

**Loan 1146-PAK (SF): Chashma Right Bank Irrigation Project, Stage III (CRBIP-III)**  
**Terms of Reference**  
**for**  
**Gender & Social Development Specialist**  
**To Support the Grievance Redress and Settlement Committee (GRSC)**

**I. Background/Rationale**

1. As agreed by the Government Pakistan and the Asian Development Bank (ADB), the Grievance Redress and Settlement Committee (GRSC) was established in May 2003. Following the terms of reference, the GRSC reviewed the outstanding issues, received grievances from affected people, reviewed them, and made recommendations for remedial actions in October 2003. The GRSC was to identify strategic measures to mitigate adverse impact and achieve social development and inclusion in the CRBIP-III with particular focus on the more vulnerable in the population – women, small landholders and the landless. GRSC was to explore and recommend program options to extend opportunities for the poor and the excluded, who are vulnerable to risks of further impoverishment when displaced from land and other assets.

2. It is conceived that irrigation development has reduced the access of the landless to surrounding land for livestock grazing and fuel as farmers now follow a more intensive cultivation regime. On the other hand, irrigated agriculture has increased work opportunity for landless labor closer to home. They had to travel far before the advent of the canal into irrigated areas across the river to find work. Importantly irrigation also provides water both for drinking and domestic purposes, which had to be brought from long distances before the canal since ground water in the command area is mostly saline.

3. While landowners have a share in canal water supplies, the landless do not. GRSC recognizes this vulnerability. This does not stem so much from the possibility of the landowners objecting to the use of water. But from the landless being dependent and obligated towards land owners, particularly when located on a watercourse -- and not the main canal, distributary or minor – where the entire supply at any given time is being directed to a particular farmer. This is most evident in the few villages built on state land in the command area, which are almost exclusively inhabited by the landless. While the landless live in the nucleus where they were allowed to settle by the state, the landowners live scattered in the environs on their own land.

4. Recognizing this vulnerability the entitlement matrix approved by GRSC (item 4.4) provides permanent canal-water allowances for domestic use to the landless as compensation for loss of livelihood due to reduced access to land for live stock grazing and fuel. This entitlement -- the assurance of fresh water supplies as a matter of right for the landless in an area where the ground water is predominantly saline -- is particularly focused towards women since they are closely concerned with domestic water use. It is primarily conceived as an inclusion into the benefits and opportunities of the project for the vulnerable.

5. From a broad gender specific perspective there are many aspects in the lives of women that can be addressed in the project area to positively impact women and general development. Primary gender-specific issues are girl enrollment and retention

rates in schools; mother and child health care; strengthening of women's roles in leadership, representation and decision making for effective participation under the new local government system, decentralization and devolution. Provision of canal water for domestic use and the involvement of women in the management of canal water for domestic use has the potential to positively impact all these issues.

## **II. Scope of Work**

6. The specialist will carry out the following scope of work in close coordination and collaboration with women councilors at the union council and tehsil level in the project area.

A. Conduct rapid social assessments (RSA) in various areas of the project to determine domestic water use and livestock watering patterns

- (i) Chose at least six villages for the RSA along distributaries in the head, middle and tail reaches of CRBIP-III where the ground water is saline. Select, as far as possible, villages that have a large landless population.
- (ii) Describe how the community and individual households accessed water for domestic and animal use before canal water was available – the distances, time and labor involved.
- (iii) Document canal water use patterns, including gender specific information on bathing and washing, drinking water, animal watering; and other uses that water is put to in homes. Determine any preferences differentiated by purpose of use for flowing water as opposed to water stored in a tank; for using the water at home as opposed to the source. Describe the frequency and distance involved in water collection, method of transportation and extent of storage at home.
- (iv) Carry out a community mapping exercise, showing location of houses and points on the watercourse used for bathing, washing clothes and cooking utensils, watering of animals or from where water is collected.
- (v) Gather information for a representative gender time budget study to determine the contribution of fetching or accessing water to the overall work load of women. Assess the stress, anxiety, and fear for safety and scope for conflict in accessing water at a distance away from the home.
- (vi) Conduct participatory appraisals with various sub groups of women to get feed back on the proposal to construct water tanks as close as possible to the residential areas and on how to make the storage structure user friendly.

