIFTMENT OF WOMEN THROUGH SELF HELP GROUP ACTIVITIES: AN EMPIRICAL STUDY IN KANCHEEPURAM DISTRICT SHGs <i>J. SANKARI & DR. R. NAGARAJAN</i>	89
20.	SOCIO ECONOMIC IMPACT OF CONFLICT: AN EMPIRICAL STUDY OF YOUTH IN KASHMIR <i>DR. ANISA JAN & UNJUM BASHIR</i>	93
21.	EXTERNAL DEBT OF SRILANKA: GROWTH AND ECONOMIC GROWTH <i>DR. G. JAYACHANDRAN</i>	100
22.	FOOD SECURITY IN INDIA – CHALLENGES AHEAD <i>DARSHINI.J.S</i>	112
23.	THE PERFORMANCE OF SELF HELP GROUPS A STUDY OF DHAN FOUNDATION, JEWARGI TALUK, GULBARGA DIST, KARNATAKA <i>BHIMASHA K. B.</i>	121
24.	BLACK MONEY AND ITS IMPACT ON INDIAN ECONOMY AND COMPARATIVE STUDY OF INDIA AND CHINA <i>JATINDER KUMAR, VINAY KUMAR & ANITA KUMARI</i>	126
25.	INCIDENCE OF POVERTY AND INTRAHOUSEHOLD ALLOCATION OF RESOURCES: A GENDER ANALYSIS <i>P.KANAKARANI</i>	129
26.	PROGRESS OF SHG's AND SOCIO-ECONOMIC CONDITIONS OF WOMEN BENEFICIARIES IN HAVERI DISTRICT (KARNATAK STATE) <i>DR. RAMESH.O.OLEKAR & CHANABASAPPA TALAWAR</i>	139
27.	A STUDY ON ISSUES AND CHALLENGES OF CHILD LABOUR: WITH REFERENCE TO GARMENT INDUSTRIES IN BENGALURU <i>KRISHNA MURTHY.Y & S.MANJUNATH</i>	143
28.	STRESS AND COPING BEHAVIOR AMONG HEARING IMPAIRED CHILDREN IN CHITTOOR DISTRICT <i>G. JANARDHANA & V. RAMESH BABU</i>	150
29.	VOLATILITY TRANSMISSION BETWEEN CRUDE OIL PRICES AND INDIAN EQUITY SECTOR RETURNS <i>ANAND.B</i>	157
30.	NEED OF HOUR: ACTION TANKS NOT THINK TANKS <i>NAGURVALI SHAIK, PUJITHA VALLBHANENI & VINOD ADAPALA</i>	161
	REQUEST FOR FEEDBACK	165

CHIEF PATRON

PROF. K. K. AGGARWAL

Chancellor, Lingaya's University, Delhi
Founder Vice-Chancellor, Guru Gobind Singh Indraprastha University, Delhi
Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

FOUNDER PATRON

LATE SH. RAM BHAJAN AGGARWAL

Former State Minister for Home & Tourism, Government of Haryana
Former Vice-President, Dadri Education Society, Charkhi Dadri
Former President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

CO-ORDINATOR

DR. BHAVET

Faculty, M. M. Institute of Management, MaharishiMarkandeshwarUniversity, Mullana, Ambala, Haryana

ADVISORS

DR. PRIYA RANJAN TRIVEDI

Chancellor, The Global Open University, Nagaland

PROF. M. S. SENAM RAJU

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

PROF. M. N. SHARMA

Chairman, M.B.A., HaryanaCollege of Technology & Management, Kaithal

PROF. S. L. MAHANDRU

Principal (Retd.), MaharajaAgrasenCollege, Jagadhri

EDITOR

PROF. R. K. SHARMA

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

CO-EDITOR

DR. SAMBHAV GARG

Faculty, M. M. Institute of Management, MaharishiMarkandeshwarUniversity, Mullana, Ambala, Haryana

EDITORIAL ADVISORY BOARD

DR. RAJESH MODI

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

PROF. SIKANDER KUMAR

Chairman, Department of Economics, HimachalPradeshUniversity, Shimla, Himachal Pradesh

PROF. SANJIV MITTAL

UniversitySchool of Management Studies, Guru Gobind Singh I. P. University, Delhi

PROF. RAJENDER GUPTA

Convener, Board of Studies in Economics, University of Jammu, Jammu

PROF. NAWAB ALI KHAN

Department of Commerce, Aligarh Muslim University, Aligarh, U.P.

PROF. S. P. TIWARI

Head, Department of Economics & Rural Development, Dr. Ram Manohar Lohia Avadh University, Faizabad

DR. ANIL CHANDHOK

Professor, Faculty of Management, Maharishi Markandeshwar University, Mullana, Ambala, Haryana

