

FIGURES

Figure G-1 Organization Chart of Punjab Irrigation Department

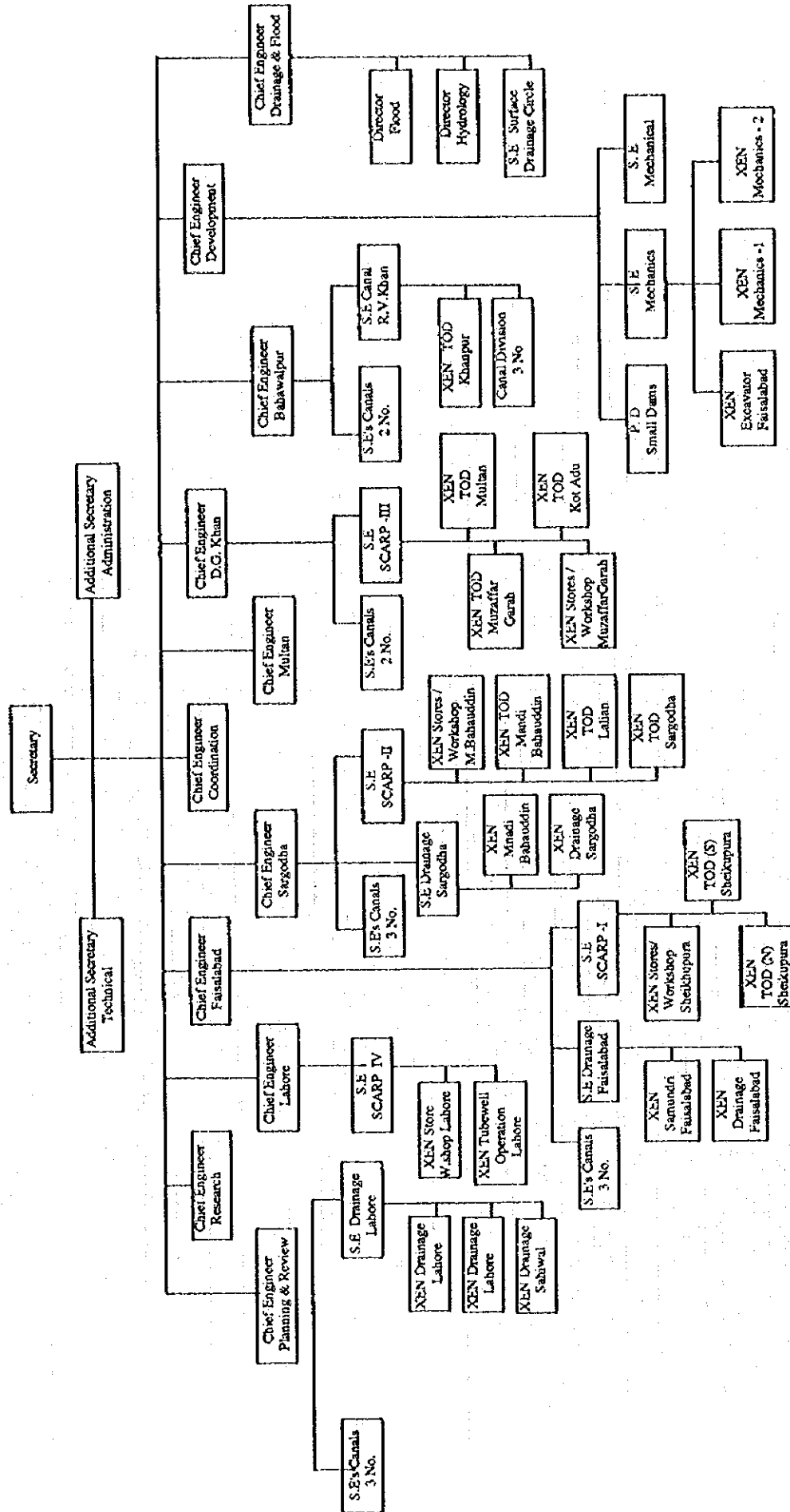


Figure G-2 Organization Chart of Sargodha Irrigation Zone

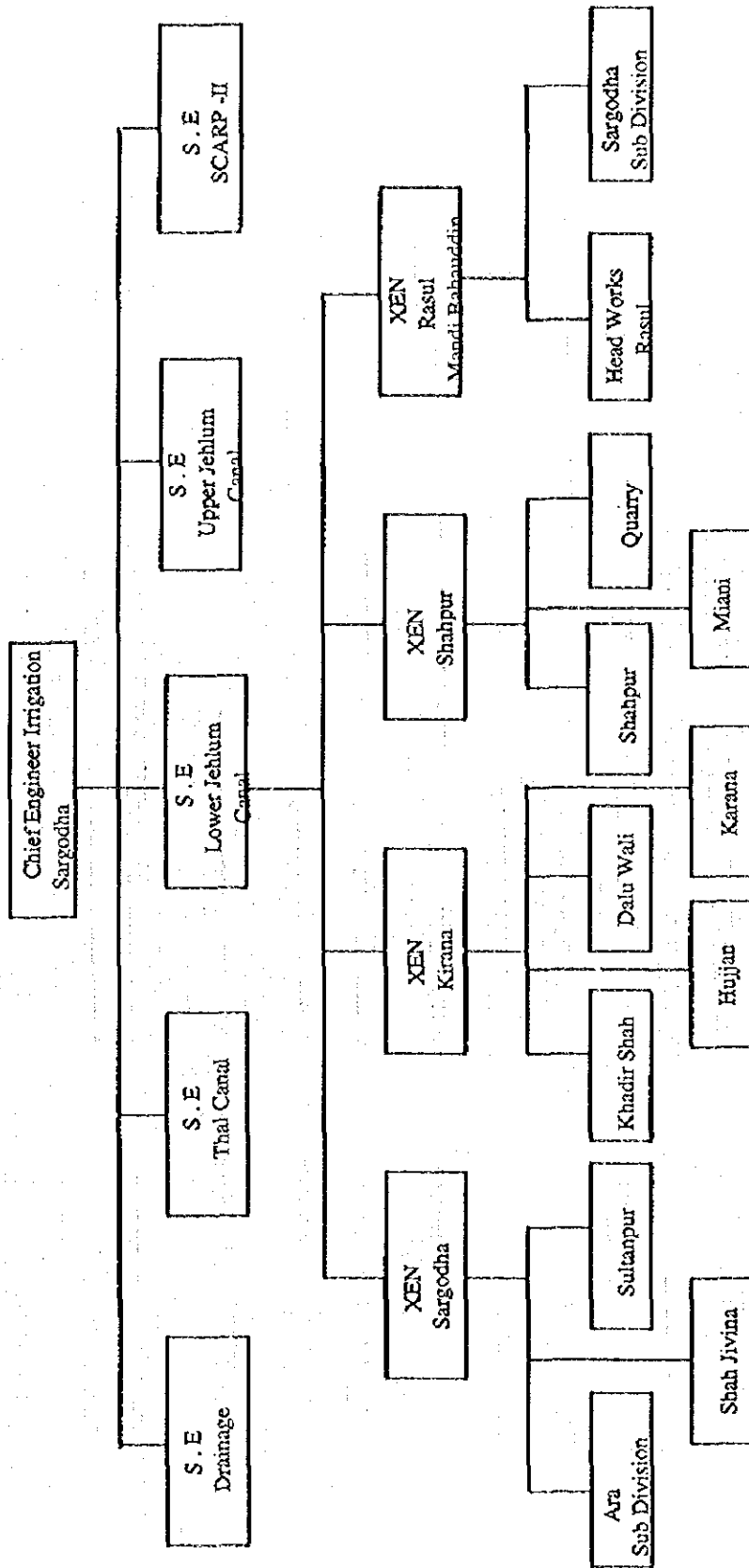
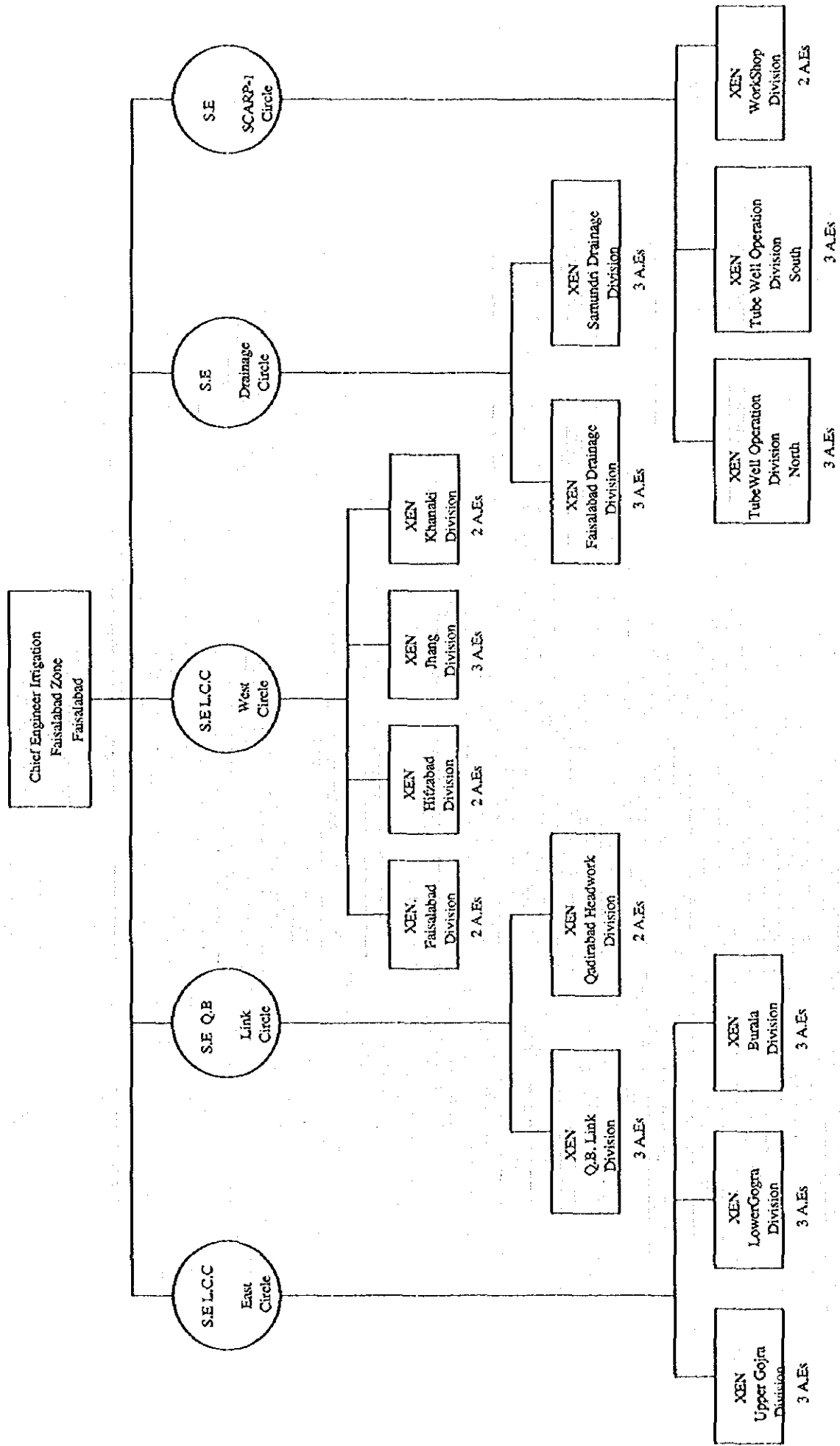


Figure G-3 Organization Chart of Faisalabad Irrigation Zone



S.E.: Superseding Engineers (Circle Direction Officer)
 XEN : Executive Engineer (Divisional Officer)
 A.E : Assistant Engineer (Subdivisional Officer)

Figure G-4 Graph Showing Repairs & Maintenance Funds Status of L.J.C.

