

Final Impact Evaluation Report

Mass Awareness for Water Conservation and Development (MAWCD) Project

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List of Abbreviations

AFO	Administration and Finance Officer
AKRSP	Agha Khan Rural Support Programme
ANM (WR)	Assistant National Manager (Water Resources)
APR	Annual Project Report
BOG	Board of Governors
CCA	Cultivable Command Area
CDA	Capital Development Authority
DIM	Direct Implementation
DRIP	Drainage and Reclamation Institute of Pakistan
FATA	Federally Administered Tribal Areas
FAO	Food and Agriculture Organization
GoP	Government of Pakistan
KIU	Karakoram International University
KP	Khyber Pakhtunkhwa
LG&RD	Local Government and Rural Development
MAWCD	Mass Awareness for Water Conservation and Development
MOU	Memorandum of Understanding
MTDF	Medium Term Development Framework
NFR	Note for Record
NIM	National Implementation
NPD	National Project Director
NPM	National Project Manager
NIFA	Nuclear Institute of Food and Agriculture

PIR	Project Implementation Review
PARC	Pakistan Agriculture Research Council
P&DD	Planning and Development Department
PCC	Provincial Coordination Committee
PCOM	Project Cycle Operation Manual
PCRWR	Pakistan Council of Research in Water Resources
PSC	Project Steering Committee
PMU	Project Management Unit
R & D	Research and Development
RPM	Regional Project Manager
TOR	Terms of Reference
TPR	Tripartite Review
UNDAF	United Nations Development Assistance Framework
UNDP	United Nation Development Program
WRRC	Water Resources Research Centre

1. Background and Introduction to the Project

The Food and Agriculture Organization (FAO) of the United Nations regards water as a severe constraint on the socio-economic development and environmental protection at levels of the annual internal renewable water availability of less than 1000 m³/capita. At levels of annual water availability of less than 2,000 m³/capita water is regarded as a potentially serious constraint and a major problem in drought years. Water scarcity provides a measure of the sensitivity of a given situation to drought conditions and threat to food security. In situations where the average availability of water per capita is low, even slight variations can render poverty stricken communities to become extremely vulnerable to conditions that may lead to human disasters.

Water is nature's most valuable gift to the mankind. Although three-fourth of the globe is covered with water, yet the freshwater available is only three per cent. Agriculture is the largest user of water, accounting for three-fourth of global water consumption followed by industry and household. In Pakistan, water is becoming a scarce resource. The country's population has been growing at much faster rates and is currently estimated at 18 million. With increased population, pressure on land and water utilization is increasing. The annual per capita water availability which was about 5,600 m³ in 1947 has currently reached the figure of 1,100 m³ which is very close to the critical level of 1,000 m³.

The changing global climate has significant impacts on environment. These impacts are resulting in the form of groundwater depletion, poor water quality, desertification, food insecurity and increase in poverty. Decrease in the river flows will affect hydel power generation, resultantly industrial output will be decreased and the domestic life will be disturbed. Pakistan is at the stage when it has developed almost 80 percent of its renewable water resources and must look forward more to managing the resource so that the water resources are sustainably used. In this connection it must be kept in mind that the economy of the country is based on heavily on agriculture; sector contribution to the national economy exceeds 21% of GDP.

The current water use practices in the country, unfortunately, leave much to be desired. This includes the three major water use sectors, viz. domestic, agricultural and industrial. Both overuse and misuse of water is being practiced by all three sectors. While there is immense misuse of the water resources in the domestic sector in everyday use due to lack of awareness, the irrigation practices still rely largely on age old traditional flood irrigation even for vegetables and fruit crops. The industrial sector is not only overusing the resource but is also responsible for polluting the resource due to poor effluent disposal practices.

2. The Need for Mass Awareness

Keeping in view the prevailing water situation in Pakistan and the wasteful water use practices, an immense need was felt to undertake a project on educating water users that the

water resources are not an inexhaustible entity and have a value. The water users in the domestic, agricultural and industrial sectors must be given to understand that conserving the resource would lead to sustainability and bring about economic and social stability. Accordingly a 3-year project titled “Mass Awareness for Water Conservation and Development (MAWCD)” was initiated to raise awareness among water users to put a stop to the wastage and propagate conservation methods to increase water availability, particularly when it is feared that the future drought cycle may be longer than recently experienced. This project aimed to launch a comprehensive mass awareness program by undertaking applied research on efficient water conservation techniques involving all stakeholders and partners, introducing water education for productive use. This project was expected to support sustainable water resources management in the country and certainly save natural resources which are vital for national growth and poverty reduction as well as economic development of the country.

