

**Moga
Punjab**

**Pre- Assessment of Villages
For Watershed Development
Programme NABARD, Moga,
Punjab**



Village Resource Mapping



**ABHIVYAKTI
FOUNDATION**

2018

**Regional Office Punjab
#20 / 1, Prem Nagar, Moga Punjab, India**

Pre- Assessment of Villages for Watershed Development Programme NABARD, Moga, Punjab.

Background

Water is life, the current situation of availability of water has drawn attention of government and rural farmers as they have been complaining about the rundown of water level every year because of the prevailing water scarcity and diminishing water reserve. The state of Punjab as , known in history as land of five rivers, has been facing a major water crisis because of “fast depleting and polluted underground water and polluted rivers”, which is set to deepen following as the Supreme Court order in favour of starting the construction of Sutlej-Yamuna link (SYL) canal to supply water to Haryana.(16 July 2018,Indian Express) According to the Centre Ground Water Board (CGWB), of the 141 agricultural development blocks in Punjab, 102 currently fall in the “dark zone”, where water is 200 feet or deeper. In some of these blocks, prior permission is required to install the household submersible pumps.

Agricultural experts say Punjab only has 13 MAF (million acre-feet) of water currently while it requires over 20 MAF. “To meet the remaining need, ground water is being sucked through over 15 lakhs tube wells in Punjab,” said another expert from PAU. (16 July 2018,Indian Express)

Irrigation and Ground Water Status Moga

Tube-wells are the major source of irrigation in the district. As from the table shows that total irrigated area in the district is 1, 94,976 hac. Which mean that 100% areas sown are irrigated? The irrigation intensity of the district is 180%. Out of total 194336 hectare, 85267 hectare irrigated by canals and tubewells both and 104321 hectare. Area is irrigated by tubewells alone. Source of irrigation in district is presented in table below. The table reveals that through the currently available source of irrigation and the area irrigated with the respective source.

Sr. No.	Source Of Irrigation	Area Irrigated (Hac)
1	Canal	4748
2	Tube wells	1,04,321
3	Canal + Tube wells	85,907
	Total	1,94,976

It is clear from the above table that major source of irrigation in the district is Tube well, canal + tube wells and very small area i.e. 4748 hectares are irrigated with canal. (Source: Centre Ground Water Board (CGWB),

Sensing the situation of water crisis NABARD has taken lead in this direction by organizing water campaign last year and has covered 250 districts and covered more than 1 lakh

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Sensing the situation of water crisis NABARD has taken lead in this direction by organizing water campaign last year and has covered 250 districts and covered more than 1 lakh villages pan India. The main objective of the Programme was to sensitize the rural farmers to adopt water conservation methods to recharge the depleting water table. The campaign also emphasized on diversification of crops and adopting scientific method of water irrigation through sprinkler and drip irrigation methods. The resource mapping of particular village was conducted to identify the existing situation of water bodies and prevailing agricultural practices. Existing crisis, this year NABARD has planned to take

Watershed area development plan in 50 districts out of 250 districts of water campaign on pilot basis and will implement area development Programme in selected 5 villages of the districts. Moga district of Punjab is one the identified district list by NABARD where this Programme has to be implemented.

To assess the existing situation of water bodies and agricultural practices at village level a pre assessment survey of villages was conducted by the Abhivyakti foundation in Moga district of Punjab. The main objective of the survey was to assess the overall prevailing situation of water in rural area in terms of water conservation methods practiced at village level and existing situation of water bodies and types of agricultural practices undertaken by the farmers at village level.

Objective of the Study

- To assess the prevailing situation of the water bodies and their use for agricultural practices.

To consolidate the initiative taken last year to conserve water to overcome existing crisis, this year NABARD has planned to

- To generalize the pattern and management of paddy straw
- Financial linkages in terms of agro and allied infrastructure development
- To know the opinion of farmers in terms of water conservation methods

Selection of Villages

The selection of villages for the purpose of survey was determined on the basis of no of water bodies present, the use of water bodies for the purpose of agriculture and allied activities, to know the existing level of water table, types of crops raised by the farmers, number of farmers involved in agricultural practices. Means and types of irrigation practices, bank credit linkages for agro farm infrastructure etc.

