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A GLOBAL STUDY ON SUSTAINABLE IRRIGATIONAL PRACTICES ON AGRICULTURE

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ABSTRACT
As the world endures to become more populated the demand for clean water on agriculture will surge.so water efficiency will come to the forefront on the effective irrigational practice. Today, the world necessitates the agriculture the most and it became the excessive experiment among the countries. And this experimentation mostly centred on the water source.so, this study generates the solution for the water sources from low to high used countries and their method of irrigation applications on their countries. This study subject entitled to "A Global Study on Sustainable Irrigational Practice on Agriculture". In the study, the five countries were be selected, based on their efficient usage on specific irrigational systems. It collected the global implicational parameters to irrigational agriculture problems and this report obtains global insights to the conditions. The five countries are India, United States, China, Brazil, and Israel. For these five countries, the study concentrates on four parameters such as population, irrigation method and its extraction, renewable, consumption and waste on consumption. In this research the best irrigational practice will be recommended to apply in an agricultural prosperity. This research is restricted to analytical research and analysis done with a tool of SPSS.

Keyword: *Necessitates, Irrigational, Implicational, Renewable, Extraction and Consumption.*

INTRODUCTION

1. WATER RESOURCES ON AGRICULTURE

All life systems on this planet necessitates water. Water resources plays a vital role in this universe for all the beings. But in today's world, water scarcity occurs everywhere. It leads a major drawback to our economical balance and it offers a huge part which granted to the destroy of lives in this world. so, this study concerns on the primary occupation of our human evolution – Agriculture. Without water, agriculture cannot survive and without agriculture, any living organism cannot survive. That's the huge reason this study taps the irrigational practice on agriculture – how the water efficiently works in an irrigational practice.

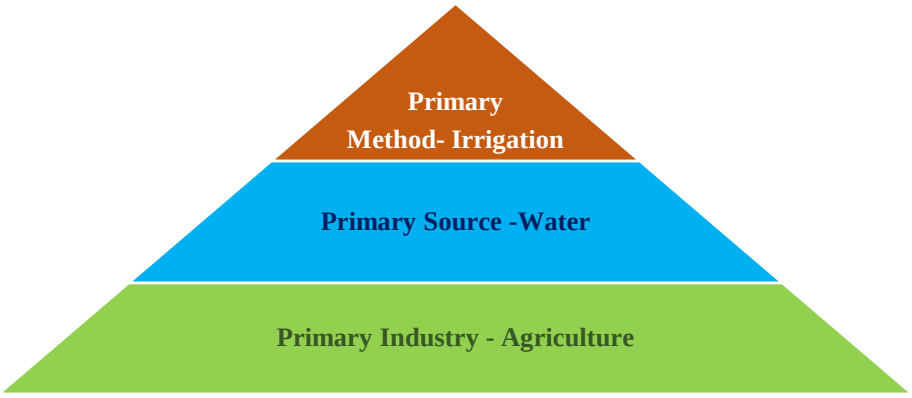

FIGURE 1.1 CONCEPTUAL STUDY FRAME

2. PRESENT SCENARIO ON AGRICULTURE - WATER CRISIS

In this research the theme is widely concern on their level of water extraction and its consumption, consumption on waste. Based on this, five countries analysis were done with specified parameters which highly efficient to the other agricultural practice of their irrigational method. And the main objective for this study is to ranking the countries based on their renewable water resources. In presuming water resources on a country basis, a peculiarity is to be made between Renewable and Non-renewable water resources. And renewable resources should be more concentrated for increase the efficiency of groundwater systems.

India Agriculture Water Resources Analysis

India has profuse ground water reserve which gets refilled every year mostly by monsoon precipitation. In the study, the top 5 countries were be selected based on the groundwater resources and their efficient usage on specific groundwater systems. And here research is purely based on the secondary data. The study collected the global implications parameter to regional groundwater problems and it's giving a significant opportunity to other countries who were rich in groundwater resource but poor in renewable. And this report obtains global insights to the conditions under which various solutions to groundwater problems in any countries, where it says the parameter of specified system may, or may not, work. The top Five countries are India, United States, Israel, China, Brazil. For the Top Five countries, the study concentrates on one parameter as Agriculture (Irrigational method) usage. Population evolution, lifestyle changes, expansion, and agricultural practices will subsidize to an increasing. Agriculture is the primary source of livelihood as well as primary industry.

3. GROUNDWATER EXTRACTION

Sl.No.	Country	Population (2021)	Total groundwater availability per year (2021) BILLION CUBIC METRE	Total groundwater extraction per year (2021) BILLION CUBIC METRE
			Estimate on 2021	
1	INDIA	1393400000	438	240
2	USA	331900000	212	177
3	CHINA	1412400000	169	98
4	ISRAEL	9360000	87	49
5	BRAZIL	21400000	75	15

TABLE 1. 1 COUNTRYS WATER AVAILABILITY

4. FIVE COUNTRIES POSITION ON IRRIGATIONAL PRACTICES OF AGRICULTURE

a) INDIA IRRIGATIONAL PRACTICE ON AGRICULTURE

India is one of the leading countries in the world in terms of agricultural production, and irrigation plays a vital role in ensuring that the nation is able to meet its agricultural needs. In India, irrigational practices are divided up into two primary categories: surface and ground water irrigation. Surface water irrigation is the most common form of irrigation in India, and involves the distribution of surface water, such as rainwater or water from rivers, canals, and reservoirs, to agricultural areas.

b) ISRAEL IRRIGATIONAL PRACTICE ON AGRICULTURE

Israel is well known for its successful and innovative agricultural practices, particularly its world-class irrigation techniques. Through the use of sophisticated technology, Israel is able to achieve high crop yields while using relatively small amounts of water. This includes the use of drip irrigation, which is a method of providing water directly to the roots of plants at a slow rate. The use of innovative technology and practices has enabled Israel to become self-sufficient in terms of its water supply, as it is now capable of producing enough water for its agricultural and other needs.

c) USA IRRIGATIONAL PRACTICE ON AGRICULTURE

Generally, the US uses well irrigation surface irrigation, subsurface irrigation, sprinkler irrigation, and a combination of these practices. Surface irrigation involves providing water directly to the soil surface, while subsurface irrigation transports water directly to the root zone. Sprinkler irrigation is advantageous for its flexibility in terms of water application, and it is often used for row crops, orchards, and other crops that require frequent, regulated water. All of these methods are important for providing crops access to sufficient water and promoting optimal growth.

d) CHINA IRRIGATIONAL PRACTICE ON AGRICULTURE

Irrigation has been a fundamental part of Chinese life for centuries, with the earliest written records of Chinese irrigation dating back to 220 BC. In modern times, Chinese irrigation practices are highly advanced, with a variety of methods being employed to ensure efficient water delivery to agricultural land. Drip irrigation is becoming increasingly popular in China, as it is more efficient than traditional methods and can effectively distribute even small amounts of water to the crop. Sprinklers are used to rapidly wet the soil surface, while water pumps are used to move water from rivers and reservoirs to the fields.

e) BRAZIL IRRIGATIONAL PRACTICE ON AGRICULTURE

Brazil is known for its advanced agricultural irrigation practices that ensure high yields of crops and other agricultural products. Brazil has a wide range of irrigation methods, from automated systems that use modern technology to more traditional practices. Automated systems can be used to irrigate large areas of land and help maintain consistent water levels in the soil, while traditional practices can be used to water smaller plots of land. Additionally, Brazil has a number of reservoirs and dams that help provide water for agricultural irrigation. These reservoirs and dams are also important for controlling flooding, as they can hold excess water during wet seasons and release it slowly during dry periods.

5. AIM

- The foremost goal of the study is to identify the sustainable irrigational practices on recycling water of Agriculture.

6. OBJECTIVE

- To rank the selected countries based on the chosen parameters for expanding an irrigational practice of agriculture on global insights.
- To study on total population and the total groundwater extraction on global countries.
- To identify the relationship between the population composition on groundwater extraction.
- To analyse on recycle water consumption and the waste water.

7. SCOPE

- In today's world, water scarcity and agricultural drawback plays a vital role in human survival life part. So, an adoption of best water renewable practices leads to increase the groundwater level and ensuring there is enough water to meet multiple needs, from agriculture to municipal and industrial usage