DR. ASHOK KUMAR CHAUHAN

Reader, Department of Economics, Kurukshetra University, Kurukshetra

DR. SAMBHAVNA

Faculty, I.I.T.M., Delhi

DR. MOHENDER KUMAR GUPTA

Associate Professor, P.J.L.N. Government College, Faridabad

DR. VIVEK CHAWLA

Associate Professor, Kurukshetra University, Kurukshetra

DR. SHIVAKUMAR DEENE

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

ASSOCIATE EDITORS

PROF. ABHAY BANSAL

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

PARVEEN KHURANA

Associate Professor, Mukand Lal National College, Yamuna Nagar

SHASHI KHURANA

Associate Professor, S.M.S. Khalsa Lubana Girls College, Barara, Ambala

SUNIL KUMAR KARWASRA

Principal, Aakash College of Education, Chander Kalan, Tohana, Fatehabad

DR. VIKAS CHOUDHARY

Asst. Professor, N.I.T. (University), Kurukshetra

TECHNICAL ADVISOR

AMITA

Faculty, Government M. S., Mohali

FINANCIAL ADVISORS

DICKIN GOYAL

Advocate & Tax Adviser, Panchkula

NEENA

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

LEGAL ADVISORS

JITENDER S. CHAHAL

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

CHANDER BHUSHAN SHARMA

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

SUPERINTENDENT

SURENDER KUMAR POONIA

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the area of Computer, Business, Finance, Marketing, Human Resource Management, General Management, Banking, Insurance, Corporate Governance and emerging paradigms in allied subjects like Accounting Education; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Monetary Policy; Portfolio & Security Analysis; Public Policy Economics; Real Estate; Regional Economics; Tax Accounting; Advertising & Promotion Management; Business Education; Management Information Systems (MIS); Business Law, Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labor Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; Public Administration; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism, Hospitality & Leisure; Transportation/Physical Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Digital Logic; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Multimedia; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic and Web Design. The above mentioned tracks are only indicative, and not exhaustive.

Anybody can submit the soft copy of his/her manuscript **anytime** in M.S. Word format after preparing the same as per our submission guidelines duly available on our website under the heading guidelines for submission, at the email address: infoijrcm@gmail.com.

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. **COVERING LETTER FOR SUBMISSION:**

DATED: _____

THE EDITOR
IJRCM

Subject: SUBMISSION OF MANUSCRIPT IN THE AREA OF.

(e.g. Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript entitled ' _____ ' for possible publication in your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the author (s) have seen and agreed to the submitted version of the manuscript and their inclusion of name (s) as co-author (s).

Also, if my/our manuscript is accepted, I/We agree to comply with the formalities as given on the website of the journal & you are free to publish our contribution in any of your journals.

NAME OF CORRESPONDING AUTHOR:

Designation:

Affiliation with full address, contact numbers & Pin Code:

Residential address with Pin Code:

Mobile Number (s):

Landline Number (s):

E-mail Address:

Alternate E-mail Address:

NOTES:

- a) The whole manuscript is required to be in **ONE MS WORD FILE** only (pdf. version is liable to be rejected without any consideration), which will start from the covering letter, inside the manuscript.
- b) The sender is required to mention the following in the **SUBJECT COLUMN** of the mail:
New Manuscript for Review in the area of (Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)
- c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any specific message w.r.t. to the manuscript.
- d) The total size of the file containing the manuscript is required to be below **500 KB**.
- e) Abstract alone will not be considered for review, and the author is required to submit the complete manuscript in the first instance.
- f) The journal gives acknowledgement w.r.t. the receipt of every email and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending separate mail to the journal.

2. **MANUSCRIPT TITLE:** The title of the paper should be in a 12 point Calibri Font. It should be bold typed, centered and fully capitalised.

3. **AUTHOR NAME (S) & AFFILIATIONS:** The author (s) **full name, designation, affiliation (s), address, mobile/landline numbers, and email/alternate email address** should be in italic & 11-point Calibri Font. It must be centered underneath the title.

4. **ABSTRACT:** Abstract should be in fully italicized text, not exceeding 250 words. The abstract must be informative and explain the background, aims, methods, results & conclusion in a single para. Abbreviations must be mentioned in full.

5. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.
6. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. It must be prepared on a single space and single column with 1" margin set for top, bottom, left and right. It should be typed in 8 point Calibri Font with page numbers at the bottom and centre of every page. It should be free from grammatical, spelling and punctuation errors and must be thoroughly edited.
7. **HEADINGS:** All the headings should be in a 10 point Calibri Font. These must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
8. **SUB-HEADINGS:** All the sub-headings should be in a 8 point Calibri Font. These must be bold-faced, aligned left and fully capitalised.
9. **MAIN TEXT:** The main text should follow the following sequence:

INTRODUCTION**REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESES****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****SCOPE FOR FURTHER RESEARCH****ACKNOWLEDGMENTS****REFERENCES****APPENDIX/ANNEXURE**

It should be in a 8 point Calibri Font, single spaced and justified. The manuscript should preferably not exceed **5000 WORDS**.

10. **FIGURES & TABLES:** These should be simple, crystal clear, centered, separately numbered & self explained, and **titles must be above the table/figure. Sources of data should be mentioned below the table/figure.** It should be ensured that the tables/figures are referred to from the main text.
11. **EQUATIONS:** These should be consecutively numbered in parentheses, horizontally centered with equation number placed at the right.
12. **REFERENCES:** The list of all references should be alphabetically arranged. The author (s) should mention only the actually utilised references in the preparation of manuscript and they are supposed to follow **Harvard Style of Referencing**. The author (s) are supposed to follow the references as per the following:
 - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
 - Use **(ed.)** for one editor, and **(ed.s)** for multiple editors.
 - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
 - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
 - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
 - For titles in a language other than English, provide an English translation in parentheses.
 - The location of endnotes within the text should be indicated by superscript numbers.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITES

- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

IRRIGATION WATER PRICING IN KARNATAKA: TRENDS AND ISSUES

GOWRISH P
RESEARCH SCHOLAR
DOS IN ECONOMICS
UNIVERSITY OF MYSORE
MYSORE

DR. B. K. TULASIMALA
PROFESSOR OF ECONOMICS
DOS IN ECONOMICS
UNIVERSITY OF MYSORE
MYSORE

ABSTRACT

The water rate plays an important role in regulating the water use, mobilizing resources, ensuring equitable water distribution, efficiency of the irrigation system and its management. The pricing of water has to be such as earning a fair return on capital after meeting other recurring costs of maintenance. Despite various Finance Commissions and official committees' recommended that the irrigation charges paid by farmers should be adequate atleast to cover operation expenses and a part of capital cost, the position has been far from satisfactory in Karnataka. Incidentally this has led to poor development and management of irrigation system.