The selection of village was planned to take up villages situated in the water dark zone area where the water level has gone below the 350 foots and villages where the water level is about 100 foot.



Methodology

The methodology for the pre-assessment was done through in-depth interview of Sarpanch (Panchayat Member /Representative/farmers), feedback from the villagers and the transit walk to know and verify the existing situation of the selected villages.

Sampling

A random sampling has been taken for the authentication of the collected data.

Sample Size

To generalize the facts 12 villages of Moga district has been taken for the sample size.

Time Period

The pre-assessment study was conducted in the first week July 2018.

Name of the selected villages for this Project

Ghal Kalan, Khossa Pando, Samadh Bhai, Sada Singh Wala & Rania

List of Villages Covered

S.no	Name of Village	Block	District	Contact Person	Phone No
1	Ghal Kalan	Moga	Moga, Punjab	Sukhjeet Kaur	9815098569
2	Khossa Pandu	Moga -2	Moga , Punjab	Major Singh	9876572913
3	Khossa Randhir	Moga -2	Moga Punjab	Contact person – Gurpreet	9815738096
4	Ratia	Moga	Moga Punjab	Sunita Rani	9781326786
5	Sada Singh Wala	Moga	Moga Punjab	Gurudev Singh	783797979
6	Charek Mehal	Moga	Moga Punjab	Sri Baksish Singh	9855359079
7	Charek Patti	Moga	Moga Punjab	Sri Baksish Singh	9855359079
8	Rania	Nehal Singh wala	Moga Punjab	Jagjeet Singh	9876285456
9	Kussa	DO	DO	Baldev Singh	9814482246
10	Mania	Do	Do	Sevak Singh	8872634000
11	Samadh Bhai	Do	Do	Jagmohan Singh	9815522665
12	Himatpura	Nehal singh wala	Do	Charan Singh	9463593891

Feedback from the Government authority

District official contacted in this regard to collect information related to water bodies and scheme of government related to management of soil and water. Mr. Raj Kumar (District Officer Soil Conservation, Moga, Punjab) contacted and shared the Programme of NABARD of watershed management. He suggested as focused should be given to the dark zone area of Moga district. Asking about the Programme and scheme undertaken for soil conservation said as we have not received any grant from the state for last two years for any activities.

The water bodies present at villages has got huge potential for adopting the integrated watershed area development approach and linking to the enhanced livelihood for the marginalized farmers. Crop diversification and organic farming can be introduced and adopted for better water management.

Feedback from the (KVK) Krishi Vigyan Kendra, Budh Singh Wala

During the interaction with Dr. Harsimranjeet Kaur, Assistant Professor (Farm Management) & Dr. Ankit Sharma, Assistant Professor (Agri Engg) they suggested to focused on dark zone area of Moga. Further they also suggested name of 2 villages Sada Singh Wala & Budh Singh Wala for this project. As regards to KVK Services they share that KVK organizes various extension activities like field days visit, campaigns, group meetings, farmer's seminars, camps, specialized lectures, and campaigns, celebration of special days, exhibitions, and TV and radio talks for fulfilment of KVK mandates. KVK also produce certified seed of improved varieties of different crops for sale among the farmer community of district.

Major farming systems/enterprises in Moga

S. No	Farming system/enterprise
1.	Rice-wheat +Dairy farming
2.	Cotton-wheat +Dairy farming
3.	Vegetable cultivation +Dairy farming
4.	Rice-Potato-Summer Moong

Area, Production and Productivity of major crops cultivated in the district Moga

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1.	Rice	174 thousand	746 thousand	42.90
2.	Wheat	176 thousand	885 thousand	50.30
3.	Cotton	3.3 thousand	14 thousand bales	7.21
4.	Oilseed	1.5 thousand	2.0 thousand	12.90
5.	Potato	5.3 thousand	122.5 thousand	231.2