8. RESEARCH DESIGN FRAMEWORK

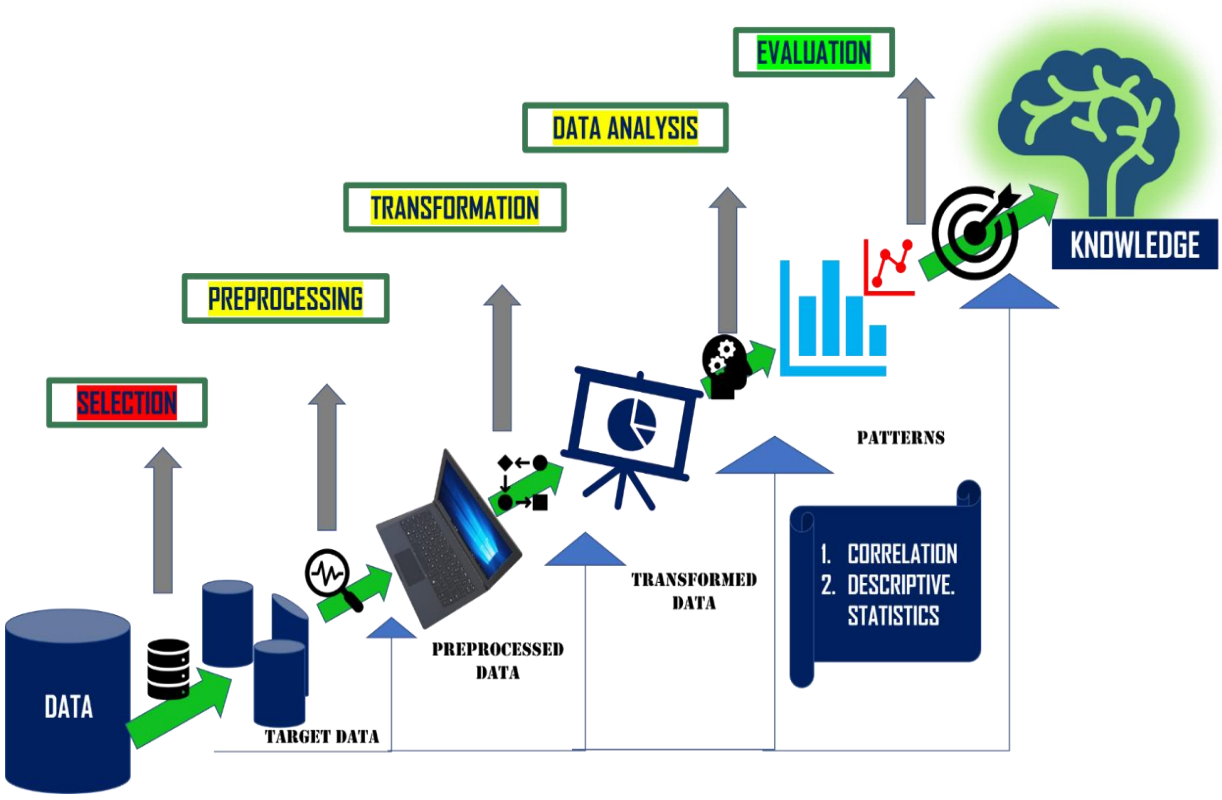

FIGURE 1. 2 RESEARCH DESIGN FRAMEWORK

9. RESEARCH METHODOLOGY

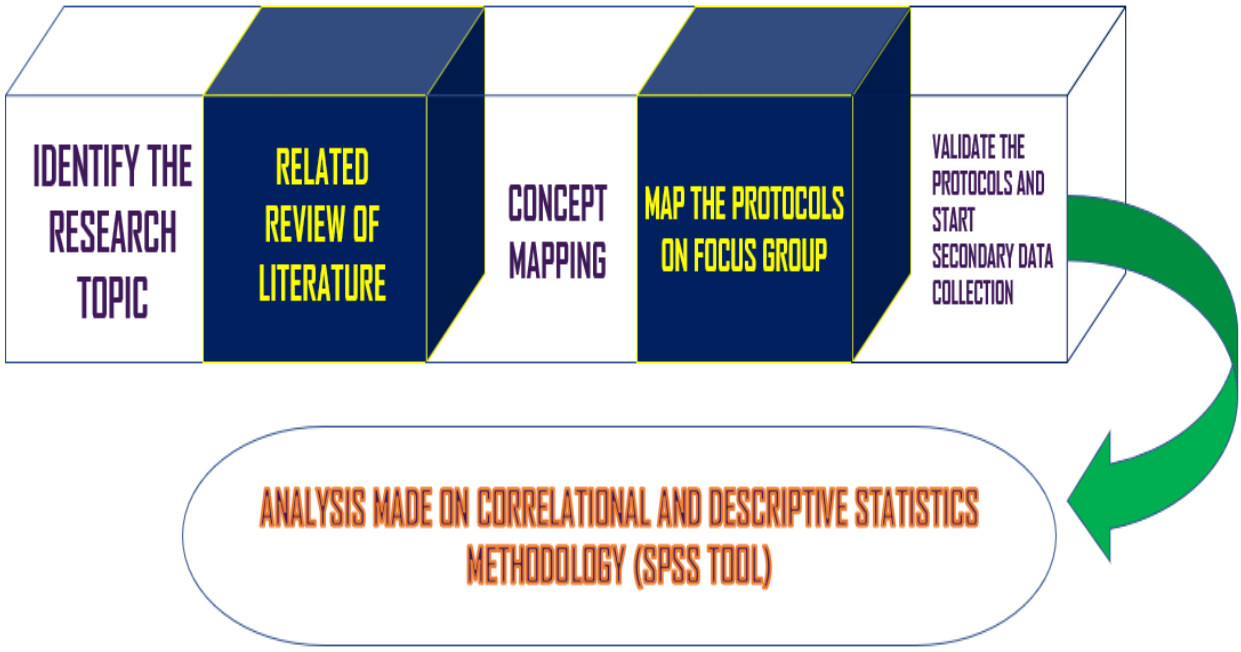

FIGURE 1. 3 RESEARCH METHEDOLOGY

LITERATURE REVIEW

1. Using GRACE to quantify the stress on renewable groundwater resources. James S. Famiglietti1,2,4, Katalyn Voss5, Sean Swenson6, and Matthew Rodell7; Brian F. Thomas2; Min-Hui Lo3; John T. Reager2; 14/07/2015 America, the United States of the global expansion of groundwater sources is the focus of this investigation. Therefore, it can determine how much groundwater has already been extracted and how much of a water supply can be expected in the future. Utilizing data from the Gravity Recovery and Climate Experiment (GRACE) satellite mission, we can estimate the impact of groundwater use and stress. Critical ratio, Grace observations, compiled groundwater statistics, and stress regimes all contribute to the mathematical model.Based on the results of this research, it is clear that the prevalence of renewable groundwater stress can be accurately measured by comparing trends in groundwater use with storage anomalies derived from the GRACE satellite. They've made it known that the wide variety of effects that groundwater use has on groundwater systems can't be adequately captured by relying solely on withdrawal statistics to tally water use. The study claims that taking into account the underlying land cover factors behind water stress.

2. Water and Its Impact on Agriculture, the Environment, and Society Those who contributed to this section include: David Pimentel, James Houser, Erika Preiss, Omar White, Hope Fang, Leslie Mesnick, Troy Barsky, Stephanie Tariche, Jerrod Schreck, and Sharon Alpert. America, United on January 18, 2013 (Secondary data analysis shows that many countries participated in studies of water scarcity.) Reusing and recycling purified ground water is the focus of this study rather than broader developmental projects related to agriculture, the environment, and society. Using an Analytical Approach Analysis of secondary data, critical thinking, and basic percentages No attempt is made to test the hypothesis. A. Water Supply B. Groundwater Supply C. Other Water Supply Third, the hydrologic cycle, 4.access to water, 5.changes in the global climate and other aspects of the environment brought about by human activity, Human consumption, agricultural and livestock operations, power generation via irrigation, and other industrial uses all fall under the umbrella of "6. Water Use." This study grew tired of hearing people express anxiety about reaching human water limits. For the sake of future society, each individual must worry about and work to solve water shortages.

3. The Indian Country's Water Supply Three Indian men named Rakesh Kumar, Rajendranath Singh, and Kedardev Sharma 10/09/2005 India This study focuses on the annual water demand in India for various applications of water from various water sources. Indian efforts to control water usage Restoring ecosystems and preserving water supplies. It is expected that It is anticipated that the work begun in Phase-I of the Hydrology Project and the proposed improvement of the Decision Support System in Phase-II of the Hydrology Project will help close the gap between the state of the art in water resources planning, design, and management and their practical applications in the Held. To evaluate water supplies in the face of potential climate change, hydrological studies must be conducted. Eco-hydrological methods and the transfer of water virtually are effective in this case. In addition, modernising the administration of water resources necessitates the development of human capacity to achieve this goal.

4. Managing Water Supplies in a Sustainable Manner Cornell University, Ithaca, New York, USA Daniel P. Loucks, Member, IWRA 22/01/2009. The focus of this study is on sustainable water resource management, which places an emphasis on looking ahead to the long-term advantages as well as the short-term ones. Researchers use an observational approach to their study. Methods of observing and quantifying natural phenomena No attempt is made to test the hypothesis. Change and long-term viability Longevity and size Rankings of environmental impact and sustainability principles Ecology and modernization Potential dangers and long-term sustainability. Future sustainable water resources management will benefit from the training and advice provided in this study.

5. Possibilities and Threats for Egypt's Water Supply in the Future Mohamed NasserAllam a and Gamal Author: Ibrahim Allam 22/01/2009 Egypt. Focusing on Egypt, a country with a significant impact due to its status as a low-rainfall region, this study reviews the country's water resources policies and plans. Studying the law and analysing it Statistical breakdown by country Analysing Current Water Management Methods Examining the GATT Tools that are project-based and use an overt, observational methodology do not test hypotheses. Plans and policies for Egypt's water supply Methods of water management and conservation, Concerns and problems involving water. Following a thorough analysis of the Egyptian water system,

policies, issues, and considerations, a set of concrete conclusions and recommendations are provided. All of it is predicated on what we think the future will resemble.

6. Global Water Resources: Analysis and Assessment St. Petersburg, Russia's State Hydrological Institute Professor Igor A. Shiklomanov 22/01/2009 Fifty different countries were selected at random (including Europe, North America, Africa, Asia, South America, Australia, and Oceania). This research analyses the current status of the world's water resources and offers a precise estimate of the total amount of water stored on Earth based on preliminary data and methodological approaches. The renewable water resources and potential water availability in a selection of countries around the world. Experts in hydrology, climatology, complex use, and protection of water resources from various countries and international organisations must collaborate closely to find a solution. All of these considerations should be taken into account in future studies of the challenging problem of estimating global water resources. (Aquatic runoff into the world's oceans is considered.)

7.Modelling the Availability of Iran's Blue and Green Water Resources 07 Hong Yang, RainerSchulin, MonirehFaramarzi, Karim C. Abbaspour, and MonirehFaramarzi 27/11/2008 Iran Findings from this study will inform long-term planning for Iran's blue and green water resources zone, with a particular focus on the country's water and food security needs. Hydrological simulations on a grand scale, Risk Assessment An Examination of Calibration Evaluation of the Current Situation SUFI-2, the Sequential Uncertainty Fitting Program; SWAT, the Soil and Water Assessment Tool No attempt is made to test the hypothesis. Environment and water resources in Iran's watershed Hydrological features of Iran's eight major regions. Information about 19 large reservoirs used in the SWAT model and their individual characteristics parameters chosen at the start of the calibration process Evaluations of the regional method approach's performance calibration. For researchers interested in learning more about Iran's water and food supply, this study provides a solid starting point. The distribution of water scarcity and the availability of water resources in Iran's various provinces and regions have been successfully estimated, providing a foundation for a systematic evaluation of crop water productivity. Clearly, this demonstrates the inextricable bond between water and nourishment.

8. Monthly water balance-based estimates of Italy's renewable water resources. Federica di Battista, maria Elisa venezian scarascia, LuigiPerini, luca salvati, Tomaso ceccarelli, marco petitta, and luca salvati 07/04/2008 Italy. The focus of this study is to calculate the amount of precipitation that does not evaporate back into the air or remain in the soil after being absorbed, which includes both the surface runoff and the subsurface runoff as well as the effective infiltration. Technique for Quantitatively Monitoring Environments (based on the law of conservation of matter) Use of Equations Field capacity versus permanent wilting point versus water facility. Water waste and pollution can be avoided if we use the available data to map out the most efficient use of water across all industries.

9.The State of California's Renewable Thermal Energy Sources Face Future Water Constraints Authors include Scott Samuelsena, Amir AghaKouchaka, Felicia Chiang, and Brian Tarrojaa. 23/05/2018 California the potential future advantages of making effective use of California's thermal and geothermal water resources are the focus of this investigation. What climate models have predicted is that A Calculation Is Formulated Net available water supply is calculated by analysing the water resources of different hydrologic regions in order to estimate the water-free solar thermal and geothermal capacity. Calculating the maximum amount of solar thermal and geothermal energy that can be installed without increasing water consumption. Absolutely no effort is made to verify the hypothesis. For a more accurate prediction of solar thermal and geothermal plants' potential power output, we can use data on water availability. Water conservation policies can pave the way for the use of renewable energy sources, which should be factored into the future planning of water and energy resources.

10.An analysis of China's efforts to reduce renewable energy curtailment from the viewpoint of the climate and water resource nexus The authors, in order of appearance: JuanjuanCaoa, Qi Cuia, Ling Hea, GuoyiHanb, and Hao Chena 28/04/2020 China. Two types of experiments, a complete-depletion experiment and a partial-depletion experiment, are developed to assess the potential consequences on carbon emission and water resource. Comprehensive investigation Formalization and Theorization Solar output decline Water, energy, and carbon: a nexus of challenges Creating Hydroelectricity from Water Power plant's carbon dioxide emissions Reduced use of renewable energy sources has environmental consequences. In light of China's

expected progress in technical solution and market reform, increased, stabilised quotas for renewable energy production are necessary to increase the adaptability of the entire energy generation-trade system.

11. Water desalination systems that run on sustainable energy sources: a brief overview Ahmed Alkaisia, Ruth Mossadb, Ahmad Sharifian-Barforousha are the authors. Today is Saturday, March 16th, 2017 More specifically, the Kingdom of Saudi Arabia Studies focusing on the integration of renewable energy into water desalination systems have grown in popularity in response to rising water and energy needs and the desire to reduce carbon footprint contributions. Science's Observational Methods for Investigating the Wilderness Absolutely no effort is made to verify the hypothesis. Technologies for Removing Salt from Water Different desalination techniques and their effects on the world's water supply are compared. Desalinization uses a lot of powerSolar still distillation (SD) systems are the best solution for addressing water and energy shortages in remote and rural areas. The high cost of SD systems is largely attributable to their low productivity. Desalination integrated renewable energy systems are on the rise as a potential way to solve the world's energy and water crises at the same time. Sustainable and environmentally friendly, RED (renewable energy desalination) technology has been widely adopted due to its ability to reduce dependence on traditional energy sources..

12.Controlling Energy Use and Producing New Forms of It Management of renewable energy and water resources together Yu-Ching Tsaia, b, Yea-KuangChanb, Fu-Kuang Kob, Jing-Tang Yanga; publication date: January 25, 2018 Taiwan This analysis focuses on Taiwan, a country with lofty targets for the expansion of renewable energy: 20 GW of solar power and 4.2 GW of wind power by 2025. On the other hand, the current power grid may be significantly impacted by the intermittent nature of renewable energy sources. The availability of fresh water and the reliability of the world's energy grid will both be impacted by climate change. approach based on in-depth analysis and observation, case studies, and secondary sources. The Theoretical Framework Methods of computation A pulsed-square-wave rider (PSH) unit for the ISRWR Absolutely no effort is made to verify the hypothesis. When 1099-MW pumped-storage hydropower units are added, the proposed system and operating model further improve peak-loading support; in comparison to a battery-storage system in the reference case, the cost of energy storage can be reduced by $166 million per year..

13. Hydrologic engineering Cycles and Global Water Resources Involving Taikan Oki and Shinjiro Kanae 25/08/2006 Japan While it's true that studying the water stored in natural and man-made reservoirs can help expand the amount of water available to human society, assessments of these resources should instead centre on the water's actual flow. The maximum rate at which renewable freshwater resources can circulate is capped by the climate system (RFWR). The Use of Secondary Sources Powerful data analysis No attempt is made to test the hypothesis. Radio Frequency Waveform Reconstruction Based on Questionnaire. The first step in getting ready for these upcoming changes is decreasing our current level of vulnerability.

