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Study on Climate Change and Water Quality Status and Food Security – On Overview

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ABSTRACT

The Water Quality collected in samples have from different villages of, Vettamangalam(w), Kumbupalayam, Mavathur, Keeranur in Karur district Tamilnadu analyzed for different water quality parameters. Effects of Taste, Color, Turbidity, Odor in water quality have been examined. The significance of Karur is growing city because of its Temples, Silk production and Textile business. This study of water samples. The study is important of quality water using the village households at the level of water viable in summer time and rainy time of analyses so this study propose in used water level in villages. Concepts of food security have evolved in the last thirty years to reflect changes in official policy thinking (Clay, 2002; Heidhues et al, 2004). The term first originated in the mid-1970s, when the World Food Conference (1974) defined food security in terms of food supply - assuring the availability and price stability of basic foodstuffs at the international and national level: "Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices".

Keywords: Water, Quality, Households, Food Security Consumption

Introduction

Water Quality collected in samples have from different villages of, Vettamangalam(w), Kumbupalayam, Mavathur, Keeranur in Karur district Tamilnadu analyzed for different water quality parameters. Effects of Taste, Color, Turbidity, Odor in water quality have been examined. The significance of Karur is growing city because of its Temples, Silk production and Textile business. This study of water samples. The study is important of quality water using the village households at the level of water viable in summer time and rainy time of analyses so this study propose in used water level in villages. Concepts of food security have evolved in the last thirty years to reflect changes in official policy thinking (Clay, 2002; Heidhues et al, 2004). The term first originated in the mid-1970s, when the World Food Conference (1974) defined food security in terms of food supply - assuring the availability and price stability of basic foodstuffs at the international and national level: "Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices". In 1983, FAO analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: "Ensuring that all people at all times have both physical and economic access to the basic food that they need" (FAO, 1983). The definition was revised to include the individual and household level, in addition to the regional and national level of aggregation, in food security analysis. In 1986, the highly influential World Bank Report on Poverty and Hunger (World Bank, 1986) focused on temporal dynamics of food insecurity (Clay, 2002). The report introduced the distinction between chronic food insecurity, associated with problems of continuing or structural poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disasters, economic collapse or conflict. This was complemented by Sen's theory of famine (1981) which highlighted the effect of personal entitlements on food access i.e. production, labour, trade and transfer based resources.

OBJECTIVES

- to Analysis the water quality of the Study Areas.
- to Analysis in the Food Security in India

METHODOLOGY

The entire information and data are taken mainly from district statistical hand book and district census hand book also from refer to secondary sources at study in Primary data in Samples Villagers etc. in the village problem of water quality level in must of people health of common man so collected in water quality of summer time and rainy time on the sample villages Vettamangalam village, Kumbupalayam village, Mavathur village, Keeranur village in Karur district, Tamilnadu.

STUDY AREA

Karur District is an administrative district of Tamil Nadu state in southern India. The city of Karur is the district headquarters. The district is located in the banks of river Kaveri and Amaravathi. It is an inland district without any coast line. The geographical position of the district lies between North Latitude 11.00^o to 12.00^o; East Longitude lies from 77.28^o to 77.50^o and the altitude of 122 meters. The district has an area of 2895.57 km². It is bounded by Namakkal district in the North, Dindigul district in the South, Tiruchirapalli district on the East and Erode district on the West; it is the most centrally located district in Tamil Nadu. The topography of the district is almost plain except Rengamalai hills in extreme south of Karur taluk - Tipasamymalai and Vellimalai are in Kulithalai Taluk. Gives a brief detail on Karur and Kadavur Blocks, Selected gives an elaborate detail on the selected four Sample villages i.e., Vettamangalam, Kumbupalayam, Mavathur, Keeranur.

WATER QUALITY

The quality of water in the different locations in karur district is prejudiced by a range of natural processes and anthropogenic performances. The whole collection of life in water is exaggerated due to pollution in water¹. In many areas, wastewater is inclined into the natural water bodies due to their ability to incorporate and dilute the injurious ingredients of the effluents. The trouble of river water quality worsening is level of water range in the study villages so have the people very used in important utility of water bur water is quality level and used in people most so in important of quality water in the study villages.