Water Crisis

Major Action Required

1. Sensitizing the village community on water crisis and judicious management.
2. Capacity building of farmers and Panchayat representatives on water conservation.
3. De-silting of ponds and wells for better conservation and management of water.
4. Treatment of waste water before discharging to the Village Ponds.
5. Linkages with local banks to finance micro irrigation tools and equipment, repairs/construction of water storage structures, wherever required.
6. Plantation of trees at community level.
7. Motivating farmers to take up crop diversification to reduce dependency on water.
8. To involve Corporate /Industries for watershed development Programme through their CSR funds.
9. Banks must help and finance beneficiaries desirous of availing bank loans for construction of water conservations structures.
10. Mass awareness to be created among school/college students on war-footing, to overcome the looming water crisis.
11. Convergence of programs and activities with Government programs

Profile of Village

Village Resource Mapping

Name of Village: Ghal Kalan

Block: Moga -

District: Moga

Distance from the District Head quarter: Situated about 8 KM from the district head quarter.

Name / Phone no. of Sarpanch: Sri Sukhjeet Kaur (9815098569)

Population of village: Approx. 8000

No of House hold: 1570

Total percentage of land under cultivation: 88%

Types of agricultural practices:

The main crops raised by the villagers are Wheat and Rice.

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the data collected about 90 % of the farmers are using tube wells for irrigation purposes and about 10% of the farm land are irrigated by the canal water. The modern means of irrigation like sprinkler and drip are almost absent in the villages. The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the judicious use of water.

The use of ponds, wells and other means of irrigation are almost absent and negligible in the village setting.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 150 foot to 350 foot. At 150 foot the quality of water is not good and in summer season it goes dry, so people prefer to bore more than 300 foot to get regular water from the bore.

Types of water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Ghal Kalan there are total 03 ponds are present, out of three 02 ponds are of big size measuring about more than 2 acre and 01 small ponds measuring about 0.5 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds. One big pond is situated in the middle of village which gets over flooded during the rainy season and create locomotive problem for the villagers. Some people also complained that during the rainy season the over flooded water get into their houses and create problem for them. The rain water in the season stands for long and helps in creating water borne diseases. Another big pond measuring about more than 2 acre situated outside the village and remains dry except the rainy season.

Intervention: Both the ponds needed de-silting and treatment of drain water at source or before it get into the ponds to make use of ponds water for irrigation and other domestic purposes.



(Water bodies visited with Sarpanch of the Village Gal Kalan, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the taps are always open and water keeps flowing till the supply disconnected from the water works.

The villagers use RO drinking water supplied by a private water supplier on a monthly basis, charging Rs 90 for 20 liters of water on a daily basis at the door step.

The water sources like wells and hand pumps for drinking purposes are almost absent in the villages.

Means of livelihood

Agriculture and allied practices are the main source of livelihood. About 70% of the land holders practice farming for their main source of livelihood. About 20% of the SC population of the village directly depends on farming and work as farm labour. About 3% of the village population is engaged in government service and 5% are in private services.

Bank linkages and credit

The villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, levelers, harvesters, tube wells and other related agro equipment's.

The villagers have not taken a loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected, there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected, it shows that no government intervention has been taken up for the existing water bodies like renovation of ponds and drains. At school level, mainly in the government primary school, Nestle Company has installed an RO water plant under CSR activities.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Gal Kalan the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. About 80% people in this village reported to be practicing stable burning in spite of the given government direction of fine and imprisonment.

Forest cover at village level

The coverage of forest is almost absent at village level.



(Water bodies visited with Sarpanch of the Village Ghal Kalan, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village: Khossa Pandu

Block: Moga -2

District: Moga, Punjab

Distance from the District Head quarter: 10 KM from the district head quarter.

Name / Phone no. of Sarpanch: Sri Major Singh (9915867011/9876572913)

Population of village: Approx. 5500

No of House hold: 1060

Total percentage of land under cultivation: 87%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat and Rice, vegetables (Organic), potato,

Organic farming is done in about 20 acre of land facilitated by the Gurudwara Prabandhak Committee. (Local Gurudwara)

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villagers uses both mean of irrigation that is tube well and canal water. The use of tube well is higher as compare to the canal. They have contacted Punjab Agriculture University (PAU) for the sprinkler and drip irrigation and they are willing to adopt the same for the farm water management.