14. Variations in China's Renewable Water Supply from 1956 to 2010 The Chinese authors LI Yuanyuan, CAO Jian Ting, SHEN Fuxin, and XIA published their work on June 28th, 2013. This study's focus on water resource shifts makes it particularly useful for assessing the consequences of climate change, developing strategies for optimising and safeguarding water supplies, and settling related policy questions. Research strategy based on analysis Separation into Zones Discernment of Ideas There is no effort made to test the hypothesis. Zones with a High-Water Supply Potential Territories with a Level II Water Supply Regions with a Third-Level Water Supply. Seasonal shifts between years Due to the effects of climate change, it was necessary to revise the discharge series in calculated units based on economic and social water consumptions during the national water resource assessment stage, and to further adjust the discharges based on the relationship between precipitation and runoff on the most recent land cover status.

15. Cleaning up and reusing Eureau's wastewater system. According to A.N. Angelakisa, b and L. Bontouxc on the 28th of August, 2000 There are 17 EU members. For the purposes of this study, Eureau stands in for the water and sewerage service industry in Europe, serving somewhere around 400 million people.The EUREAU organisation and how it works. Managing water supplies in EUREAU member states. Dealing with water scarcity Reuse of wastewater in Europe: laws and guidelines There is a wide range of strategies for controlling wastewater reuse. Northern and southern Eureau countries can both benefit from wastewater reclamation and reuse due to its many uses (protecting water resources, preventing coastal pollution,

recovering nutrients for agriculture, increasing river flow, saving money on wastewater treatment, recharging groundwater, ensuring the long-term viability of water resource management, etc.). Since this is an international issue, Eureau may have a hand in developing standards for reusing treated wastewater in the future.

16. Water resource management in China faces eight first-quarter 21st-century challenges. PerttiVakkilainen, Olli Varis, and 04/01/2000 China These studies focus on the fact that China's water supply will be severely strained in the not-too-distant future. In the coming decades, China's water resources will be put to the test by the country's rapid urbanisation, industrialization, growing agricultural demand, environmental degradation, and potential climate-related threats. Approach based on observations Purely naturalistic Analytical Criticism Technique No attempt is made to test the hypothesis. The inequitable distribution and scarcity of China's water supply. Extreme and unpredictable climatic shifts Density of people is extremely high Explicitly quick urbanisation to stop environmental deterioration, it must be stopped Safe food supplies economic and social inequality Disparities in the structure of the relevant institutions China's economy is booming, and there are plenty of other reasons the country must make deliberate decisions about its future. The disparities in China's economic and human development are enormous between different regions.

17. The importance of renewable energy sources to Israel's and Jordan's energy security Those two people are Tareq Abu Hamed and Lindsey Bressler. 9/12/2018 Union Euro penne (Israel & Jordan) In this study, we focus on renewable energy. increases energy security because it opens up new channels for bilateral cooperation between Israel and Jordan, helps the two countries meet their climate mitigation targets, and has far-reaching socioeconomic benefits for the populations of both countries. Both Israel and Jordan rely heavily on fossil fuels, with renewables contributing only 4% to their total energy output. Both the Arab Spring and the findings of the Tamar and Leviathan natural gas fields have had an impact on both economies. The current energy demand in Israel and Jordan was analysed, along with the connection between the deployment of renewable energy sources and the supply security dimension. Energy needs in both countries are currently being met primarily by fossil fuels.

18. Future fresh water scarcity in India can be alleviated sustainably through the use of desalination systems that incorporate renewable energy. SManju, NSagar 28/01/2017 India for the purposes of this study, we will focus on the historical significance of fossil fuels like coal, petroleum, and natural gas as primary energy sources. However, the environmental costs of using these traditional energy sources, such as greenhouse gas emissions, have prompted a shift toward renewables. India's current drinking water situation and potential problems in the future India's geography and climate. Rapid population growth has led to a dramatic increase in water consumption, prompting calls to increase fresh water production using renewable energy sources. The analysis demonstrates that India has a significant renewable energy potential to fuel both sea water and brackish water desalination plants. Desalination is the environmentally friendly and sustainable technology that can help India deal with its impending water stress.

19. Desalination using renewable energy Authors: EftihiaTzen a, Richard Morris 10/07/2003 Greece This study's focus on renewable energy sources (RES) coupled with desalination offers a promising prospect for meeting the basic power and water requirements in off-the-grid areas were connecting to the public electrical grid is either impractical or prohibitively expensive. Independent power generation and distribution systems have advanced to the point where they can be used reliably in remote areas. Approach to Analysis in Scientific Study Desalination: A Phenomenological Study of Nature No attempt is made to test the hypothesis. Desalination methods and standards of practise. Utilization of RES in desalination and what we've learned from it. The demand for water in the world is rising rapidly. For example, the Renewable Energy (RE) and Desalination Industries should work together more closely, as the European Union's current level of research and development (R&D) is woefully inadequate.

20. Water Dynamics in the World: Modelling Global Water Resources the Slobodan P. Simonovic Team 26/04/2002 [globalised] The focus of this study is the future of global industry is inextricably linked to the state of the world's water resources, according to World Water's simulations of global water dynamics. It is also demonstrated that water pollution will become the world's leading water crisis in the coming decades. Innovative Dynamic Approach Methodology Modelling the global water balance Method based on system dynamics modelling Template for the Third Global Realm Conceptualization of global water systems. The

research presented in this paper, however, has the same potential to open up new avenues for the application and improvement of models in the future. Most significantly, World Water will be split up into many different "Regional Water" models.

PROPOSED SECTION

4.1 BLOCK DIAGRAM ON IRRIGATIONAL METHOD

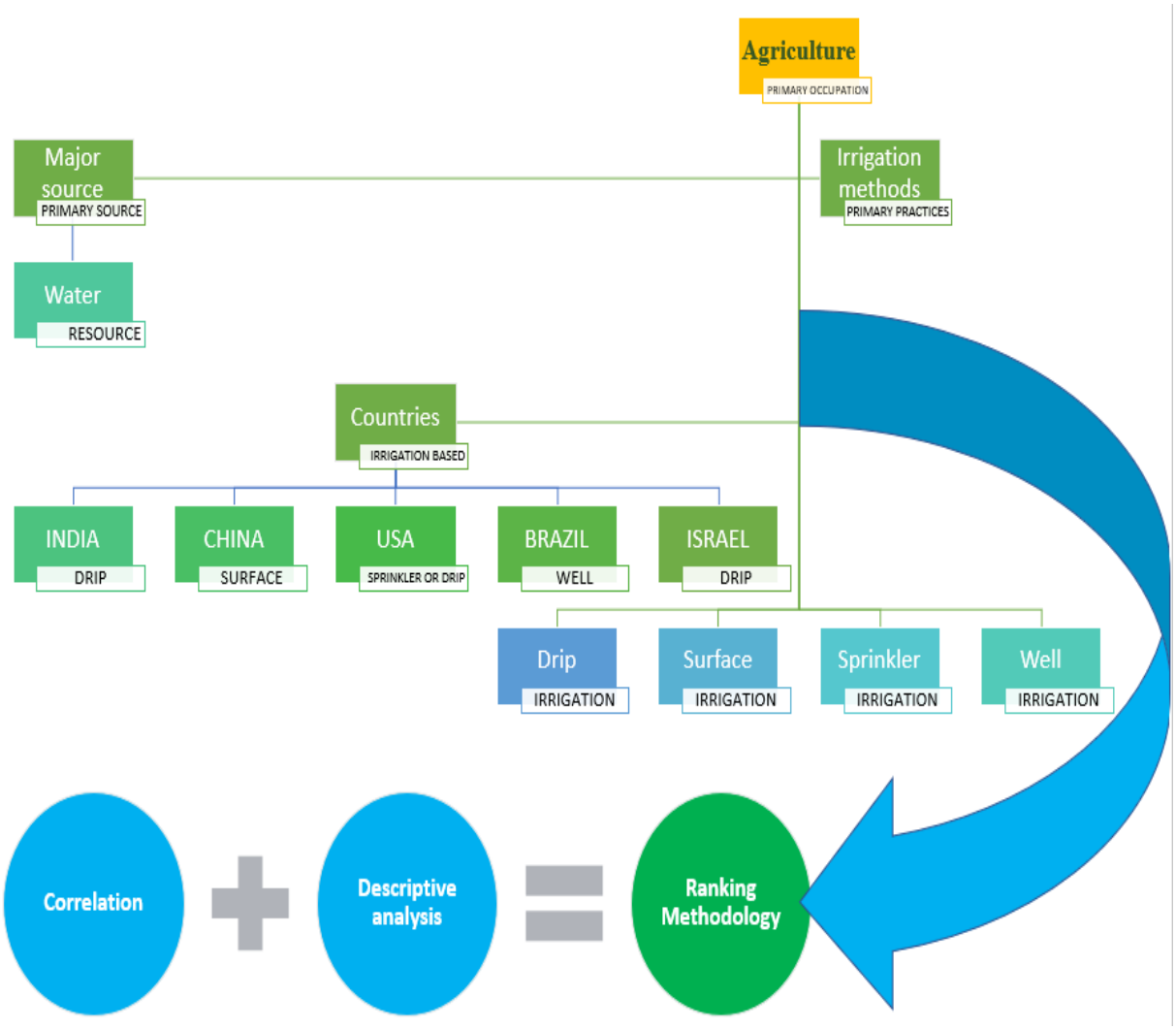

FIGURE 1. 4 BLOCK DIAGRAM ON IRRIGATIONAL PRACTICE

4.2TECHNICAL CONCEPT ON IRRIGATIONAL PRACTICES

Drip Irrigation

Drip irrigation always keeps the land moisturizing due to the slowly water drips into soil at the root zone. This is a micro irrigation system which distributes the water through the valve network, emitters, pipes and tubes. Drip irrigation allows farmers to increase their harvests while decreasing their use of water, fertilisers, electricity, and pesticides.

Sprinkler Irrigation

As a different to traditional irrigation methods, sprinkler irrigation simulates the effects of raindrops. In order to get water to where it needs to go, a network of pipes and pumps is required. Here the water undergoes screen filter and sand filters and then the flush valve helps to gives an air pressure through air valve and the pump creates where the water starts to Sprinkle, eventually.

Surface Irrigation

By gravity the water is delivered into the crops, where this irrigation system is divided into furrow, basin and border systems. These three systems need the vast water supply for crops cultivation. A large water supply

stream enacts here and the flood occurs where it could be controlled or uncontrolled base system. This method is only applicable if water amount for irrigation is present, Vastly.

Well Irrigation

An irrigation well is a water source used to operate non-drinking water distribution systems like sprinklers, animal waverers, geo systems, and feeding ponds. Since it is not intended for human consumption, some businesses use water from a shallower depth to save money. No matter what, though, at Applied Resource Management we drill into the rock aquifer. Given that shallow wells tend to dry up during dry spells, this guarantees that we never run out of water. Where the water extracting from the well is illustrate above in the figures.

4.3 COUNTRY BASED ANALYSIS ON AGRICULTURE WATER SYSTEM

4.3.1 CHINA

According to these experts, China's grain production capacity will decrease as a result of rapid depletion of water resources, leading to increased demand for imported grains and a glut on global markets. Others argue that China can avoid the predicted crisis by adopting measures such as growing crops that require less water and changing agricultural practises. Similarly, water levels have dropped in the Huai and Hai Rivers, two more significant waterways in the north China plain. Many of the smaller rivers and streams that feed into the Hai River dry up long before they reach the river itself.

4.3.2 UNITED STATES

Twenty-five percent of the country's potable water supply comes from aquifers. Groundwater is crucial for irrigation and domestic uses in arid or distant areas where surface water may be scarce or difficult to access. The groundwater table is replenished by precipitation that seeps into the ground, but it may be hundreds of years before the water can be used again after being extracted. Approximately 25% of the water that falls in the United States is stored underground. Most of the water that is taken out of aquatic systems for purposes like producing electricity with a thermoelectric generator, irrigating municipal and agricultural land, extracting metals, and making products is eventually put back in.

4.3.3 ISRAEL

Israel's most pressing issue was the unequal distribution of freshwater across the country, and fixing that would make the country a leader in sustainable water management. There would be a greater demand for water for agricultural and domestic uses than the National Water Carrier could supply. By the middle of the 20th century in Israel, agricultural use accounted for 72 percent of the country's freshwater consumption. Israeli engineers have come to the conclusion that it is not sufficient to merely conserve freshwater; rather, it is also necessary to make use of water sources that have been previously disregarded, Agriculturalists have benefited greatly from the National Water Carrier programme, which has been operating since 1985 and transports recycled water from urban centres to the country.