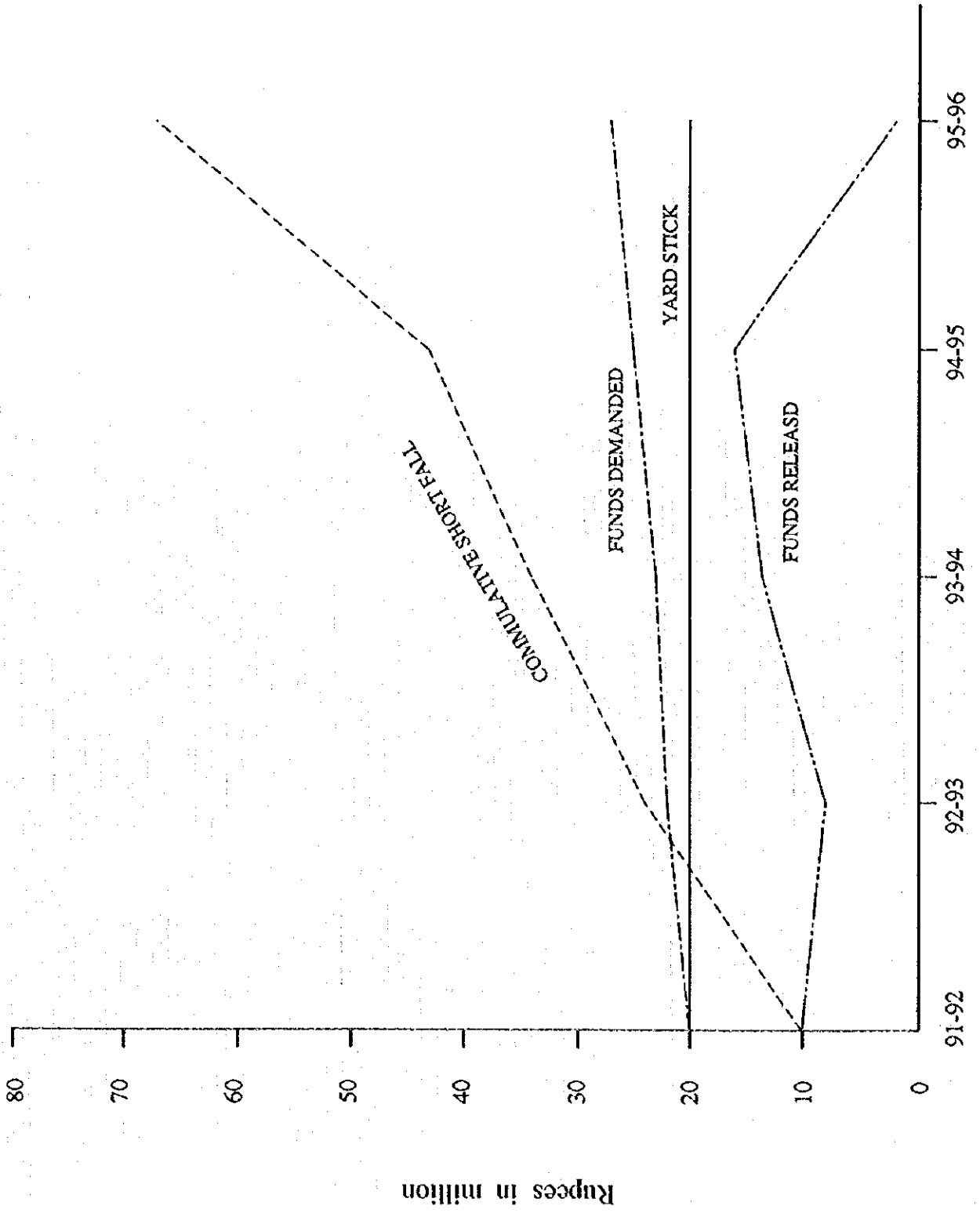
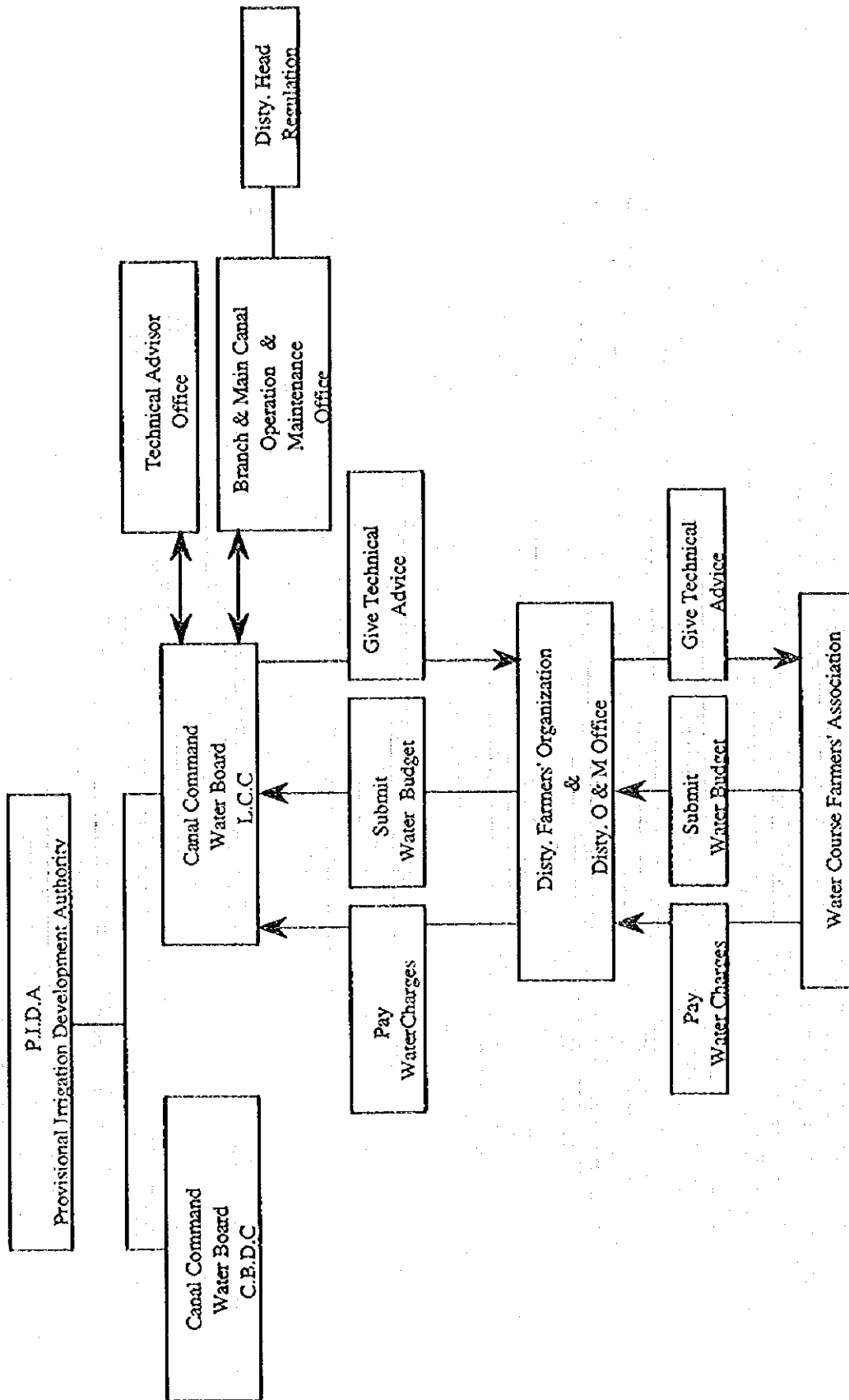


Figure G-5 Functional Chart of Proposed P.I.D.A



* Based on the proposed reorganization by Govt of Pakistan and Donners.

Figure . G - 6 Inequitable Distribution of Discharge along the Distributaries

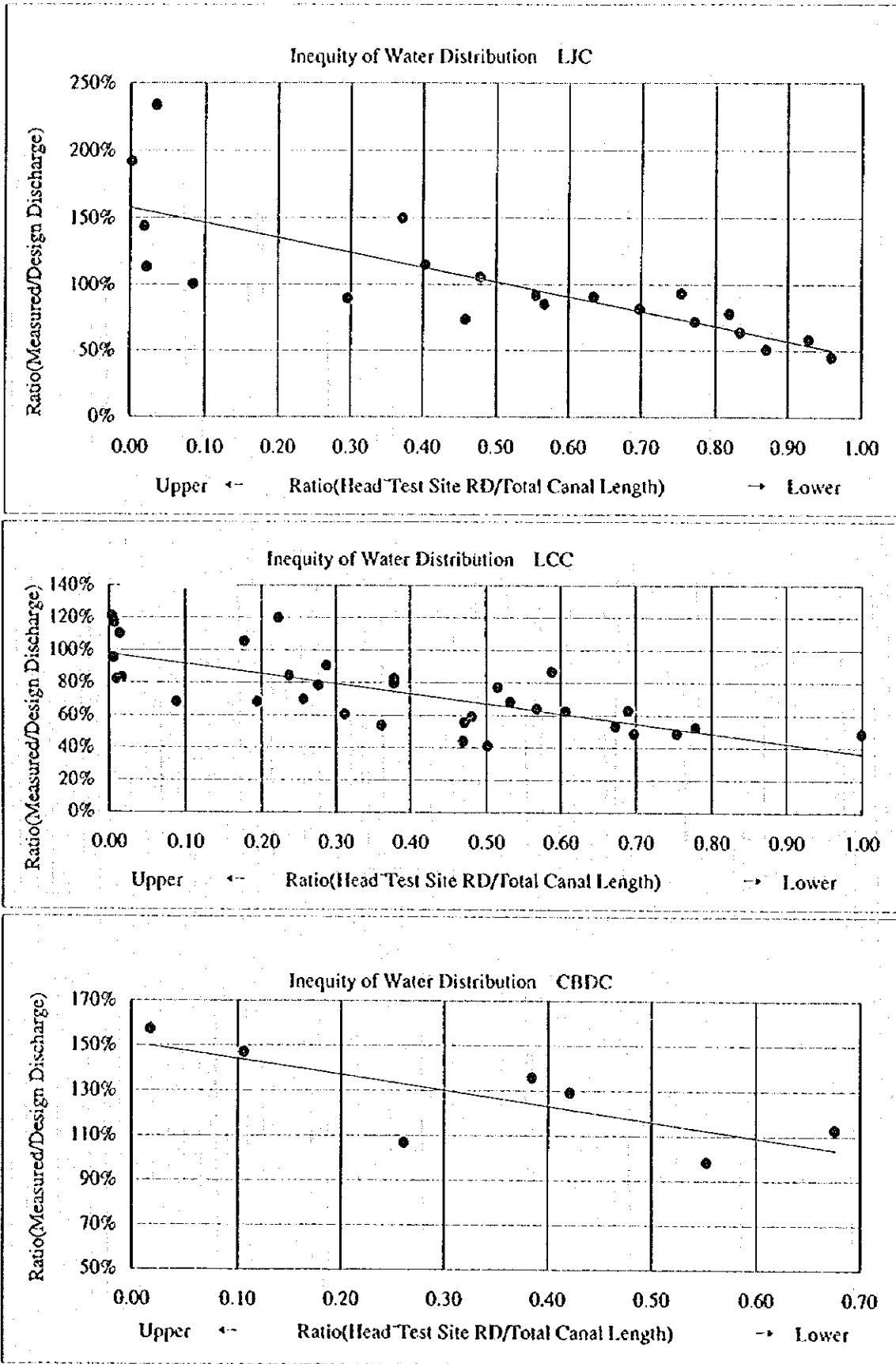
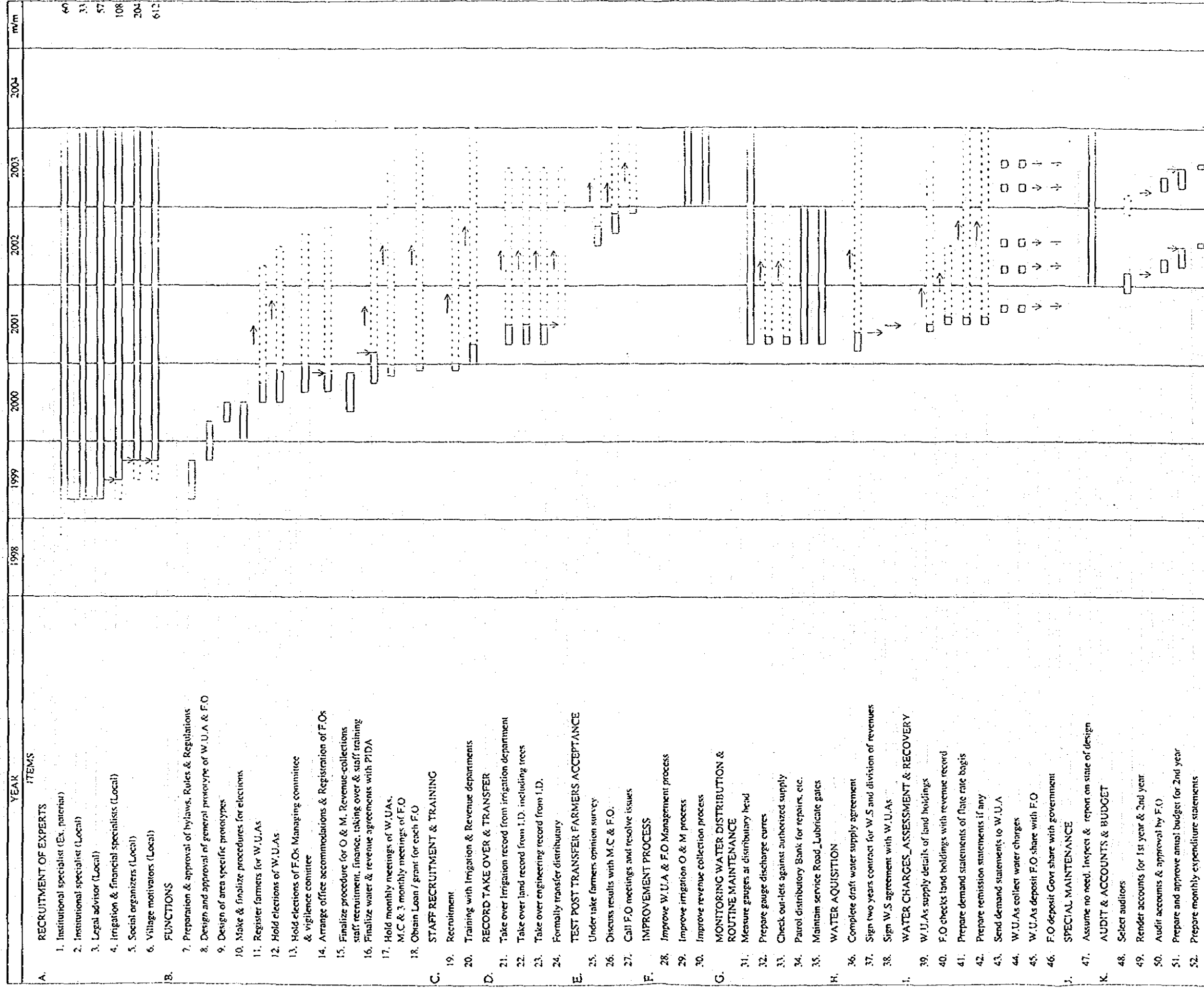


Figure G - 7 Implementation Schedule of Institutional Reforms



Dotted lines at beginning show procedural requirements for recruitment. Firm lines show continuous work on the same distributary.

