International Journal of Research in Social Sciences
Vol. 9, Issue 4, April - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Impact Assessment of Kadana Dam Project with Reference to Socio Economic Development of Tribes

HARSH KUMAR

M.Sc. Geography

Abstract:-Shortage of water is for the most part brought about by inappropriate administration of water assets which likewise restrains the development of the country. One of the numerous approaches to tackle the issue of lack of water is by developing the trench or dam arrange. The tremendous errand of connecting the dam requires multidisciplinary examinations. Hydrological and horticultural parameters demonstrate a prevailing job in the determination of reasonable way for the development of the channel. The Saurashtra Narmada Avtaran Irrigation Yojana is modified to determine the water emergency of the rare areas of Saurashtra. The Yojana is partitioned into 4 connections. This paper manages the investigation of the arrangement of these 4 connections of the "SAUNI YOJANA" with the assistance of ArcGIS and QGIS software. Linking water surplus Himalayan Rivers with water rare pieces of western and peninsular India has been accomplished for as far back as 150 years. Entomb bowl move implies connecting at least two water bodies, one with surplus water and another with rare water, by making a system of physically made trenches. The present investigation manages the surplus water redirection by means of channel from Kadana Dam to Watrak Dam, Gujarat. The investigation territory incorporates two regions to be specific Panchmahal and Sabarkantha of upper east Gujarat. For interlinking, thought of different ground highlights, contours and slant of the investigation region is finished utilizing GIS and Remote Sensing. The information got from topical maps are coordinated that aides in arranging of arrangement of channel. Choice of arrangement for a channel is basic regarding cost and execution time. A few arrangements might be conceivable between the source and goal of a channel, yet direction region and arrangement conceivable with least cutting and filling works dependent on topography is concluded. Further development of structural building structures are distinguished to plan the new interlink waterway from Kadana Dam to Watrak Dam.

Keywords:- Canal system, GIS, Remote Sensing, River Interlinking, SauniYojana, Canal Alignment, GIS, Saurashtra

International Journal of Research in Social Sciences
Vol. 9, Issue 4, April - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

]

Introduction:-The province of Gujarat was confronting serious water shortage and a few areas stay parched and get rare precipitation, along these lines confronting incessant dry spells. Individuals of Saurashtra and Kutch locales were confronting intense deficiency of water for drinking and water system and had to relocate to different areas. Practically 70% of dams, supplies and other water assemblages of this district had become dry and huge zone of the Kutch-Saurashtra area was subject to water supply through tankers. In an offer to alleviate this issue, the Gujarat government undertook the development of a state water supply lattice, Swarnim Gujarat Saurashtra–Kutch Water Grid Project. It was created by Gujarat Water Infrastructure Limited (GWIL) to enlarge water supply to these regions in the state. With execution of the SauniYojana, the overabundance water from the SardarSarovar Dam is to be provided to dried locales of Saurashtra utilizing pipe channels. It goes about as a connection project and intends to fill water system dams which incorporate trench systems to channelize water to the farmland. The project additionally can possibly make around 8,800 occupations every year. SPML Infra has finished a significant Irrigation Project in Gujarat called Saurashtra Narmada Avtaran Irrigation (SAUNI Yojana) propelled by Shri Narendra Modi in September 2012 during his residency as the Chief Minister of Gujarat. The project visualize to redirect one million section of land feet (1 MAF) water of Narmada Dam to Saurashtra to convey it to 115 Reservoirs through a total of 1115 km four connection pipelines to flood 1.8 million hectare of land, for the most part in Saurashtra, Kutch and north Gujarat, profiting a huge number of ranchers. It will likewise supply water system water to 2.46 lakh hectares in dry season inclined Barmer and Jalore areas in Rajasthan and a few pieces of Maharashtra separated from creating hydropower. Around 1,650 MLD of water is provided to 39 million individuals over these areas and with the great yield; it is boosting the economy of the state.