KEYWORDS

water pricing, irrigation water.

PART - I**INTRODUCTION**

Irrigation is a crucial input in the process of agricultural development and rural transformation. It has definite impact on agricultural production and productivity. It has facilitated drastic changes in agricultural sector and contributed to commercialization of the same. However irrigational facilities are not available every where, they are unevenly distributed. Further development of irrigation involves heavy doses of investment. As a result irrigation development is not even across the state. To facilitate further development in irrigation and also its equitable distribution there is need for more resources. It is against to this background, there are imperatives to recover a fair return on capital hitherto invested in the sector. Water rate is an important source of revenue from investment in irrigation. Further it is a common knowledge that irrigation helps in increasing agricultural production brought about not only by raising land productivity, but also by increasing the land use intensity. However, the process through which such a positive change is effected after the introduction of irrigation is not very well recognized. Making available water for irrigation in the storage is not enough, its proper and efficient distribution is more crucial in bringing about desired changes through the introduction of irrigation. Efficient control of irrigation water distribution is supposed to contribute to agricultural production by making possible planting at optimal time, extending to the efficient cropping season and permitting high productivity and cultivation of high value crops. Thus there is a dire need for further development and extension of irrigation facilities.

Agriculture is the single largest consumer of water. Agriculture accounts for more than 70 percent of the total water demand globally and its share is as high as 90 percent in developing countries like India. Unfortunately, irrigation water is one of the most ill-managed resources, which creates a severe scarcity of water, both for drinking and irrigation. It has created environmental problems such as water logging in endowed regions and desertification in fragile regions. Of late, there has been a great emphasis on the judicious management of water at the policy level. Pricing and institutional (user participation) approaches are suggested to overcome the strident problems. So far, even these policy changes have been limited to surface irrigation. An important segment of water resources (groundwater), which covers most of the rain-fed regions, is more or less neglected. In the absence of any effective policy measures, groundwater regions are plagued with water scarcity, inequitable distribution of water and environmental degradation. The situation seems to have aggravated during recent years, especially in the arid and semi-arid regions across the world. All these provide very strong imperatives for scientific and balanced irrigation development.

OBJECTIVES OF THE PAPER

The paper has set the following objectives

1. To examine the growth of public investment in irrigation in Karnataka.
2. To examine the case for irrigation pricing on the basis of costs and benefits.
3. To discuss the structure of water rates and provisions for levying it in the irrigation Act.
4. To examine the reforms in irrigation pricing.

METHODOLOGY

It is an analytical and descriptive study. The study is based on secondary data. The data are collected from plan documents, Government documents and various relevant reports. Data have been collected with respect to investment in irrigation and returns from public investment in irrigation in the form of water rates for the period of sixteen years from 1991 to 2006.

ORGANIZATION OF THE PAPER

The present paper is organized and presented in four parts,

- ❖ The first part introduces the topic and explains the context
- ❖ The second part provides a brief theoretical exposition of pricing of irrigation water
- ❖ The third part deals with the irrigation water pricing in Karnataka
- ❖ The fourth part includes a few policy imperatives

IMPORTANCE OF IRRIGATION

In Karnataka, agriculture is a major occupation and prominent economic activity. In the total domestic product its share is more than 50 percent. Moreover, it is supporting various economic activities like industry, commerce, transportation, etc. and providing consumer articles for the non-farm population. Low agricultural productivity, shortage of food, disparities between farm income and non-farm income, deplorable conditions of agricultural labour, small and

marginal farmers and vast rural unemployment and underemployment offer strong justification to develop agricultural sector on a priority basis. Further, the pace and pattern of economic development and ensuring food security is very much depending on agricultural development. Considering the importance of agriculture therefore a special place has been given to this sector in Karnataka's planning strategy.

Irrigation is one of the strategic inputs for agricultural transformation. A good irrigation system is indispensable for agricultural development and rural development. India is an agrarian economy and vast areas are prone to frequent droughts and famines and it has become a limiting factor increase in agricultural production. Extending irrigation facilities is the only solution to protect the farmers from the vagaries of monsoon. In addition to this, marginal productivity of irrigation is high. As a result, agricultural productivity and output respond favorably to the timely irrigation facilities. Naturally this increases the relative share of agricultural sector to the state domestic product. It also creates gainful employment opportunities and confidence among the farming community. It stabilizes agricultural base and contributes to economic development. Therefore, in Karnataka's Five Year Plans highest priority has been accorded to this strategic sector. It is evident from the following table.

