International Journal of Engineering, Management and Humanities (IJEMH)
Volume 2, Issue 5, pp: 258-262 www.ijemh.com

Assesment of Soil Quality Parameters of Ujjani Dam Affected Areain Indapur Tehsil (MH)

J. B.BHORE*, B.I. GATKUL
Arts, Science and Commerce College Indapur, Dist - Pune. (MH)

Date of Submission: 12-10-2021 Date of Acceptance: 26-10-2021

ABSTRACT:
Soil is the essential medium on which agriculture is supported. Water is equally important resource for agriculture. Soil is composed for four major constituents as inorganic particles, organic matter, water and air.Conservation of water has got special importance in increasing the agricultural productivity and maintaining nature and quality of soils. The soil samples were collected in the study area are sampling sites as Palasadev, Kalthan, Shaha, Kuroli etc. Physicochemical parameter analysis of soil of study area should be extensively monitored since deterioration of soil and water quality was clearly observed.

KEY WORDS: Physicochemical parameter of soil, Questionnaire Survey, Occupation Status.

I. INTRODUCTION:

The most challenging social impact of dam is the displacement of native people. After resettlement, the displacement of native people have faced many social problem such as disturb family relationship, poor drinking water facilities, lack of infrastructure amenities, lack of educational, medical, road and transportation, electrical facilities, absence of public toilet facilities, deficiency of market Centre.[1]The Irrigation has played an important role in changing the agricultural scenario and brought about lot of change in the social,political and economic factor .However introduction of large scale irrigation coupled with overuse of chemical ,fertilizers and practicing of monoculture type of cropping pattern have accelerated the process of soil and water degradation in the study area This degradation includes water logging soil salinity and water quality deterioration. Therefore environmental regulatory bodies such as Environmental Department and Water Resources Board should be more aggressive and effective in environmental monitoring, assessment and enforcement of environmental laws and regulations so as to preserve the soil from further degradation.

A dam interrupting a river leads to unpredictable social impact. First, many communities must resettle to provide land for the dam and the reservoir [3]Over irrigation causes rise in the water levels thereby resulting in water logging of the area this leads to continuous decline in agricultural productivity The fact is that irrigation creates a certain risk of soil degradation such degradation depends upon the composition of soil to be irrigated quality of water and management practices adopted these negative impacts on soil as salinity of soil alkalization, water logging, Depletion in soil fertility, Change in soil properties.Farmer adopts cultivation of crop as traditional method. Excess use of industrial effluent, fertilizer cause calcium, magnesium ammonium ions in various amount increasing their concentration in soil and water which leads to water loggings and salinity of soil and water.Soil enzymes are the important moderator and catalysts of significant roles in soil. [4]

Soil enzymes catalyze the cycling of nutrients such as carbon, Nitrogen, Phosphate and Sulphur decomposition in soil,[6]Excessive use of fertilizers particularly in soil under intensive monoculture type of land use leads to lose organic matter and its ability to retain moisture due to this soil erosion and ultimately lose their fertility and productivity. The burning of waste in the site to reduce garbage releases toxic particulate matter and smokes that cause of respiratory complications and other health problems for people and other living organism [5]

Methods of Sampling:

A field can be sampled to estimate its fertility through soil analysis by several methods. A sampling pattern in a heterogeneous land. Analytical methods employed for the soil analysis of samples from the fourvillage area

The Physico–chemical parameters of Soil analyzed in lab by standard Techniques.[2] Soil and water resources are important for environment that is to reduce the erosion rate and the destructive effects of torrential flooding.

International Journal of Engineering, Management and Humanities (IJEMH)
Volume 2, Issue 5, pp: 258-262 www.ijemh.com

Table 1:Physico-chemical parameters of soil - Kalthan:

Sr. No.	Sample Site	pH	EC	N	P	K	C
1	S1	8.28	0.54	196	13.15	156.3	0.64
2	S2	8.31	0.24	286	12.21	155.0	0.52
3	S3	7.4	0.12	178	36.22	137.0	0.82
4	S4	7.3	0.64	232	27.14	52.7	0.63

Graph1 :Physico-chemical parameters of - Kalthan:

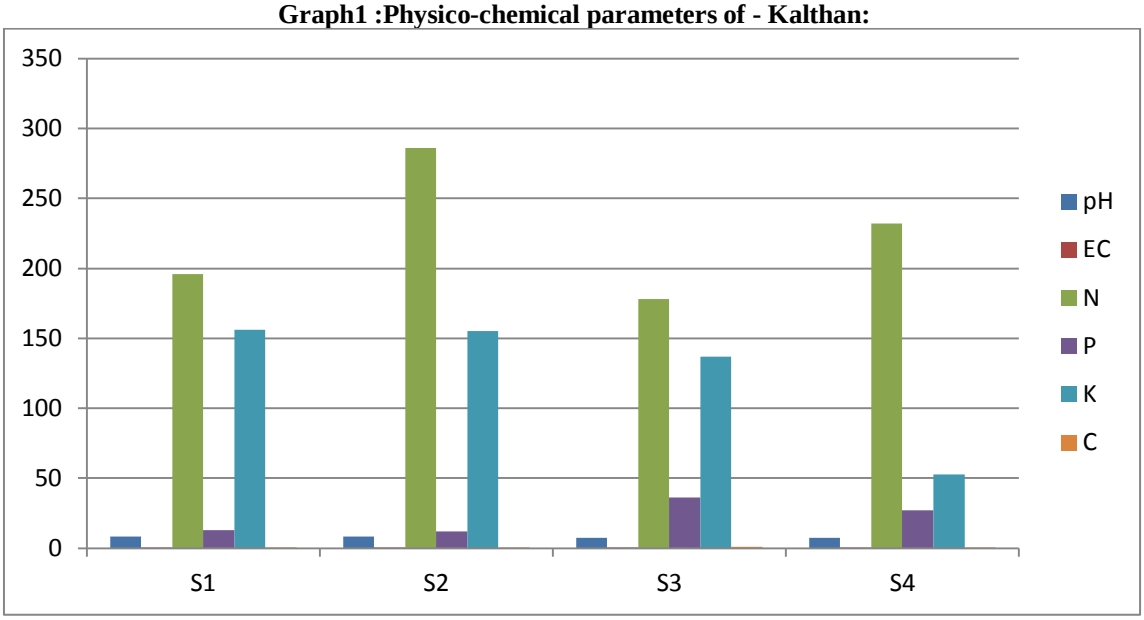


Table 2: Physicochemical parameters of soil - Palasadev:

Sr.No.	Sample site	P^H	EC	N	P	K	C
1	S1	7.82	0.42	196	08.15	136.3	0.47
2	S2	7.36	0.12	286	05.21	145.0	0.67
3	S3	7.14	0.24	178	26.47	129.0	0.89
4	S4	6.87	0.08	232	21.7o	032.5	0.74

International Journal of Engineering, Management and Humanities (IJEMH)
Volume 2, Issue 5, pp: 258-262 www.ijemh.com

Graph 2: Physicochemical parameters of soil -Palasadev:

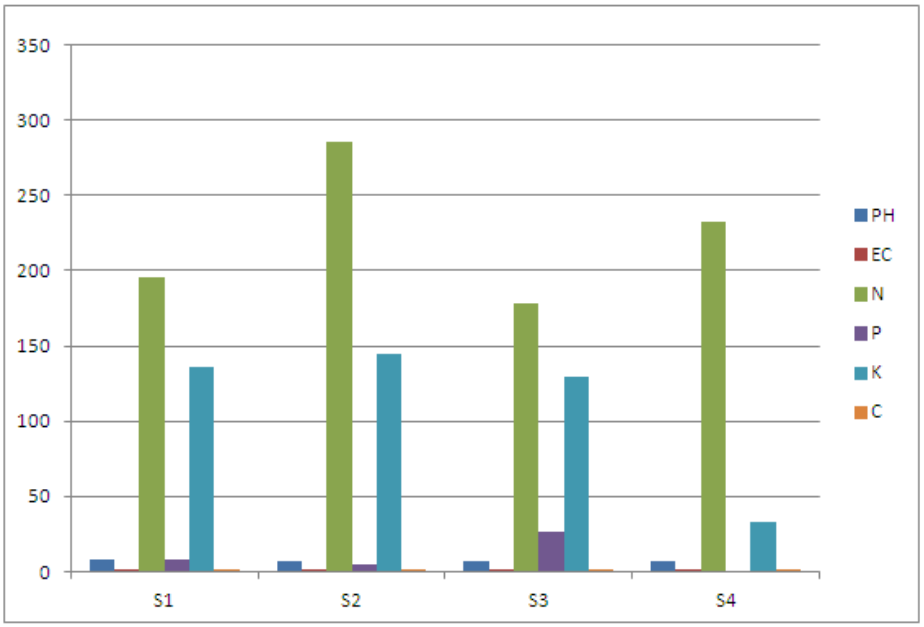
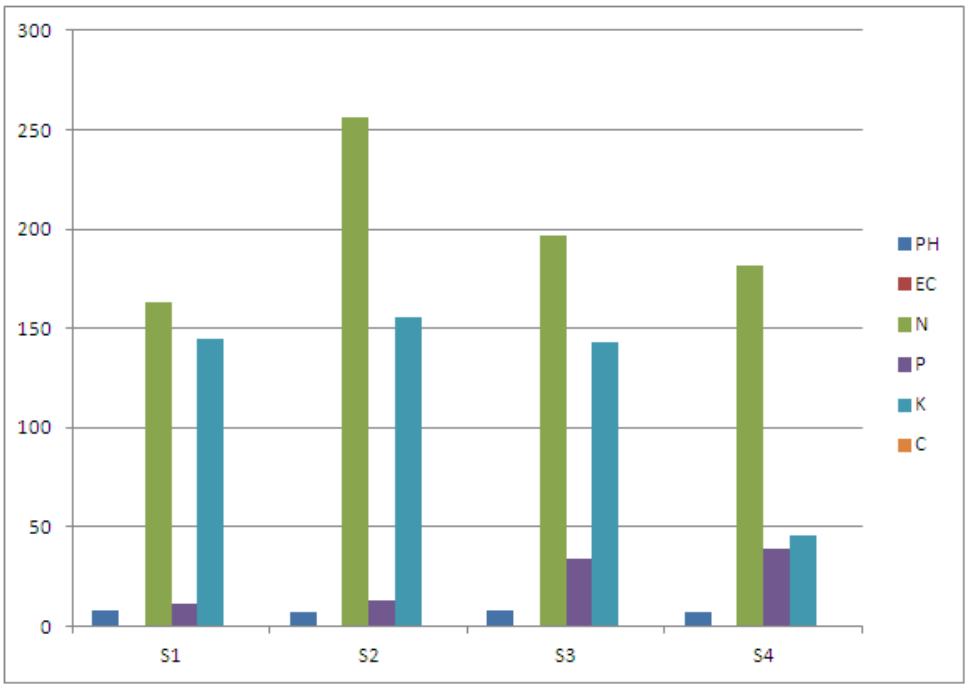


Table 3: Physicochemical parameters of soil - Shaha:

Sr.No.	Sample Site	P^H	EC	N	P	K	C
1	S1	8.12	0.49	163	11.25	144.3	0.61
2	S2	7.54	0.22	256	13.34	156.0	0.73
3	S3	7.7	0.02	197	34.26	143.0	0.92
4	S4	7.12	0.59	182	38.70	045.5	0.82

Graph 3: Physicochemical parameters of soil - shaha:



International Journal of Engineering, Management and Humanities (IJEMH)
Volume 2, Issue 5, pp: 258-262 www.ijemh.com

Table 4:Physicochemical parameters of soil - Kuroli:

Sr. No.	Sample Site	pH	EC	N	P	K	C
1	S1	8.23	0.53	163	09.4	152.3	0.51
2	S2	7.93	0.20	256	06.5	179.0	0.75
3	S3	7.31	0.21	197	03.3	134.5	0.97
4	S4	8.00	0.59	182	23.8	115.87	0.80

Graph 4 : Physicochemical parameters of soil - Kuroli:

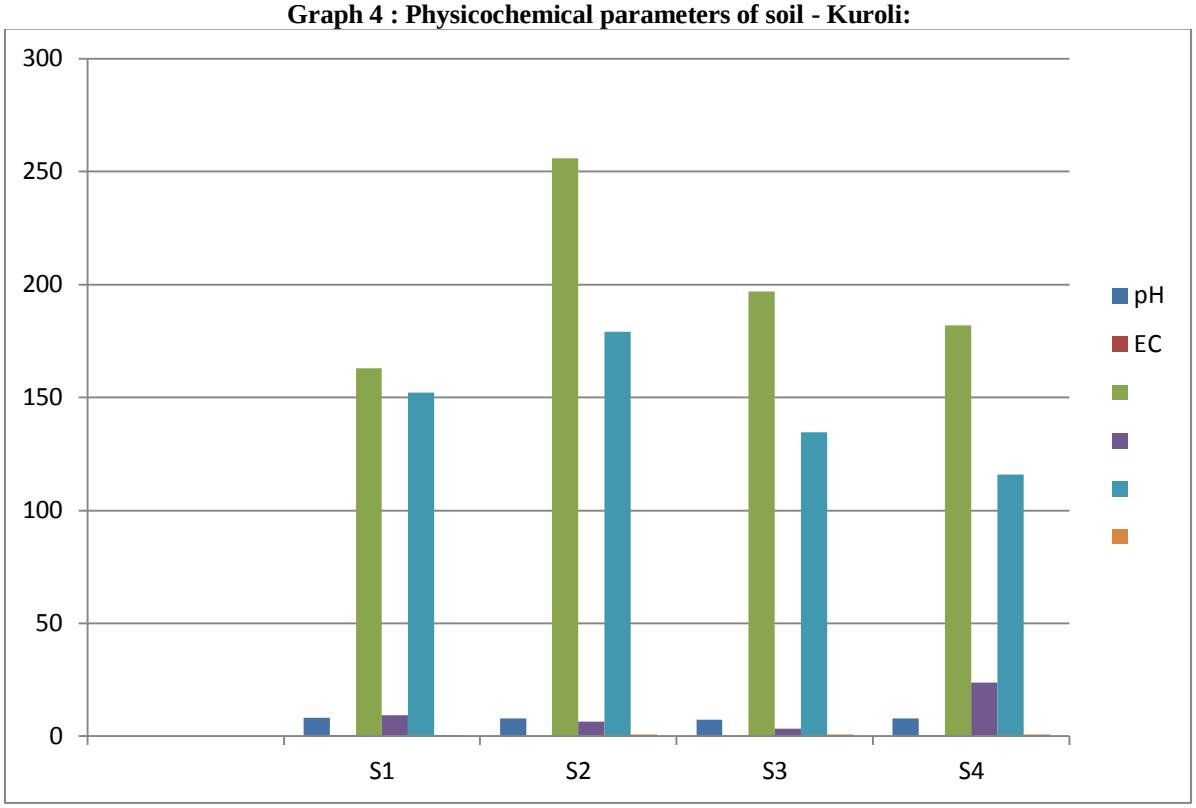


Table 5: Physicochemical parameters of soil: Standard values of parameters of soil.

Sr. No.	Parameters	Units	Permissible Limit.
1)	EC	mmhos/cm	0.1to0.55
2)	pH	-	7.5-8.6
3)	Organic carbon	%	0.5-0.75
4)	Phosphate	Kg/hector	23-56
5)	Potash	Kg/hector	142-337
6)	Nitrogen	Kg/hector	300-500

II. RESULT AND DISCUSSION:

The soil is the most fulfillments of all the basic needs of human beings. Soil is an important component of our farmingIt is necessary to check erosion of soils to bring necessary to bring to the notice of farmers and thereby make them aware of the basic factors of soil conservation in agriculture.Asustainability analysis must be incorporated to ensure social acceptability and maintain the original quality of the previous natural system [7]

Enhancement public participation and irrigated water into the basic management activities increases in awareness knowledge and understanding on sustainable agriculture development.With developing dam project the erosion of soil has been noticed in dam affected area. The field survey also indicated that there is lack of awareness among the farmers about the application of fertilizers along with irrigation facilities has pronounced effect on the chemistry of soil.

III. CONCLUSIONS:

Physico-chemical parameter ofsoil proves that of variation in Physico-chemical parameters of soil where plant life cycle is sometimes irregular in the contaminated soils as compared with the normal agricultural soils. Such study focus as highly significant due to the adverse effects of contaminants of soil.Some of the major's issues and conclusions affected by the lifestyle of the dam affected farmers.

REFERENCE:

[1]. ISSN (Online): 2319-7064 Index Copernicus Value (2015): 78.96
[2]. APHA and Water Pollution Control Federation, 1985. 16th Edition. AWWA,
[3]. Yuskel I. (2009) Dam and Hydropower for sustainable development,Energy Part B¹4 (1).100¹110dpi 10 1080/15567240701425808
[4]. Oishimaya, S.N. Harmful effects of Littering; www.worldatlas.comSept 2020
[5]. Utobo E.B.et.al Soil enzymes as bio indicators of soil ecosystem status Env.2015, 13,P147
[6]. TanX.et.al. Implications for Soil Quality Assessment, Science World J.2014 P181-191
[7]. Das A.K Hossain and S.Hasan.1996. Recovery and reuse of sulfuric acid of waste electrolyte Dhaka University Journal of Science 44 (2): 1