The project has close relationships with the objectives of Medium Term Framework (MTDF) which stressed on sustainable management and development of water resources in the country through integrated projects and programs. The project also had to contribute to global targets of the Millennium Development Goals (MDGs) for reducing poverty by increasing irrigated agricultural productivity, efficient management of water resources and improving environment. To assist the Government, the United Nations Development Assistance Framework (UNDAF) for Pakistan has been adopted as a response to the national challenges identified in the Common Country Assessment (CCA). UNDAF includes support for creating an enabling policy environment, strengthening institutional capacity and promoting sustainable land and water management practices.

The Project, which started late by one year is now coming to a close on 30 June, 2011. The present assignment has been outsourced to the Consultant to evaluate the project activities, describe successes and failures of the project, identify gaps in the project design and make recommendations for running any similar future activity.

Detailed Terms of Reference of the Consultant are as follows:

3. Consultant’s Terms of Reference

1. Review the Project PC-1 and Project Document, and Annual Work Plans and various progress reports (Annual/Quarterly) and other documents prepared for furthering the objectives of the Project to familiarize himself with the Project’s work done and the mechanism/strategy followed during the implementation period;
2. Identify the gaps in Project design and discuss the adequacy of manpower and financial resources;
3. Identify and elaborate the successful aspects of the project or success stories and lessons learned for implementation during the second phase of the Project;

4. Identify and elaborate the impediments/failures in project implementation or aspects not contributing properly to meeting objectives of the project;
5. Make recommendations for future running the projects like this on mass awareness.

4. Methodology Adopted

Since the consultancy was very short duration (one week), the Consultant had to rely mostly on published data and the record made available by the MAWCD staff. The Consultant tried to look for a baseline survey but it was revealed that this report was never prepared. This was a major handicap faced by the Consultant in the preparation and finalization of this report.

The two handicaps prompted the Consultant to rely on secondary data and word of mouth from different sources. In this connection, some detailed discussions were held with the technical/ professional staff of the project and some stakeholders with whom contact could be easily made. These included personnel of the Academia, Press and Electronic Media, and Capital Development Authority Water Management Wing in Islamabad. Extensive use of remote contact through telephone was made with some stakeholders in Khyber Pakhtunkhwa and Balochistan.

Annex-1 is the list of personnel with whom direct or telephonic contact was made and views obtained.

5. Project Goals and Objectives

The overriding goal of the project is to bring about a behavioral change in the mindsets of the general public including agriculturists and industrialists that water is a finite resource and must be conserved by changing water use practices through launching a comprehensive mass awareness campaign for sustainable management of water resources in the country.

The specific objectives of the Project as per the Project Document and PC-I are:

1. To collect and document existing knowledge on indigenous and improved technologies for water conservation in agriculture, industries and household;
2. To develop dissemination material and promote best practices for mass awareness and capacity building campaign;
3. To conduct research and demonstrate the best practices and improved water conservation techniques at grass root level.

6. Brief Account of Progress

A very positive work done by the Project was the development of a Strategy for the Project to pursue. The document provided the basic guideline to move forward and set the direction the Project so that the objectives could be achieved. It was rather unfortunate that, for various reasons¹ not within the Project grasp, the Project failed to follow fully the guidelines given in the developed strategy.

The following sections briefly outline some major activities of the Project.

6.1 Awareness Raising Activities

One of the objectives of the Project was development and dissemination of awareness raising material. The Project has developed and widely disseminated the following awareness raising material:

- Project Brochure introducing the project. This was done at the beginning of the project. The brochure was widely circulated among all stakeholders who attended meetings/events held in connection with spreading the water conservation messages. The comprehensive brochure itself provided the basic informatory material for promoting water conservation. However, this brochure was in English language only and its utility was rather limited to highly educated class.
- Some high efficiency irrigation technology introduction flyers and leaflets for dissemination to respective users. These included technologies like bubbler irrigation, sprinkler irrigation, drip irrigation, etc. high efficiency irrigation systems and artificial recharge technologies. The brochures/ leaflets/flyers were printed in English, Urdu and Sindhi languages. The leaflets containing some basic information and advantages/disadvantages of the technologies were distributed at every farmer day/workshops of other events that were organized by the Project or by PCRWR – the implementing partner of the Project. The brochures, no doubt, have played a major part in bringing water conservation technologies in the agriculture sector to users.
- Some interesting and eye catching posters containing appeals for water conservation were prepared and distributed among the stakeholders. The posters included topic such as: i) tips on water conservation at the domestic level, ii) importance of water in everyday life, iii) why water conservation,

¹ Besides the gaps in project design (see section 9) the poor security situation in the country (particularly in KP, Balochistan and Gilgit) and the non/late release of government share of funds were major hurdles in smooth functioning of the Project. These are discussed separately in section 9.,

etc. The brochures depicted the bleak water situation in the country, the future scenario and how we could help save the day. The posters were professionally done and have played their due role.