The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

The Gurudwara committee head also assured for the adoption of new and scientific means of irrigational methods like sprinkler and drip by the farmer. The committee has initiated several water conservation works like filtration and treatment of waste water through three tank method, the work is in the progress.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 250 foot to 450 foot. At 250 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 500foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Khossa Pandu total 02 ponds are present, and are of big size measuring about more than 1 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds. The Gurudwara committee has taken several initiative in the present like waste water treatment through three water filtration tank. The Gurudwara committee also maintained the village drain and plantation in school and villages.



(Plantation of tree facilitated Gurudwara committee during the visit to the Khossa Pandu village, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
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- Involving local school children in environment building for water management.

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the tap is always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 liters of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practice are the main source of livelihood. About 70% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village populations are engaged in government service and 5% are in private services.

Bank linkages and credit

About more than 90% villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveler, harvester, tube wells and other related agro equipment's and infrastructure development. Some of the villagers have taken loan for the dairy and other like purposes.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Gurudwara Committee has installed RO water plant and taking other plantation work on regular basis.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Khossa Pandu the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. This year by the intervention of Gurudwara Prabandhak Committee the villagers were motivated not to burn straw and make use by composting and other means. About 80% people in this village reported that they are not practicing stable burning.

Forest cover at Village level

The coverage of forest is almost absent at village level.



(Water bodies visited with Sarpanch of the Village Khosa Pando, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
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- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village: Khossa Randhir

Block: Moga -2

District: Moga, Punjab

Distance from the District Head quarter: 10 KM from the district head quarter.

Name / Phone no. of Sarpanch/contact person: Gurpreet (9815738096)

Population of village: Approx. 5500

No of House hold: 1060

Total percentage of land under cultivation: 87%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat and Rice, vegetables, potato etc.

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villagers uses both mean of irrigation that is tube well and canal water. The use of tube well is higher as compare to the canal. They have contacted Punjab Agriculture University (PAU) for the sprinkler and drip irrigation and they are willing to adopt the same for the farm water management.

The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

The Gurudwara committee head also assured for the adoption of new and scientific means of irrigational methods like sprinkler and drip by the farmer. The committee has initiated several water conservation works like filtration and treatment of waste water through three tank method, the work is in the progress.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 250 foot to 450 foot. At 250 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 500 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Khossa Randhir there are total 02 ponds are present, and are of big size measuring about more than 8 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds. The Gurudwara committee has taken several initiative in the present like waste water treatment through three water filtration tank. The Gurudwara committee also maintained the village drain and plantation in school and villages.



(Plantation of tree facilitated Gurudwara committee during the visit to the Khossa Randhir village, Moga, Punjab)

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the taps are always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 liters of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of livelihood

Agriculture and allied practice are the main source of livelihood. About 70% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village populations are engaged in government service and 5% are in private services.

Bank linkages and credit

About more than 80% villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveler, harvester, tube wells and other related agro equipment's and infrastructure development. Some of the villagers have taken loan for the dairy and other like purposes.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Gurudwara Committee has installed RO water plant and taking other plantation work on regular basis.

Management of solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Khossa Randhir the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

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Forest cover at Village level

The coverage of forest is almost absent at village level.



(Water bodies visited head of the Gurudwara Prabandhak Committee of the Village Khossa Randhir, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
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- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village: Sada Singh Wala

Block: Moga -2

District: Moga, Punjab

Distance from the District Head quarter: 10 KM from the district head quarter.

Name / Phone no. of Sarpanch: Sri Gurudev Singh (7837979791)

Population of village: Approx. 4200

No of House hold: 980

Total percentage of land under cultivation: 86%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat and Rice,

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and geographical situations. As per the information collected the villagers' uses tube well as the main source of irrigation. Almost all the farmer have their own bore well/ tube well.

The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 90 foot to 150 foot. At 90 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 250 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Sada Singh Wala there are total 05 ponds are present, 02 of the ponds are of big size (more than 2 acre) and it contains water for year and 03 are of medium size. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds. During the rainy season one of the pond get over flooded and create problem for villagers.



(Visiting the village water bodies along with the village Sarpanch at Sada Singh Wala village, Moga, Punjab)

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villagers' uses pipe supplied water for other than drinking purposes. It was also observed that the taps are always open and water keeps flowing till the supply disconnected from the water works.

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As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Nestle has installed RO water plant and taking other plantation work on regular basis.