4.3.4 BRAZIL

Brazil has long been regarded as a prime location due to its abundant water supply. world's freshwater supplies there. As of 2007, the average annual water supply per person was 43,027 m3, which was considerably higher than the global It's easy to be fooled by the impressive average and fail to notice the significant variation in water distribution between regions. Only 4% of Brazilians live in the Amazon River basin, but the region provides 75% of the country's freshwater. Water resource management in Brazil has been hampered by the country's waning commitment to protecting the environment and its growing reliance on water sources that are becoming increasingly scarce.

4.4 STATISCAL ANALYSIS

4.4.1 CORRELATION

It shows the relationship between two variables only by using correlation coefficient. In this correlationcoefficient is a deciding factor.

4.4.2 DESCRIPTIVE STATISTICS

It describes, show, and summarize the basic features of a dataset found in a given study, presented in a summary that describes the data sample and its measurements. It helps analysts to understand the data better.

4.4.3 DATA ANALYSIS WITH INTERPRETATION

Here, the country and it'sPopulation, Total groundwater availability per year, Total groundwater extraction per year is tabulated as in 2021.

Sl.No.	Country	Population (2021)	Total groundwater availability per year (2021) BILLION CUBIC METRE	Total groundwater extraction per year (2021) BILLION CUBIC METRE
			Estimate on 2021	
1	INDIA	1393400000	438	240
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TABLE 1.2 COUNTRY WISE GROUNDWATER DATA

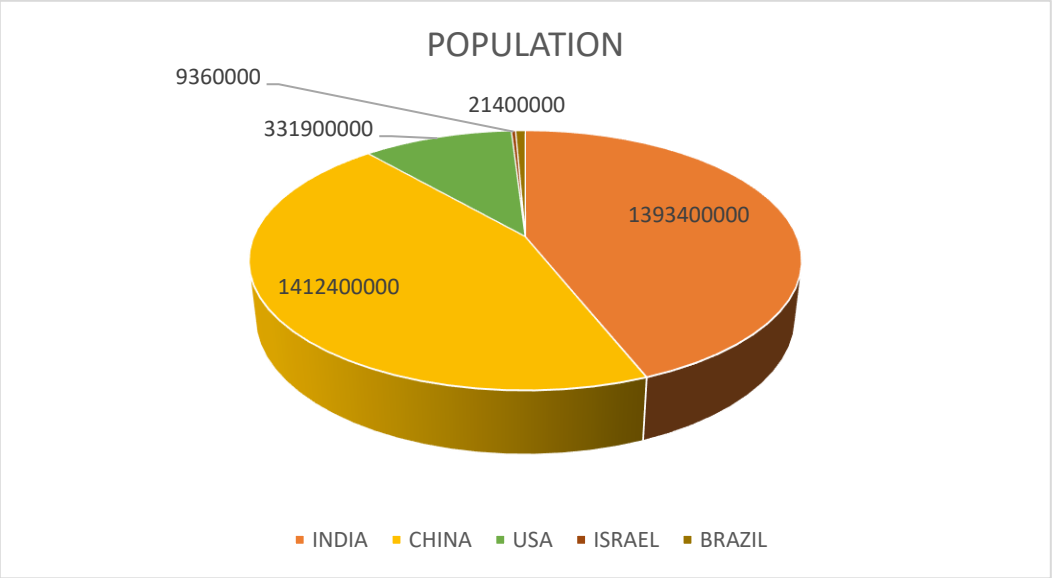


FIGURE 1.5 COUNTRY POPULATION DATA

4.4.3.1 CORRELATIONS ON SPRINKLER IRRIGATION

Here, the correlates on sprinkler irrigation were analyzed between the five parameters for finding the Relationship whether exists or not.

Sprinkler irrigation correlation between the selected variables

Variable X	Variable Y	Correlation	Value
Population of the country	Withdrawal certain percentage of water for sprinkler irrigation	-0.435	Low negative correlation
Population of the country	Renewable water from the sprinkler irrigation	-0.947	Very high negative correlation
Population of the country	Consumption of the renewable water	-0.932	Very high negative correlation
Population of the country	Waste water on the consumption	-0.841	High negative correlation
Withdrawal certain percentage of water for drip sprinkler irrigation	Renewable water from the sprinkler irrigation	0.192	Negligible correlation
Withdrawal certain percentage of water for sprinkler irrigation	Consumption of the renewable water	0.319	Low positive correlation
Withdrawal certain percentage of water for sprinkler irrigation	Waste water on the consumption	-0.085	Negligible correlation
Renewable water from the sprinkler irrigation	Consumption of the renewable water	0.850	High positive correlation
Renewable water from the sprinkler irrigation	Waste water on the consumption	0.962	Very high positive correlation
Consumption of the renewable water	Waste water on the consumption	0.779	High positive correlation

TABLE 1.3 CORRELATION BETWEEN SELECTED VARIABLES

5.5 CORRELATIONS ON SURFACE IRRIGATION

Here, the correlates on Surface irrigation were analyzed between the five parameters for finding the Relationship whether exists or not.

Surface Irrigation Correlation Between the Selected Variables:

Variable X	Variable Y	Correlation	Value
Population of the country	Withdrawal certain percentage of water for surface irrigation	-0.903	Very high negative correlation
Population of the country	Renewable water from the surface irrigation	-0.982	Very high negative correlation
Population of the country	Consumption of the renewable water	-0.988	Very high negative correaltion
Population of the country	Waste water on the consumption	0.419	Low positive correlation
Withdrawal certain percentage of water for surface irrigation	Renewable water from the surface irrigation	0.864	High positive correlation
Withdrawal certain percentage of water for surface irrigation	Consumption of the renewable water	0.865	High positive correlation
Withdrawal certain percentage of water for surface irrigation	Waste water on the consumption	-0.662	Moderate negative correlation
Renewable water from the surface irrigation	Consumption of the renewable water	0.984	Very high positive correlation
Renewable water from the surface irrigation	Waste water on the consumption	-0.271	Negligible correlation
Consumption of the renewable water	Waste water on the consumption	-0.364	low negative correlation

TABLE 1.4 CORRELATION BETWEEN ON SELECTED VARIABLES

5.6 CORRELATIONS ON WELL IRRIGATION

Here, the correlates on Well irrigation were analyzed between the five parameters for finding the Relationship whether exists or not.

Well Irrigation Correlation Between the Selected Variables:

Variable X			
Population of the country	Withdrawal certain percentage of water for well irrigation	0.471	Low negative correlation
Population of the country	Renewable water from the well irrigation	0.777	Very high negative correlation
Population of the country	Consumption of the renewable water	0.214	Very high negative correaltion
Population of the country	Waste water on the consumption	0.318	High negative correlation
Withdrawal certain percentage of water for well irrigation	Renewable water from the well irrigation	0.921	Negligible correlation
Withdrawal certain percentage of water for well irrigation	Consumption of the renewable water	0.952	Low positive correlation
Withdrawal certain percentage of water for well irrigation	Waste water on the consumption	0.968	Negligible correlation
Renewable water from the well irrigation	Consumption of the renewable water	0.772	High positive correlation
Renewable water from the well irrigation	Waste water on the consumption	0.836	Very high positive correlation
Consumption of the renewable water	Waste water on the consumption	0.962	High positive correlation

TABLE 1.5 CORRELATION BETWEEN SELECTED VARIABLES

5.7 CORRELATIONS ON DRIP IRRIGATION

Here, the correlates on Drip irrigation were analyzed between the five parameters for finding the Relationship whether exists or not

Drip irrigation correlation between the selected variables

Variable X	Variable Y	Value	Correlation type
Population of the country	Renewable water from the drip irrigation	0.251	No correlation
Population of the country	Withdrawal certain percentage of water for drip irrigation	0.799	High positive correlation
Population of the country	Consumption of the renewable water	0.690	Moderate positive correlation
Population of the country	Waste water on the consumption	0.624	Moderate positive correlation
Withdrawal certain percentage of water for drip irrigation	Renewable water from the drip irrigation	0.768	High positive correlation
Withdrawal certain percentage of water for drip irrigation	Consumption of the renewable water	0.836	High positive correlation
Withdrawal certain percentage of water for drip irrigation	Waste water on the consumption	0.562	Moderate positive correlation
Renewable water from the drip irrigation	Consumption of the renewable water	0.983	Very high positive correlation
Renewable water from the drip irrigation	Waste water on the consumption	0.798	High positive correlation
Consumption of the renewable water	Waste water on the consumption	0.838	High positive correlation

TABLE 1.6 CORRELATION BETWEEN SELECTED VARIABLES

Drip Irrigation Data Interpretation:

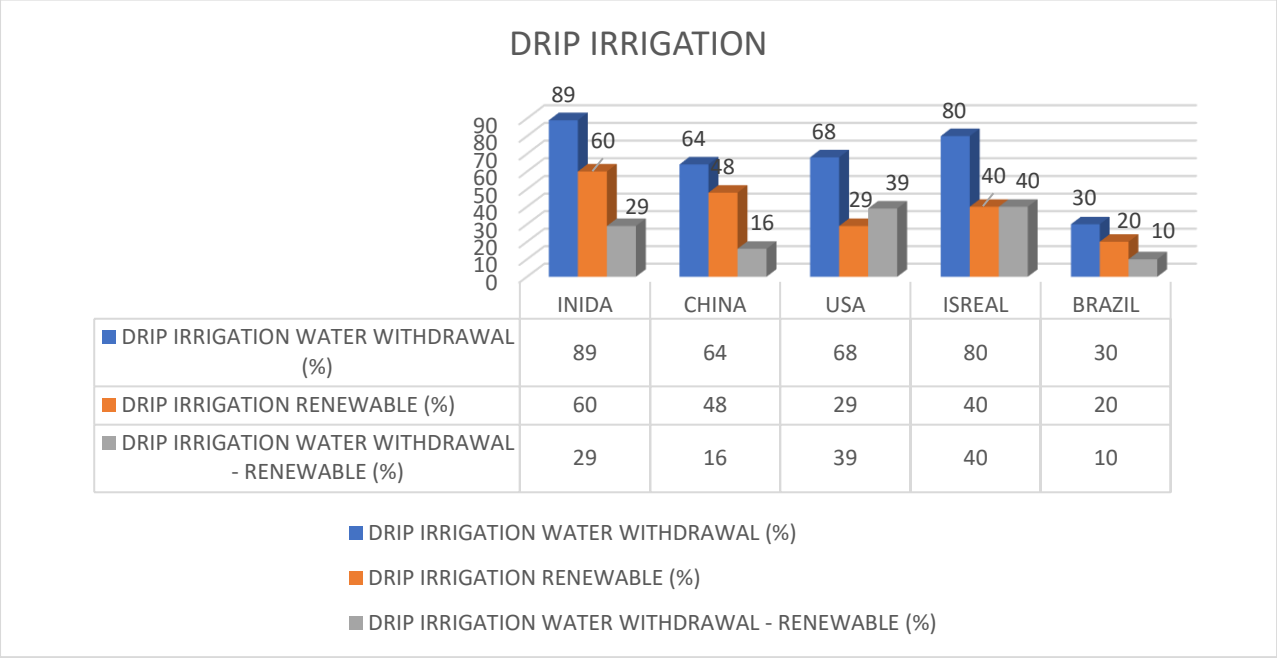
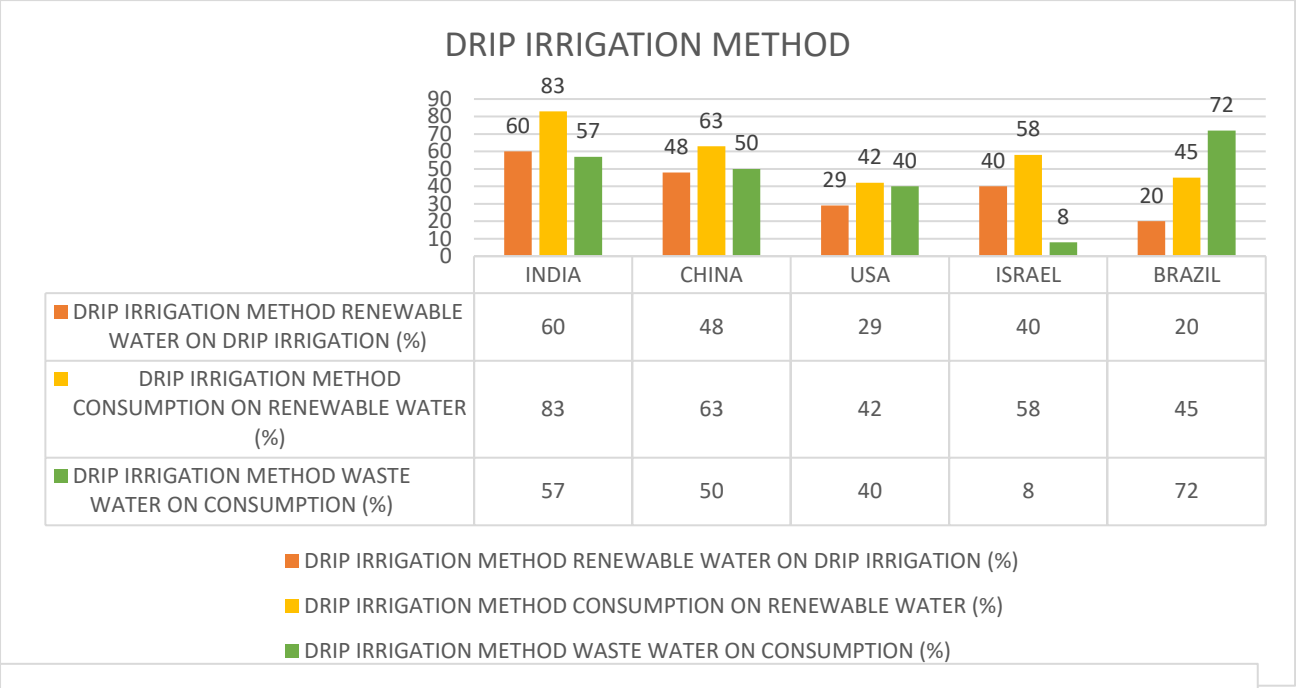