- Well designed and eye catching advertisements promoting water conservation at all levels were published in the local and national news papers. These advertisements passed through millions of home in all parts of Pakistan.
- Attention-grabbing and very noticeable Billboards were erected on the national highway at the entry point to Gilgit and some parks in Islamabad and Karachi. These activities were excellently done in collaboration with local authorities without cost to the Project.
- Water bowsers in Quetta were painted with water saving slogans. Being in a very water scarce part of Pakistan and faced with extreme water scarcity this activity has done some tremendous good to the objectives of the Project.
- A booklet on Islamic teachings (references from the Holy Qur'an and certified hadiths) on importance of water and its conservation was printed and distributed among students, teachers, and Ulema. The book containing carefully selected material from the Holy Qur'aan and Ahadiths was widely circulated among concerned stakeholders.
- Moppies (small hoardings) were installed in Islamabad at strategic locations along various main roads and avenues. The activity done in collaboration with Capital Development Authority Water Management Wing could not sustain itself due to the negative role by the Maintenance Directorate of the Authority.
- Streamers and canopy umbrellas were prepared for distribution among the stakeholders (Islamabad Traffic Police and CDA) with water saving slogans. The canopies were distributed among the traffic police and some schools for their security staff on the main gates. The streamers were used by CDA for installation on major routes for limited time.

The following activities were undertaken with the view to educate and sensitize the younger generation on the current water situation and what the future holds and how they could help save the precious resource. It may be mentioned that the impact of these activities would not be visible immediately but their long term benefits cannot be denied.

- Grass root comic posters with some popular comic characters conveying water saving messages were developed, published and widely circulated among school children in Karachi and Balochistan.

- Stickers with water conservation messages and badges containing popular character with water saving message were developed and distributed among young students throughout the country.
- A special documentary on water issues in the context of Gilgit-Baltistan water sector issues and possible solutions was produced and broadcast by GEO TV and local cable networks. It will not be out of place to mention that GEO TV is very widely watched and its viewership rating is very high.
- MAWCD sponsored printing of water conservation messages in schools' text books of Urdu and English from class 1 to class 5 with the coordination of Khyber Pakhtunkhwa Text Book Board. The Project also sponsored the printing of water conservation messages in more than 2.8 million textbooks for class III to V, published by the Sindh Textbook in three languages viz. Sindhi, Urdu and English. Again this activity will show its impact in the long term and is not immediately visible.
- Speech and Poster competitions with water conservation as the main theme were organized at various schools and colleges throughout the country.
- A Nationwide essay competition was arranged by the Project which was very heavily participated.
- A number of debates and poster competitions among school children were held among the school children in Gilgit-Baltistan and Balochistan.

6.2 Stakeholders Capacity Building

Building the capacity of stakeholders has been one of the main activities under the project. Activities in this direction were concentrated and undertaken under the following main groups:

- Consultative Workshops
- Water Groups
- Farmers Days and Field Visits
- Short Training Sessions
- Demonstration Units and Outreach Workshops

Overall the Project held six consultative workshops; among these 3 were held in Sindh, while one each was conducted in NWFP, Balochistan and Gilgit-Baltistan. The Workshops helped the project in devising a strategy and correcting its course during the implementation phase. Large sections of society were invited in the workshops

and participated. There can be no doubt that besides serving the purpose of providing a guided direction to the Project these meeting helped sensitize the participants on the water scarcity issues faced by the country in various regions.

Water groups were formed one each in Sindh, Punjab, Balochistan and Gilgit-Baltistan. The groups consisted on representatives from academia, media, general public and concerned government departments. Open discussion on local water issues and problems were held and the media covered the same in local newspapers. This was an excellent step taken by the Project.

The project organized farmers' days and field visits in various districts of the Punjab, Sindh, Balochistan, KP and Gilgit-Baltistan. The workshops were used to demonstrate to the farmers in these districts efficient water use technologies in use in various parts of the world. A Training Manual was also developed for the training of project staff, local government staff, mid-level professionals dealing with water, water managers, and water users in the industrial, domestic and agriculture sectors. A teacher student guide in water conservation was also developed and circulated among schools in Balochistan. The Project developed some activity books targeting young children. The books contain activity material conveying water saving messages.