TABLE- 1: PUBLIC INVESTMENT ON IRRIGATION IN KARNATAKA (Rupees in Crores)

year	Major & Medium Projects	Minor Irrigation works	Total (cumulative)
1991-92	354.35	25.70	380.05
1992-93	480.17	51.52	531.69
1993-94	655.68	61.75	717.43
1994-95	684.63	70.23	754.88
1995-96	920.13	61.76	981.89
1996-97	1361.12	71.57	1432.69
1997-98	1604.52	67.89	1672.41
1998-99	1719.80	89.17	1808.97
1999-2000	2027.27	107.92	2135.19
2000-01	2595.09	121.18	2716.27
2001-02	2547.17	103.16	2650.33
2002-03	2689.96	96.55	2786.51
2003-04	2303.08	129.88	2439.96
2004-05	3531.24	203.96	3735.20
2005-06	3253.13	192.84	3445.97
2006-07	3764.82	445.39	4210.21

Source: Water Resources Department, Government of Karnataka (Karnataka Economic survey 2006)

The above table shows the growth of public investment on irrigation in Karnataka state. The Government of Karnataka invested Rs. 380.05 crores for developing the irrigation sector in 1991-92. It gradually increased year after year and by the end of 2006-07 it stood at Rs. 4210.31. Over a period of fifteen years a total amount of Rs. 3830.16 crores have been invested in irrigation sector in Karnataka. In the coming years the amount of investment will increase still further. It is against this background a fair rate of return on investment hitherto made is expected. The main source of return from investment in irrigation is water rate. In the following section an attempt is made to examine a case for irrigation pricing.

PART - II

THEORETICAL ARGUMENTS FOR PRICING OF IRRIGATION WATER

In a developing country like India, irrigation pricing is influenced by economic, social, promotional and even political factors. As a result, various issues are interrelated with pricing policy and a good pricing policy requires compromise between various objectives. A brief analysis of theoretical issues which are intimately connected with irrigation pricing is very essential to answer these questions. Among them important are costs of irrigation and benefits of irrigation.

COSTS OF IRRIGATION AND PRICING

It is a known fact that Government undertakes huge investment to provide irrigation facilities. In future there would be a further increase in investment requirement. Given the poor financial health of the Government and also the irrigation system, additional resource mobilization is a daunting task. It is against this background there is an argument to recover the costs in the form of water rates. This method encourages non-users of water to use it and ensures a stable return to the state Government. In their opinion, this method is capable of covering operating costs of irrigation system. Here the problem relates to the type of cost to be covered. There are two major items of costs like fixed cost and variable cost. Some have suggested that variable cost alone should be recovered. However, many have opined that price should cover total cost, both fixed and variable. But the problem is how high would the level of irrigation charges are in relation to its cost of supply. There are three possibilities and they are as follows.

- 1). The level of water rates can be higher than the average cost of supply of water. This principle is known as cost plus pricing method. Its advantages are that it yields adequate revenue, helps further irrigation development through reinvesting profits and enables maintenance, repair and modernization of irrigation system.
- 2). Water rates can be equated to the average costs of supply of water and all costs like long period, short period, fixed, variable, current and replacement costs are covered. This principle is preferable to cost plus pricing method because it avoids exploitation of the farmer as under cost plus pricing method. There is no need for subsidization because all costs are fully covered.
- 3). The level of irrigation charges can also be equated with the marginal cost of provision of irrigation. It leads to optimum capacity utilization and rational resources allocation.

BENEFITS OF IRRIGATION AND PRICING

Benefits criterion of irrigation has received considerable attention than costs of irrigation as the basis of irrigation charges. It is believed that as the cost of supply is important to the Government, the benefit is important to the farmer. According to this principle, farmer's willingness to pay for water depends on the gain that he expects from its use. For a cultivator, net gain and increased benefits from irrigation are important than costs of irrigation. He assesses the value of irrigation on the basis of incremental benefits that follow from irrigated agriculture. There are three indicators for estimating the benefits from irrigation. They are

- a). Net additional benefit,
- b). Gross income from irrigated agriculture,
- c). Net contribution of irrigation.

NET ADDITIONAL BENEFIT

It means net additional benefits realized by the cultivator as a result of irrigation. This is measured by the value of the increase in agricultural output made possible by irrigation less the increase in farmer's associated cost on account of cultivating irrigated crop. These additional benefits can be estimated by the difference between the net benefit received before and after the use of irrigation water.

GROSS INCOME FROM IRRIGATED AGRICULTURE

Even though it indicates benefits from irrigation, it is not a good and sound indicator. According to this principle, water rates can be fixed in relation to gross income derived from irrigated crops. The Irrigation Commission has suggested that this principle can be employed if sufficient data about additional net benefit are not available.

NET CONTRIBUTION OF IRRIGATION TO OUTPUT

Between gross and net contribution, the latter is a more satisfactory index because the entire increase in agricultural produce is not due to irrigation alone. Usually irrigation is accompanied by other inputs and farm improvement techniques. Thus, it may be wrong to assign the entire increase in agricultural produce to irrigation alone. Estimation of net contribution from irrigation requires calculation of percentage contribution of each of the variables and share of irrigation to the incremental benefit. This is termed as net contribution of irrigation and it is more rational and acceptable criterion for fixation of water rate. Against this theoretical exposition, in the following paragraphs an attempt is made to explain the pricing of irrigation water in India.

PART-III

PRICING OF IRRIGATION WATER

The financing of irrigation and cost recovery which though indirectly bring in the issue of water rates or tariffs etc., do not explicitly deal with the theory and practices of pricing of irrigation water taking into consideration both the efficiency and equity aspects of irrigation. To appreciate the need for a proper policy for pricing of irrigation water it is necessary to take into account the government policy in this regard in the distant and recent past.