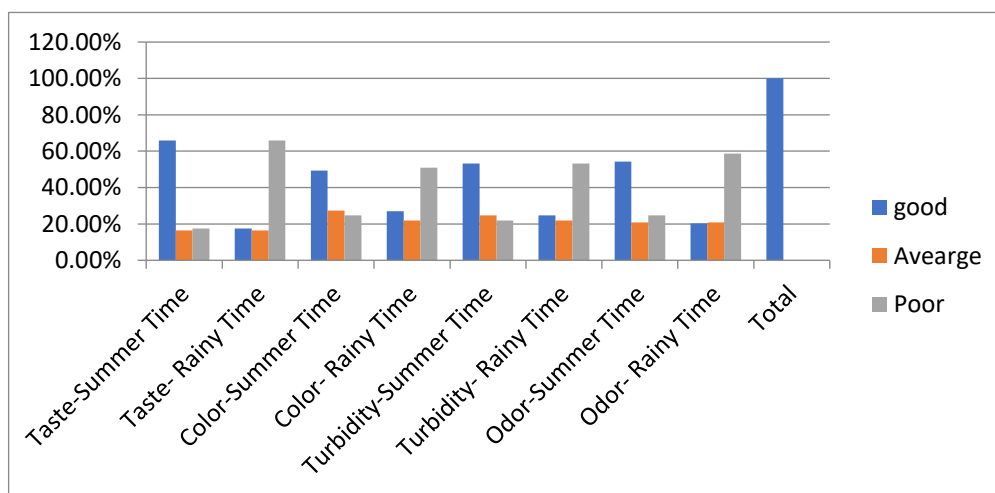
Table;1 Identify the Water Quality of Vettamangalam(W) Village

Status of Water quality	Good	Average	Poor	Total Households
Taste-Summer Time	120(65.9%)	30(16.4%)	32(17.5%)	182(100%)
Taste- Rainy Time	32(17.5%)	30(16.4%)	120(65.9%)	182(100%)
Color-Summer Time	90(49.4%)	50(27.4%)	42(24.7%)	182(100%)
Color- Rainy Time	49(26.9%)	40(21.9%)	93(51%)	182(100%)
Turbidity-Summer Time	97(53.2%)	45(24.7%)	40(21.9%)	182(100%)
Turbidity- Rainy Time	45(24.7%)	40(21.9%)	97(53.2%)	182(100%)
Odor-Summer Time	99(54.3%)	38(20.8%)	45(24.7%)	182(100%)
Odor- Rainy Time	37(20.3%)	38(20.8%)	107(58.7%)	182(100%)

Source: Primary data

The table;1 Explain the identify of water quality in vettamangalam(W) village. Is water taste in Summer time levels good in 120(65.9%) Average 30(16.4%),poor in 32(17.5%) at rainy time in water quality in levels of good 32(17.5%) at average 30(16.4%) in poor of 42 (24.7%) on the village. Next in Quality of water Color is summer time is good 90(49.4%),average in 50(27.4%) at poor in 42(24.7%) of color is rainy time is good on 49(26.9%) at average in 40(21.9%) at last in level of poor is 93(51%) in Village ,next in turbidity in water is summer time is good97(53.2%) at average level is 45(24.7%) on the village at poor of water is 40(21.9%) so this rainy time is water quality of good in 45(24.7%) at average in 40(21.9%) in poor level in 97(53.2%) on the village next in water quality of odor is summer time is level of good in 99(54.3%) at average is 38(20.8%) on last level is poor is 45(24.7%) on next is rainy time water quality is good in 37(20.3%) at average is 38(20.8%) last in poor is 107(58.7%) in the village the total village households sample size is 182(100%) on the vettamangalam(W) village.