The Project arranged some very pertinent short training sessions on various topics relating with water. More than 400 persons were trained in water conservation in these trainings. A number of discussions events of the farmers groups, and workshops/ seminars were held during the project period.

6.3 Demonstration Projects

Working on the theory that "Seeing is Believing", the Project ended up with a number of technology demonstration units. Following is a list of these projects:

1. One demonstration site on efficient irrigation system and a green net established at Ziarat in collaboration with UNDP funded biodiversity project, while another one was established at Agriculture Research station, Sariab road Quetta
2. Under partnership with CDA, Rainwater Harvesting for Artificial Ground Water Recharge demo unit established at E-7, Islamabad+
3. In KP, construction of tunnel/green house (Size: 100*20*10) at the Nuclear Institute of Food and Agriculture, Peshawar
4. In Sindh, a demonstration site equipped with modern pressurized irrigation technology such as drip, sprinkler and bubbler systems established on a 2.1 acre area of land at the DRIP (formerly known as DRC), Tandojam.
5. In GB, high efficiency landscape irrigation system installation at KIU completed in last week of October 2010. About 95 pop-up sprinklers erected in four selected plots in KIU campus.

6. Another demonstration site on efficient irrigation system established at Zirat in collaboration with UNDP funded Biodiversity Project, while another one was established at Agriculture Research Station, Quetta. In Gilgit-Baltistan, high efficiency landscape irrigation system installation at KIU has been completed.
7. In Sindh, MAWCD established a Pilot Demo Unit of “Wastewater Treatment and Reuse” demonstrating treatment of domestic wastewater and reuse for agricultural production (vegetables). The Unit was established in the residential campus of Drainage and Reclamation Institute of Pakistan (DRIP)

6.4 Running Mass Media Campaign

The activities of the Project revolved around the following:

1. Running a 13-Episode weekly Programme “*Pani Ek Naimat*” from Radio Pakistan.
2. Sponsoring Advertisements and Supplements on special days in leading daily newspapers (Urdu and English).
3. TV Commercials in national and local languages developed and aired from various TV channels
4. Live talk shows with water as the main theme were aired in local languages from PTV in Balochistan, Sindh and Gilgit Baltistan.
5. Live and recorded talk shows were also aired in Urdu and English from private TV Channels. The topic of the Talk Shows was water issues and conservation.
6. Strolls for cable network were developed and run by cable networks in main cities during peak time.
7. A number of press conferences were held highlighting water issues of the country and the need for water conservation at all levels including domestic, agricultural and industrial sectors.
8. Special sensitization events were organized in Punjab, Sindh, Balochistan, KP and Gilgit-Baltistan.

The above activities targeting the general public apparently played their due role in sensitizing different sections of society on importance of water, the water scarcity problems faced by the country and how best to meet the situation.

6.5 Establishing Linkages

Good working relations with CDA, Islamabad, PDA, Peshawar, TMAs and CDGK in Karachi, Local Government, Quetta, LG&RD, NAPEA, AKRSP, P&DD, Agriculture and civil society in Gilgit-Baltistan were developed and made use of in promoting Project activities. Under partnership with CDA started construction of artificial recharge wells at E-7, Islamabad to arrest depleting aquifers by harvesting rainwater in Islamabad and recharging to local aquifer. In collaboration with DRIP, Tandojam a demonstration unit for the use of micro (water saving) irrigation technologies has been installed at the premises of the DRIP campus. The collaboration with local administration helped the Project to install a large billboard at the entry point of the national highway in Gilgit.

The UN mission visiting Gilgit-Baltistan to respond to Atta-abad disaster was facilitated by the Project for meetings and office work through MAWCD, Gilgit. MAWCD team provided technical support to UN Habitat and AKRSP WATASN project in Gilgit. Pakistan Academy of Rural Development, Peshawar arranged five days training course on “Water Management for Rural Development” in collaboration with WRRC, Peshawar.

The linkages helped a lot in making some successful achievements in its efforts to implement the Project.

6.6 Commemorating Special Days

As a whole 10 commemoration of conservation days have been celebrated which were attended by 1430 female participants, 1710 male participants while the total comes to 3140 participants. Global day on Climate Change, Mountain Conservation Day, Environmental Day, Earth Day and World Water Days have been celebrated by MAWCD or with the collaboration of other coordinating agencies and institutions during the project period. Apart from these activities, MAWCD participated in Cholistan Jeep Rally and cultural show, Sibi Mela in Balochistan. A Natural Carnival was held in collaboration with WWF-Pakistan on the occasion of the World Water Day in Karachi.