Linking water surplus Himalayan Rivers with water rare pieces of western and peninsular India has been accomplished for as long as 150 years. Bury bowl move implies connecting at least two water bodies, one with surplus water and another with rare water, by making a system of physically made waterways. The present investigation manages the surplus water preoccupation through waterway from Kadana Dam to Watrak Dam, Gujarat. The examination zone incorporates two locale specifically Panchmahal and Sabarkantha of north-east Gujarat. For interlinking, thought of different ground highlights, contours and incline of the examination zone is finished utilizing GIS and Remote Sensing. The information acquired from topical maps are coordinated that aides in arranging of arrangement of trench. Choice of arrangement for a trench is basic as far as cost and execution time. A few arrangements might be conceivable between the source and goal of a channel, however order territory and arrangement conceivable with least cutting and filling works dependent on topography is finished.

International Journal of Research in Social Sciences
Vol. 9, Issue 4, April - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Further development of structural building structures are recognized to plan the new interlink channel from Kadana Dam to Watrak Dam. Catchphrases: Canal framework, GIS, Remote Sensing, River Interlinking I. Presentation Water is considered as valuable regular asset for people. It is the fundamental human need and significant blessing to humankind. Stream is characterized as a crisp normally streaming water that arrives at either a sea; ocean or another waterway. It is a piece of hydrological cycle where crisp water is gathered from precipitation or surface runoff. Stream interlinking methods connecting of at least two waterways by a system of normal or misleadingly made supplies and trenches. Fundamental motivation behind interlinking is to control flood in surplus locale and supply water to water deficiency area. In the present situation there is incredible increment sought after for crisp water; in this way appropriate arranging is significant for sensible use of water to make the harmony between the accessibility and request of water supply. Stream interlinking is considered as the answer for the two water issues: flood and dry season. Further the proficient arranging of waterway interlinking can expand water supply in shortfall area which prompts extra water system, hydropower age, local and modern water supply, navigational offices, and so on. The fundamental criteria for waterway interlinking is that the surplus water is accessible in bowl is at any rate in the wake of meeting the water system needs of 60% of cultivable zone in the bowl and just this water can be redirected to shortfall bowl. Then again the water shortfall bowl ought to have 30% of cultivable territory under water system. Rains in the Gujarat are not normal and adequate to tackle the water lack to take care of the water deficiency issue which is expanding step by step because of populace development and quick industrialization and city development. In this manner it is critical need to appropriately use surface and ground water thinking about the present and future need. With this target, the present investigation has been led to propose the interlinking of Kadana and Watrak dam which is at northern piece of Gujarat. This district is needy principally on waterway water system.

METHODOLOGY:-

1) Indian Remote Sensing Satellite (IRS P-6) LISS-III advanced information were geo-referenced for topical guide development.

2) Thematic layers were created with the utilization of Arc Map software of ARC GIS by utilizing visual understanding strategy

3) Contour map with 10m contour interim and slant 'map utilizing DEM information with 30m goals were produced.

4) Canal arrangement was proposed with explicit criteria dependent on I.S. code of lined trench.

5) Three arrangements were proposed out of which last arrangement was recognized.

International Journal of Research in Social Sciences
Vol. 9, Issue 4, April - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

6) The definite segments of conclusive trench were concentrated to distinguish topography and geography utilizing Google Earth.

7) Layer of water bodies and streams were overlaid on proposed channel arrangement to find cross waste structure

8) Identification of edges was finished requiring various structures an along the trench.

Restoration of Dams and Appurtenances:- This part will concentrate on basic and non-basic measures at the project dams, assessed at around 250 dams, a considerable lot of which are over 25 years of age. The quantity of dams proposed for incorporation in the project depends on proposition gotten from the states. The states have done an audit of the status of their dams what's more, have decided those dams that are needing recovery and improvement so as to ensure their future wellbeing and operational limit. The proposed intercessions will incorporate such fills in as: treatment of spillage through stone work and solid dams and decrease of drainage through earth dams and their establishments; improving dam waste; improving the capacity to withstand higher floods, including extra flood dealing with offices, if necessary, joined by basic fortifying of dams; recovery and improvement of spillways, head regulators, draw-off doors and their working instruments, stilling bowls and downstream channels; expanding spillway limit as required by the consequences of the hydrological assessments, yet just in those situations where this is genuinely conceivable and cost viable, in any case non-basic measures must be considered; improving approach streets; and improving dam wellbeing instrumentation. The help will likewise incorporate hydrological assessments, residue the board, and different measures required to improve the security and activity of the dams and related appurtenances. Also, planning of advantage the executives plans, crisis readiness plans, crisis cautioning frameworks, open mindfulness, and floodplain mapping will be incorporated.