Management of solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Sada Singh Wala the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. About 80% people in this village reported that they are practicing stable burning in-spite of the direction given by the government.

Forest cover at Village level

The coverage of forest is almost absent at village level.



(Visiting the village water bodies along with the village Sarpanch at Sada Singh Wala village, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village: Charik Mahel

Block: Moga -1

District: Moga, Punjab

Distance from the District Head quarter: 8 KM from the district head quarter.

Name / Phone no. of Sarpanch: Sri Baksish Singh (9855359079)

Population of village: Approx. 11500

No of House hold: 2350

Total percentage of land under cultivation: 88%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat and Rice, vegetables, potato,

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villager's uses as the main source of irrigation accounts for more than 90 percent. The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 150 foot to 250 foot. At 150 foot the quality of water is not good and in summer season it goes dry, so people prefer to bore more than 250 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Charik there are total 04 ponds are present, and are of big size measuring about more than 3 acre. It was observed that villagers discharge domestic drain water to all the ponds. It was also observed that all the big ponds receive the domestic drain water directly to the ponds.



(The water bodies visited along with the village Sarpanch of Charek, Moga-1, Punjab)

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villagers' uses pipe supplied water for other than drinking purposes. It was also observed that the taps are always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 liters of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practice are the main source of livelihood. About 60% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village populations are engaged in government service and 5% are in private services. Animal husbandry is also practiced by the local villagers mainly rearing cow and buffalo.

Bank linkages and credit

About more than 80% villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveler, harvester, tube wells and other related agro equipment's and infrastructure development. Some of the villagers have taken loan for the dairy and other like purposes.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no Government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Nestle has installed RO water plant and taking other plantation work on regular basis.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Charik the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land

Holder and in absence of proper management and available equipment the practice of straw burning is common. This year by the intervention of Government department villagers were motivated not to burn straw and make use by composting and other means. About 80% people in this village reported that they are practicing stable burning.

Forest cover at Village level

The coverage of forest is almost absent at village level.



(Water bodies visited with Sarpanch of the Village Charik, Moga-1, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village : Charik Patti

Block : Moga -1

District: Moga, Punjab

Distance from the District Head quarter: 8 KM from the district head quarter.

Name / Phone no. of Sarpanch : Sri Baksish Singh (9855359079)

Population of village: Approx. 6500

No of House hold: 1350

Total percentage of land under cultivation: 88%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat and Rice, vegetables, potato,

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villagers uses as the main source of irrigation accounts for more than 90 percent. The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 150 foot to 250 foot. At 150 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 250 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Charik Patti there are total 02 ponds are present, and are of big size measuring about more than 3 acre. It was observed that villagers discharge domestic drain water to all the ponds. It was also observed that all the big ponds receive the domestic drain water directly to the ponds.



(The water bodies visited along with the village Sarpanch of Charik, Moga-1, Punjab)

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villagers' uses pipe supplied water for other than drinking purposes. It was also observed that the tap are always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 liters of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practice are the main source of livelihood. About 60% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village populations are engaged in government service and 5% are in private services. Animal husbandry is also practiced by the local villagers mainly rearing cow and buffalo.

Bank linkages and credit

About more than 80% villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveler, harvester, tube wells and other related agro equipment's and infrastructure development. Some of the villagers have taken loan for the dairy and other like purposes.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Nestle has installed RO water plant and taking other plantation work on regular basis.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Charik the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. This year by the intervention of Government department villagers were motivated not to burn straw and make use by composting and other means. About 80% people in this village reported that they are practicing stable burning.

Forest cover at Village level

The coverage of forest is almost absent at village level.

The water bodies present at villages has got huge potential for adopting the integrated watershed area development approach and linking to the enhanced livelihood for the marginalized farmers. Crop diversification and organic farming can be introduced and adopted for better water management.



(Water bodies visited with Sarpanch of the Village Charik, Moga-1, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village: Kussa

Block: Nehal Singh Wala

District: Moga

Distance from the District Head quarter: Situated about 28 KM from the district head quarter.

Name / phone no. of Sarpanch: Sri Baldev Singh (9814482246)

Population of village: Approx. 6000

No of House hold: 1570

Total percentage of land under cultivation: 89%

Types of agricultural practices:

The main crops raised by the villagers are wheat, Maize and rice.