On an overall basis the activities undertaken by the Project are summarized in the following Table.

Table 1: Summary of events conducted by MAWCD during the project period

Event Nature	Number of Events	Female Participants	Male Participants	Total Participants
Competitions	12	972	732	1,604
Demo Units	9	NA	NA	0
Sensitizations	54	9,321	2,581	11,902
Commemoration of conservation days	10	1,430	1,710	3,140
Farmers Days/Visits	18	20	1343	1,363
Seminar/lectures	10	410	414	824
Linkages meeting	50	19	440	459
PCC meeting	5	0	69	69
Press Meeting	6	4	185	189
PSC meeting	3	2	43	45
Radio	5	1	3	4
Show	2	350	1,850	2,200
Training	27	181	1,386	1,567
TV	22	8	14	22
Water Group	5	9	110	118
Workshop	22	157	1,276	1,424
Grand Total	260	12,884	12,156	24,930

7. Project Impact Evaluation

7.1 Subjective Evaluation

A close and deep look into the Project goal and its objectives brings out the fact that the Project is more about a behavioral and attitudinal change in the mindsets of the water users. The ultimate impact made by the Project can only be assessed if the reduction in water use at the country level and some change in water use practices is estimated, which considering particularly that the initial baseline data is not available, is not possible.

The prevalent scenario in Pakistan's social set up and poor literacy rates in general and the socially backward provinces in particular are considered perhaps to be the biggest detrimental factors in achieving a 100% success of this kind of Project. It is therefore that the matter of assessing the Project impacts on the social behavior among water users needs to be looked into with these factors in mind.

Another important factor to be considered is the Project life. Bringing about any behavioral change in a traditional society with low literacy rate requires a much longer Project cycle extending well over 5-10 years to make an impact. MAWCD, initially designed for 36 months of operation, despite the extension given to it by the Project Steering Committee, remained active for only 30 months; the initial 12 months having been lost due to non-appointment of professionals staff including the key position of National Project Manager.

It is also pointed out that the Project impact could have been assessed properly if a baseline survey had been conducted at the start of the Project. Unfortunately here again it was found that the money meant for the baseline survey was spent on other not so important activity and survey could not be undertaken. This has been the most negative point in the Project.

A brief insight into the Project activities, face to face meetings with water professionals having some sort of association with the MAWCD Project and remote discussions with the stakeholders who have had links with the Project activities has brought out the following impressions the Project has made.

a) Awareness Campaign

Under the awareness raising campaign, 12 competitions, 54 sensitizations, 18 farmers, days/visits, 10 commemorating conservation days, 10 seminars/lectures, 6 press meetings, 5 Radio programs, 2 shows, 22 TV talks were organized during the project period. MAWCD has conducted a total number of 260 awareness raising events, which were attended by 12,875 females and 12,156 male participants. Thus 16,529 people attended all events of MAWCD.

Overall, it is difficult to exactly assess the project impacts on account of the awareness campaign run in the print and electronic media. However some discussions with some participants of events undertaken by the Project revealed that the campaign has had its positive impacts. Some students and faculty members of a local University were very vocal in saying that they benefitted a lot from the sensitization lectures on the current water and future water scenarios and the need for water conservation. They were of the view that the lecture and material provided to them had definitely brought about a positive change in their outlook towards water sector and their approach to water use. Above all they were now fully cognizant of the fact that they could individually help save the precious resource.

b) Stakeholders Capacity Building

The capacity building efforts made by the Project included 22 workshops, 5 water groups meetings, 27 training sessions, 3 PSC meetings, 5 PCC meetings, which have been organized during the project period. Thus events were attended by a total of 349 female and 2,784 male participants.

It is again difficult to assess the actual impact the Project may have made on the water situation in the country but some limited remote discussion and face to face meetings with a few beneficiaries has led the Consultant to the conclusion that these capacity building efforts have been most useful in increasing the knowledge level of the participants regarding current water scenario in the country and making them realize that water is a finite resource that needs to be properly managed and conserved.

c) Demonstration Projects

The Project has successfully established 9 small scale demonstration units on new and more efficient water use technologies (details provided earlier on in Section 6.3). Besides more than 50 linkage meetings and outreach workshops at the sites were held during the life tenure of the project period. The establishment of these units is considered to be the most successful activity undertaken by the Project. As assessed by the Consultant these demonstration units undertaken with local government support have been able to bring about some immediate positive impact as some of the organizations and farmers have started using the technology demonstrated.