B. Facilitate the formulation within the Irrigation Departments of a domestic water sanction policy for CRBIP-III.

- (vii) In consultation with women councilors in the Union Councils, Irrigation Department and CRBIP staff, prepare eligibility criteria for villages to qualify for domestic water supply sanctions on respective watercourses from the canal. Ensure that the sanction process includes the required modification of the

mogha or canal outlet and the inclusion of the domestic sanction in the warbandi or weekly roster of turns of a particular watercourse.

C. Initiate the program for canal water domestic supply infrastructure installation by CRBIP in landless communities of the canal command

- (viii) Work closely with WAPDA Central Design Organization staff to determine a basic appropriate design meeting the requirements and addressing the concerns of the user community gathered during the field consultation process.
- (ix) With the help of women councilors identify saline ground water zone villages with a high concentration of landless meeting the eligibility criteria for domestic use sanctions.
- (x) On each identified site establish an advisory and implementation monitoring committee comprising a woman councilor, and a male and two female members from the community.
- (xi) Specify a process for CRBIP and the implementation monitoring committee to locate the installation. The central feature of this process must be close consultation with all the sub groups of the user community.

D. Facilitate strengthening women councilor's leadership role in the project area.

- (xii) Identify federal, provincial and private sector programs in education, health, sanitation, agriculture and micro credit operating in the project area. Facilitate contact through workshops to provide a focal role to women councilors at the tehsil and union council level to enable communities and individuals access regional programs directed at women and the poor.
- (xiii) Facilitate the formation of a Clean Water Group comprising of women councilors at the tehsil and union levels, to ensure persuasive and more stringent measures thorough the district governments to keep the canal waters from being contaminated. Help establish linkages with provincial EPAs and national and regional environmental programs and NGOs to start an awareness program on the main canal and distributaries.

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**Terms of Reference**  
**for**  
**Irrigation Management Specialist**  
**To Support the Grievance Redress and Settlement Committee (GRSC)**

**I. Background and Rationale**

1. An overwhelming number of concerns encountered by GRSC members during consultations and visits in the field related to irrigation issues. GRSC earlier considered to limit its mandate to remedy adverse impact attributable to the building of the canal system and not necessarily resolve issues arising from the glitches in the operation of the canal irrigation system itself, unless those adversely affected were not farmers or irrigators benefiting from the canal. However, it became increasingly apparent that it is difficult to ignore the responsibility of the project and the importance of making the system operate according to design as early as possible. The glitches causing inconvenience to the farmers and contributing to their frustration are attributed to a lack of knowledge on part of the users of how the system operates and their own interference with it. The system is new and is anticipated to settle down only gradually. It will take time as outlet or watercourse communities build their watercourses and agree on a warabandi (roster of turns) either themselves, or with the help of the provincial Irrigation and Power Departments (IPD). It will be a while before revised chakbandis (hydrological boundaries of a particular canal outlet) are in place providing new outlet locations to land, particularly in headreaches of the distributaries, that cannot presently be irrigated from their designated outlets because of topography. This notwithstanding, the project needs to orient the users, and help the farmers make the sudden transition from erratic rodh kohi irrigation to the warabandi system of fixed allocations and perennial continuous flows.

2. The project should encourage farmers to apply for warabandi, and support respective IPDs to undertake this systematically on all outlets to eliminate potential friction amongst the users. Similarly the project would do well to intervene and coordinate the construction of watercourses in outlet communities where there are disputes and also in genuine and necessary cases undertake and effect a revision of the chakbandi. More attention needs to be directed than presently towards regulating the flows in the distributaries to prevent overflowing as farmers block outlets when water is no longer needed, often because the entire command area of an out let may not yet be under cultivation. The existing institutional arrangements and protocols for regulation, particularly at the main canal-distributary interface, and discharge and escape protocols on the main canal and distributaries need to be reviewed and improvements proposed and implemented to retain timely and adequate flows for use by the farmers.