In the days of colonial rule, the irrigation systems were originally looked upon as commercial ventures. Only schemes that could pay for the annual expenses for operation and maintenance and meet interest charges on the investments for irrigation construction were undertaken. Area was used as the main criteria for water rate fixation. However, the area based rates were differentiated further by factors like crop and season-specified variations in water requirements. Assessment and collection of these rates were strictly followed. A number of schemes fulfilled these criteria and made net profit. Later, in 1880, a new category of unproductive irrigation projects was introduced as a famine relief measure and in subsequent years a number of such protective schemes were undertaken. Gradually after the independence the irrigation projects were begun to be viewed as instrument of development, especially for augmenting food production, employment and income. Since independence owing to abandonment of the commercial approach, the financial returns from the irrigation systems have been dwindling. These works, as has been mentioned earlier, have been showing increasing losses and imposing a growing burden on the general revenue of the state. However, in view of the assumed impact on overall agricultural development and food self-sufficiency and security in particular, the direct financial return criterion of project selection on irrigation investment gave way to social benefit costs (B.C) ratio in early sixties, as recommended by the Gadgil Committee. As per committee's recommendation as the minimum benefit cost ratio used for selection of irrigation projects were low, being 1 for the projects in drought prone areas and 1.5 for projects elsewhere, the applicable water rates were also kept at a lower level. The water rates continued to be based on area irrigated rather than on the volume of water use and there has not been any change or modification in that in the four decades of independence. The main criteria for determining the water rates have been (i) farmers capacity to pay (determined by total output), (ii) volume of water used (determined by area irrigated), (iii) quality of irrigation services (determined by dependability) and (iv) recovery of at least operating and maintenance (O&M) cost (Government of India, 1972). The position was, however, reviewed by the Second Irrigation Commission 1972. The Commission was conscious of deteriorating financial position of the irrigation works and opined that the financial return of the project should also be carefully examined at the time of considering a project for acceptance. The Commission observed that if the return did not cover working expenses and interest charge on capital, the need for revision of water rates in the states should be examined. The Commission further observed that since the benefits from irrigation projects were less evenly distributed and the main beneficiaries were only a section of the cultivators in the command area, the irrigation works as a whole should give an annual income at least equal to their annual cost of operation and that no part of the burden for providing irrigation should fall on the general tax payers (GOI, 1989).

The procedures for B-C ratio analysis of irrigation projects were reviewed in 1983 by a committee constituted by the Planning Commission. This Committee recommended replacing the B-C ratio by the Internal Rate of Return (IRR) and suggested that projects should normally earn a minimum IRR of 9 percent; a lower minimum of 7 per cent was prescribed for the drought prone and hilly areas. The National Conference of Irrigation and Water Resources Ministries in 1986, argued that water rates should be such as to provide signals to the beneficiaries regarding the precious value of scarce water supplies and wanted the rates to be increased gradually taking into consideration the rising cost of irrigation projects, in regard to both capital outlays and operation and maintenance costs. The National Water Policy adopted in 1987 also echoed the same view and argued for water rates that would cover the annual O&M costs and a part of the fixed cost while ensuring timely water supplies.

In view of the deteriorating financial position of the irrigation works and heavy financial burden on the state the main recommendations of 12th Finance Commission regarding maintenance of irrigation works are as under

- i) In major and medium irrigation sector an average of O&M cost norm of Rs.600 per hectare for utilized potential and Rs.300 per hectare for unutilized potential may be considered based on normative expenditure requirements for maintenance of irrigation works. This norm for minor irrigation works should be half of those for major and medium irrigation projects. Being insignificant, for minor irrigation works it was decided to ignore the unutilized potential.
- ii) For hill states 30% higher rate of O&M expenditure has been suggested.
- iii) On the base year estimates so worked out, 5% annual rate of growth has been suggested to generate projected levels in the forecast period.

STRUCTURE OF WATER RATE AND PROVISIONS FOR LEVYING IT IN THE IRRIGATION ACT OF KARNATAKA

A common practice in all the states is to charge for water supplied for irrigation in the form of water rate. Water rates are charged for supplying water for the purposes of irrigation, the right of which vests in Government. Water rate is treated as a service charge for water supplied or used for irrigation.

According to the Mysore Irrigation (levy of betterment contribution and water rate) Act, 1957, water rate is leviable on the water used for the purpose of irrigation or any other purpose from any work belonging to or constructed by or on behalf of Government and on the use of water from such work either by direct flow or percolation. It is fixed on the basis of the type of crop and is usually charged on per acre basis.

Two sets of rates have been prescribed in the rules. One set applies to irrigation works capable of irrigating more than 100 acres and the other for irrigation works capable of irrigating less than 100 acre. Higher rates have been fixed for lands under irrigation works which irrigate more than 100 acres.

According to the water rate rules, water rates vary with the type of crops grown. For the first time in 1965, different water rates were imposed for different crops, and they have been revised from time to time. In all the revision, they have been enhanced and they are uniform throughout the state. Water rates have been fixed with reference to the extent of area actually irrigated and a provision has also been made for the levy of water rate on the second crop. There is also a provision to levy penal water rate for unauthorized use of irrigation water and for violation of cropping pattern. For unauthorized use of irrigation water, these water rates were ten to thirty times the normal water rate and for violation of the cropping pattern it was five to ten times the normal rate. Now, the Government has revised these rates. For unauthorized irrigation the revised penal rates will be 15 times of the normal water rate and for violation of the cropping pattern it will be ten times of the normal water rate.