FIGURE 1.6 PERCENTAGE OF DRIP IRRIGATION ON SELECTED COUNTRY

DRIP IRRIGATION RANKINGS				
Country	POPULATION	(WATERWITHDRAWAL - RENEWABLE)	CONSUMPTION ON RENEWABLE WATER	WASTE WATER ON CONSUMPTION
INDIA	2	3	5	4
CHINA	1	4	4	3

USA	3	2	1	2
ISREAL	5	1	3	1
BRAZIL	4	5	2	5

TABLE 1.7 DRIP IRRIGATION RANKINGS



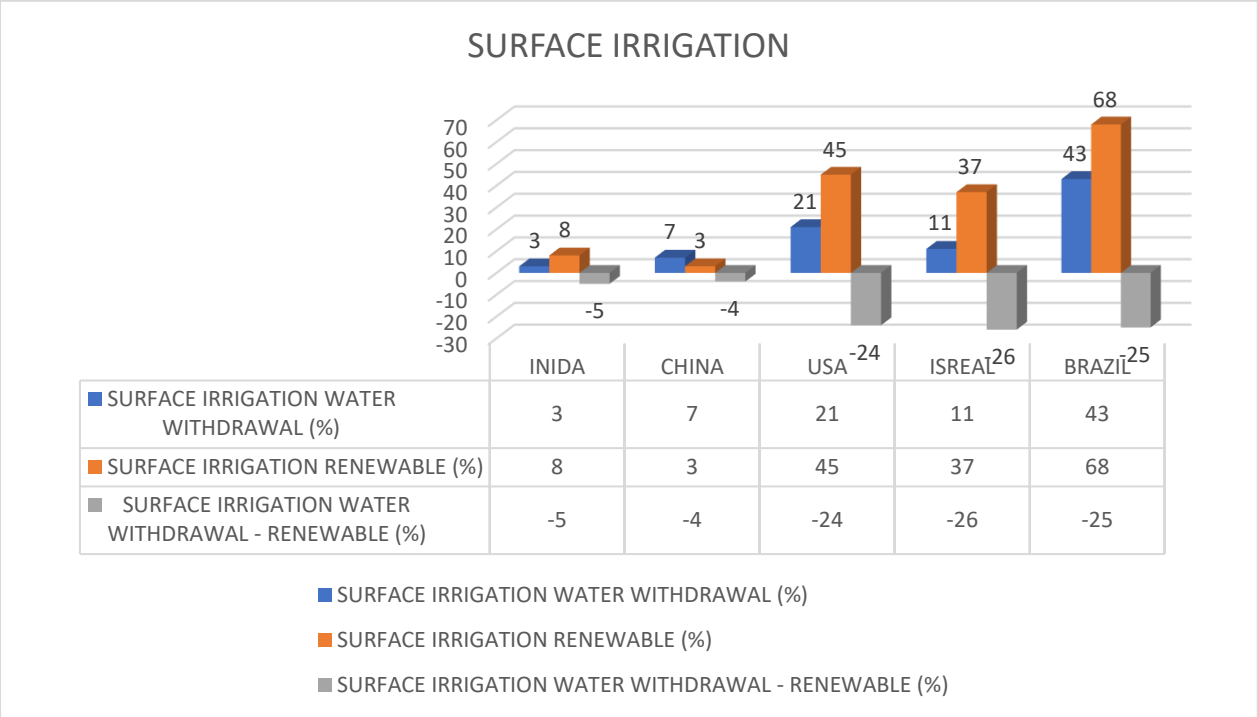


FIGURE 1.8 PERCENTAGE OF SURFACE IRRIGATION ON SELECTED COUNTRY

SURFACE IRRIGATION RANKINGS

COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTION ON RENEWABLE WATER	WASTE WATER ON CONSUMPTION

INDIA	2	2	2	4
CHINA	1	1	1	2
USA	3	3	5	5
ISREAL	5	5	3	1
BRAZIL	4	4	4	3

TABLE 1.8 SURFACE IRRIGATION RANKINGS

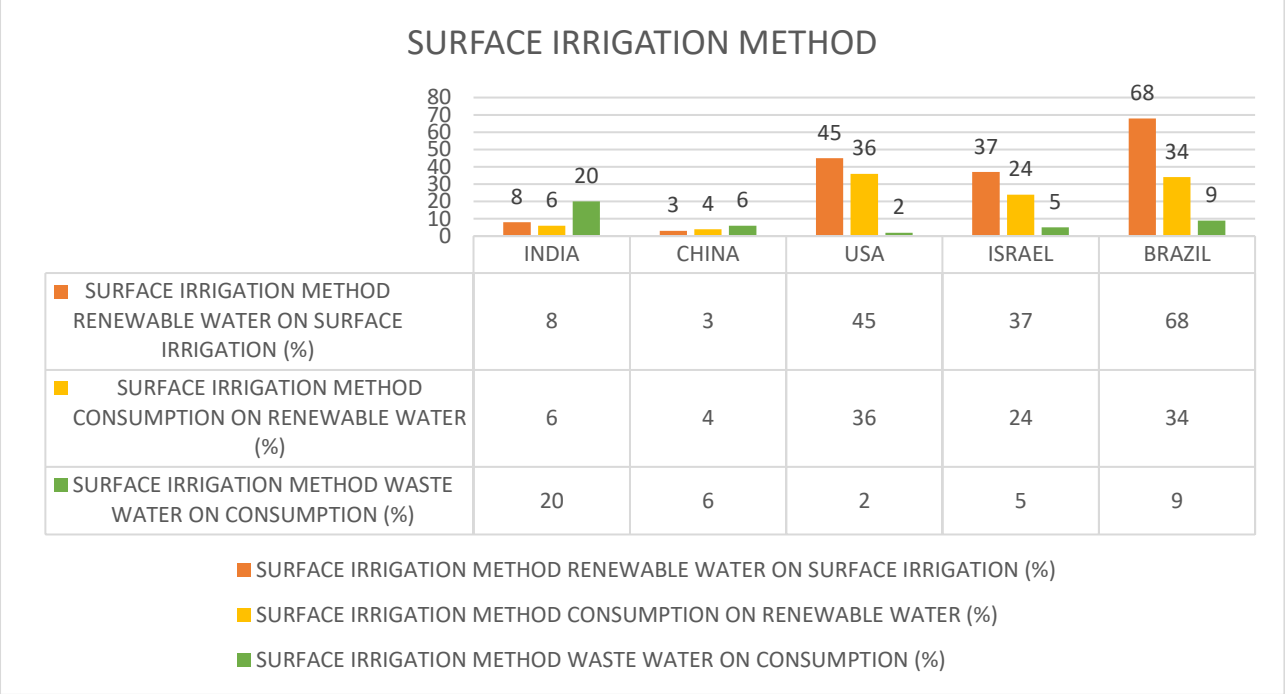


FIGURE 1.9 SURFACE IRRIGATION EXTRACTION AND CONSUMPTION

Sprinkler Irrigation Data Interpretation:

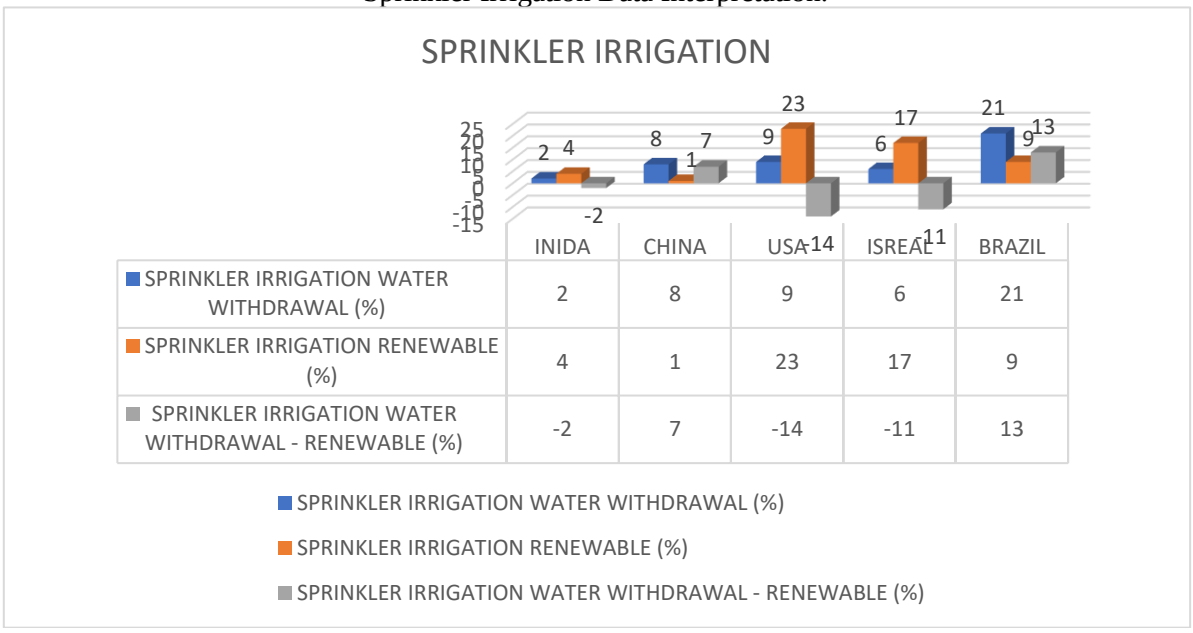


FIGURE 1.10 PERCENTAGE OF SPRINKLER IRRIGATION ON SELECTED COUNTRY

SPRINKLER IRRIGATION RANKINGS

COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTION ON RENEWABLE WATER	WASTE WATER ON CONSUMPTION
INDIA	2	1	2	3
CHINA	1	4	1	1
USA	3	3	3	5
ISREAL	5	2	4	4
BRAZIL	4	5	5	2