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the data collected about 100 % of the farmers are using tube wells for irrigation purposes. The modern means of irrigation like sprinkler and drip are almost absent in the villages. The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the judicious use of water.

The use of ponds, wells and other means of irrigation are almost absent and negligible in the village setting.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 150 foot to 350 foot. At 150 foot the quality of water is not good and in summer season it goes dry, so people prefer to bore more than 300 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village pond of different size is present. In the village Kussa there are total 03 ponds are present, out of three 02 ponds are of big size measuring about more than 2 acre and 01 small ponds measuring about 0.5 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds. One big pond is situated in the middle of village which gets over flooded during the rainy season and create locomotive problem for the villagers. Some people also complained that in rainy season the over flooded water get into their houses and create problem for them. The rain water in the season stands for long and helps in creating water borne diseases. Another big pond measuring about more than 2 acre situated outside the village and remains dry except the rainy season.

Intervention: Both the ponds needed de-silting and treatment of drain water at source or before it get into the ponds to make use of ponds water for irrigation and other domestic purposes.



(Water bodies visited with Sarpanch of the Village Kussa, Moga, Punjab)

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the tap is always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 liters of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practice are the main source of livelihood. About 70% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village population is engaged in government service and 5% are in private services.

Bank linkages and credit

The villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveler, harvester, tube wells and other related agro equipment's.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Nestle Company has installed RO water plant under CSR activities.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Kussa the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. About 80% people in this village reported to be practicing stable burning in spite of the given government direction of fine and imprisonment.

Forest cover at Village level

The coverage of forest is almost absent at village level.

The water bodies present at villages has got huge potential for adopting the integrated watershed area development approach and linking to the enhanced livelihood for the marginalized farmers. Crop diversification and organic farming can be introduced and adopted for better water management.



(Water bodies visited with Sarpanch of the Village Kussa, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village: Rania

Block: Moga -

District: Moga

Distance from the District Head quarter: Situated about 29 KM from the district head quarter.

Name / phone no. of Sarpanch: Sri Jagjeet Singh (9876285456)

Population of village: Approx. 9000 (65% SC Population)

No of House hold: 1770

Total percentage of land under cultivation: 89%

Types of agricultural practices:

The main crops raised by the villagers are wheat and rice

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the data collected about 90 % of the farmers are using tube wells for irrigation purposes and about 10% of the farm land are irrigated by the canal water. The modern means of irrigation like sprinkler and drip are almost absent in the villages. The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the judicious use of water.

The use of ponds, wells and other means of irrigation are almost absent and negligible in the village setting.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 90 foot to 150 foot. At 90 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 200 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Rania there are total 01 pond are present of big size measuring about more than 1 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds. One big pond is situated in the middle of village which gets over flooded during the rainy season and create locomotive problem for the villagers. Some people also complained that during the rainy season the over flooded water get into their houses and create problem for them. The rain water in the season stands for long and helps in creating water borne diseases.



(Water bodies visited with Sarpanch of the Village Rania, Moga, Punjab)

Source of drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the tap is always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 liters of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practice are the main source of livelihood. About 70% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village populations are engaged in government service and 5% are in private services.

Bank linkages and credit

The villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveler, harvester, tube wells and other related agro equipment's.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Nestle Company has installed RO water plant under CSR activities.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Rania the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burring has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. About 80% people in this village reported to be practicing stable burning in spite of the given government direction of fine and imprisonment.

Forest cover at Village level

The coverage of forest is almost absent at village level.

The water bodies present at villages has got huge potential for adopting the integrated watershed area development approach and linking to the enhanced livelihood for the marginalized farmers. Crop diversification and organic farming can be introduced and adopted for better water management.



(Water bodies visited with Sarpanch of the Village Rania, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village : Maniya

Block: Nehal Singh Wala

District: Moga, Punjab

Distance from the District Head quarter: 33 KM from the district head quarter.