W.U.A : Water Users Associations
 F.O : Farmers Organization
 M.C : Managing Committee of Farmers Organization
 V.C : Vigilance Committee

FIGURE G-9 CONCEPT OF FARMERS GROUPING (1/7)
 HUJJAN DISTRIBUTARY

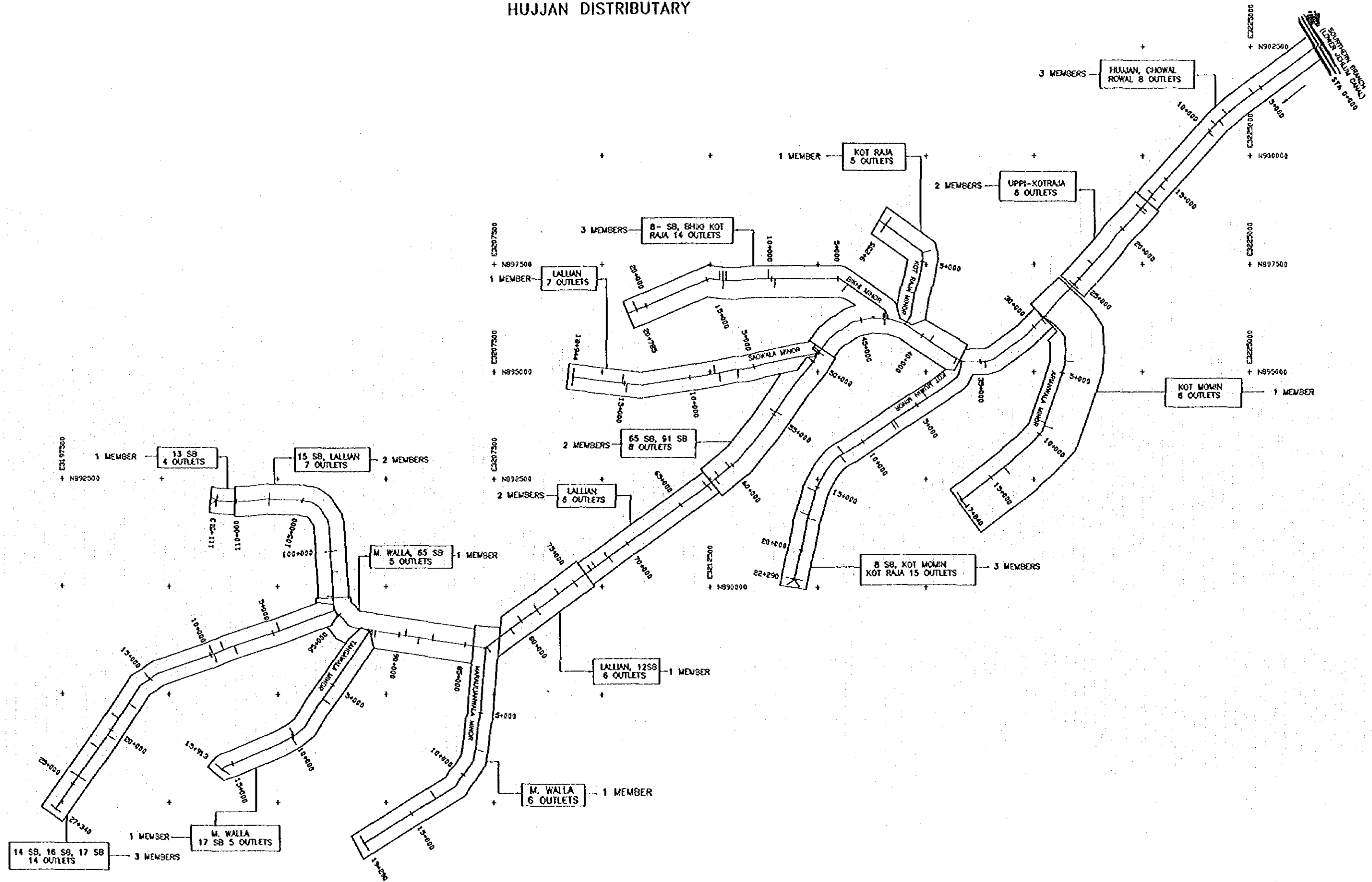


FIGURE G - 9 CONCEPT OF FARMERS GROUPING (2/7)
KIRANA DISTRIBUTARY

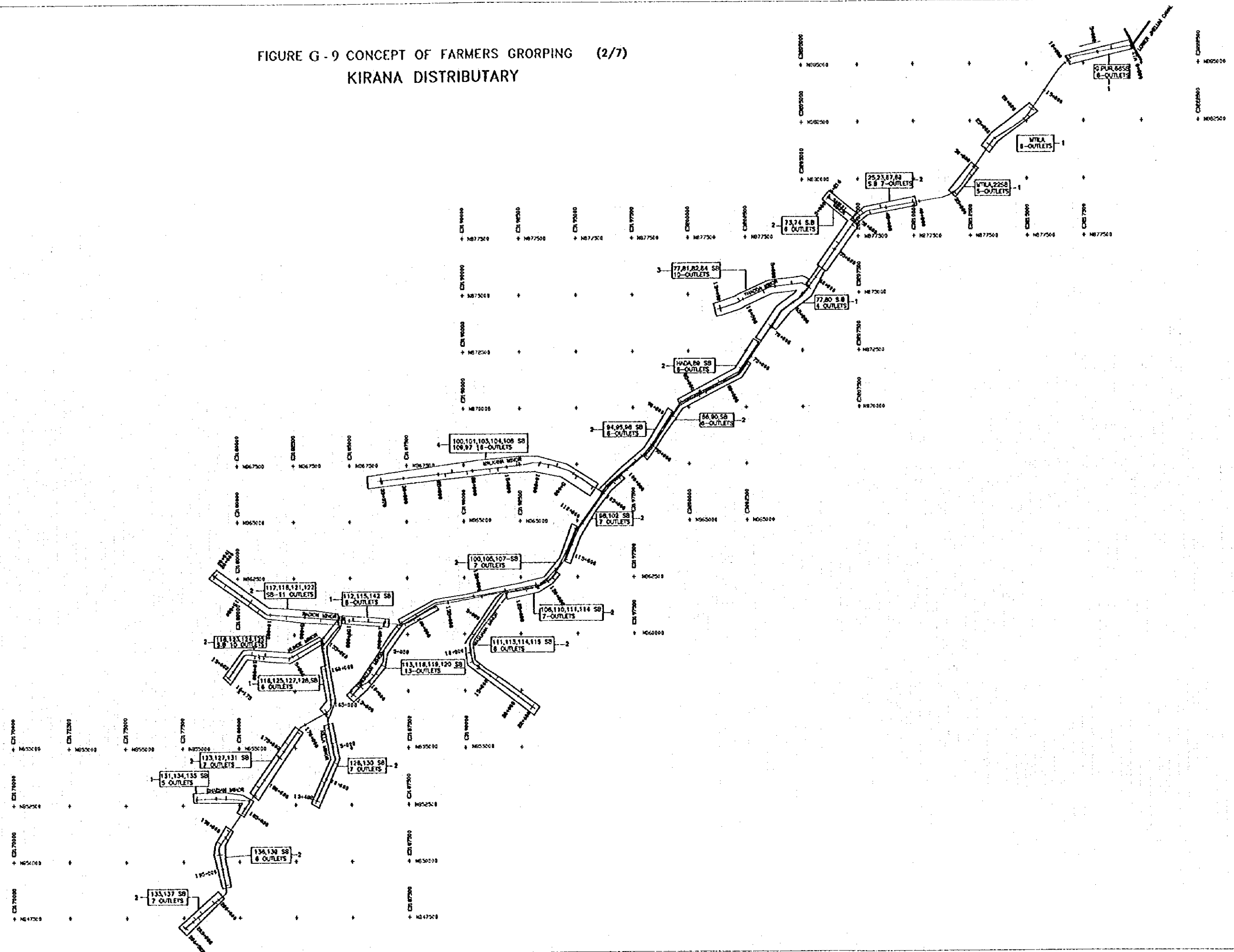


FIGURE G-9 CONCEPT OF FARMERS GROUPING (3/7)
NASRANA DISTRIBUTARY