The demonstration unit on rainwater harvesting and recharge is considered as the only viable solution to the increasing depletion of groundwater in Islamabad as pointed out by one of the senior officers of the Capital Development Authority (CDA). The technology is being replicated by CDA at various locations in Islamabad.

The bubbler irrigation technology demonstrated in Balochistan for irrigation of apple orchards has gained immediate adoption as many farmers in the area are going for this technology instead of the drip/trickle irrigation. Similarly the use of zero tillage and proper rotation practice demonstrated on a farmer's land in Sialkot area has gained popularity by the farmers.

A leading farmer in Kabirwala has been highly praising the efforts of the Project in raising his awareness on water scarcity in the country and new technological solutions suggested by the Project during farmers' field days organized in the area. The impact of the demonstration on wastewater treatment and reuse could not be assessed as these projects are of recent occurrence and it will be a matter of time the systems would gain popularity.

The small demonstration project on growing off-season high value vegetables in high tunnel greenhouse with sprinkler/spray irrigation installed at the Nuclear Institute of Food and Agriculture is showing a big potential of gaining popularity as assessed from a very recent outreach workshop held at the premises. Farmers were very keen to understand and adopt the system to lower their water application rates and increase their income.

7.2 Objective Evaluation

The three main objectives of the Project relate to:

1. Collecting and documenting existing knowledge;
2. Developing dissemination material and promoting best practices; and
3. Demonstrating best practices in water conservation.

In the following paragraphs the Project is evaluated for each of the Objectives.

a) Objective 1: Collecting and documenting existing knowledge

A very careful analysis of the data collected and discussion held with project staff establishes that the Project has not been able to do full justice to this objective of the Project. Without going into the reasons, the data provided and the discussions held with Project Management establish the fact that this has remained the weakest part in Project's otherwise very good achievements. However, the Project was successful in developing a comprehensive report on "Current Water Use Practices in Pakistan" which very exhaustively presents the water use practices in vogue in various regions of the country. Besides, a brief report on efficient irrigation technologies has also been developed. The rating for this objective is 3.3 out of 5.

b) Objective 2: Developing dissemination material and promoting best practices

The Project developed and published some very well designed and eye-catching dissemination material targeting different groups of stakeholders. These included advertisements, brochures, posters, bill-boards, moppies, streamers, banners, canopies, umbrellas, stickers, documentaries, etc.

The Consultant is satisfied that the Project has achieved the goal of this objective fairly well. The material can be used even in the future if new efforts and programs are undertaken to sensitize water users on water conservation. The rating for this objective is 4.5 out of 5.

c) Objective 3: Demonstrating best practices in water conservation

The Project has done some pioneer work in establishing excellent demonstration projects as already mentioned earlier on in section 7.1. These demonstration projects were very well received by the intended group of water users and in some cases were replicated with a great degree of success. However the Project could not complete some demonstration projects due to various reasons. The overall rating in achieving this objective by the Project is 4.8 out of 5.

7.3 Conclusion on Evaluation

Considering the handicaps and the detrimental factors faced by the Project during the life cycle, in the opinion of the Consultant, the Project has scored 4.5 out of 5. The Project can be grouped with projects that have achieved their objectives to a large extent with some minor failures.

8. Review of Project Successes and Failures

At the outset it may be mentioned that the Project is considered by various stakeholders as a very positive one and absolutely necessary in the present circumstances and scarcity of water. The need for such a Project for a much longer term cannot be questioned.

A review of the successes and failures of the Project is given in the following sections.

8.1 Successes

The MAWCD project has some success stories. An analysis of the data available with the Project and the brief discussion the Consultant had with a limited section of the stakeholders reveals the following successes of the Project:

- i) **Demonstration Projects:** The demonstration projects undertaken by the Project are considered as highly successful. Not only the technologies are being replicated by some interested stakeholders but many are visiting these sites and are appreciative of the technology. At some sites a few students have shown their interest in the technology for undertaking their research leading to Master's degree.
- ii) **Collaboration with Text Book Boards:** The activity on inclusion of water saving tips and messages in the Text Books of Class 1 to 5 in Sindh and KP is rated as highly successful, as over 5 million copies have been printed with the material and distributed among students. There was need to replicate this activity in other provinces with whom initial discussion had already been held.
- iii) **Targeting Young Generation:** The strategy of the Project to target young generation with water conservation messages has been excellent and is considered to be paying dividends. A discussion with some young

students in Islamabad who were exposed to lectures by the Project and collaborating CDA officials revealed that the students have taken the advice to their heart.

