

# Department of Chemistry - KRR Govt. Arts & Science College

Kodad - 508 206, Nalgonda Dt.  
Affiliated to MG University, Nalgonda



Telangana State  
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## PROCEEDINGS OF UGC SPONSORED TWO DAY NATIONAL SEMINAR ON **Low Levels of Ground Water Cause, Effect & Control**



**10<sup>th</sup> & 11<sup>th</sup> February 2016**

*Edited by*

Convener - **Dr. A. Sreenivasulu**

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-Dr.A.Sreenivasulu

## 31. Time Series Analysis of Carbon Dioxide Emissions in India

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### Abstract

Given the pace of the industrialization and urbanization, it is very important to study the Carbon Dioxide in India. Since CO<sub>2</sub> is the main driver of the greenhouse gas and these greenhouse gases from human activities are the most significant driver of observed climate change since the mid-20<sup>th</sup> century. The indicators in this study characterize emissions of the major greenhouse gases resulting from human activities, the concentrations of these gases in the atmosphere, and how emissions and concentrations have changed over time. When comparing emissions of different gases, these indicators use a concept called "global warming potential" to convert amounts of other gases into carbon dioxide equivalents.

The time series pattern shows us that electricity is the main driver of the carbon dioxide followed by industries and transportation in India. Among the sources of the carbon dioxide gases are the leading indicator followed by liquids and solids. Finally, the carbon dioxide per capita metric tons draws a special attention given its faster growth after 2002.

It's a known fact that without electricity, industrialization, and transportation, we cannot meet the human needs. However, it doesn't mean that we should not neglect the consequences of the CO<sub>2</sub> emissions (Ozon depletion, global warming, whether changes, many other health problems, etc.). Hence we need to achieve the development without compromising the ability of future generations to meet their own needs such as using energy efficiency methods Energy Conservation, Fuel Switching, Carbon Capture and Sequestration, this is also known as the sustainable development.

### 1. Introduction

Carbon dioxide (CO<sub>2</sub>) is the primary greenhouse gas emitted through human activities. Carbon dioxide is naturally present in the atmosphere as part of the Earth's carbon cycle (the natural

## 33. Causes and Consequences of Ground Water Depletion in India Some Remedies

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### Abstract:

The unsustainable use of groundwater stands to significantly impact a host of hydrological, ecological and other natural resources and services, including freshwater bodies, and aquatic riparian, transitional, and terrestrial ecosystems. Base flow will decrease and wetlands will disappear, streams and rivers will degrade, channel erosion will increase, and wildlife habitat will be reduced. Other impacts include drying up of wells, salt-water intrusion in coastal areas and land subsidence.

The sustainable use of groundwater should begin by tapping primarily deep percolation, and secondarily shallow percolation. The latter should be exploited only if its effects on the base flow of neighboring streams and water bodies are shown to be minimal. Detailed hydrological and hydrogeological studies are required to determine the percolation amounts. In the absence of basin-specific studies, global values of deep percolation may be used to establish an initial reference estimate of sustainable yield. Baseline and time-dependent hydrological and hydroecological studies are necessary to assess and monitor the effect of groundwater use on local freshwater bodies, ecosystems, and geomorphology. To guarantee sustainability, these studies should accompany planned groundwater development.

A contaminated aquifer cannot be used as a resource. Therefore, every effort should be taken to ensure that both groundwater quantity and quality are preserved for the benefit of present and future generations.

**Key words:** ecosystem, groundwater, rainfall, water per head  
**1. Introduction: Water and Groundwater**

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## 56. IMPACT OF PARBOILED RICE MILL EFFLUENTS ON GROUND WATER QUALITY

Ravirala.Naresh<sup>1</sup>, Dr. Anthathi Sreenivasulu<sup>2</sup>

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### ABSTRACT

The most important fresh water source in the world, based on stability and importance, is the groundwater.. The quantity and the suitability of groundwater for human consumption and for irrigation are determined by its physical, chemical and bacteriological properties. Ground water is one of the earth's widely distributed, renewable and most important resources. It is generally considered least polluted compared to other inland water resources, but studies indicate that ground water is not absolutely free from pollution though it is likely to be free from suspended solids. The quality of ground water depends on various chemical constituents and their concentration, which are mostly derived from the geological data of the particular region.