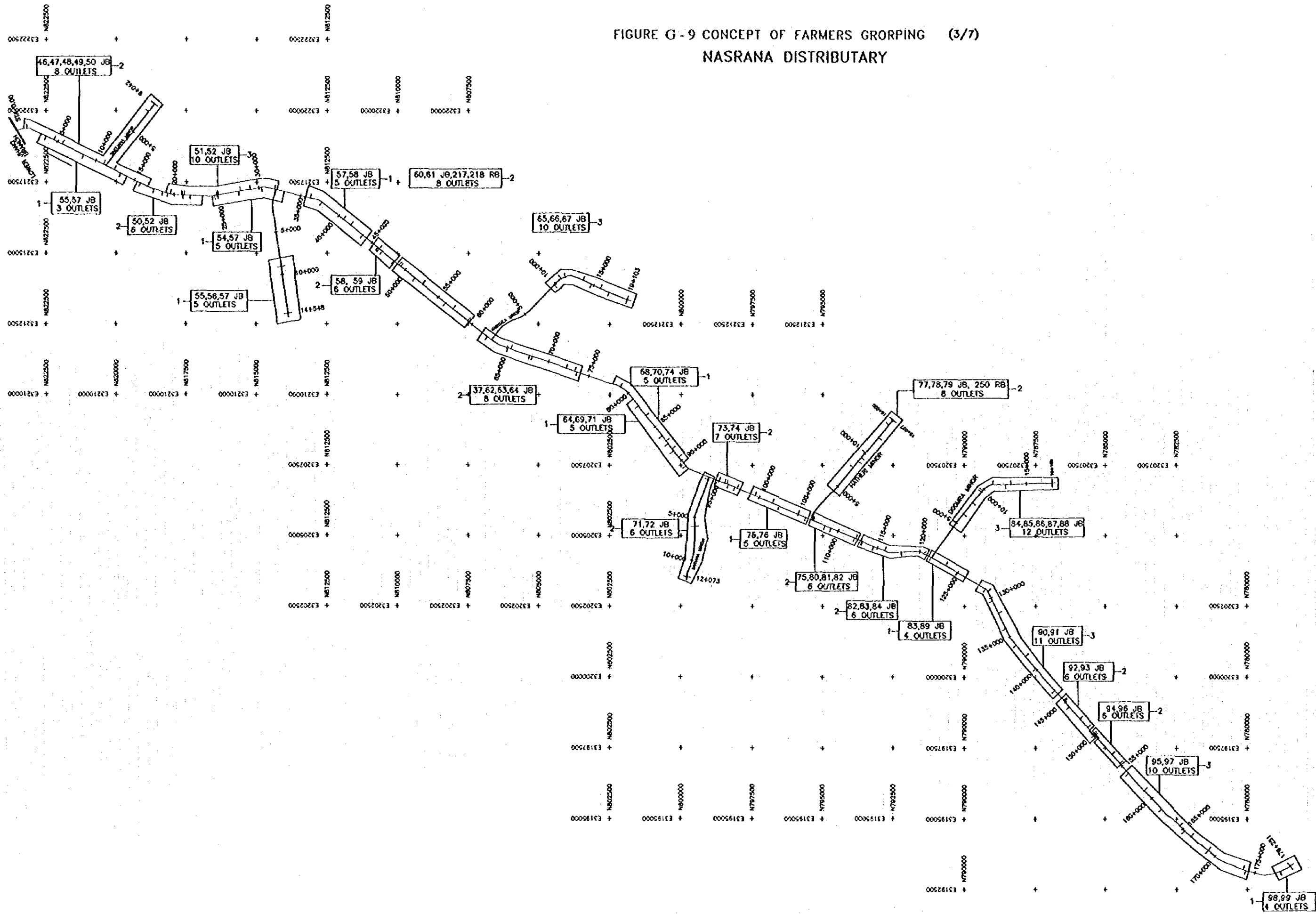


FIGURE G - 9 CONCEPT OF FARMERS GROUPING (4/7)
MUNGI DISTRIBUTARY

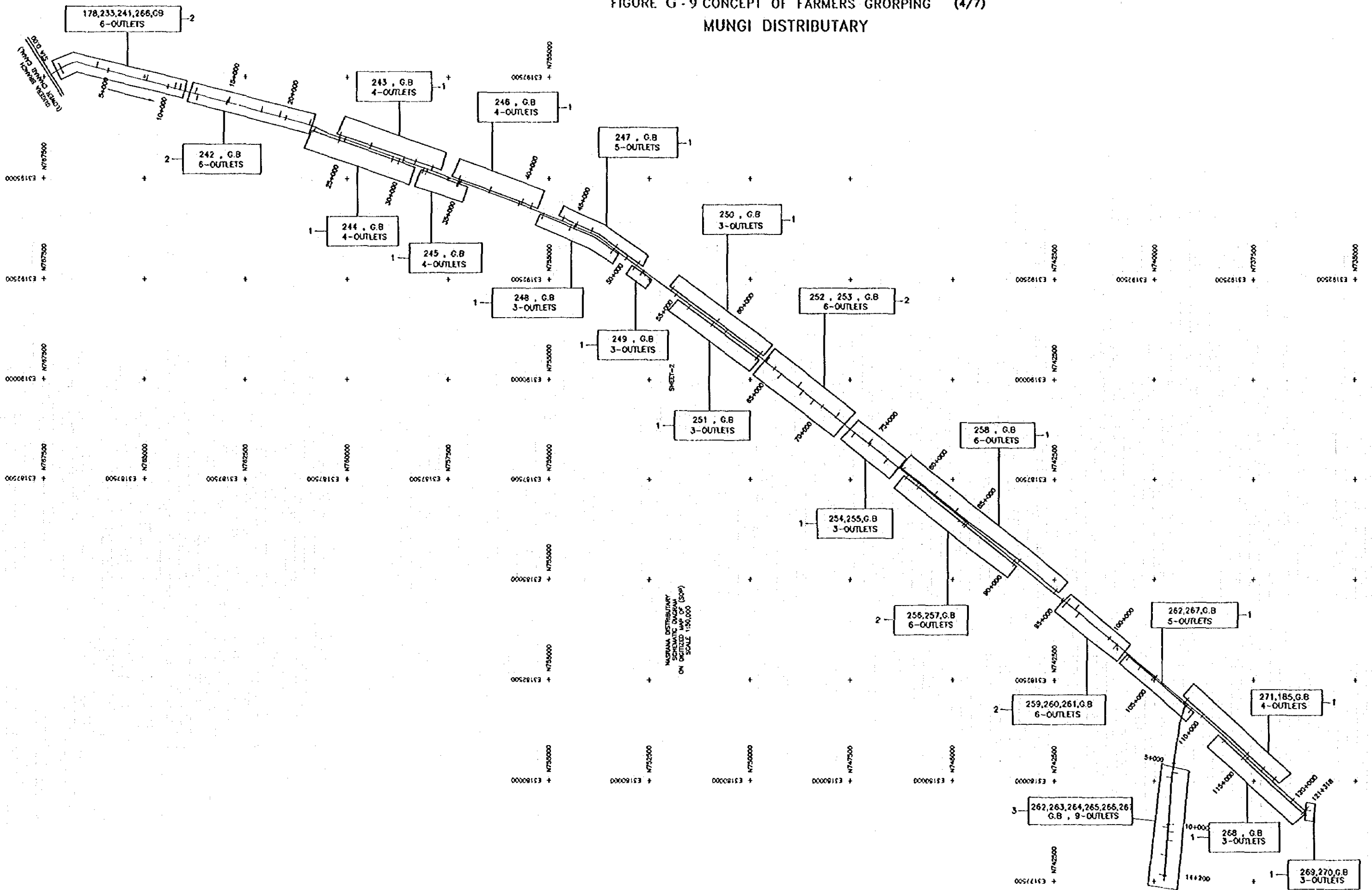


FIGURE G - 9 CONCEPT OF FARMERS GRORPING (5/7)
 PIRMAHAL DISTRIBUTARY

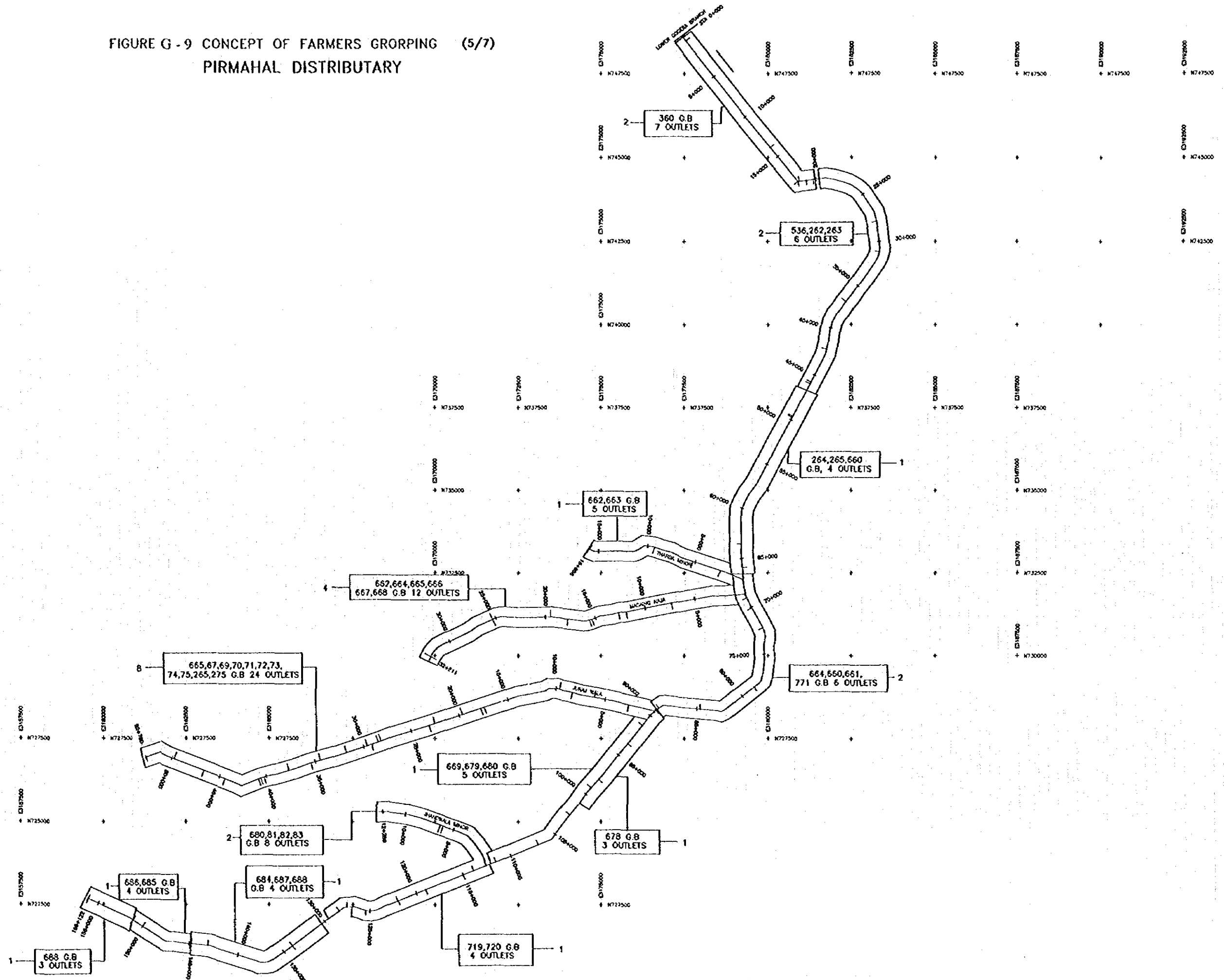


FIGURE G-9 CONCEPT OF FARMERS GROUPING (6/7)
KILLIANWALA DISTRIBUTARY

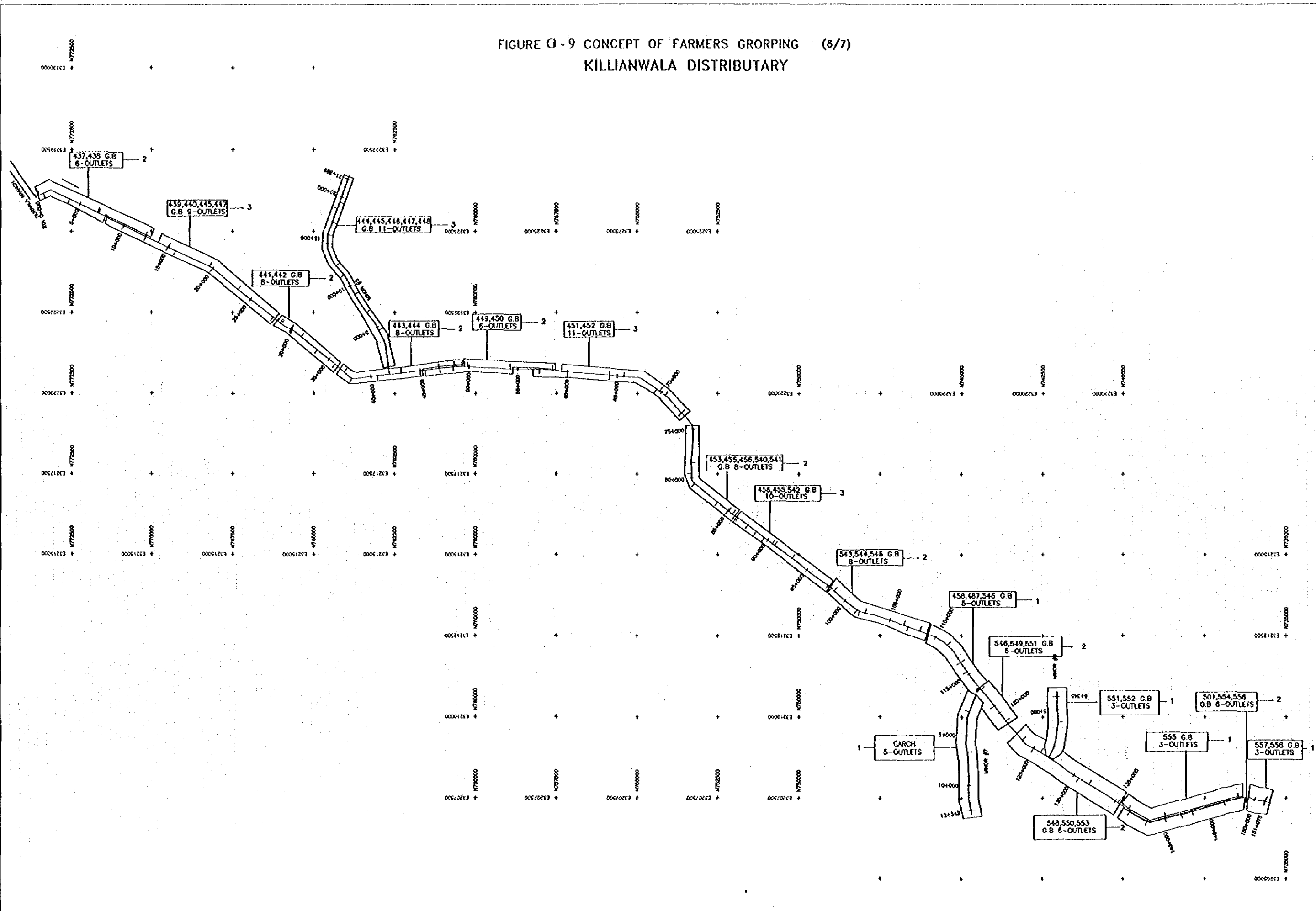
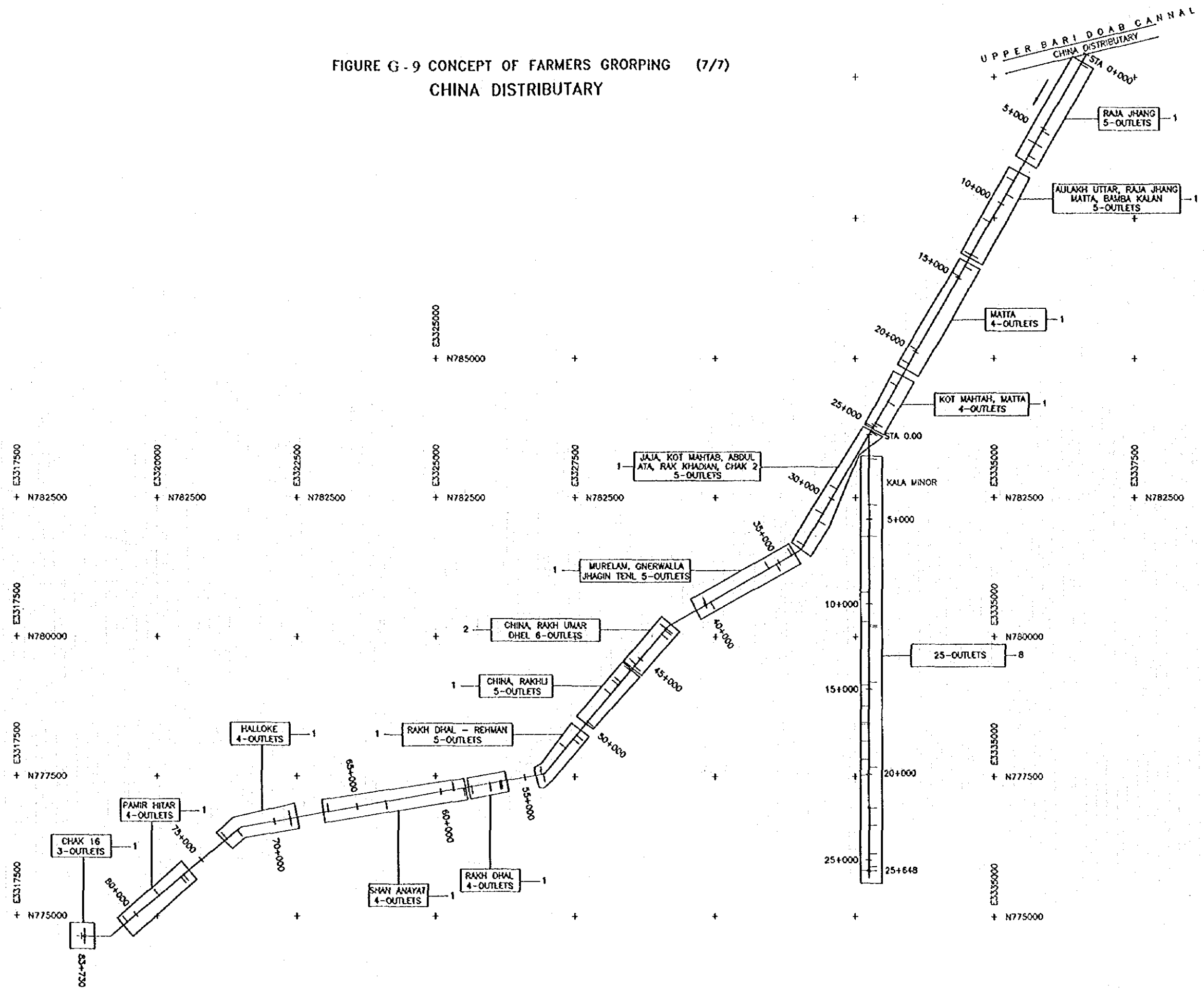