TABLE 1.9 SPRINKLER IRRIGATION RANKINGS

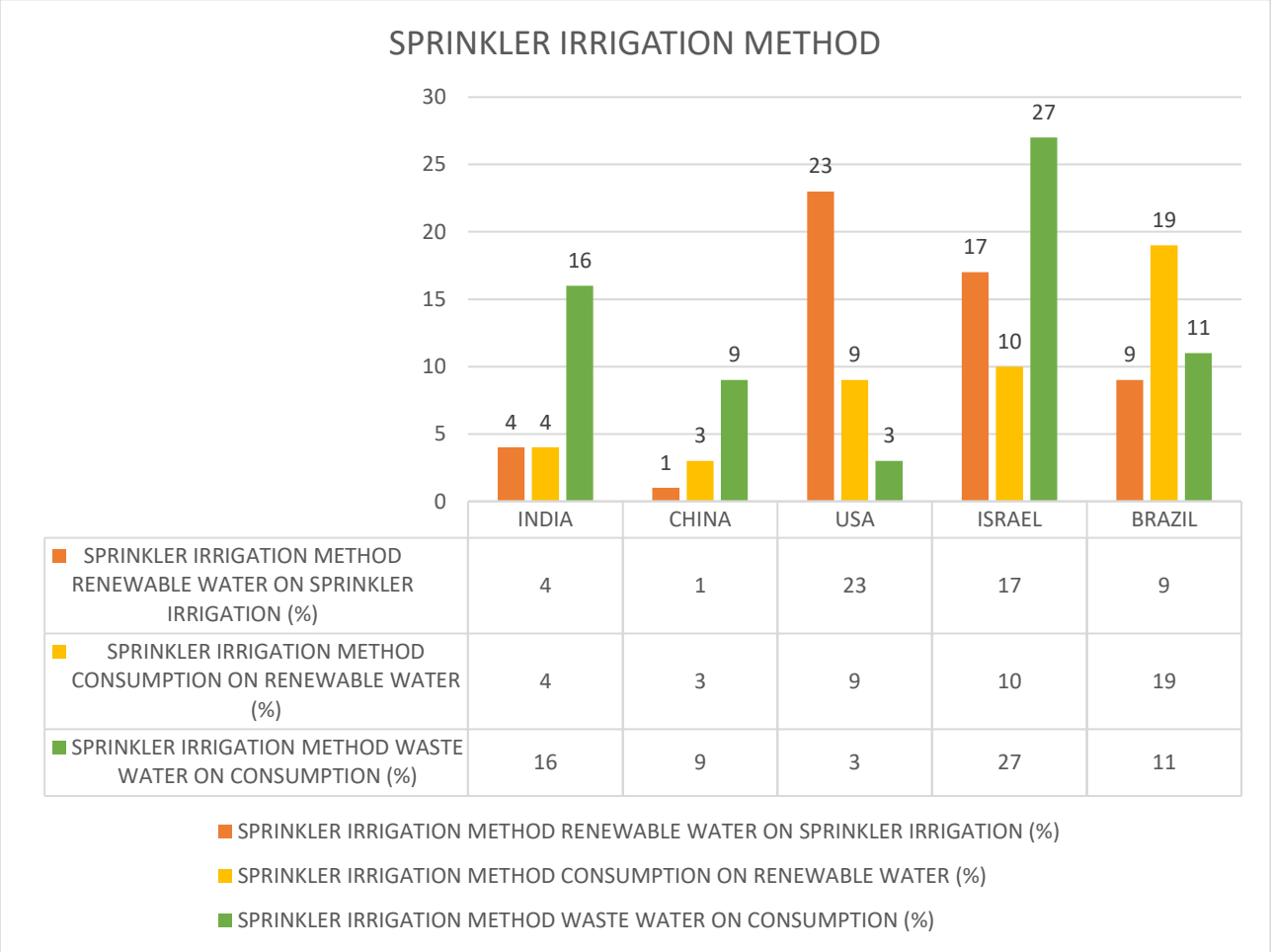


FIGURE 1.11 SPRINKLER IRRIGATION RENEWABLE AND CONSUMPTION

Well Irrigation Data Interpretation:

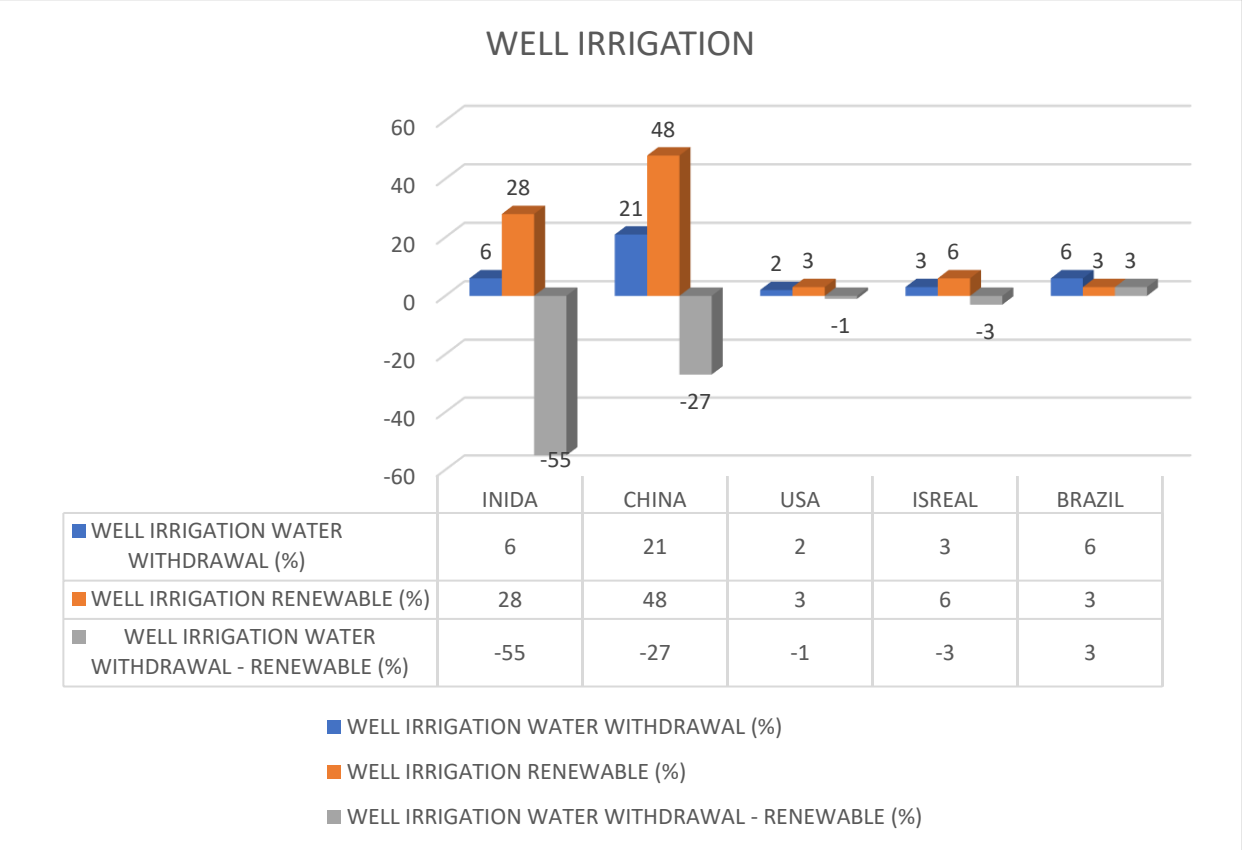


FIGURE 1.12 PERCENTAGE OF WELL IRRIGATION ON SELECTED COUNTRY

WELL IRRIGATION RANKINGS

COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTION RENEWABLE WATER	WAWASTEWATER ON CONSUMPTION
INDIA	2	3	2	3
CHINA	1	4	5	4
USA	3	1	4	1
ISREAL	5	3	3	5
BRAZIL	4	5	1	2

TABLE 1.10 WELL IRRIGATION RANKINGS

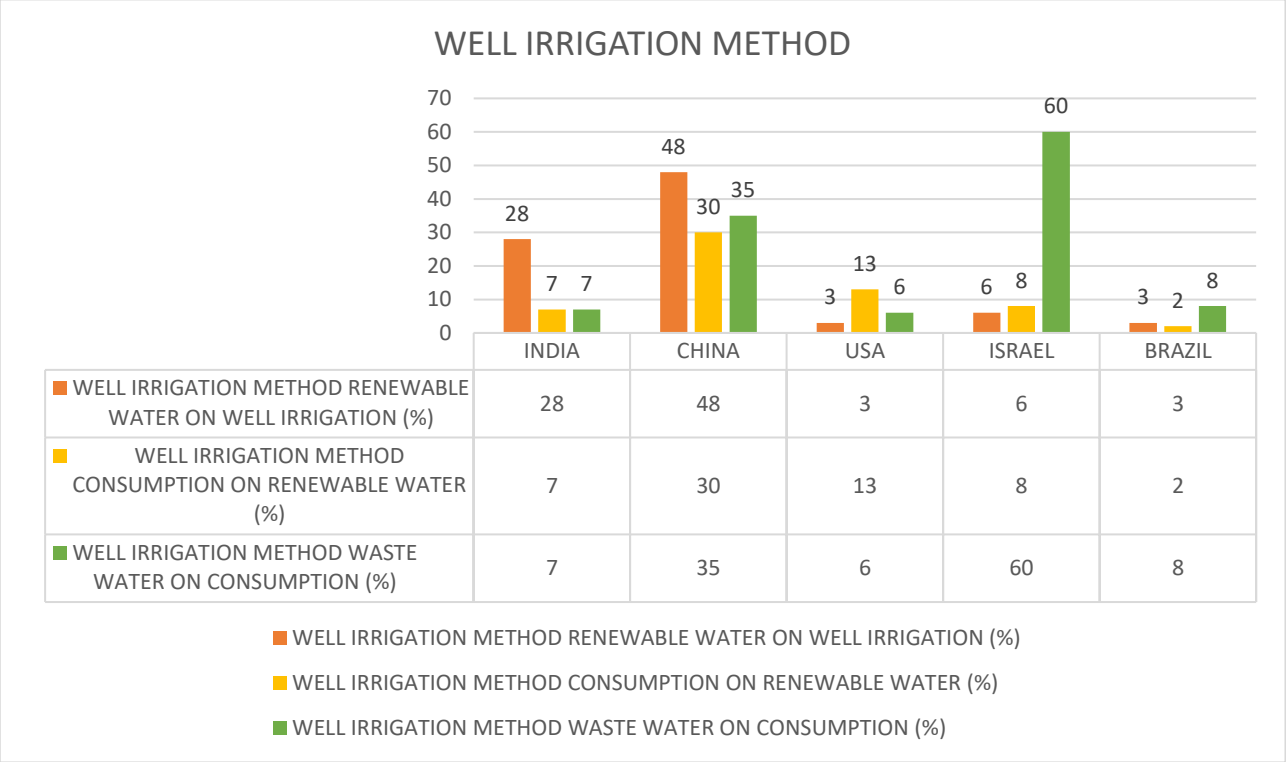


FIGURE 5. 1 WELL IRRIGATION RENEWABLE AND CONSUMPTION

RESULTS AND DISCUSSION

5.1 DATA FINDINGS AND ITS INTERPRETATION

DRIP IRRIGATION RANKINGS

COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTION ON RENEWABLE WATER	WASTE WATER ON CONSUMPTION
INDIA	2	3	5	4
CHINA	1	4	4	3
USA	3	2	1	2
ISREAL	5	1	3	1
BRAZIL	4	5	2	5

TABLE 1.11 DRIP IRRIGATION RANKINGS

DRIP IRRIGATION ON WATER EXTRACTION FROM GROUNDWATER LEVEL AND TOTAL RENEWABLE WATER LEVEL.

Here, the five-country based percentage were discussed and obtained from the various sources and tabulated for the ranking purpose. In this ranking Methodology, the SPSS tool – " Descriptive Statistics" were been used. The median were calculated and the ranking were decided based on the odd median analysis. An odd median analysis was selected, based on the five countries. i.e., 5 is odd.