3. A crucial requirement is the institutionalization of the necessary rules amongst all users to enable the system to operate according to its design. This cannot be left to the enforcement of the Canal and Drainage Act. The Act covers the essential principles required to keep the system operational according to design, but relying on enforcement alone may not institutionalize the necessary discipline, as has been clearly evident on older canal systems in the Indus Basin. The important lesson learnt there and on numerous state-run systems around the world is to manage through participation and not administer these systems -- build and leverage social capital among the end users for ensuring equitable water distribution and long term sustainability.

4. The eminent environment for irrigation in both NWFP and Punjab is characterized by their respective Irrigation and Drainage Authority Acts. These provide a central role to the end users in the management of irrigation systems.

## II. Scope of Work

5. The Irrigation Management Specialist with experience of Indus Basin Canals will carry out the following scope of work in close coordination with Water and Power Development Authority (WAPDA) and respective IPD and On Farm Water Management Directorate. While conducting fieldwork, the specialist should attempt probes on locations evenly spread in the head, middle and tail reaches of the Chashma Right Bank Canal and at the head, middle and tail of distributaries under the Stage III of the Project (Contracts 66, 67 and 68).

A. Review the watercourse development process in the Project area

- (i) Highlight right of way obstructions to building watercourses due to farmers' resistance. Access the frequency of the problem and propose a strategy for the Project to overcome this difficulty;
- (ii) Explore the quality of water distribution arrangements on the watercourses and determine any difficulties faced by farmers in applying for warabandi, and for departments to execute them;
- (iii) Considering that the CCA is mostly privately owned and already settled and no official settlements are anticipated, explore the feasibility to prepare warabandis for all watercourses. Consider all factors, including the fact that on some watercourses undeveloped land may only gradually be included into the CCA;

B. Review emerging chakbandi issues.

- (i) On the basis of the records of the IPDs, list the types of issues that prompt applications for changing of chakbandi. Describe the general nature of chakbandi modifications undertaken by the departments so far;
- (ii) Make recommendations on what minimum stream size would generally remain efficient in different soil and topographic conditions in the command area. This will help indicate the minimum feasible chak size. Small stream sizes contribute to water application efficiency;
- (iii) Point out any negative technical and management consequences of increasing the number of out lets and chaks to accommodate not only topographic factors but also available social cohesion amongst user communities;
- (iv) Probe into departmental reservations to allow irrigation from sumps from the main canal when the topography does not permit farmers to convey water lifted from designated points on distributaries to portions of their land, particularly if these were previously irrigated by rodh kohi. Study the issue, including the option of creating new chakbandis for this land, with provision for lift irrigation from sumps, or possibly from specially built in-ROW minors, from the main canal;

- C. Review regulation management practices on the main canal and the distributaries in close collaboration with all stake holders.
- (v) Determine the concerns of all three stakeholders, WAPDA, and Irrigation and Power Departments of Punjab and NWFP, regarding the regulation process.
  - (vi) Describe the present method of determining the water discharge to operate the main canal and the distributaries and whether escapes on both are operated to manage flows, when and how. Describe the staffing and responsibilities of the offices concerned.
  - (vii) Assess whether water indents based on distributary demands received from provincial IPDs are catered for. Determine how the provincial IPDs prepare indents for each distributary, and how these are communicated to WAPDA. Ascertain any shortcomings in coordination and management and recommend improvements acceptable to all stakeholders. Assess the need for communication equipment.
  - (viii) Propose measures for calibration of gauges on distributaries that are acceptable to all stakeholders. Recommend how the gauges can be simplified for farmers to read.
- D. Prepare an end of the service report prior to the completion of the services and submit it to WAPDA, IPDs and ADB.