FIGURE G-9 CONCEPT OF FARMERS GROUPING
CHINA DISTRIBUTARY (7/7)



ATTACHMENTS

Minutes of the Meetings with Farmers in Phase I Field Study

Seven villages were visited along with E.D.C. staff; four in L.C.C. area on May 29-31, 1996 and three in L.J.C. area on June 8-9, 1996. Gist of the discussion for six meetings is given below.

<u>Name of Village</u>	<u>Discussion</u>
1. Chak No. 278 Jung Branch (J.B.) L.C.C. Usman Kot.	The village had 4 water courses all of which were improved under On-Farm Water Management. The improvement resulted into increase in irrigation by 50% (exaggerated) Committees were formed who chose a president, a secretary and a treasurer with the duties to cooperate with water management organization (O.F.W.M.). They provided material and communal labour. The mason was paid by Committee through farmers contribution. OFWM provided cement and bricks. Supervision was done by farmers. Committee broke after completion of the work, because they had nothing to do. Every thing was controlled by the Irrigation Department. With regard to their perception about the efficiency of the Irrigation Department, they unanimously stated that they were not satisfied with the working of irrigation department. Even for small issue they have to contact the department at far away places and may have to wait on them for days. Usual complaint is that they are not receiving their authorized supply because the head reach farmers use more water than their authorized share by inserting pipes in the distributary banks, use their animals to head up the water in the distributary, use of lower crests of their out lets or raise crests of the fall on disty side to increase water supply in their out let. Since they are the tail farmers, they suffer because of theft by the head farmers. None of the head farmer was ever penalized under C & D Act because the head farmers were powerful or mixed with officials of irrigation department. They applied for a separate disty which was approved but was not allowed by head farmers. They pay monthly under the table money to officials of irrigation department otherwise their out let is likely to be closed.

The team then asked the farmers how to improve the management. They asked the team to improve the irrigation department to do equitable distribution of water. The lining of the disty will help but management needs to be honest and should not come under political pressure of head farmers. After lengthy discussion about the gradual deterioration of the department and strong interference of the head farmers through their political leaders the department is likely to deteriorate further and therefore what chances are there to improve it. The other alternative was that the government should give the distributary to a private party on annual lease and the private party shall then operate. The farmers were unanimous that such a system will bring about further in equality and result in increase of water rates beyond the paying capacity of the farmers. The third alternative was that farmers should organize themselves as W.U. As. and F.Os. and take over the O&M of the disty and collection of water rates a part of which may have to be paid to irrigation department or its successor. They raised many questions regarding the powers and responsibilities of the association their methodology of election their legal positions, and when the team's proposal was explained to them, they unanimously agreed that under the given conditions this was the best alternative.

2. Chak No. 58 Jung Branch (J.B.) L.C.C. This village had four water courses off-taking from Nasrana distributary. The distributary is approximately irrigating about 85 villages. This village lies in the middle of the distributary. the discussions followed the same pattern as for 278 Jung Branch and they also agreed to the proposal. At this time the idea of flat water charges was also introduced and the ease of collection of revenue and reduction in Revenue Staff costs was indicated. They also totally agreed to the flat rate system.

3. Chak No. 287 Jung Branch (J. B.) L.C.C. This village had two water courses off-taking from Godian disty one of which was improved by 30%. It has about 500 acres/water course owned by about 100 farmers. The village lies near the head of disty. They had 8 private tubewells with 40 meter depth and pipe dia of 15 cm with 25 H.P. motor. The bill was Rs. 4000-5000 per month. The cost of water was Rs. 70 per hour of tubewell needing 2 1/2 hours of operation to irrigate one acre. Thus the cost per acre of a single irrigation was Rs. 175. Against canal water charges of Rs. 29.7 per acre for wheat crop needing 6 waterings to mature. It can be seen that cost of tubewell water to mature one Acre of wheat crop would be 175 x 6= Rs. 1,050 or 35 times the canal water charges. When the discussion started the farmers enumerated almost the same problems as the farmers of 278 J.B. When asked how the situation could be improved, they almost came with the same proposal as given by the team to the previous two villages. This was quite a surprise for the team but it was learnt that one of the farmers had stayed in England for 35 years who was well versent with the community participation in managing their own affairs. They also insisted that the present system of water charges assessment on the type of crops was no longer appropriate and should be changed to flat rate system. In fact they felt that irrespective of other distributaries they will change to flat rate system once the distributary was handed over to the farmers.
4. Chak No. 164 Gojra Branch (G.B.) L.C.C. This village had two water courses taking-off from Jani Wala distributary which was 4 miles long. The village is at the tail of the distributary. It has saline soils and saline ground water. There were no tube wells and the water table was at 8 to 10 meter below ground surface. They also complained of the same problem but their case was more acute as they entirely depended on canal water for drinking purposes. In case of any interference with the disty, it is not only that their crops that suffer but they do not have water for cooking and drinking. They totally agreed with the team proposal and desired that the distributary should be lined to help them in obtaining drinking water at all times.

5. Chak No. 68 North Branch (N.B.) L.J.C. This village is at the tail of Dhrehma Disty which is having four water courses in all. Earlier the distributary was longer and was having three more water courses downstream but the farmers of the three water courses at the tail succeeded in getting their own disty. The farmers of this disty were an exception to the farmers of the previous distributaries and appeared to be very tense against each other. The younger farmers were not allowed to speak in front of the very old farmers who wanted the existing system to continue. The team asked for inspection of the out let. The out let had no gauge but the Baildar (official rep. of the irrigation department) explained that the out let was already taking twice the authorized discharge which explained why the farmers were happy with the existing system. Although no information was available but it could be guessed that after separation of the tail water courses the distributary head was not remodeled and it was still carrying the original authorized discharge making a lot of additional water available at the tail water course. They thought that if the distributary was taken over by the farmers there would be many disputes. However, they strongly desired that their distributary may be lined. When they were informed that lining of distributary may be conditional on the formation of F.Os, they asked for the time to decide.

6. Dodha Kalan. L.J.C. They have six out lets at the tail of the Dodha distributary. The ground water is sweet and fresh. They have 10 public tube wells and about 100 private tubewell of 4" to 5" suction pipe. Total irrigated area is about 8000 to 9000 acres. The total length of the disty is 10 K.M. with 40 out lets.

They agreed to the transfer of the disty to farmers committee and collection of water charges on flat rate basis. Regarding the flat rate they argued that presently even when we use private tube well water for high delta crops we are charges higher water charges although we have used water from our own tubewells to grow those crops. They complained that the department had no right to charge higher water rates. They thought that clear separation of water used will only be possible if they paid the charges on flat rate basis proportional to the duration of their water turn, which was further proportional to the land owned by them.

Minutes of Meetings with Farmers in Phase II Field Study

In the following pages minutes of the meetings held with farmer groups during phase II field study along the 12 selected distributaries at the three canal systems under study are presented. Before starting discussion on the management of distributary and minors, basic data about the village and an overview of the irrigation water problems was gathered. What ever farmers said it is presented in *Italics* and is given almost in the first paragraph (s). Minutes are not edited to know the farmers view point in their own language and tone.

Lower Chenab Canal

Meeting No. 1

Date	09.11.1996	Time	1200 hrs
Distributary	Gojra	Minor	Gojra
Location	Head	Chak No.	361/JB

Gojra Distributary of Jang Branch., Faisalabad. Ground water = Saline. About 8 tube wells along the canal for supplemental irrigation, no public tube well. Rate of tube well water is around Rs 20-30 per hour. It takes 4 hours to irrigate per acre (an acre = 0.4 hectare) of wheat. Farming families approximately 500 house holds in the village. Total 3 outlets to irrigate the village agricultural land (CCA). Water is available according to authorized full supply. The conditions of canal and distributary maintenance have been deteriorated over the last 5 to 10 years. Being at the head reach we are satisfied with the water supply and distributary closures on turn basis. However, we also pay an amount of Rs fifteen thousand annually to get our share of water. There has been no punishment ever given to the water stealers in the last ten years.

Regarding Water Users Association (WUA) at watercourse level and Farmer Organization (FO) at distributary level, they were of the opinion that it would be difficult to handle the administration and maintain the distributaries as it would result in to exploitation. Regarding flat water charges they totally agreed. However, when lining was conditioned on the formation of the farmers organizations then they said they would go along with the other villages located on that distributary. If all other farmers agreed on the distributary then they would also form the organizations. Even if such law becomes enforced by the Government, they would agree.

Meeting No. 2

Date	09.11.1996	Time	1400 hrs
Distributary	Nasrana	Minor	Nasrana
Location	Tail	Chak No.	95/JB (Gill)

No of farming families 250 and non-farming families in the village are (250). Maximum land ownership is 25 acres, minimum land holding is 1 acre per family while land ownership for dominant group was reported as 4 acres per family. Landless house holds are about 50 % of the total population. One of the farmer was a Police Inspector who was the chairman of the village committee. His son was Head Constable in the local Police Station. Farmers reported that they have occupied federal land and work on these farms and or in the near by factories.

Problems: During meeting the participants discussed their problems relating to water and specially irrigation water. They stated: *Drinking water is a big problem. We have installed hand pumps along the canal and water is transported by women at a distance of 2 km. We are getting only 1/3rd of our authorized share of water. The distributary and minors are in a bad shape and requires a lot of maintenance. Due to the same we are unable to get our authorized share of water. To day our canal have breached and our men have gone to repair. We are not getting our share of water at tails. Out of 12 acres we can only irrigate 2 acres of land from this water. We are unable to understand the distributary turn schedule because our distributary normally remains closed. It looks like that there is always closure turn on this distributary. There had never been any punishment to the persons who steal water. The*

aqueduct over the drain was constructed about 7 years back which has its bottom level a foot higher than the canal bed level resulting in to blockage of water flow. This in-turn makes the head reach farmers to draw more water. If we complaint to irrigation department, no action is taken. Actually irrigation officials are also part of such mal-practices. If irrigation department informs us in time about closure turn of our distributary at least we can schedule our programs accordingly.

Solution: Farmers were asked about the solution for these problems. They said the distributaries should be given on contract. One farmer opposed and said that contractor would also not listen to us. The contractor would also give water to larger farmers to collect contracted money and will not care for us (poor farmers). Another solution was presented that irrigation department should employ honest persons who should not be influenced by large farmers or politicians. This option was also rejected by the majority with the argument that it was simply not possible.

After a lengthy discussion farmers were of the opinion that they could take care of the distributary if it is lined and outlets were properly fixed. They also said that they could even manage better than irrigation department. Even now they desilt the distributaries and minors instead of irrigation department. One of the farmer stated that we (farmers) are in-need of water then why some one else should do all these things like desilting and maintenance of the distributaries. He also asked the other farmers if they were not getting proper water is there any body who will bother to ask irrigation officials about that. Farmers also lauded that non is going to reduce the salaries and per-diems of any officer of the irrigation department if we will not get irrigation water. They unanimously decided that they themselves should take over the management.

Management Approach: Farmers were of the opinion that total length of the distributary should be divided into the number of villages getting water from that distributary. Each village should give two members to manage his portion of the Distributary. This discussion ultimately led to a proposal that there should be a watercourse users association (WUA) and each watercourse users association should elect a watercourse chairman. All such chairmen should then elect a main body who should take care of distributary. These members should be paid some salary to enable them to take full interest in the management of water distribution and maintenance of distributary.

Water Charges: Farmers also discussed the sources of funding for maintenance of distributary when all irrigation staff would not be there. It was decided that the present water charges assessee should also go back to the department and water charges should be fixed on the basis of irrigation timings. Out of such collection some money should be retained and spent on the distributary maintenance while rest may be handed over to the irrigation department for providing water at distributary head.