Industrial waste has emerged as one of the leading cause of pollution of surface and ground water. The discharge of effluents from parboiled rice mills into the environment could easily lead to contamination of surface and groundwater. It is very essential and important to test the physico-chemical parameters of water before it is used for drinking, domestic, agricultural or industrial purpose.

In the present study, the effect of effluents from two parboiled rice mills designated as PBR 1 and PBR 2 on the ground water in kodad town was investigated. Groundwater from three tube wells(PBR1=S2,S3,S4; PBR2=S6,S7,S8) around each parboiled rice mill were analyzed.The physico-chemical parameter like temperature, pH , hardness, Dissolved oxygen,Ca hardness, Mg hardness, alkalinity, Total hardness,, TDS, Electric conductivity, COD was determined. The suitability of groundwater for drinking and other purposes may be assessed by comparing physical and chemical parameters of the study area with the guidelines recommended by World Health Organization, BIS. It has been found that in some parameters the water samples collected from various locations in and around kodad town are not in the acceptable limit in accordance with the of WHO and IS 10500 drinking water quality standards.

**Key words:** Dissolved oxygen, groundwater, parboiled rice mills, physico-chemical Parameters,

## **60. Resources & Uses of Ground water in India**

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### **Introduction**

Ground water is the water that seeps through rocks and soil and is stored below the ground. The rocks in which ground water is stored are called aquifers. Aquifers are typically made up of gravel, sand, sandstone or limestone. Water moves through these rocks because they have large connected spaces that make them permeable. The area where water fills the aquifer is called the saturated zone. The depth from the surface at which ground water is found is called the water table. The water table can be as shallow as a foot below the ground or it can be a few hundred meters deep. Heavy rains can cause the water table to rise and conversely, continuous extraction of ground water can cause the level to fall. Figure 1 illustrates the major definitions used in the context of groundwater.

**Figure 1: Graphical representation of ground water and associated terms**



The underground (hydrogeological) setting of ground water defines the potential of this resource and its vulnerability to irreversible degradation.<sup>1</sup> This setting in India can be divided into following categories, which are described below:

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Edited by

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-Dr.A.Sreenivasulu

## **OP-48: Empowerment of Women**

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As women's empowerment is a complex issue with a myriad of indicators , the present paper focuses on key interventions of the government that have been undertake with the aim of women' economic as well as social transformations . Empowerment, as an enabling process will only be achieved when an improvement in the condition of women in terms of health , education ,safety and security including financial security is achieved.

**Health:**Health being the pre requisite for improvement of survival indicators, priority continues to be laid on increasing access to health services. To address the issue of maternal and child malnutrition the Integrated Child Development Services (ICDS) Scheme has been universalized and strengthened .Village Health and Nutrition Days are conducted in rural areas as an outreach activity for provision of maternal and child health services. To accelerate the pace of reduction Maternal Mortality Ratio (MMR) in several interventions have been made by the government. Janani suraksha vishwas, absolutely free and no expense delivery, including caesarean section under the janani shishu suraksha karyakaram (jssk) for all pregnant women delivering in public health institutions Mother and Child Protection Card to monitor service delivery for mothers and children, Mother and Child Tracking system to ensure antenatal , intra-natal and postnatal care along with immunization services and Maternal Death Review MDR to take corrective action at appropriate levels and improve the quality of obstetric care. The draft National Health Policy 2015 and National Health Plan made in framing information about reproductive health and child health. It mentions the need to increase the targets of male sterilization and

"status and the benefits of education cannot be emphasized enough. The Right to Education Act 2009 was passed in 2010 for ensuring free and compulsory education to all children between the ages of 6 and 14 years. Sarva Shiksha Abhiyan (SSA) was rolled to right for all children and a flagship programme, Sarva Shiksha Abhiyan (SSA) was rolled to girls in schools, both in rural and urban areas across the country , has shown a steady increase called Padhe Bharat, Badhe Bharat has been launched to ensure that learning levels of class I and