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**Terms of Reference**  
**for**  
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**I. Background and Rationale**

1. Twenty-two settlements west of the Chashma Right Bank Canal Stage III (hereinafter referred to as “West Bank”), were considered unsafe due to the increased flood risk induced by the construction of the flood protection embankment, the height of which is calculated to withstand high intensity flood anticipated on a one in forty years return period. To avoid relocation of these communities the project proposed to encircle their settlements with a flood protection embankment.

2. Eight of these communities accepted the proposal and agreed on the protection embankment. Yet several of them did not agree. In some locations they did not perceive a threat from water to their houses on the basis of historical recall. In other places those whose land was to come under the embankment were resistant and in locations where rodh-kohi is practiced some rightly feared the embankment would obstruct their means of irrigation. They remained unconvinced by arguments that their areas would be inundated by the hill torrent waters being blocked by the main canal embankment in case of high floods. As their areas were not prone to flooding and had never experienced hill torrent flows, they do not take the risk of flood water to reach up to the level of the crest of the embankment and inundate the land in the west of the canal that lies below that level as a serious threat.

3. The rest of fourteen communities that did not accept the flood protection embankment option chose cash compensation for the structure of their houses instead.

4. The GRSC has examined the circumstances and concludes that from amongst communities that did not perceive the possibility of floods destroying their dwellings and threatening life, most inhabitants have even before the project lived in the east closer to the river.

5. These communities have no water, and cultivation is dependent on rain, diverted hill torrent flood, or rain- water harvesting. In times of drought, which often extends into periods of several years, they have no option but to migrate with their livestock and live elsewhere. Water whether from rain or flood is welcome apparently even if it enters their homes – these communities historically recognize this and have their graveyards further east on high ground in the vicinity of graves of saints in the older townships of the region. This is almost suggesting that the dead cannot flee water but those who are alive can. Some of these settlements belong to people whose permanent homes and primary agricultural land are in townships to the east but who have built a hutment there because of the land they own.

6. The GRSC recognizes that the compensation made for dwellings on the West Bank for increased risk of flooding was not adequate, particularly for the landless. The entitlement matrix under item 8.2 for loss of dwelling in the official flood impact zone specifies two types of people as vulnerable, (i) those who are landless and (ii) those who own land but only in the official flood impact zone. These have to be identified and compensated according to item 8.2 of the

entitlement matrix. The landless will benefit from relocation in the canal command zone to take advantage of the increased opportunity for labor that has arisen from irrigated agriculture. In addition to a shifting allowance they are entitled to a one- time subsistence allowance equivalent to six months official minimum wages. The increased risk of flood to the dwellings of those who are landowners, but only in the impact zone, will be mitigated by provision of land for housing in the vicinity outside the flood impact zone.

## II. Scope of Work

7. The Participatory Assessment Specialist will conduct:
  - A. Census surveys of the flood impact zone or West Bank villages that have not opted for a protection embankment.
  - B. Consultations with communities that have opted for the flood protection embankment to highlight and address any concerns they may have regarding these structures.
8. The Specialist will prepare a work plan and schedule within the first 3 days, and discuss with the International Resettlement Specialist his/her approach and methodology to identify the “core” community and its constituent sub-groups for participatory consultations.

### A. Census Surveys

9. The purpose of these hamlet level surveys is to identify dwellers who are landless and those that own land but only within the flood impact zone so that they may receive compensation according to the entitlement matrix.