FIXATION OF WATER RATES IN KARNATAKA

In Karnataka, for the first time in 1965, crop method was introduced. Here, water rate is charged in respect of crop growing areas. In this system, irrigation charges varied with the nature of the crop and the value of the crop. Thus, in this method different water rates were imposed for different crops. The criteria adopted in 1978 for fixing rates were the average yield of the crop per acre and gross income and water rates were fixed with reference to the actual of land

brought under irrigation. In the 1985 revisions the same criteria have been adopted but, changes have been made only in the level of charges. Now the question is selecting some measurable unit for irrigation pricing. This may be the amount of water used, the cropped area, type of crop grown or income of the farmer. When the unit of measurable is the amount of water used, various types of pricing procedure can be adopted. One such is two part tariff with a fixed rate independent of quantity used and a variable charge for quantity used. This is a financially advantageous, because it ensures some stable revenue to the government and facilities recovery of capital cost and variable cost. Although the advantages are illuminating, there is no economic rationale to support it. Another form is volumetric charging. Volumetric rate is fixed according to the volume of irrigation water supplied to the cultivator. This can be measured by installing meters. Supporters of this procedure claim that it leads to more efficient use of water and better management practices and induced the cultivator to avoid wastage. Such a system is conducive to economy in the use of water and it also permits to charge different rates according to the requirements of each crop. This system depends on effective distribution of water between holdings which is practically very difficult especially in the case of small and scattered holdings. Therefore, volumetric charging is impracticable and also a costly procedure. Another method is crop method. Here water rate is not charged for whole land, but for the area where crop is grown. The crop rate depends upon the nature of the crop and the value of the crop. Obviously in this method different water rates are imposed for different crops. But this method does not induce efficient use of water and discourage improvements in on farm water management practices. One more method of irrigation pricing is warimetric method which is popularly known as proxy for volumetric method. In this method, each cultivator pays according to his capacity and charge is not related to the quantity of water supplied to him. This method protects the interests of the tail-enders. Its biggest advantage is that it relates water rates to the production of crops. Therefore, these facilities are provided and maintained must meet some part of the expenditure. On this ground, a small compulsory charge on the irrigable command is justified. There have been practical difficulties in the collection of irrigation charges and the fact that whether rates are rational is also disputed. In Karnataka, water rates are related to the types of crop grown and unit of charge is acre. Now the Government has revised water rates with effect from 13th July 2000 and water rates for different crops in Karnataka is as follows.

TABLE-2: CROP-WISE WATER RATES FOR IRRIGATION WATER IN KARNATAKA (DOE 13/07/2000)

Crops	Water Rate(Rs./ Hectare)
Sugarcane harvested within 12 month	988.45
Sugarcane harvested after 12 & within 18 months	988.45
Paddy	247.1
Cotton	148.25
Horticulture crops	148.25
Wheat	148.25
groundnut	148.25
sunflower	148.25
Jower	86.5
Maize	86.5
Navane	86.5
Ragi	86.5
Semi-Dry crops	86.5
Cereals	86.5
Tobacco	37.05
Fertilizer crops	86.5
Other crops	86.5

NOTES

Compiled from the data provided by Central Water Commission

DOE: Date of Enforcement

Water rates are fixed based upon the type of crops grown, whether wet or semi-dry, duration of the crops, number of watering required till crop maturity etc., keeping in view the requirement of water for each crop. In Karnataka, flow irrigation is practiced. The water rates for all seasons viz; Kharif, Rabi, hot weather or summer is the same. For new irrigation works, no water rates are levied for the first two years, after completion and commissioning. In the third year 50% of the water rates are levied and from the fourth year onwards full water rates as specified for the State Government are charged. In Karnataka, Paddy, Sugarcane and semi-dry crops, Ragi, Wheat, Jowar, Pulses, Oilseeds and Tobacco are the principal crops, which are grown by the farmers. Besides, there are garden crops like Banana, Coconut, Pepper, Turmeric etc., which are also grown subject to availability of water and climatic conditions. The principal cropping season in the State is Kharif (June to October) which is followed by Rabi (November to February). Depending upon water availability, sometimes the hot weather crops are also grown during February to June. The Government of Karnataka has revised the water rates for Flow irrigation with effect from 13th July 2000. No separate water rates are specified for Lift irrigation schemes. Previous revision of water rates was made during 1985, which came into effect from 1st July 1985 as per the Government Order No. RD 56 EWR 83 dated 24th July 1985. These revised rates are applicable for the agricultural holdings coming under the major and medium projects. In respect of holdings coming under medium irrigation projects which do not have assured supply of water, half of the normal water rate will be levied. In Karnataka water rate for wheat is Rs. 148.25 per hectare. For Paddy, water rate is Rs. 247.1 per hectare, and for Maize is Rs. 86.5 per hectare. And for Cotton, Horticultural crops, Groundnut, and Sunflower the water rate is Rs. 148.25 per hectare. For Jower and Maize, Navane, Ragi, Semi-dry crops and Cereals the water rate is Rs. 86.5 per hectare. And for Tobacco the water rate is Rs. 37.05 per hectare. And for Fertilizers and other crops the water rate is Rs. 86.5 per hectare. For Sugarcane, in Karnataka water rate ranges between Rs. 988.45 and Rs. 988.45 per hectare. This indicates that for some crops water rate in Karnataka is relatively high and for some crops it is low. There are number of problems in the fixation and collection of water rates. Some of them are

- Poor phasing of major projects
- Lack of adequate infrastructural facilities in the command area
- Unwillingness of farmers to change over to irrigation
- Unwillingness of farmers to pay irrigation charges
- Violation of cropping pattern and lack of technical guidance in adopting new cropping pattern and tillage practices. Thus there is need for reforms in the pricing of irrigation water.