All farmers present in the meeting fully participated in the discussion and agreed with the proposal. When they were asked about the reaction of the other farmers who were not present in this meeting, they told who ever is a farmer and is deprived of his water rights, he would agree to this proposal. Lastly the following points were clearly repeated and passed through consensus.

- 1 Formation of water users associations-agreed
- 2 Creation of farmers organizations for the management of distributary- agreed
- 3 Flat rate water charges and collection by water users associations chairman-agreed

Meeting No 3

Date	09.11.1996	Time	1600 hrs
Distributary	Gojra	Minor	Gojra
Location	Tail	Chak No.	369/JB

No. of outlets 2. CCA is 40 squares (one square=25 acres) of land. No. of farmer families are about 200 and non-farmer families are more than 200. No public or private tube well have been installed because ground water is saline. Drinking water is taken from canal through a Govt. water supply scheme. Maximum land holding is about 25 acres, minimum land holding is up to 3 acres while dominant group of farmers fall in the category of 8 acres of land holding per family. Time allocated to irrigate one acre is 15 minutes for canal water supply. Out of 50 acres of land we only cultivate 50% of land and rest is left uncultivated. This is because of shortage of canal water supply only. We grow sugarcane because it can sustain longer drought period than maize or cotton. Farmers at head reaches do injustice with us. They often put broken bricks in the canal and block the water below their outlets. Luckily if water is able to reach us then irrigation department will close the distributary due to the introduction of turn system at distributary level. This minor remains closed a week in a month. Some times our distributary is closed on the sayings of MNA as water in his distributary is opened as he needs water with out any turn. If we ask that why Distributary is closed the answer would be that XEN has ordered to do so. Illegal increase in the sizes of outlets also exist. Usage of siphon pipes from the distributary are also practiced. None of the person have been ever fined or given punishment on any kind of theft of water.

Farmers felt that they should be given a separate minor direct from the main canal which would solve their problems. It was not possible because it involved a lot of money, survey and land for new distributary or minor. Discussions on water availability and management of distributary were then carried out and all possible solutions were discussed. Farmers also think that irrigation officials can not solve their problems. Because the existing management have totally failed. While discussing alternate solutions the proposal came for contracting out the distributary. At the same time the idea was opposed and dropped on the experiences of the contractors behavior on tool tax barriers. The alternative arrangement of farmers association was also discussed and was told that it is acceptable as it will give them the powers to obtain their water according to agreement, water will also be distributed equitably. They also agreed to flat rate water charges.

Meeting No 4

Date	10.11.1996	Time	0900 hrs
Distributary	Killianwala	Minor	Killianwala
Location	Head	Chak No.	437/GB

Population is living in two settlements. Total 4 outlets. 300 house holds are farming families and 50 HHs are non-farming families. Private tube wells in the village are only two. Water is saline. In the next village there are many private tube wells. CCA of the two villages is about 60 to 70 squares. Drinking water is taken from hand pumps installed near the distributary. For the last ten years no punishment against any violations have been awarded. Steel lining may not be used as farmers will steal them and sell the lining in the market. Due to politics most of the outlets have been broken and large farmers are enjoying water. Farmers temper bricks outlet also. If any government official wanted to do his duty honestly he would be transferred. This system had been started with the beginning of the democracy in Pakistan say, 1970-71. Once you have lined the distributary, we would be able to manage the water distribution.

Overseer of the same distributary also attended this meeting and added that 31 cases have been identified with broken outlets. These outlets will be repaired in the coming canal closure time (month of January/February). How are you going to manage if distributary is lined? This was a question in response to their thinking that they would manage themselves. All possible solutions similar to previous meetings were discussed and they agreed with the F.Os & W.U.As and also considered that flat water charges would be more appropriate than any other system including present system or the contractor system.

Meeting No 5

Date	10.11.1996	Time	1200 hrs
Distributary	Killianwala	Minor	Killianwala
Location	Middle	Chak No.	453/GB

Total No. of outlets are 4. No. of farming families are 200 and non-farming families are 450. CCA is 75 squares of land. Ground water is saline but can be mixed with canal water. No. of private tube wells are 4 to 5 but run only at the time of prime need. No. SCARP tube well exists in this village. Ground water table is at 25 feet. Drinking water is pumped through hand pumps installed along the water courses. Out of 25 acres only 4 to 4.5 acres are possible to irrigate with weekly turn of water allocation. This routine is carried on for the last 5-6 years. Before that there were no distributary closure system. Now we do not get authorized share of water. Farmers at head reach fetch more water. Its impossible for the farmers to get full share of water during night. Distributary remained closed for 95 days out of 365 days. Out of which 30 days are normal canal closure period. We feel that no one is responsible to take care of this Distributary. These distributaries and whole water management system is orphan and have no mother and father.

Solution: Farmers were then asked about the solution for these problems. They also said that water supply should be given on contract as government is thinking about privatization of the canal systems. After a long discussion the idea was dropped and consensus reached to the farmer managed system. Similarly farmers also discussed the sources of funding for maintenance of these distributaries. However, collection of water charges should also be with each WUAs at watercourse level. A flat rate for levying water charges on the basis of time allocated to a farmer should also be adopted. At the end of the meeting farmers agreed to form water users associations; farmers organizations and introduction of flat rate water charges.

Meeting No 6

Date	10.11.1996	Time	1500 hrs
Distributary	Killianwala	Minor	Kanjwani
Location	Tail	Chak No.	Killianwala/Lodhran

Total number of outlets 2. CCA is 50 squares. Farmer house holds are 300 to 400, landless house holds are 150. Maximum land holding is 8 squares = 200 acres, average land holding is 20-25 acres. Ground water is sweet. Private tube well are 40. Out of which 50 percent are electric driven and rest are diesel operated. Water table is at 45 feet. Water table is going down at the rate 3-4 feet per year. 10 years earlier there were no tube wells and water in the minor was available. Now there is no water in the minor as it is being stolen by upper reaches through siphons. Many complaints have been made but no action has taken by the authorities. We believe that the political pressure compels the irrigation department to keep silent on such issues. In spite of the fact there is absolutely no water in the minor but we are

regularly paying water charges. We also pay tube well water cost at Rs 60-70 per hour. One acre of wheat could be irrigated in 3 hours and we need 5-6 irrigations to harvest of an acre of wheat.

On the basis of such discrepancies farmers started discussing irrigation departments improvement, contracting the system and later farmer managed irrigation system. All farmers were in favor of taking over the management. To meet the expenses of maintenance water charges collection and retaining the money equal to present maintenance charges was approved. Flat rate introduction was also approved.

Meeting No 7

Date	11.11.1996	Time	0900 hrs
Distributary	Mungi	Minor	Mungi
Location	Head	Chak No.	241/GB

No. of farming families in the village are 400 and non-farming families are 200. Total No. of tube wells are 20 (installed along the distributary) All giving saline water except 5 tube wells. We do sell tube well water. Per hour rate of tube well water is Rs 50 to 60 according to the discharge of the tube well. It takes 4-5 hr. to irrigate one acre of wheat. We run the tube wells only at peak demand. Drinking water is through water supply scheme. Though we are at the head reach but canal water is very short. Total number of out lets are 4 for this village. CCA is 74 squares of land. Maximum land holding is (one farmer) 4 squares, minimum land holding is 1 acre. 25 percent of land is not cultivated due to salinity in this village. However, this land can be cultivated if water supply is there. Out of 25 acres only 5 acres are being cultivated by canal irrigation. Distributary remains closed once a month for one week. It is unscheduled closure. Overseer will chop money by alleging that your have increased the mughra and he would reduce it.

After heated discussion about its solutions particularly from the head water course it was agreed that this management should be in the hands of the persons who need water and whos lives are on stake due to mismanagement of this water. However, farmers were of the opinion that the time period of these associations should be two years. They feel that they shall be supervised either by agriculture department or by corporate law authority.

Meeting No 8

Date	11.11.1996	Time	1400 hrs
Distributary	Mungi	Minor	Mungi
Location	Middle	Chak No.	251/GB

No. of outlets are 3. No. of tube wells, 12. Ground water is saline. Tube well water can only be used after mixing with canal water. Tube well water is sold @ Rs 65 per hour. It needs three hours to irrigate an acre of wheat. Farming families are 300, and land less families are 250. Maximum land holding in this village is 35 acres, minimum land holding is 0.5 acres and average land holding is 5 acres per family. Total CCA is 60 squares.

This is one of the best distributary of Gogera branch. Tarkhmi with a discharge of 275 cusecs has never been closed because of political influence. All outlets of our distributary are broken for the last 10-20 years. Tail reaches of our distributary, have never received water. These outlets were repaired 3 years back but have been broken again. Mungi distributary is

doing very well even then only one tail is receiving water but Kot Khitran tail is not receiving water because the farmers just up stream of tail minor have broken their outlets and lowered the crest of the minor. With regard to Gogara branch some distributaries such as Takkar distributary, Bhun distributary, Jani Walla distributary have been connected to Gogara branch in their middle and had almost doubled their share. The result is that the water going down stream has been reduced particularly for Pir Mahal distributary. We are irrigating only 6 acres per sq from canal water and if we use tube well water, we can cultivate about 11 acres but we pay abiana (water charges) for all the 11 acres.

You may not be aware of the fact that we took a procession and visited XEN against all these in-justices and problems. We told him, look we are forced to protest against our own government. Then for few days we did get water available at the tails. If government wanted nothing is impossible. Influential farmers have got garden water sanctioned without any remodeling and provision in the distributary.

Discussions were carried out to find out the solution of such problems. It was agreed that government can not be serious to supply regular and equitable share of water to poor farmers. There should be some one else who should take care of farmers. Who could be such person? Only and only farmer itself. However, farmers must have powers if they are given the responsibilities. If the management have some powers only then other farmers would listen to them. Farmers then told that they would only agree to take the management if distributary and minors were lined and outlets were properly fixed. Farmers must get authorized water at the regulator head of the distributary. On the assurance that distributaries would be lined then all the farmers present in the meeting agreed to take over the management and formation of WUAs and FOs. They also opted for flat rate of water charges per acre.

Meeting No 9

Date	11.11.1996	Time	1600 hrs
Distributary	Pir Mahal	Minor	Pir Mahal
Location	Head	Chak No.	536/GB

There is only one outlet irrigating this village. Farmer families house holds are 31, non-farmer families are 15. Maximum land ownership is 12 acres, minimum land ownership is 08 acres. Ground water is sweet along the canal. Total CCA is 11 squares. Tube well water is sold at Rs 60-70 per hour. It would take 2 to 2.5 hours to irrigate one acre of wheat. Water table is 35 feet. Presently cropping intensity is 50 per cent. Our distributary remains closed for one week in one month. This closure of distributary is even without any schedule. When ever we complained, no body listened. Drinking water is pumped from ground through hand pumps.

Being at the head the farmers were not having many problems like middle and tail reach farmers problems. However, all the participants showed there willingness to take over the management if all villages were agreed to do so. Flat rate of water charges were however, agreed and accepted by all farmers present in the meeting.

Meeting No 10

Date	12.11.1996	Time	0900 hrs
Distributary	Mungi	Minor	Mungi
Location	Tail	Chak No.	269/GB

Farmers from three tail reach villages were assembled for meeting. Villages included: 269/GB, 270/GB, and 268/GB. Information gathered was as follows:

Farming families are 300 and non-farming families are about 150 in this village. Maximum land holding is 2 squares, minimum land holding is 0.5 acre while dominant group holds about 2-3 acres per family. Cropping intensity is 200 per cent. Ground water is sweet. Water table is at 70 feet. Forty years before it was at 25 feet now it has gone down. We are unaware of the aquifer situation in the ground. Any brackish water may take place of this sweet water. During the last 30 years it has gone down more than 25 feet. Depletion of water table is more than one foot per year. There are in all more than 40 tube wells in operation in one village. These tube wells run round the clock, only then we are able to cultivate our land. Almost all tube wells are electric operated with 25 HP motors. These tube wells are at fixed electric tariff @ Rs 9000 per month. So all tube wells are working for 24 hours a day. There is absolutely no water in two outlets for the last 25 years. Only four squares of land owners near tail are paying water charges while others are not paying because they went on strike and demolished their outlets and then government did not claim any water charges. Main crops grown are cotton, sugarcane, wheat. No water transaction because all tube wells are installed on cooperative basis. There are various tribes living all together like Kithran, Pathan, Jat, and Arian etc..

In all three outlets; one of Chak No. 270 and two outlets of Chak No. 268 did not receive any water since long. Actually we are in much crisis. Increasing costs for pumping water (electricity and diesel) and fear of saline water which may take place of fresh water if we go on pumping the ground water. Reasons for these problems are injustice in distribution of canal water, political interference, non responsiveness to broken canal banks, improper management and increase in corruption in irrigation department.

Participants of the meeting requested that lining should be started from tail to upstream so that water should first reach at tail ends. Farmers said the distributary should be covered near the head reach so that no stealing could be practiced through pipes etc. They also agreed to take over the management and create farmers organizations. They were in the opinion that they were already working on the same pattern as they were having joint tube wells. All agreed on the flat fixed water charges on the basis of time allocated to the land.