10. A major challenge is to locate the beneficiaries. They do not all live in these settlements. In deed there will be settlements that may not have any one living in them at the time of the survey. Yet while individuals, specially the landless, may be difficult to locate the “core” community of each of these settlements should be locatable either in the settlements themselves or east in the CRBC command area and the belt along the river. Since compensation for the structure of their dwellings has already been paid **a list of inhabitants of each community at the cut off point for compensations is available with WAPDA.**

11. The Participatory Assessment Specialist will specifically:
  - (i) Establish contact and rapport with the “core” community. Identify the constituent sub groups of the community and document these for each settlement’s profile;
  - (ii) Track and interview key community informants from each sub-group and identify on the original compensation list of WAPDA those that fall in either of the two focused categories;
  - (iii) Authenticate the list of landless and those that own no land out side of the flood impact zone by cross confirming the information from the different constituent sub-groups and reconfirm the legitimacy of the beneficiaries from the records of respective revenue estates;

- (iv) Submit to the Executing Agency and the Land Acquisition Collector a written record of the authentication process along with the settlement's community profile including the constituent sub-groups and the names of key informants and of those cross confirming the information, and certification from the Revenue Estate. Certification from the Revenue Estate will specify that names of the landless do not appear in the register of ownership of the Estate and that those claiming to own land only in the flood impact zone do not have land anywhere else in the Estate;
- (v) Together with the Land Acquisition Collectors and the Executing Agency agree upon the requirements that the entitled will need to fulfill to identify themselves to the Land Acquisition Collector for receiving their entitlements; and
- (vi) Inform the individuals or households of both categories of loss about their entitlements, brief them on the required procedure to avail these entitlements and direct them to the office of the Land Acquisition Collector. If these persons are not readily available i.e. traveling, in another city for work etc. advise members of the "core" community to pass on the message at their next point of contact.

#### **B. Improvement-of-Condition Consultations with Embankment Communities**

12. Preliminary consultations reveal that communities that have an embankment would want improvements or modifications made either to ease access for women or to ease entry of irrigation water or conversely to drain water when it accumulates within the embankment. One community, Katehra, finds the embankment oppressively close to their homes. This community is unhappy, to say the least, and continues to protest. Their cause has been taken up by a group of activists that have unfortunately declared not to cooperate with the Project or the GRSC.

13. Preliminary consultations also reveal that these communities, particularly women often have to cross the main canal and walk considerable distances to a distributary and then onto a watercourse, for watering their livestock. GRSC recommends the provision of ponds for livestock within the embankment area of the villages that draw water from the main canal. Provision of canal water for domestic use by community should also be made within the village embankment.

14. The consultations will be carried out together with technical staff from WAPDA including a representative from the Central Design Organization who will be integral members of the Participatory Assessment team.

15. The Participatory Assessment Specialist will:

- (i) Approach the community through its constituent sub-groups;
- (ii) Identify any substantial problems the community may have with the embankment – access to and from the surrounding areas, irrigation water inflows, drainage outflows etc;
- (iii) Together with the community determine remedial measures to improve any adverse conditions created by the embankment and mediate between the WAPDA technical staff and the community to reach agreement on appropriate modifications or additions;

- (iv) Identify the need for provision of canal water for domestic water use and watering tanks for livestock within the embankment community;
- (v) Determine the willingness of the community to organize and take responsibility for the maintenance of an eventual domestic water supply tank and stand post, and a livestock watering- tank;
- (vi) Consult with all sub-groups while determining an adequate location for these facilities;
- (vii) Explain to the community in detail, together with the WAPDA technical staff, the preliminary design concept for each facility; incorporate suggestions and help remove any reservations. Also explain the potential maintenance requirements, and responsibility, including collecting funds for repair, de-silting etc.;
- (viii) Facilitate the formation of a managing committee in close consultation with the constituent sub groups of the committee. This committee will be responsible for interfacing on behalf of the community with WAPDA and the contractor during the execution of the physical works and later for maintenance; and
- (ix) Write up the consultation process in each embankment village and include the profile of the community, the issues raised and a mutually agreed improvement plan, the village management committee, and a draft agreement between WAPDA and the embankment community for the maintenance of the proposed water supply facilities.

### **C. Report**

16. The Participatory Assessment Specialist will prepare an end of the service report prior to the completion of the services and submit it to WAPDA and ADB.