INDIAN ECONOMY:- India has uncommonly been recorded one of the most elevated development rates comprehensively. Today it is considered as a part of the most significant developing economies of the world. By all signs, the nation's economic force is probably going to win in the coming year at a continuous pace. The Indian economy can draw significant solace from winning positive large scale conditions as far as decrease in swelling, increment in remote capital inflows, genuinely stable cash, narrowing exchange shortage and current record deficiency, lower intrigue rate system and development strong government approaches and activities, including the reception of financial control. The normal improvement in the farming sector and the related increment in rustic interest will give an upward push to economic development. The Indian economy has been profited from the huge terms of exchange gain brought about by lower ware costs and much decrease in expansion. A typical rainstorm and pay climbs in Central and State Government workers have expected to empower family utilization, however private sector venture is drawn-out. The nation is named a recently industrialized nation and a creating economy with a normal

International Journal of Research in Social Sciences
Vol. 9, Issue 4, April - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

development pace of roughly 7% in the course of the most recent two decades. The long haul development imminent of the Indian economy is sure because of its young populace, relating low reliance proportion, sound reserve funds and venture rates, and expanding coordination into the worldwide economy. By and by, administrations were the significant wellspring of economic development, representing about 66% of India's yield with short of what 33% of its work power. The assembling sector is likewise appearing upgrades with Purchasing Managers Index, Record of Industrial Production for center sectors and auto deals going up. The residential flight sector development keep on being strong.

International Journal of Research in Social Sciences
Vol. 9, Issue 4, April - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

CONCLUSION:-The point by point investigation of hydrology, topography and land use example of the territory between Kadana dam and Watrak dam has been conveyed for the determination of appropriate interlinking waterway to move surplus water from the Kadana dam to Watrak dam through Bhadar dam. Different elective proposition have been viewed as dependent on the GIS study thinking about economy, appropriateness and land use prerequisite. While choosing the channel arrangement, ground contours, waste, structural building structures, for example, streets, spans, and so forth have been considered in the examination. At first channel among Kadana and Bhadar dams of around 14 km length has been proposed. Total length of interlinking waterway up to Watrak dam would be around is 38 km. This trench is essentially gravity waterway going through loamy soil having delicate to bumpy territories. In the present investigation zones of cutting and filling comes to have additionally been recognized

REFERENCES:-

[1] RambabuPalaka, Mukesh M, Mani Kumar Y, Prakash V , "Selection Of Alignment For Feeder Canal From Pillaipally Flood Flow Canal To Wankamamidi Tank In Nalgonda District", IJRET,Volume: 03 Issue: 12 | Dec-2014.

[2] N.Bhaskara Rao, N.Srinivas, B.S.Prakasa Rao, G.JaiSankar,V.Venkateswara Rao, E.Amminedu, N.Venkateswarlu1, N.Rajesh, P.Kesava Rao and M.Satya Kumar, "Study on Nagarjunasagar to Somasila link canal alignment and its impact on environment using IRS-P6, AWiFS data", J. Ind. Geophys. Union , April 2011.

[3] Khalid Mehmood, Ajay Patel, Vijay Singh, SumitPrajapati, Manik Hari Kalubarme, Indra Prakash, Keshav Prasad Gupta, "Submergence Analysis UsingGeoInformatics Technology for Proposed Dam Reservoirs of Par-Tapi-Narmada River Link Project, Gujarat State, India", International Journal of Geosciences, 2014, 5, 622-633.

[4] P.Jeyapushpa, P.Latha, "Inter Linking of Rivers from Cauvery to Agniyar using Construction Techniques", Indian Journal of Applied Research,Volume : 4 , Issue : 4, Special Apr Issue 2014, ISSN - 2249-555.

[5] Akruti K Patel , Dr. N.P Singh, Indra Prakash " Planning of River Inter- Linking Canal System Between Shetrunji River and Dhatarwadi River Saurashtra, India, using Remote Sensing and GIS" ,IJSTE - International Journal of Science Technology & Engineering, May 2015