Figure:1 Identify the Water Quality of Vettamangalam(W) Village



Table;2 Identify the Water Quality of Kumbupalayam Village

Status of Water quality	Good	Average	Poor	Total Households
Taste-Summer Time	37(60.6%)	14(22.9%)	10(16.3%)	61(100%)
Taste- Rainy Time	14(22.9%)	17(27.8%)	30(49.1%)	61(100%)
Color-Summer Time	33(54%)	19(31.1%)	17(27.8%)	61(100%)
Color- Rainy Time	17(27.8%)	13(21.3%)	31(50.8%)	61(100%)
Turbidity-Summer Time	33(54%)	13(21.3%)	15(24.5%)	61(100%)
Turbidity- Rainy Time	12(19.6%)	18(29.5%)	31(50.8%)	61(100%)
Odor-Summer Time	40(65.5%)	13(21.3%)	8(13.1%)	61(100%)
Odor- Rainy Time	9(14.9%)	11(18%)	41(67.2%)	61(100%)

Source; Primary data

The table;2 Explain the identify of water quality in kumbupalayam village. Is water taste in Summer time levels good in 37(60.6%) Average 14(22.9%),poor in 10(16.3%) at rainy time in water quality in levels of good 14(22.9%) at average 17(27.8%) in poor of 30 (49.1%) on the village. Next in Quality of water Color is summer time is good 33(54%),average in 19(31.1%) at poor in 17(27.8%) of color is rainy time is good on 17(27.8%) at average in 13(21.3%) at last in level of poor is 31(50.8%) in Village ,next in turbidity in water is summer time is good33(54%) at average level is 13(21.3%) on the village at poor of water is15(24.5%) so this rainy time is water quality of good in 12(19.6%) at average in 18(29.5%) in poor level in 31(50.1%) on the village next in water quality of odor is summer time is level of good in 40(65.5%) at average is 13(21.3%) on last level is poor is 8(13.1%) on next is rainy time water quality is good in 9(14.9%) at average is 11(18%) last in poor is 41(67.2%) in the village the total village households sample size is 61(100%) on the Kumbupalayam village.