Meeting No 11

Date	12.11.1996	Time	1300 hrs
Distributary	Pir Mahal	Minor	Pir Mahal
Location	Middle	Chak No.	660/1

Farming families are 350, non-farming families are 300. Maximum land holding is 2 squares, minimum land holding is 0.5 acre and dominant group hold 3-4 acres per family. Water table is at 40 feet. On the North of the village water table is at 55 feet. Water table is going down 2 to 3 feet every year. CCA is 65 squares. No. of tube wells are around 80 while 8 are driven by small peter engines. 8 tube wells are electric driven. Tube well water is not sold. During summer tube wells are operated 4 to 5 days per week. In winter 2 days per week. Water is mixed with canal water because ground water is not suitable by it self. Drinking water is pumped through hand pump. Sugar mill (near our village) have evaporation ponds and drains its water there. Which also percolate and giving problem to drinking water. Our distributary remains closed one week per month. There is no set pattern for its closure. Irrigation department does not listen us. We complained many times but in vain. Irrigation department gives water to rich villages who gives them money. If you check the distributary of a politician who is also minister, it is running continuously and there is no closure any time. Please line the distributary and take over the management.

All the participants agreed with the farmers management and flat rate per acre water charges.

Meeting No 12

Date	12.11.1996	Time	1430 hrs
Distributary	Pir Mahal	Minor	Junejwala
Location	Tail	Chak No.	674/15,675/15,672/15

	674/15	675/15	672/15
CCA	55-60 Sq.	70 Sq.	56 Sq.
Outlets	3	3	2
Public Tubewell	2	6	2
Private Tubewell	50	100	+100
Farming families	400	250	450
Non-farming families	200	50	150
Water Quality	Not good	Brackish	Not good

Our ground water is saline and can only be used by mixing with canal water. If we use it alone in case of peak demand then it damages the soil. However, for survival we are using it alone for wheat and other salt tolerant crops as no canal water is available. Thus our normal cropping pattern is wheat-rice-wheat. Drinking water is obtained from hand pumps. Water table is at 25 feet and is going at the rate of 2 ft per year. Currently 10 squares of land out of 70 squares is saline. We are trying to reclaim with Kallar Grass and with the use of gypsum. Gypsum is expensive and even not easily available as only MNAs are enjoying the distribution monopoly. Politicians have their Quota and they only use then selves. This is all because Government has given subsidy on the gypsum that is the reason it is not available to poor farmers. We did not received canal water for the last six month in this minor. We are regularly paying double water charges for SCARP tube wells and of canal water. SCARP tube wells are also not working even.

Political pressures and influential farmer increase the sizes of their outlets. This is happening for the last 30 years. Earlier we were getting full water. We propose that distributaries should be so designed that tail reaches should also get water. The outlets should be refitted proportionate to land being cultivated. Tail distributary up to 10 km should be lined silt should be cleared physically and not on papers. One watercourse has been lined. There should be no rotation of closure at distributary level. To implement this you will have to verify the physically growing gardens and their authorized water. You must check the distributaries giving water to MNAs and MPAs, you will see those will be running whole the year. Three years have passed we have not irrigated our fields with canal water. We wish head regulator should be our man. It is pity we have to give money to the head regulator (Pansal) to get our own water. Who ever is getting water charges should also desilt the distributaries. We believe if watercourses are lined water can reach to the fields.

Discussion was then started and farmers were very much glade and asked for training to carry on effective management. Farmers agreed on flat fixed water charges and its collection.

Lower Jehlum Canal

Meeting No 13

Date	16.11.1996	Time	1200 hrs
Distributary	Kirana	Minor	Kirana
Location	Head	Chak No.	22/SB

This distributary was formed in 1904. No. of outlets 3. Total C.C.A is 60 squares. Farming families are 200, mostly absentee farmers. Landless families are 500. No. of public tube wells, 3 but all out of order and not working. Private tube wells are about 10. Ground water is sweet. Tube wells are run along with the farmer's water turn. 50 minutes to 34 minutes per acre is the timing authorized as water turn. Water is not sold because they can easily steal water from the distribution by siphon at night with the consent of the irrigation department. Many agitations have been done but no body takes notice. So much so that the farmers have started using pipes at day time. Which results into acute shortage at the tail reach. I have personally complained to the XEN against such flagrant breaches of canal act but no action was taken. Our outlet was broken to the extent that there was a danger of breach but despite our request no action was taken and we had to close the breach our selves. Water table is at 25 to 45 feet depending upon the rains. Scarp tube wells were meant for argumnetal irrigation as intensity has increased. It is clear if we are not getting enough water we will brake the outlets. There should be same punishment for all defaulters. Rich farmers are free to do any thing they want but you would also ask the poor farmer for his minor fault. If you are going to line the distributary fix the outlets at a level that water should reach to the tail also and water should be accurately distributed. Irrigation department will not be able to manage the distributary. Department official can not stop corruption. They are very much obliged by politicians. Some one else should take over the management. Why do not Japan takes it over. We have learnt that Japanese are honest and hard worker. You can your self verify that now trees have started to dry. We have shortage of water. We do not want to breach the canal if proper system is there.

After a lengthy discussion farmers agreed on the formation of water users associations and creation of farmers organizations at distributary level. They also supported flat and fixed water charges per acre.

Meeting No 14

Date	16.11.1996	Time	1400 hrs
Distributary	Kirana	Minor	Kirana
Location	Middle	Chak No.	90/S11

No of outlets, 3. Farmer families, 270, non farming families, 250. Total land (CCA), 60 squares. Maximum land holding, 25 acres, minimum land holding, 1 acre and dominant group is of 5 acres per family. Ground water is saline. Private tube wells, 12. These tube well are run during the months of June and July. There were 34 Scarp tube well installed some where long ago. Now two are operative only. Scarp tube well were for drainage purposes. Ground water table is at 5 feet and during rainy season it comes up. When scarp tube wells were in operation it had gone by 4 to 5 ft. Some where the water table has risen back. In area where the ground water is high the water is not required most of the year. Yet the department blames us for breaking the outlets in periods when we do not even require the water. We want that arrangement for drainage may be done and we may be given our right and authorized share of water. Surface drainage will be more suitable along with lining of the distributary. Would you please clarify that those farmers who have sanctioned and allocated water for gardens but they have no gardens at present what would happen to them.

After listening the whole story farmers were asked to put up the solution for the above mentioned problems. Discussion were then started and farmers took a great deal of interest in the discussion. They unanimously declared that due to the such injustices (as described by farmers above) in our system they would like to take over the management. Lot of discussion was carried out on fixed water charges. Lastly it was approved by the farmers that water charges should be flat and fixed per acre according to time allocation to an acre rather on crop grown on that acre.

Meeting No 15

Date	17.11.1996	Time	0900 hrs
Distributary	Hujjan	Minor	Jaspal
Location	Tail	Chak No.	16/SB,15/SB, 14/SB

	14/SB, 15/SB	16/SB	
Farmer families	150	100	100
Non-farmer families	400	300	300
CCA	30	55	60
Private tube wells	40	20	20
minimum land holding	3 squares	2 squares	7 squares
Average land holding	10 acres	12 acres	7-8 acres
Sub soil water	saline	Saline	Saline
Water table	20	20	20
Outlet	5	4	3
Good soil (per cent)	60	80	85.

Tube wells are operated in peak demand period. Tube well is used by mixing with canal water. Tube well is not transition because of the bad quality. Soil classification depends upon water availability. The land started deteriorating since 20 years because of non availability of water. Crop yields are also decreasing since 20 years because of non availability of water.

Reasons for shortage of water are: canals are not maintained, and not de-silted. Farmers at head reach are playing with distributary. We are doing the cleaning of our distributaries, but because of no technical knowledge we can not do it properly. Distributary and minors have reduced in capacity. The water is stolen in head reaches by breaking outlets, using siphons and putting mud down stream of outlets and making buffallows stand which also damages the Distributary. The solution is to line the canal and provide cattle ponds. In Chak 16, out of total CCA of 65 squares. Most of the area (55 squares) is under gardens. There should be no allowance for gardens.

During discussion farmers agreed if distributary is lined and water starts reaching at tails they were willing to take over the management. They also agreed for fixed flat rate of water charges.

Meeting No 16

Date	17.11.1996	Time	1200 hrs
Distributary	Hujjan	Minor	Kot Momen
Location	Middle	Chak No.	Kot Raja

Old settlement. Farmer families, 1800. Non farming families, 1000. C.C.A, 260 squares. Maximum land holding, 2 squares. Minimum land holding, 0.5 acres. Average group holds 5 acres. Public tube wells, 12 (but are out of order only two are operational). Private tube wells 7. All private tube wells are operational. Private tube wells do not sell water. Ground water is sweet. Farmers have dug bores holes and operate with tractor when needed. Water table is at 25 ft. Outlets are 18. It takes 2.5 hours to give single irrigation to wheat field with tube well water which costs about Rs 1000 with out the capital cost of tractor. Soil is very good. We also need our authorize share of water from the distributary. This distributary have been filled with silt and can not take authorize discharge of water. Whenever needed we desilt the distributary. Department of irrigation is just enjoying salaries and tour allowances. If we can manage our farm and other machinery why we can not handle this distributary.

This was made clear if any farmer owns his land on more than one outlets he would cast his vote for more than one time. Farmer told it is better if we are linked with Agriculture department as it is docile department and has good relations with farmers. They only requested that water should be equitably distributed. Finally agreed for all points; farmers management and flat fixed water charges.

Meeting No 17

Date	17.11.1996	Time	1600 hrs
Distributary	Hujjan	Minor	Hujjan
Location	Head	Chak No.	Hujjan

Farmer families approximately, 3500 and non-farming families, 2500. Total population is approximately 30,000. Total area/CCA, not sure of statistics. Outlets from hujjan distributary are 7. From another minor 4. Maximum holding 4 squares. Minimum land holding, 1 acre while average holding per family are 4 acres. Land of two watercourses have been waterlogged. The existing drain is not working. Water table is at 20-30 ft. Management of water distribution is bad. Officials take money and interfere with the outlets. Beldars are not working on the banks of the distributary, farmers pay an amount of Rs 10 to 15 thousand per outlet to get sufficient water. Though we are at head of the distributary but we also feel problem to get water. No body is taking care of the water losses. This water is water logging our soil. We need some one should be responsible for this. we do pay regularly water charges.

They agreed with the proposal. In the first instance they preferred Deputy Commissioner as a linkage between farmers organization and the government. Later they thought that Agriculture department may serve the purpose. However, elections should be for two years only. It is better if Japanese lined the distributary. There should be a mettle road along the distributary.

Meeting No 18

Date	18.11.1996	Time	0800 hrs
Distributary	Dherma	Minor	Dherma
Location	Tall	Chak No.	68/NB

This was the same distributary that was visited in phase I study and the farmers had stated that they will inform later about their decision. They were now stated that they are not prepared to take over the management of the distributary nor they need any lining. They are getting more than their share of water and are afraid of its reduction during lining. Reconstruction of distributary may affect their present availability adversely. Obviously it will be brought to authorized share of water. They therefore do not want their Distributary to be lined.

Meeting No 19

Date	18.11.1996	Time	0930 hrs
Distributary	Pindi	Minor	Pindi
Location	Tall	Chak No.	84/NB

Outlets 3. Total C.C.A 57 squares. Farmer families 100, non-farmer families 450. Private tube wells 12, Ground water is saline and could only be used by mixing with canal water.

Drinking water is used between 25-35 feet depth. At this level water is tolerable. Maximum land holding is 3 squares, minimum land holding is 2 acres and average land holding is 6 acres per family. Population of the village is about 5000. Water is very short, canal banks are in bad condition, water is normally stolen by the head reach farmers. Irrigation department does not give full discharge as this will breach the distributary. Beldars are working in the Bungalows of the officers. In summer the animals are made to water and they block the distributary. More over animals damage the banks also. If the distributary is lined and proper outlets are fixed this will automatically increase our water. If this distributary is again given to irrigation department, this would not be good for poor farmers because they will again break the outlets.

After discussion it was agreed that this is a small distributary. They agreed to take over the management. Farmers also draw team's attention to a point that it should be in the law that irrigation department would be bound to sign the water supply agreement after every two years. Farmers were afraid of the thing if department refused to give water after two years. Flat water charges concept was also agreed.

Meeting No 20

Date	18.11.1996	Time	1300 hrs
Distributary	Kirana	Minor	Malkana
Location	Tail	Chak No.	104/SB

Outlets 20, C.C.A, 70 squares. Farmer families 286, non-farmer Families 200. No public tube wells. Population 8000. Private tube wells 8. Tube well water is used at the time of peak demand and mixed with canal water. Water table is at 25 feet below ground level. Ground water is saline. Drinking water is managed by farmers and supply is carried out by using small pumps in comparatively good quality ground water area and bringing water through pipes to town. Maximum land holding 1 square, minimum land holding 1 acre, and average land holding in this village is 4 acres per family. Irrigation water from canal (distributary) is not available. We are doing dry farming mostly. We have very few and small gardens. The water is stolen by head reach farmers. At absolute tails 2 acres per square intensity from canal water is cultivated. Per season intensity is 16%. We had been receiving enough water supply till 1971. Some of watercourses are lined. Currently animals are also damaging the distributary. Our distributary was closed for about 22 days due to a breach some where in the middle of the distributary near Chak 97/SB. The outlets are always broken with the consent of irrigation department. We have legally complained against such thefts but non has been punished. Believe us some times poor farmer comes back with out water and canal supply would only moist the watercourse. All scarp tube wells have been removed and their operators are still on roll and getting salaries.