REFORMS IN THE PRICING OF IRRIGATION WATER

In the irrigation sector there is a change in the convectional operation and maintenance and financing of O&M costs of the system. There are two aspects of such reforms. The first deals with the operating agency (Irrigation Department) and the other deals with the users (the Irrigators). However, these two are not separate aspects of reforms but are very intimately intertwined with each other such that success under one is, as it were, a precondition of success under the other. These two aspects of reforms are (i) financial autonomy of the operating agency and (ii) farmers participation in management.

FINANCIAL AUTONOMY

Financial autonomy of the operating agency carries with it certain advantage for financing of the O & M. It not only gives operating agency greater access to resources, but also frees the agency from the uncertainties of funds being made available in adequate quantities and in time from the Government budgetary provisions. Such autonomy provides the operating agency with full control and considerable influence over the nature and quality of irrigation services.

FARMERS PARTICIPATION

The need for farmers' participation in the irrigation management convincingly emphasizes the necessity for major changes in the way irrigation systems are managed so as to make them more cost effective and rationalize irrigation pricing. Farmers' participation in system management is a prime pre-requisite for a smooth and successful transition to a more efficient system. Such a change in the system management will not only establish linkages between the users and the irrigation agencies, but will also bring about accountability on the part of the users.

PART-IV**POLICY IMPLICATIONS**

The water rates presently being fixed for the users are highly subsidized and have resulted in low revenue realization. The revenue realization from water charges has proved inadequate, has been meager and much less than even the recurring O&M charges, consequently having adverse impact on ensuring satisfactory and adequate maintenance. There is an urgent need for a review and to restructure the water rates to ensure full recovery of recurring O&M cost initially and a part of capital cost subsequently.

There have been considerable delays in the revision of water rates by the States. There is an apparent need for a more frequent review and consequent revision in the water rates at periodic regular interval of time. Even a regular review and consequent revision in the water rates is likely to take a minimum 5 to 10 years, within which the recurring costs go on increasing every year on account of inflation. Pending review and consequent revision of water rates, an in built provision should also be incorporated, providing for an automatic increase every year, to take care of inflation.

Although States are giving due considerations to the cost aspects and crop water requirement etc. in fixation of water rates, in reality the rates fixed by the States seem to be restricted ultimately to the paying capacity of the farmers. No doubt the paying capacity of the farmers cannot be ignored altogether but if the water rates are to ensure full recovery of recurring O&M cost initially and a part of the capital cost subsequently as stressed in the National Water Policy Statement 2002 and also recommended by various Finance Commissions and Official Committees, alternative may lie in adopting differential water rates as per the holding size of the cultivators or volumetric consumptions of water.

In order to facilitate speedy and timely realization of water revenue and minimize the existing gap between the revenue assessment and realization, it may be desirable to involve Water Users Association in water distribution and revenue collection.

CONCLUSION

For fixation of irrigation rates two sets of criteria are available they are namely, costs of irrigation and benefits of irrigation. Cost criterion suggests that irrigation rates should cover costs of irrigation like fixed and variable. But strict application of this principle is having some limitations like equitable distribution of costs among different components of the irrigation projects and it also involves the problem of selection of the type of cost to be recovered. Various committees and commissions have very often recommended that irrigation rates should cover at least working expenses.

Another criterion is benefits of irrigation and it has become more popular than costs of irrigation. A good pricing procedure, therefore, requires compromise between these two criteria. Water rates should represent a reasonable portion of benefits of irrigation and cover the cost of supplying irrigation and bring a fair rate of return on capital.

In Karnataka, for the first time in 1965 crop method was adopted for fixation of water rates. Even to this date, water rates are being imposed on crop basis and they vary for different crops. Unit of charge is acre and rates are charged only in respect of crop growing areas. In 13th July 2000, water rate were revised taking in to consideration the average yield of the crop per hectare, gross income from irrigated crops and actual extent of land brought under irrigation. But they are too meager and do not serve any purpose. Thus there is a case for thing restructuring and scientific revision.

REFERENCES

1. (1997), Irrigation Management and Pricing of irrigation Water, National Bank for Agricultural and Rural Development Mumbai, Occasional Paper- 4, pp 1-103.
2. Government of India (1999), Integrated Water Resources Development: A Plan for Action. Report of the National Commission on Integrated Water Resources Development- Volume 1, New Delhi; Government of India.
3. Government of India (2005), Dynamics ground Water Resources in India, Central Ground Water Board, Ministry of Water Resources, Government of India.
4. Holzapfel Eduardo and et.al. (2009), Design and Management of Irrigation Systems. Chilean Journal of Agriculture Research 69(suppl. 1) pp: 17-25.
5. Mitra Ashoka K. (1996), Irrigation Sector Reforms: Issues and Approaches, Economic political Weekly, March 30.
6. Palanisami, k. and Paramasivam, P.(2000), Participatory Irrigation Management(PIM): Lessons from Water users Association for Tamil Nadu, Centre for Agriculture and Rural Development Studies. Coimbatore, India, Tamil Nadu Agriculture University.
7. Pouloslatino P. (2005), Valuation and Pricing of irrigation Water: An Analysis in Greek Agriculture Areas. Global NEST journal, vol 7, No 3, pp: 323-35.
8. Shah Tushaar, AditiDebroj (2003), Sustaining Asia's Groundwater Boom: An overview of Issues and Evidences, Natural Resources Forum, pp 130-41.
9. Shah Tushar and Intizar Hussain (2000), Irrigation Management in Pakistan and India: Comparing notes on Institutions and Policies, International Water Management Institute (IWMI working paper 4), pp 21.
10. Vaidyanathan A. (1985), Water Control Institution and Agriculture: A Comparative Perspective, Indian Economic Review. April.