Figure:2 Identify the Water Quality of Kombupalayam Village

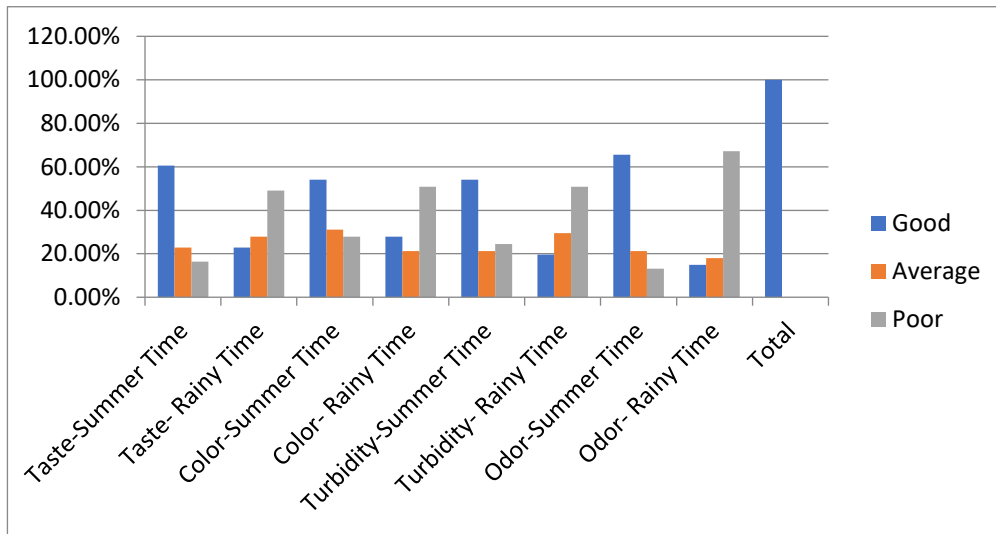


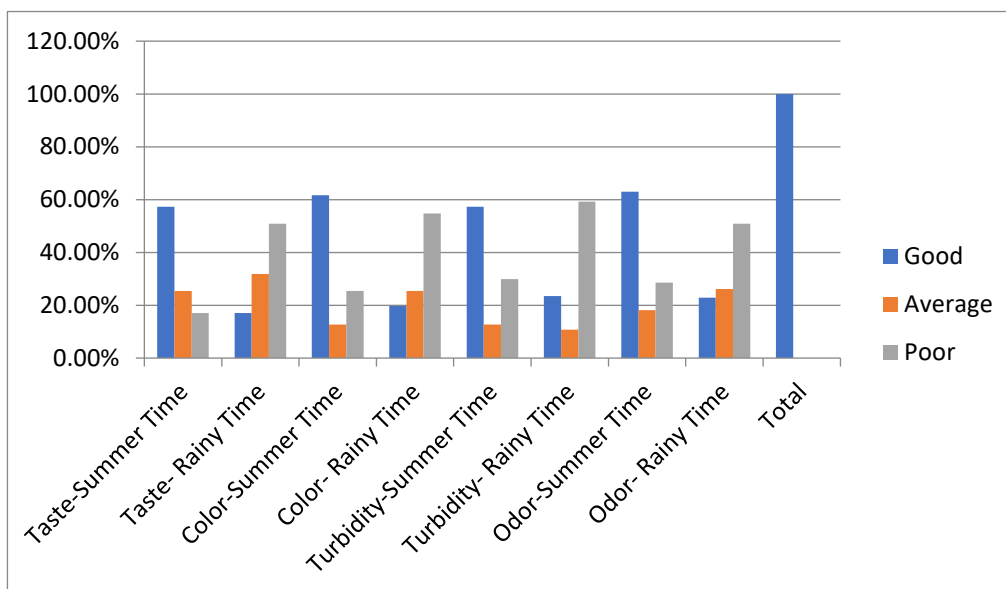
Table 3 Identify the Water Quality of Mavathur Village

Status of Water quality	Good	Average	Poor	Total Households
Taste-Summer Time	90(57.3%)	40(25.4%)	27(17.1%)	157(100%)
Taste- Rainy Time	27(17.1%)	50(31.8%)	80(50.9%)	157(100%)
Color-Summer Time	97(61.7%)	20(12.7%)	40(25.4%)	157(100%)
Color- Rainy Time	31(19.7%)	40(25.4%)	86(54.7%)	157(100%)
Turbidity-Summer Time	90(57.3%)	20(12.7%)	47(29.9%)	157(100%)
Turbidity- Rainy Time	37(23.5%)	17(10.8%)	93(59.2%)	157(100%)
Odor-Summer Time	99(63%)	13(8.2%)	45(28.6%)	157(100%)
Odor- Rainy Time	36(22.9%)	41(26.1%)	80(50.9%)	157(100%)

Source: Primary data

The table;3 Explain the identify of water quality in Mavathur village. Is water taste in Summer time levels good in 90(57.3%) Average 40(25.4%),poor in 27(17.1%) at rainy time in water quality in levels of good 27(17.1%) at average 50(31.8%) in poor of 80 (50.9%) on the village. Next in Quality of water Color is summer time is good 97(61.7%),average in 20(12.7%) at poor in 40(25.4%) of color is rainy time is good on 31(19.7%) at average in 40(25.4%) at last in level of poor is 86(54.7%) in Village ,next in turbidity in water is summer time is good 90(57.3%) at average level is 20(12.7%) on the village at poor of water is 47(29.9%) so this rainy time is water quality of good in 37(23.5%) at average in 17(10.8%) in poor level in 93(59.2%) on the village next in water quality of odor is summer time is level of good in 99(63%) at average is 13(8.2%) on last level is poor is 45(28.6%) on next is rainy time water quality is good in 36(22.9%) at average is 41(26.1%) last in poor is 80(50.9.2%) in the village the total village households sample size is 157(100%) on the Mavathur village.

Figure:3 Identify the Water Quality of Village Mavathur Village

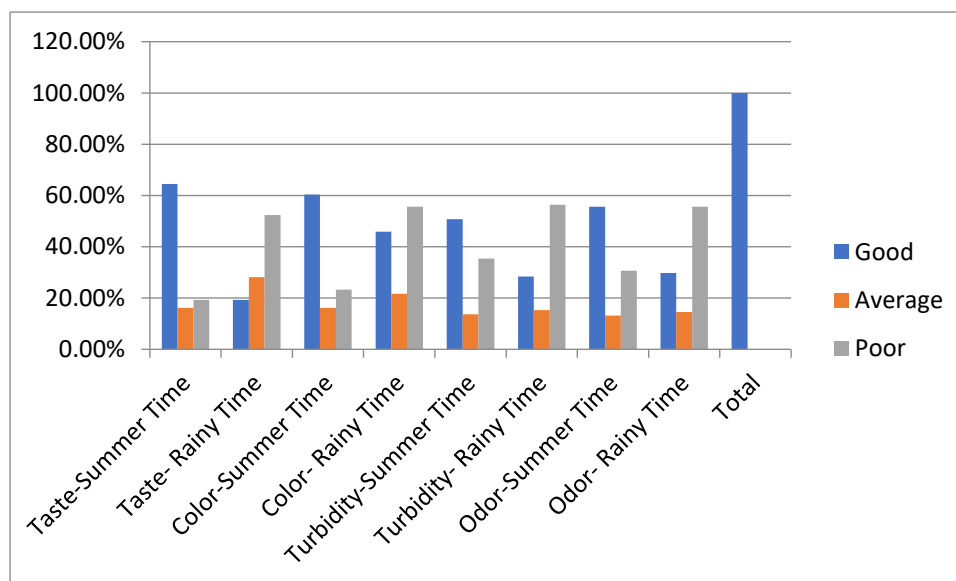


Table; 4 Identify the Water Quality of Keeranur Village

Status of Water quality	Good	Average	Poor	Total Households
Taste-Summer Time	80(64.5%)	20(16.1%)	24(19.3%)	124(100%)
Taste- Rainy Time	24(19.3%)	35(28.2%)	65(52.4%)	124(100%)
Color-Summer Time	75(60.4%)	20(16.1%)	29(23.3%)	124(100%)
Color- Rainy Time	28(45.9%)	27(21.7%)	69(55.6%)	124(100%)
Turbidity-Summer Time	63(50.8%)	17(13.7%)	44(35.4%)	124(100%)
Turbidity- Rainy Time	35(28.4%)	19(15.3%)	70(56.4%)	124(100%)
Odor-Summer Time	69(55.6%)	17(13.1%)	38(30.6%)	124(100%)
Odor- Rainy Time	37(29.8%)	18(14.5%)	60(55.6%)	124(100%)

Source; primary data

The table;4 Explain the identify of water quality in Keeranur village. Is water taste in Summer time levels good in 80(64.5%) Average 20(16.1%),poor in 24(19.3%) at rainy time in water quality in levels of good 24(19.3%) at average 35(28.2%) in poor of 65 (52.4%) on the village. Next in Quality of water Color is summer time is good 75(60.4%),average in 20(16.1%) at poor in 29(23.3%) of color is rainy time is good on 28(45.9%) at average in 27(21.7%) at last in level of poor is 69(55.6%) in Village ,next in turbidity in water is summer time is good 63(50.8%) at average level is 17(13.7%) on the village at poor of water is 44(35.4%) so this rainy time is water quality of good in 35(28.4%) at average in 19(15.3%) in poor level in 70(56.4%) on the village next in water quality of odor is summer time is level of good in 69(55.6%) at average is 17(13.1%) on last level is poor is 38(30.6%) on next is rainy time water quality is good in 37(29.8%) at average is 18(14.5%) last in poor is 60(55.6%) in the village the total village households sample size is 124(100%) on the Keeranur village.