Name / Phone no. of Sarpanch: Sri Sevak Singh (8872634000)

Population of village: Approx. 6000

No of House hold: 1260

Total percentage of land under cultivation: 86%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat, Maize, Rice, vegetables and Potato,

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villager's uses tube well as the main source of irrigation. They have contacted Punjab Agriculture University (PAU) for the sprinkler and drip irrigation and they are willing to adopt the same for the farm water management.

The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximize by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 150 foot to 350 foot. At 150 foot the quality of water is not good and in summer season it goes dry, so people prefer to bore more than 400 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Maniya there are total 03 ponds are present, and 02 of them are of big size measuring about more than 1 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds.



(Plantation of tree facilitated Gurudwara committee during the visit to the Maniya village, Moga, Punjab)

Source of Drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the tap is always open and water keeps flowing till the supply disconnected from the water works.

The villagers use RO drinking water supplied by a private water supplier on a monthly basis, charging Rs 90 for 20 liters of water on a daily basis at the door step.

The water sources like wells and hand pumps for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practices are the main source of livelihood. About 70% of the land holders practice farming for their main source of livelihood. About 20% of the SC population of the village directly depends on farming and work as farm labour. About 3% of the village population is engaged in government service and 5% are in private services.

Bank linkages and credit

About more than 90% of villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, levelers, harvesters, tube wells and other related agro equipment and infrastructure development. Some of the villagers have taken loans for dairy and other like purposes.

The villagers have not taken loans or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because electricity is free for the farmers so they don't give much importance to this practice.

Identified watershed at village level

As per the data collected, there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected, it shows that no government intervention has been taken up for existing water bodies like renovation of ponds and drains. At school level, mainly in the government primary school, Nestlé has installed an RO water plant and is taking other plantation work on a regular basis.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Maniya the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. This year by the intervention of government authority the villagers were motivated not to burn straw and make use by composting and other means. About 90% people in this village reported that they are practicing stable burning.

Forest cover at Village level

The coverage of forest is almost absent at village level.

The water bodies present at villages has got huge potential for adopting the integrated watershed area development approach and linking to the enhanced livelihood for the marginalized farmers. Crop diversification and organic farming can be introduced and adopted for better water management.



(Water bodies visited head of the Gurudwara Prabandhak Committee of the Village Maniya, Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management
- Involving local school children in environment building for water management.

Village Resource Mapping

Name of Village : Samadh Bhai

Block : Nehal Singh Wala

District: Moga, Punjab

Distance from the District Head quarter: 28 KM from the district head quarter.

Name / Phone no. of Sarpanch : Sri Jagmohan Singh (9815522665)

Population of village: Approx. 15500

No of House hold: 3060

Total percentage of land under cultivation: 88%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat, Maize, vegetables (organic)

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villager's meets 95% of irrigation means by using tube well. The use of tube well is higher as compare to other parts of the region. They have contacted Punjab Agriculture University (PAU) for organic farming, the sprinkler and drip irrigation and they are willing to adopt the same for the farm water management. They have also formed a farmers group for organic farming at state level to motivate and adopt scientific practice of farming in the region and its marketing.

The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximise by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 150 foot to 250 foot. At 150 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 250 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Samadh Bhai there are total 04 ponds are present, and are of big size measuring about more than 1 acre. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds.



(Meeting with the village Sarpanch and visiting the water bodies at Samadh Bhai village, Moga, Punjab)

Source of drinking water

The villages have got two water works for the supply of domestic pipe water installed by the government. One was reported to be functional and another was out of order. The villager's uses pipe supplied water for other than drinking purposes. It was also observed that the taps are always open and water keeps flowing till the supply disconnected from the water works.

The villagers uses RO drinking water supplied by a private water supplier on the monthly basis charging Rs 90 for 20 litres of water on daily basis at door step.

The water sources like wells and Hand pump for drinking purposes are almost absent in the villages.

Means of Livelihood

Agriculture and allied practices are the main source of livelihood. About 70% of the land holder practices farming for their main source of livelihood. About 20% of the SC population of the village directly depends on the farming and work as the farm labour. About 3% of the village population are engaged in government service and 5% are in private services.

Bank linkages and credit

About more than 90% villagers have used bank credit facilities for agriculture and allied practices like purchase of tractors, seeders, leveller, harvester, tube wells and other related agro equipment's and infrastructure development. Some of the villagers have taken loan for the dairy and other like purposes.