- iv) **Linkages with Collaborating Organizations:** The Project has been highly successful in maintaining excellent working relations with some organizations at the Federal level and at the provincial levels. The collaboration helped the Project a lot in furthering its objectives.
- v) **Formation of Water Groups:** The formation of Water Groups with representatives from the Media, Academia, NGOs and the Government Sector has been very successful as these groups not only pinpointed and highlighted local water issues and their possible solutions but adequate coverage was also given to the discussions taken in the meetings.

8.2 Failures

As with any project, MAWCD Project also has some failures to report. These are described in the following paragraphs along with possible reasons on why the failures occurred.

- i) The greatest failure of the Project has been the non-completion of various important activities included in the Work Plan. This was due to the reason that the Project has come to an abrupt closure due to non-release of committed government contribution to the Project.
- ii) For various reasons including poor management in 2008 – the first year of the project – MAWCD failed to conduct the very essential baseline survey, which has caused some serious repercussions on the project assessment. This also resulted in non-completion of Objective one as the studies planned in the first year were never implemented and as per Project Management version the funds for this purpose were spent elsewhere.

9. Handicaps Faced During Execution

Right from the start the Project has faced numerous bottlenecks and problems, which adversely affected the Project progress and had a negative impact on its achievements. These are enumerated in the following paragraphs.

1. **Late start of Project:** The Project Document was prepared in 2003 when the water situation was quite different than what it was when the Project was actually initiated for implementation (2008). Much water has flowed under the bridge and the ground situation changed a lot since then.

2. **Non-Release of Committed Government Funds:** It must be pointed out that Government of Pakistan had committed to share 40% of the total cost of the Project. For this a cost sharing agreement was also signed between UNDP and Government of Pakistan in which a schedule for payment of government share was clearly laid down. Unfortunately this agreement was never followed by GoP. While UNDP took all steps to ensure release of its share, the GoP failed to honor its commitments. This negatively impacted the Project progress.
3. **Lack of Ownership by Implementing Partners:** The Project suffered badly due to lack of ownership by both the cost sharing partner and the implementing partners. The Ministry of Science and Technology failed to fully honor its commitments in the cost sharing agreement and also failed to hold meetings of the Project Steering Committee on time, which resulted in late approvals of work plans and late start of activities. The PCRWR, which was the Implementing Partner of the Project also failed to lend ownership particularly in the first year and the last year of Project life.
4. **Security Situation in Project Areas:** Poor security situation remained a cause of serious concern to the Project. All parts of Balochistan south of Quetta and major parts of Khyber Pakhtunkhwa were troubled regions where staff movement was restricted for a major part of Project life.

10. Gaps in Project Design

A close study of Project Document and PC-1 reveals the following gaps in project design. These include:

5. **Poor Project Document:** The Project Document is assessed to be not well written. There are many omissions, repetitions and other mistakes. The roles and terms of reference of the NPD and NPM have been mixed up and require a lot of clarity on their respective duties. The comparison with PC-1 shows many disagreements. No inception workshop was held during the initial phase during which such problems could have been avoided.
6. **Operational vs. Programme Cost:** The operational cost of the Project is 60 percent (Rs. 90 million) leaving only 40 percent (60 million) for running the programme activities. This cost of operations is considered to be undesirably high and should have been kept at less than 40 percent.
7. **Power Sharing between NPD and NPM:** More than necessary powers have been given to NPD. The NPM cannot move and undertake any activity without the blessings of the NPD, who, being a serving civil servant, sometime is difficult to approach.