APPENDIX

Amending Act 12 of 1969.- According to the Mysore Irrigation Act,1965, field channels may be constructed either by a persons whose lands would be benefited by the construction or by Government at the instance of such persons. It is now proposed to provide that Government itself shall construct all fields' channels at Government cost. It is further proposed to provide that the procedure relating to acquisition of lands and payment of compensation under the Act shall, as far as may be, in accordance with the provisions of the Land Acquisition Act. It is also proposed to provide penal water rate for unauthorized cultivation in order to ensure effective compliance of the Act. It is necessary to amend the Act for the said purposes. Hence this Bill, Opportunity is taken to make certain incidental and consequential amendments also.(Published in Karnataka Gazette (Extra ordinary) Part IV -2A dated26.8.1968as No. 767 at pages 6.)

- (i) To provide for entrustment of control, maintenance and monitoring of irrigation works to Water User Societies;
- (ii) To enable, Water Users Societies to provide the means of crossing canals and to construct culverts etc., to prevent obstructions to drainage;
- (iii) To empower the Water User Society to construct drainage works wherever necessary;
- (iv) To empower the Water User Society to repair the field channel in the event of failure by the user to repair the field channel and recover the costs from the user;
- (v) To provide for consulting the Water Users Project Level Federation for regulating water supply from irrigation work;
- (vi) To empower water user society to levy water charges when water is temporarily made available as well as when water is used unauthorized;
- (vii) To empower Water User Society to stop supply of water in the event of violation of cropping pattern and non-payment of water charges and to levy penal water charges in cases of crop violations;

(viii) To exempt levy of maintenance cess in respect of lands situated within the jurisdiction of Water User Societies;

(ix) To provide for compounding of offences;

(x) To provide for compensation of Water Users Apex Level Federation;

(xi) To outline the functions of Water User Society, Water Users Distributor Level Federation, Water Users Project Level federation and Water Users Apex Level Federation. Further it is also considered necessary to amend the Karnataka Irrigation (Levy of Betterment, Contribution and Water Rates) Act, 1957 to restrict the application of the Act only to the Water Users Co-operative Societies and not to the societies registered under the Karnataka Societies Registration Act, 1960. Certain consequential amendments are also made. As the matter was urgent and the Karnataka Legislature Council was not in session, Karnataka Irrigation and Certain Other Laws (Amendment) Ordinance, 2000 was promulgated. This Bill seeks to replace the said Ordinance. Hence the Bill (Obtained from L.A. Bill No. 29 of 2000)

Amending Act 8 of 2002.-It is considered necessary to provide for Water Users Societies to become members of the Water Users Project Level Federation by suitably amending the Karnataka Irrigation Act, 1965. It is also considered necessary to amend the Karnataka Irrigation (Levy of Betterment Contribution and Water Rate) Act, 1957 to entrust the work of supplying the water from any irrigation work and levying and collecting the water rates thereby to the Karnataka Neerawari Nigam Limited. Since the matter was urgent and the Karnataka Legislative Council was not in session, the Karnataka Irrigation and Certain Other Law (Amendment) Ordinance, 2001 (Karnataka Ordinance 6 of 2001) was promulgated to achieve the object. Hence the bill. (L.A. Bill No. 2 of 2002)

Amending Act 9 of 2002.-It is considered necessary to amend the Karnataka Irrigation Act, 1965, to provide for,-

(i) A separate definition of "Water Users Association" and to make a provision for continuing the existing Water Users Societies registered prior to the commencement of this Amendment Act in respect of the minor Irrigation tanks irrigating less than 2000 hectares till a Water Users Association is registered under the Karnataka Societies Registration Act, 1960.

(ii) Conferring certain powers under Sections 4, 10, 14 and 27 on the Water Users Association.

(iii) Exempting Water Users Association from the levy of maintenance cess.

(iv) Defining the functions of the Water Users Association. It is also considered necessary to amend the Karnataka Irrigation (Levy of Betterment Contribution and Water Rate) Act, 1957 enable levy of water rate on Water Users Association who in turn may collect water charges from the water users. Since the matter was urgent and the Karnataka Legislative Council was not in session, the Karnataka Irrigation and Certain Other Law (Amendment) Ordinance, 2002 (Karnataka Ordinance 1 of 2002) was promulgated to achieve the object. Hence the Bill (L.A. Bill No. 7 of 2002).

Amending Act 36 of 2003.-Krishna BhagyaJala Nigam Limited and the Government of Karnataka have made an investment of Rs. 4143 crores for the construction of Almatti and Narayanpur Dams, Main Canals, Distributaries' and Rs. 780 crores for the construction of field Irrigation Channels in private lands. This considerable investment is made to provide irrigation facilities to the lands owned by farmers of this State in order to improve their economic condition through productive agricultural practice. In order to ensure that the benefits of Irrigation accrue to the original landholder by preventing sale or lease, to a limited extent of the land by him 1965: KAR. ACT 16] in favour of any other person, it is proposed to restrict partially, the transfer of such land for a limited period. As the matter was urgent and the Karnataka Legislative Council was not in session, the Karnataka Irrigation (Amendment) Ordinance, 2003 was promulgated. This Bill seeks to replace the said Ordinance. Hence the Bill.(L.C. Bill No. 3 of 2003)

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce, Economics and Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail info@ijrcm.org.in for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail infoijrcm@gmail.com.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals