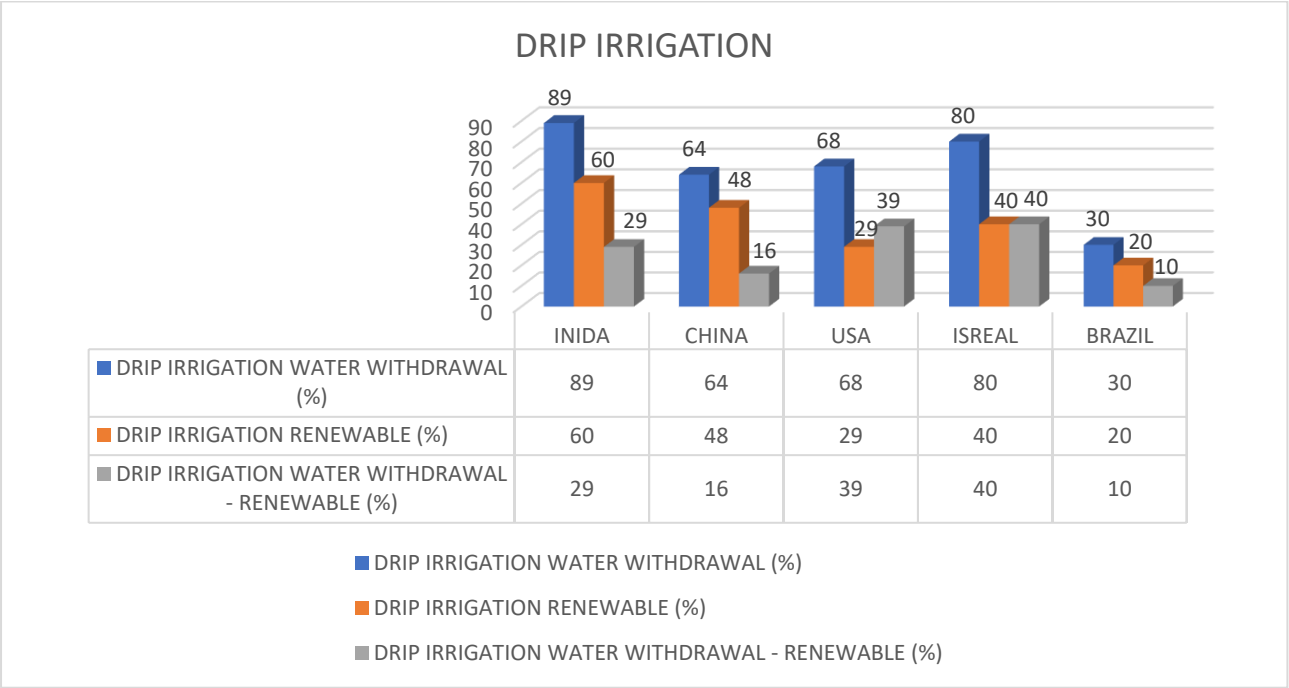


FIGURE 1.13 DRIP IRRIGATION WATER EXTRACTION AND RENEWABLE

Rankings were assigned by the descriptive statistics, median factor:

Here, the (W-R) i.e., Water withdrawal from the groundwater for drip irrigation differentiates from the water withdrawal renewable water for drip irrigation.Formula for median, (here, the median is 29) i.e., IndiaNow the assortment is made on descending order due to the correlation lies on water withdrawal and renewable on drip irrigation is 0.768 i.e., high positive correlation.40, 39,29,16,10 is ordered hierarchically.

Israel, USA, India, China, Brazil

DRIP IRRIGATION				
COUNTRY	**WATER WITHDRAWAL (%)**	**RENEWABLE (%)**	**WATER WITHDRAWAL – RENEWABLE (%)**	**RANKING**
INDIA	**89**	**60**	**29**	**3**
CHINA	**64**	**48**	**16**	**4**
USA	**68**	**29**	**39**	**2**
ISRAEL	**80**	**40**	**40**	**1**
BRAZIL	**30**	**20**	**10**	**5**

TABLE 1.12 DRIP IRRIGATION COUNTRY RANKING

Now, all the drip irrigation-based country rankings were tabulated here,

DRIP IRRIGATION RANKINGS				
COUNTRY	**POPULATION**	**(WATER WITHDRAWAL - RENEWABLE)**	**CONSUMPTION ON RENEWABLE WATER**	**WASTE WATER ON CONSUMPTION**
INDIA	**2**	**3**	**5**	**4**
CHINA	**1**	**4**	**4**	**3**
USA	**3**	**2**	**1**	**2**
ISREAL	**5**	**1**	**3**	**1**
BRAZIL	**4**	**5**	**2**	**5**

TABLE 1.13 DRIP IRRIGATION RANKING BASED ON MEDIAN

Let's proceed the descriptive analysis on the formula applicable of measures of central tendency, median .If n is even, the formula of median is:

$$\frac{(n/2)\text{ th term} + (n/2 + 1)\text{ th term}}{2}$$

Therefore, n=4 i.e., (Population, W-R, Consumption of renewable waste, Waste water of consumption) .Arrange all the country ranking in an ascending order,

INDIA

$$= \frac{(n/2)\text{ th term} + (n/2 + 1)\text{ th term}}{2}$$

$$= \frac{4/2 + (4/2 + 1)}{2}$$

Therefore, Median =2.5 i.e., (3)

Where the third value lies the msedian here,

INDIA

The third value lies on 4th ranking among these five countries.Meanwhile, the same procedures were follows up where the n =4, in the sense. The third value will be the median and it tends to ranking the country.

China

Here, the rankings were arranged from small to big ordered one, here 4 is repeated . In descriptive statistics, the repeated numeric should called as mode. If the third number is mode, then take the ranking 4 assigned to China.

USA

USA assigned rank is 1. Similarly, the next country will be taken,

Israel

Brazil

Look the sense of third value, India and China possess same ranking on median behalf. It cannot assume single rank for double countries. In this mode descriptive pattern, we should adopt the descriptive-frequency.If mode or frequency of data occurs you can sum up the value or cumulative frequency method can be adopted.

DRIP IRRIGATION RANKINGS					
COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTION ON RENEWABLE WATER	WASTE WATER ON CONSUMPTION	SUM UP VALUE OR CUMULATIVE
INDIA	2	3	5	4	14
CHINA	1	4	4	3	12
USA	3	2	1	2	8
ISRAEL	5	1	3	1	10
BRAZIL	4	5	2	5	16

TABLE 1.14 DRIP IRRIGATION OVERALL VALUE

i.e., (2+3+5+4 = 14) India, similarly other companies were calculated.Now the ranking will be given in the ascending order :8, 10, 12, 14, 16 and the ranking will be assigned as, 1, 2, 3, 4, 5.

USA, ISRAEL, CHINA, INDIA, BRAZIL

DRIP IRRIGATION RANKINGS					
COUNTRY	POPULATION	(WATER WITHDRAWAL -RENEWABLE)	CONSUMPTIONON RENEWABLE WATER	WASTE WATER ON CONSUMPTION	O R
INDIA	2	3	5	4	4
CHINA	1	4	4	3	3
USA	3	2	1	2	1
ISRAEL	5	1	3	1	2
BRAZIL	4	5	2	5	5

TABLE 1.15 DRIP IRRIGATION OVERALL RANKING

Based on these five-country analysis on the drip irrigational method, the score will be calculated based on the efficient scaling method.

SCALING WERE ON THE BASIS OF 5 PARAMETERS,

Population, Water Withdrawal for the drip irrigation, renewable water of drip irrigation, consumption of renewable water and the waste water of consumption. On scale 0-20 is very low drip irrigation area, 20-40 is low drip irrigation area, 40-60 is moderate drip irrigation area, 60-80 is high drip irrigation area,80-100 is very high drip irrigation areawere divided.

DRIP IRRIGATION OF WATER WITHDRAWAL			
COUNTRY	WATER WITHDRAWAL	SCALE LEVEL	SCALE
INDIA	89	80-100	VERY HIGH
CHINA	64	60-80	HIGH
USA	68	60-80	HIGH
ISRAEL	80	80-100	VERY HIGH
BRAZIL	30	20-40	LOW

DRIP IRRIGATION OF WATER RENEWABLE			
COUNTRY	**WATER RENEWABLE**	**SCALE LEVEL**	**SCALE**
INDIA	**60**	**60-80**	**VERY HIGH**
CHINA	**48**	**40-60**	**HIGH**
USA	**29**	**20-40**	**HIGH**
ISRAEL	**40**	**40-60**	**VERY HIGH**
BRAZIL	**20**	**20-40**	**LOW**
DRIP IRRIGATION OF (WW-WR)			
COUNTRY	**WATER RENEWABLE**	**SCALE LEVEL**	**SCALE**
INDIA	**29**	**20-40**	**LOW**
CHINA	**16**	**0-20**	**VERY LOW**
USA	**39**	**20-40**	**LOW**
ISRAEL	**40**	**40-60**	**MODERATE**
BRAZIL	**10**	**0-20**	**VERY LOW**

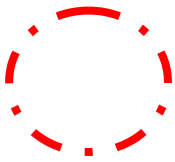
TABLE 1.16 DRIP IRRIGATION WW-WR SCALE

Based on this scaling and the ranking, we made a comparative analysis and give a scoring.

INTERPRETATION:

The first and second place of the drip irrigation country is USA and Israel.

USA withdrawal point of drip irrigation percentage is 68%, Israel withdrawal point of drip irrigation percentage is 80%, USA renewable point of drip irrigation percentage is 29%, Israel renewable point of drip irrigation percentage is 40%, USA (WW-WR) point of drip irrigation percentage is 39%, Israel (WW-WR) point of drip irrigation percentage is 40**%**. In this Israel, says the scoring of equal withdrawal and benefit leads a second position and meanwhile USA also turns on the same score. So, the drip irrigation withdrawal score will be decided on the basis of how much they renewable. The renewable score is,



50/100

For 68% withdrawal, renewable is nearly half of the percentage i.e., 29 %, (39%) occurs here for USA.

For 80% withdrawal, renewable is exactly half of the percentage i.e., 40 %, (40%) occurs here for Israel. So, the score point is decided on half of the basis by this analytical research.Due to the diversity of the land and climate across the country, Israel is able to grow a wide range of crops even in the dry area. Field crops grown in the country include wheat, sorghum and corn. On 215,000 hectares of land, these sorts of crops are grown, 156,000 hectares of which are winter crops.This modern drip irrigation technology helps the drought land of Israel to produce this crop efficiently and it gives 95% efficient drip irrigation practice

5.2 AN EXPERIMENTAL ANALYSIS OF OVERALL RANKING ON IRRIGATIONAL PRACTICES

The overall ranking chart were tabulated here for the Reference of our knowledge.

SURFACE IRRIGATION OVERALL RANKINGS					
COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTIONON RENEWABLE WATER	WASTE WATER ON CONSUMPTION	OVERALL RANKING

INDIA	2	2	2	4	2
CHINA	1	1	1	2	1
USA	3	3	5	5	4
ISREAL	5	5	3	1	3
BRAZIL	4	4	4	3	5

TABLE 5.1 1 SURFACE IRRIGATION OVERALL RANKING

SPRINKLER IRRIGATION OVERALL RANKINGS					
COUNTRY	POPULATION	WATER WITHDRAWAL - RENEWABLE	CONSUMPTION RENEWABLE WATER	WASTE WATER ON CONSUMPTION	OVERALL RANKING
INDIA	2	1	2	3	2
CHINA	1	4	1	1	1
USA	3	3	3	5	3
ISREAL	5	2	4	4	4
BRAZIL	4	5	5	2	5

TABLE 5.1 2SPRINKLER IRRIGATION OVERALL RANKINGS

WELL IRRIGATION OVERALL RANKINGS					
COUNTRY	POPULATION	(WATER WITHDRAWAL - RENEWABLE)	CONSUMPTION ON RENEWABLE WATER	WASTE WATER ON CONSUMPTION	OVERALL RANKING
INDIA	2	3	2	3	2
CHINA	1	4	5	4	4
USA	3	1	4	1	1
ISRAEL	5	3	3	5	5
BRAZIL	4	5	1	2	3

TABLE 5.1 3WELL IRRIGATION OVERALL RANKINGS

The scaling on each country and its irrigation is tabulated here for reference to the knowledge with the graph.
Drip Irrigation SCALE measurable on five countries:

DRIP IRRIGATION		
COUNTRY	WATER WITHDRAWAL	SCALE
INDIA	89	VERY HIGH
CHINA	64	HIGH
USA	68	HIGH
ISRAEL	80	VERY HIGH
BRAZIL	30	LOW

TABLE 5.1.4 DRIP IRRIGATION SCALE

Surface Irrigation SCALE measurable on five countries:

SURFACE IRRIGATION		
COUNTRY	WATER WITHDRAWAL	SCALE
INDIA	3	VERY LOW
CHINA	7	VERY LOW
USA	21	LOW
ISRAEL	11	VERY LOW

BRAZIL	43	MODERATE

TABLE 5.1.5 SURFACE IRRIGATION WWITHDRAWAL CALE

Sprinkler Irrigation SCALE measurable on five countries:

SPRINKLER IRRIGATION		
COUNTRY	WATER WITHDRAWAL	SCALE
INDIA	2	VERY LOW
CHINA	8	VERY LOW
USA	9	VERY LOW
ISRAEL	6	VER LOW
BRAZIL	21	LOW

TABLE 5.1.6 SPRINKLER IRRIGATION WITHDRAWAL SCALE

Well Irrigation SCALE measurable on five countries:

WELL IRRIGATION		
COUNTRY	WATER WITHDRAWAL	SCALE
INDIA	6	VERY LOW
CHINA	21	LOW
USA	2	VERY LOW
ISRAEL	3	VERY LOW
BRAZIL	6	VERY LOW

TABLE 5.1.7 WELL IRRIGATION WITHDRAWAL SCALE

Here, the country-based scaling is illustrated with graph.