Figure:4 Identify the Water Quality of Village Keeranur Village

CHANGING POLICY CONCEPTS OF FOOD SECURITY

Concepts of food security have evolved in the last thirty years to reflect changes in official policy thinking (Clay, 2002; Heidhues et al, 2004). The term first originated in the mid-1970s, when the World Food Conference (1974) defined food security in terms of food supply - assuring the availability and price stability of basic foodstuffs at the international and national level: “Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices”. In 1983, FAO analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: “Ensuring that all people at all times have both physical and economic access to the basic food that they need” (FAO, 1983). The definition was revised to include the individual and household level, in addition to the regional and national level of aggregation, in food security analysis. In 1986, the highly influential World Bank Report on Poverty and Hunger (World Bank, 1986) focused on temporal dynamics of food insecurity (Clay, 2002). The report introduced the distinction between chronic food insecurity, associated with problems of continuing or structural poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disasters, economic collapse or conflict.

This was complemented by Sen’s theory of famine (1981) which highlighted the effect of personal entitlements on food access i.e. production, labour, trade and transfer based resources. The widely accepted World Food Summit (1996) definition reinforces the multidimensional nature of food security and includes food access,

Availability, food use and stability. It has enabled policy responses focused on the promotion and recovery of livelihood options. Initially made popular by academics such as Chambers and Conway (1992), livelihood approaches are now fundamental to international organizations’ development programmes. They are increasingly applied in emergency contexts and include the concepts of vulnerability, risk coping and risk management. In short, as the link between food security, starvation and crop failure becomes a thing of the past, the analysis of food insecurity as a social and political construct has emerged (Devereux 2000).

THE STATE OF FOOD SECURITY IN THE WORLD

About 850 million people in the world are undernourished - a number that has hardly changed since the 1990-92 base period for the World Food Summit and Millennium Development Goal commitments on reducing hunger by half by 2015. Of particular concern are hunger hotspots, marked by the widespread persistence and prevalence of food insecurity, especially in protracted crises. As of May 2006, 39 countries in the world were experiencing serious food emergencies and required external assistance for dealing with critical food insecurity: 25 in Africa, 11 in Asia and Near East, 2 in Latin America and 1 in Europe. clearly indicates the importance of human agency in inducing crises, either directly (through wars and civil strife) or through interaction with natural hazards that would otherwise have been of minor importance.

FAO POLICY PRIORITIES FOR FOOD SECURITY

FAO’s ‘twin-track approach’ for fighting hunger combines sustainable agricultural and rural development with targeted programmes for enhancing direct access to food for the most needy. As outlined in the first track addresses recovery measures for establishing resilient food systems. Factors that affect food system resilience include the structure of the food economy as a whole, as well as its components such as agricultural production, technology, the

diversification of food processing, markets and consumption. Track 2 assesses the options for providing support to vulnerable groups. Vulnerability analysis offers a forward looking way of understanding food security dynamics, calling for explicit attention to risk and the

options for managing it. Both tracks are intended to be mutually reinforcing, and the positive interaction between them should reinforce the path to recovery¹. For example, managing risks goes beyond assisting those affected by a particular shock in addressing their immediate food needs. A range of options are available for addressing longer term food security through sustainable agricultural and rural development aimed at preventing or mitigating risk.

CONCLUSION

The water quality information is frater collected in primary data so the people direct used in daily water status the water level in variables is two different type first in summer time and rainy time different level of water quality so summer time water quality in the village is water taste ,color ,turbidity and odor in the water next in rainy time in water is not quality in main reason of pollution in the river on factory distribute in comical and human error of water pollution so development and organization of water bodies in the villages. *Focus on Food Security*: Ensuring that food security objectives are incorporated into national poverty reduction strategies

which consider impacts at the national, sub-national, household and individual levels and have a particular emphasis on reducing hunger and extreme poverty.

Fostering broad based, sustainable agricultural and rural growth: Promoting environmentally and socially sustainable agricultural development as a cornerstone for economic growth. Addressing the entire rural space: Looking beyond farming to include off farm income opportunities. Addressing the root causes of food insecurity: Promoting not only productivity growth, but also resource access, land tenure, returns to labour and education.

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