8. **National Implementation Modality:** The Project has been run on National Implementation Modality. As was learnt during the assessment exercise, this modality has some very serious limitations. The Project Steering Committee responsible for approval of Work Plans is a high level committee with representatives of various federal ministries and departments. The committee is headed by the Secretary of the Ministry who, owing to his senior most position in the federal ministry and preoccupation with other important work, finds it difficult to attend meetings of the committee. Moreover there are frequent changes in the top bureaucracy, which makes it hard to organize meetings of steering committees. Due to non/late holding of meetings the approval of work plan is often delayed resulting in late receipt of funds.
9. **Short Project Life:** MAWCD Project works on bringing a behavioral change at the grassroots level to inculcate the idea among the different water users to consider water as precious and limited resource. To bring this kind of change, it must be recognized that 2-3 years project life is absolutely insufficient. This kind of activity needs to be continued for 10-15 years to remind continuously and refresh the ideas that water conservation is important and its different users voluntarily adopt the effective ways of its usage. Otherwise the investment made through the project will go to the drain.
10. **Shortage of Funds for Running an Effective Media Campaign:** Apparently, as per project design, the main implementation tool during implementation of the Project is recognized to be electronic and press media to create awareness at the grassroots level. However, these tools have now become highly expensive and with the available budget for this kind of activity, the project management has not found itself comfortable to run this campaign freely.
11. **Geographical Coverage and Thinning-out Resources:** While the Project was designed to cover the whole of Pakistan, the financial resources provided have not been comparable and adequate. In monetary terms, including the very high management cost, this works out to about be less than 0.33 rupees per person or 0.80 rupees per ha of land area. The Project was not well designed as far as resource allocation for a work of this nature is concerned.
12. **Manpower Resources:** The Project was designed with more than necessary staff. While the professional and administrative staff at the Project Management Unit in Islamabad is considered sufficient and adequate, the staff at the Regional Centers was more than was needed. The feedback from the staff of MAWCD, it is revealed that for regional offices, a Regional Manager supported by an Assistant Regional Manager (Water) and an Administration and Accounts Assistant would have sufficed.

11. Adequacy of Manpower and Finances

Comments on both these aspects have already been given in bullets No. 7 and 8 of Section 8 and may be referred to. Strictly speaking the manpower for the Project was more than adequate particularly in the regional offices. Unfortunately though, the provided staff could not be fully utilized mainly because of the heavy turnover in the Project. The pay structure, the contract employment with no service surety and career building prospects are responsible for this.

The finances provided for the project are also commented on in Bullet 8 of Section 8. With almost 60 percent gone for operational costs, the allocations for the programme were very meager.

12. Recommendations

Based on the evaluation carried out under this consultancy the following recommendations are made:

1. NIM Modality for such an important project with so much at stake is not desirable. It is recommended that such a project with high stakes and importance should be undertaken directly by UNDP in future under DIM modality.
2. The designed time allocated for the Project was only 3 years. With the ultimate objectives of bringing a behavioral change this time is not sufficient. Future projects of such themes should be at least 10 years life.
3. Pakistan is under the active process of aridity and desertification Mass awareness activities should be continued so that the message of MAWCD is delivered to every body's door steps. For this it is recommended that the 2nd phase of the Project be launched immediately under DIM modality with properly recruited staff.

LIST OF PERSONS WITH WHOM CONTACT WAS MADE

Project Personnel

1. Dr Abdul Majeed, National Project Manager, MAWCD
2. Mr. Khan Ghulam, National Manager (Water Resources), MAWCD
3. Mr. M. Salman Ali, Assistant Regional Manager (Water Resources), MAWCD
4. Mr. Abdul Karim Gabol, National Manager (Mass Media), MAWCD

Implementing Partner

1. Mr. Saeed Javed, Nation Project Director, NAWCD
2. Mr. Sabih-ur-Rahman, Ex-National Project Director, MAWCD
3. Mr. Rao Ishtiaque, Regional Director, PCRWR, Quetta
4. Mr. Zia-ul-Haq, Ex-Regional Director, PCRWR, Lahore
5. Mr. Muhammad Khan Marri, Ex-Incharge Director, DRIP, Tandojam

Collaborating Organizations

1. Mr. Mahmood Shah, National Institute of Food and Agriculture, Peshawar
2. Mr. Sanaullah Aman, Director General, Water Management Wing, Islamabad
3. Mr. Jadoon, Deputy Director, Water Management Wing, Islamabad
4. Mr. Shahid Sohail, ADG, Sewerage Treatment Plant, Islamabad
5. Mr. Jameel, Assistant Director, Sewerage Treatment Plant, Islamabad

Academia

1. Dr. Zahiruddin Khan, Professor, National University of Science and Technology
2. Dr. Zahidullah, International Islamic University, Islamabad
3. Prof Dr. Hina Fatima, Allama Open University, Islamabad

4. Dr. , Karakoram International University, Gilgit

Media

1. Mr. Fareed Raees, Aaj TV, Karachi
2. Mr. , CNBC TV, Karachi
3. Mrs. Jameel, Coordinator, Traffic Police FM Channel, Islamabad

Islamabad Traffic Police

1. Dr. Moeen Masood, SSP, Islamabad Traffic Police

Water Users

1. Mr. Payo Khan, Farmer, Ziarat
2. Mr. Din Muhammad, Farmer and Village Activist, Balozai