The villagers have not taken loan or credit for any modern and scientific irrigation equipment like sprinklers and drip equipment. This is because of ignorance and not having the proper knowledge of the methods. It is also because the electricity is free for the farmers so they don't give much importance to this practice.

Identified Watershed at village level

As per the data collected there is no watershed area or region in the visited villages.

Involvement of local government and CSR (Corporate Social Responsibility)

As per the information collected shows that no government intervention has been taken up for the existing water bodies like renovation of Ponds and drains. At school level mainly in the government primary school Nestle has installed RO water plant and taking other plantation work on regular basis.

Management of Solid waste at village level

The provision of Solid waste management is absent in almost all the villages of the district. In Samadh Bhai the garbage both bio degradable and non-degradable remain unattended and creating problem for the ponds.

Parali Burning (Straw Burning)

With the increase in the cultivation of rice the problem of straw burning has increased in the region resulted into air pollution and depleting the health of soil as the high degree of heat destroy the useful microbes present in the upper layer of soil resulting in low yield. The paddy crop has been practiced by the entire land holder and in absence of proper management and available equipment the practice of straw burning is common. This year by the intervention of farmers group the villagers were motivated not to burn straw and make use by composting and other means. About 65% people in this village reported that they are not practicing stable burning.

Forest cover at Village level

The coverage of forest is almost absent at village level.

The water bodies present at villages has got huge potential for adopting the integrated watershed area development approach and linking to the enhanced livelihood for the marginalized farmers. Crop diversification and organic farming can be introduced and adopted for better water management.



(Water bodies visited with the head of the village Samadh Bhai , Moga, Punjab)

Action required at village level

- Mobilization and sensitization of farmer on water management issues
- Promoting diversification of crops at farm level to minimize the water use
- De-silting and lining of existing water bodies
- Treatment of waste water before entering to the main ponds
- Promotion of tree plantation at community level.
- Adoption and promotion of scientific methods of irrigation like sprinkler and drip irrigation
- Involving local banks for promotion of agricultural infrastructure
- Formation of water committee at village level to promote water conservation, rainwater harvesting and farm water management

Village Resource Mapping

Name of Village : Himatpura

Block : Nehal Singh Wala

District: Moga, Punjab

Distance from the District Head quarter: 30 KM from the district head quarter.

Name / Phone no. of Sarpanch : Sri Charan Singh (9463593891)

Population of village: Approx. 10,000

No of House hold: 2100

Total percentage of land under cultivation: 85%

Types of Agricultural practices:

The main crops raised by the villagers are Wheat, Rice, Maize and vegetables.

Means of Irrigation

Farmer uses different mode of irrigation as per the availability and climatic situations. As per the information collected the villagers uses both mean of irrigation that is tube well and canal water. The use of tube well is higher with 60% and canal water use is about 40%. They have contacted Punjab Agriculture University (PAU) for the sprinkler and drip irrigation and they are willing to adopt the same for the farm water management.

The main reasons for not adopting the scientific methods of irrigation are mainly because the farmers are not aware of the modern means of irrigation system and the second main reason revealed by the villagers was that the use of electricity is free for the farming that is why the farmers never bother for the proper use of water for cropping.

The use of canal water can be maximise by extending the cemented drains to more eligible farm area and by maintaining the drains as most of the laid cemented drains joining the main source of canals are in depleting stage.

Status of Water level

The present water level of the area is alarming and with the passage of time the level is depleting. The current water level ranges from 250 foot to 400 foot. At 250 foot the quality of water is not good and in summer season the it goes dry, so people prefer to bore more than 450 foot to get regular water from the bore.

Types of Water bodies present

There are different sources of water bodies present at village level. Village ponds of different size are present. In the village Himatpura there are total 03 ponds are present, and are of big size measuring about more than 1 acre. Two ponds are big in size and one pond is small in size. It was observed that villagers discharge domestic drain water to both the ponds. It was also observed that both the big ponds receive the domestic drain water directly to the ponds.



(Visited the water bodies along with the Village Sarpanch Himatpura village, Nehal Singh wala, Punjab)

Source of Drinking water

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- Involving local school children in environment building for water management.