India Irrigation practice on Agricultural Scaling:

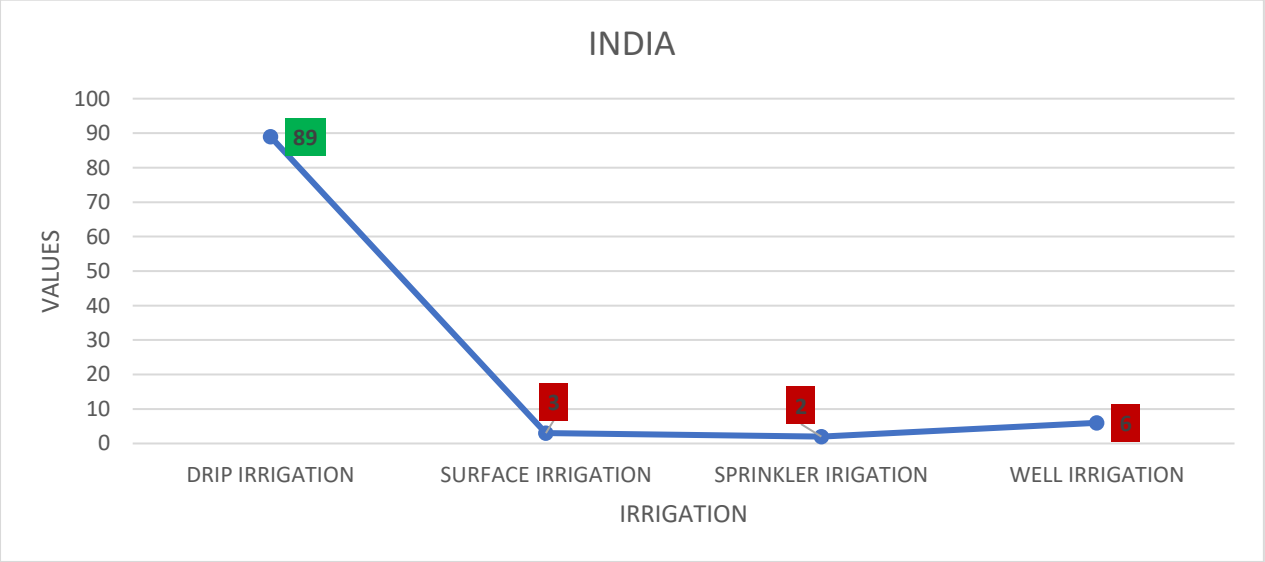


FIGURE 1.17 INDIA IRRIGATION SCALE

China Irrigation practice on Agricultural Scaling:

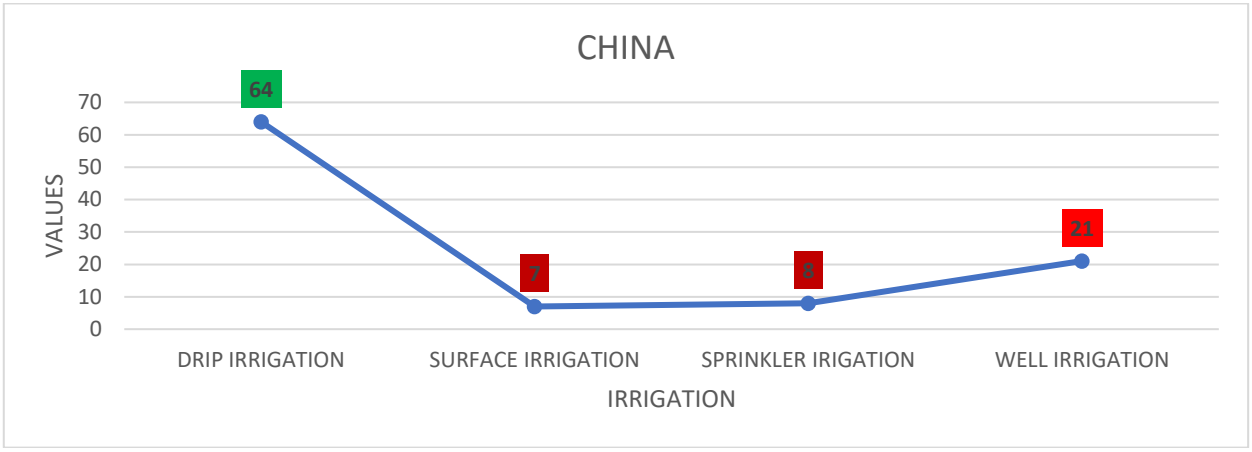


FIGURE 1.18 CHINA IRRIGATION SCALE

USA Irrigation Practice on Agricultural Scaling:

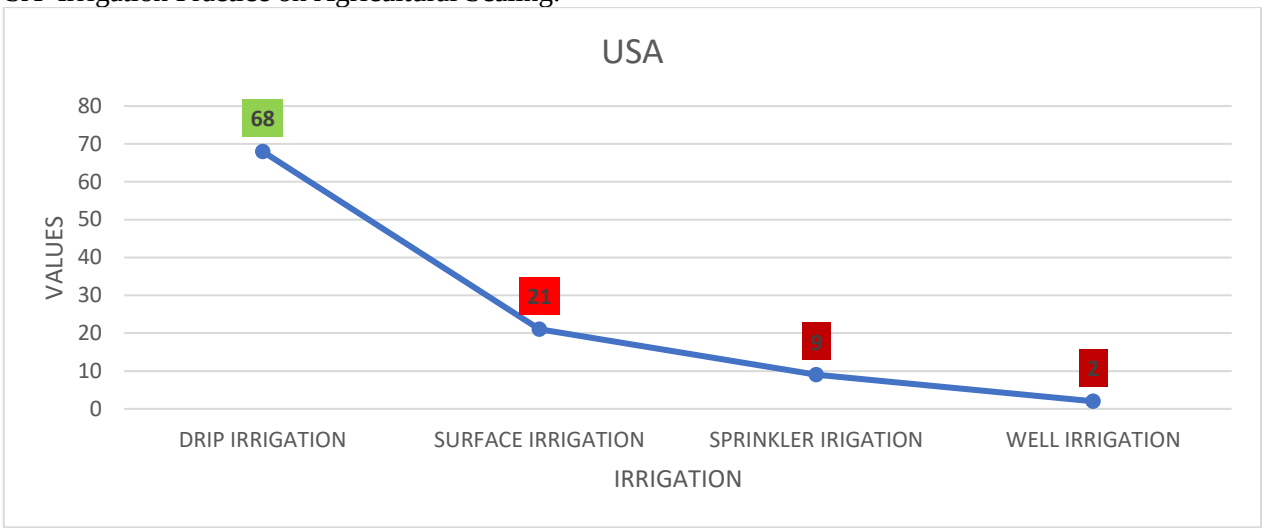


FIGURE 1.19 USA IRRIGATION SCALE

Israel Irrigation Practice on Agricultural Scaling:

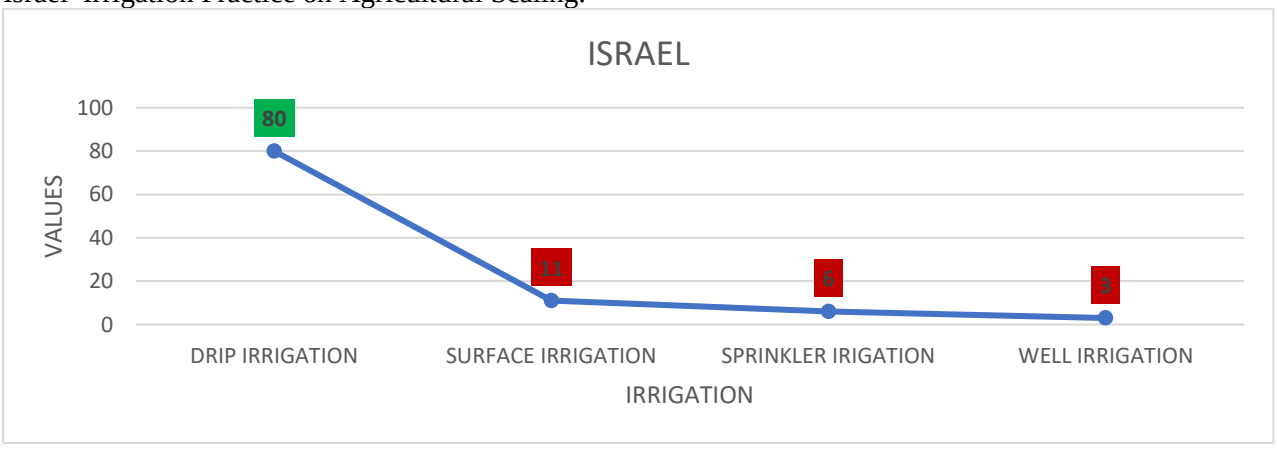


FIGURE 1.20 ISRAEL IRRIGATION SCALE

Brazil Country Irrigation Scaling:

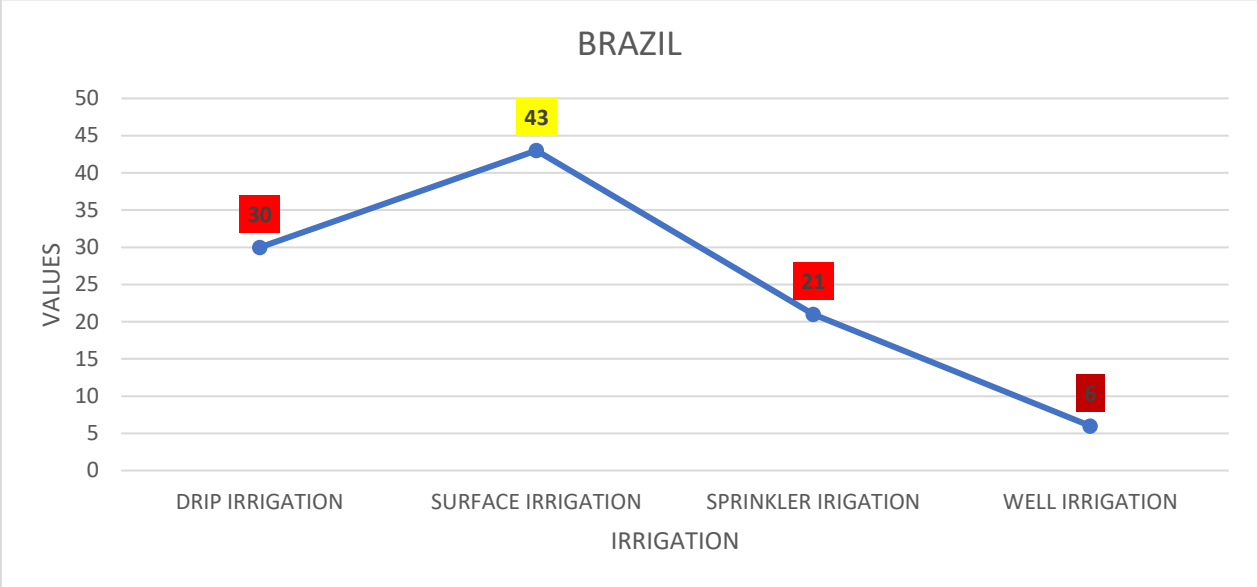


FIGURE 1.21 BRAZIL IRRIGATION SCALE

CONCULSION

At the result of this proposal, four countries were compared and contrasted to India. And this four countries Brazil, Israel, China and U.S.A. were elected by the different resources on water availability and the method of irrigation. Here, the states are irrigation and it's types which were adopted on the particular country. The operations are renewable percentage, withdrawal percentage, waste percentage and consumption from the renewable percentage. And these were analysed and statistically rankings were given by using specific ranking tools such as Correlation and Descriptive Statistics. Compared to the states and operations of the other four countries to India, "Drip Irrigation" is considered to be the best among the practices of other irrigational methods. The proposal tends to the out-turn is Prevention of water crisis on agricultural practices. The adoption of drip irrigation state and operations helps to renewable the water, the consumption from the renewable leads lowest level waste water contrast to the other methods adopted in the specified countries. The comprehensive outcome of this proposal is "The best practice of Irrigation on agriculture is Drip Irrigational Method, and it's recommended to India Agricultural practice.

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