Discussion on solution was carried out and all farmers were in the opinion that minor should be lined and given to them, they could take care of. However, in the light of their eagerness to take the management the farmers management concept was discussed which was approved. Flat rate of water charges were also approved by the farmers who attended meeting. Farmers did ask about the audit and other supervisory committee. They were told about proper audit by Government body and linking the FOs with any Government department or authority for smooth running.

CENTRAL BARI-DOAB CANAL

Meeting No 22

Date	25.11.1996	Time	0900 hrs
Distributary	Thamman	Minor	Thamman
Location	Head	Chak No.	Sirhali Khurd

Total no of houses in the village are about 300. Farming families 200. Non-farming families 100. C.C.A 1600 acres. Public tube wells None. Private tube wells one only. It is used sparingly by mixing with canal water. Depth to water table is 5 feet but not suitable for drinking public tube wells around the village is sweet below 500 ft. The ground up to 45 ft below ground level is to be able for drinking but becomes very saline there after up to 500 depth. Maximum land holding is 4 square. Minimum land holding is 4-5 acres. Dominant group falls in the land holding of 10 acres per family. The canal banks are in very bad condition. The canal at full supply results in to breaches. Outlet No. 28851 R has never got water since last 2 years. We have 7 outlets but some of them irrigate other village land also. On a question that additional water will result in to further water logging. They informed that water logging is due to breaches in canal and affected area is only near the canal. Lining will reduce this water logging and save our land. There is a public drain on the boarder of their village but duo to lack of maintenance the drain has filled up completely and now the drain is only 1 foot deep. There is therefore, no possibility of draining our land through our own efforts as there is no disposal drain further. In case of initiation of digging of small field drains by our villagers and putting the water into main drain can reduce water logging. Farmers answered that we can do this but till the other village do not do the same and main drain is not desilted or made properly we can not drain our water. The conditions started deteriorating after 1970. We would like to request that you (Japan) should line the distributaries. Department can not line this at all. We believe that what ever budget will be given to them they will construct 1/10th portion of the distributary. Our distributary also closed a day in a week. Irrigation department officials also break the canal and also fine the farmers. Our authorize water is 290 cosec but this distributary can not take up this much water. Only half of it is running due to silting in the distributary.

Farmers were asked, what would happen if water charges collected would become less than the actual money irrigation department is spending on the maintenance of distributaries?. They answered that we would like to pay conditionally, the amount was spent on us. They further added, if we can spend Rs 50,000 on installation of tube well to get water, why we would not like to pay the same to irrigation department to get canal water?.

All farmers attended meeting voted for farmers management of the distributaries and minors. They also agreed to form WUAs and FOs to handle the water distribution and maintenance of the distributaries. They also welcomed flat rate of water charges on the basis of time allocated to irrigate a field instead what crop is planted as is done currently.

Meeting No 23

Date	25.11.1996	Time	1200 hrs
Distributary	Thamman	Minor	Seharan
Location	Middle	Chak No.	Thea Roosa

Farmer families 400. Non-farming families 10. C.C.A 750 acres. No public tube well. Private tube well 25-26 but not working because of saline water. Water table 10 feet below ground level. Maximum land holding 20 acres. Minimum 2 acres. Average land holding 10 acres per family. Outlets 2. Drinking water through hand pumps but water is saline. Water supply in the canal (distributary) is very less and the level of minor is lower than the ground level because of perpetual distributary. The head watercourse farmers are drawing more water. Distributary banks are weck and can not tolerate authorized discharge. We want a

separate minor from the main canal. The M.N.A of this area is being elected for the last 40 years and benefiting to him self and his friends at our cost. He has increased their out lets.

The upper reaches farmers make their cattle sit in the canal for hours and hours which results breach the canal. Some line department officials intentionally break the distributary and even arrange to fine us. They breach Distributary near the drain and water goes into drain. Some farmers have installed their private tube wells on the drain they make use of this water and in return give money to the irrigation department official. Present intensity is 50 per cent while it was 100 per cent earlier. Now what would you like to be done for you? or increase water. They replied: line the distributary; improve out lets according to authorized discharge; make buffalo baths; work should be 100 per cent with private company; we want our share only and that is possible if the distributary is restored to its authorized capacity.

They were asked that after lining & improvement of the distributary which institution would be appropriate to manage the Distributary. After improvement the irrigation department or any contractor. Both the possibilities were discussed fully with their pros and cons. Later they said village committee from tail farmers should be formed to inspect the water distribution. Question asked was, there could be clash between head and tail farmers. After arguing the all then farmers asked, "please give us a good proposal". Team explained the proposal. They agreed to the proposal and accepted the responsibility to take over the management. However, they said, "irrigation department should not be the attached department at all". They proposed agriculture department as link between farmers organizations and the government/irrigation department. They continued talking against influential farmers and M.P.As and M.N.As.

Meeting No 24

Date	25.11.1996	Time	1500 hrs
Distributary	Chhina	Minor	Kaley
Location	Tail	Chak No.	Kaley Uttar

No of outlets 4+ including outlets from another minor (Juye). No. of farming families 200. Non-land owner families 200. Total land in this village 3500 acres. C.C.A 1700 acres. No public Tube well. Private tube well electric driven 1. Tube wells tractor driven 60 to 70. During summer only dry farming is done for the last four years as no water has reached to this tail. But we pay abiana (water charges) regularly. We are using saline water which is ruining our fields. Maximum land holding 200 acres, minimum land holding 1 acre and dominant group holds about 10 acres per family. Drinking water by hand pumps installed on the areas with a little better water at a distance of about 1 to 1.5 km. Ground water table is 30 feet below ground level. Despite there is enough water available at the head of distributary but our minor is not getting its authorized share of water. We do not receive our share because head reach farmers break the outlets with the connect and prior permission of the irrigation department. Basically our politicians are responsible for all this injustice.

What is the solution then? Farmers answered: minor should be lined; new outlets installed with out increasing the water in this minor should be closed; the upper reaches farmer have obtained water for non C.C.A area, that should be finished; there are three out lets of Thamman minor have been attached to this minor should be closed; Size of each outlet should be fixed corresponding to the area under to be irrigated; If new outlets are to be installed, water should be increased in the distributary accordingly; buffallows should not be allowed to go into the minor; out let be steel lined and design should be of well type; monopoly of the pansal (head regulator) should be stopped.

Farmers collectively agreed for taking over the management of distributary and minors. Farmers also proposed that Planning & Development Department (P&D) to be the controlling agency and the intermediary between Farmers Organizations and the Irrigation Department.

Meeting No 25

Date	26.11.1996	Time	0900 hrs
Distributary	Chinna	Minor	Chinna
Location	Head	Chak No.	Matta

No of outlets 7. Farmer house holds 1100 and Non farming house holds 600. C.C.A of the village 5000 acres. No public tube well. Private tube wells 25. Tube well water is sold @ Rs 25 per hour. One acre can be irrigated in 3 hours. Maximum holding of a family 2 squares. Minimum holding of a family is 1 acre. Dominant group falls in the category of 5 acres per family land holding. Drinking water from hand pump & water is saline. Ground water table 3 to 5 feet. 50 per cent area is water logged. Drainage is required. The standing water is due to breach of canal/distributary at upstream an also due to rain water. Though we have 50 per cent area under water logged and we do not need for the same area but we are not allowed to utilize the same water for our other areas. Because complete CCA of two outlets is water logged and water share is not allowed to be utilized through other outlets. The distributary can not take its normal share because of its low banks. Farmers also told the team that now a days there is full anarchy, outlets are broken, canals are breached, farmers have removed bricks from outlets and have increased the sizes, bed of the canal has gone down thus we are getting less water. We suggest distributaries should be lined, watercourses also be lined, improve outlets and increase water share because of new land attached to it.

After listening the farmers they were asked, suppose all is done what you say who will then assure for its sustainability. They collectively replied, we shall manage and will look after. They also favored fixed flat rate water charges. .

Meeting No 26

Date	26.11.1996	Time	1200 hrs
Distributary	Chinna	Minor	Chinna
Location	Middle	Chak No.	Chinna Uttar

No of outlets 3. Farming families houses 800. Non farming families house holds 400. C.C.A 72 squares. No public tube well. No private tube well. Water table is at 80 ft below ground level. Ground water is saline. Maximum land holding of a family 50 acres. Lowest land held by a family is 1 acre and dominant group holds approximately 5 acres per family. Drinking water is from hand pumps and are only managing to accept it for drinking. This water is not suitable for irrigation. Irrigation water is less & irregular. The crops are drying because of no water. Our wheat planting is getting late for want of water. This all is because of breaking of out lets at head reaches and by influential person. Low banks and no maintain by irrigation department. We have only 30% cropping intensity. We sow oil seed & wheat under rainfed conditions during winter and millets in summer. On 19th July or August, there was a breach in the distributary and was not repaired by the department till 25th. After all the farmers repaired it and the bill of repair must have been pocketed by the department. Some times back there were a lot of trees all along the canal but now all have been cut down and sold illegally either by the officials of the department or by influential farmers in collaboration with the department officials..

How to improve the systems? question was asked. They proposed, transfer the management to the villagers according to the outlets of each village. Later the farmer management concept was made clear to them they agreed to organize them selves around watercourse as water users associations (WUAs) and at distributary level form farmers organizations (FOs)

effective management of the two respectively. They also agreed with the flat and fixed water charges per acre and collection would be carried out by chairman of WUA.

EXTRAORDINARY ISSUE

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THE PUNJAB GAZETTE

PUBLISHED BY AUTHORITY

LAHORE THURSDAY MAY 29, 1997

GOVERNMENT OF THE PUNJAB
LAW & PARLIMENTARY AFFAIRS DEPARTMENT

NOTIFICATION

29th May, 1997

No. Legis:3(XX)/97 - The following Ordinance promulgated by the Governer of the Punjab is hereby published for general information:-

THE PUNJAB IRRIGATION AND DRAINAGE AUTHORITY ORDINANCE 1997
PUNJAB ORDINANCE NO. XX OF 1997

AN
ORDINANCE

to provide for the establishment of the Punjab Irrigation and Drainage Authority.

Preamble.- WHEREAS it is expedient to establish the Punjab Irrigation and Drainage Authority to implement the strategy of the Government of Punjab for streamlining the Irrigation and Drainage System; to replace the existing administrative set up and procedures with more responsive, efficient and transparent arrangements to achieve economical and effective operation and maintenance of the irrigation, drainage and flood control system in the Province; to make the irrigation and drainage network sustainable on a long-term basis and introduce participation of benefiniaries in the operation and management thereof;

AND WHEREAS the Provincial Assembly of the Punjab is not in session and the Government of the Punjab is satisfied that circumstances exist which render immediate action necessary:

NOW, THEREFORE, in exercise of the powers conferred on him under Article 128 of the Constitution, the Government of the Punjab is pleased to promulgated the following Ordinance:-

1. Short title and commencement. - (1) This Ordinance may be called the Punjab Irrigation and Drainage Authority Ordinance 1997.

(2) It shall come into force at once and shall be deemed to have taken effect on the day the Punjab Irrigation and Drainage Authority Ordinance, 1997 (VI of 1997) stands repealed under Article 128 (2) of the Constitution.

2. Constitution of the Authority. - (1) There shall be established an Authority to be known as the Punjab Irrigation and Drainage Authority.

(2) The Authority shall be a body corporate having perpetual succession and a common seal with power to acquire, hold and dispose of property and shall by the said name sue and be sued.

3. Composition of the Authority. - The Authority shall consist of such number of members one out of whom shall be its Chairman as may be notified by the Government.

4. Board of Management. - (1) Subject to the control and guidance of the Authority the management of the affairs of the Authority shall be carried out by the Board of Management appointed by the Authority with the prior approval of the government and comprising a Managing Director and three General Managers.

(2) The Managing Director and the General Managers shall have technical background and practical experience in the profession relevant to their job description.

5. Power and duties of the Authority. - The Authority shall have the following powers and duties:

(1) To receive irrigation supplies at the barrages falling within the province and from the inter-provincial or link canals and deliver the same in agreed quantities to the various water users and Area Water Boards in the Province.

(2) To ensure conveyance of drainage effluent to the outfall in co-ordination with Area Water Boards and Farmers Organizations as the case may be.

(3) To exercise all the powers under the Canal and Drainage Act 1873, the Soil Reclamation Act 1952 and any other law for the time being in force relating to the subject matter of these Acts.

(4) To fix the rates in consultation with the Government for the supply of irrigation water and of the drainage excess payable for the disposal of the drainage effluent.

(5) To levy appropriate surcharge for late payments and recover arrears from defaulters under the Land Revenue Act provided that in case the Government declares a remission, waiver, re-scheduling or suspension of payment of any of the dues of the Authority, the same shall be debited to the account of the Government who shall simultaneously notify how the Authority shall be compensated for the loss thereby caused to the Authority of any other entity established under this ordinance.

(6) To formulate and implement policies in the water resources sector with a view to continuously improve and achieve effective, economical and efficient utilization, preservation and improvement of such water resources by the water users of the Province on a sustainable basis.

(7) To formulate and implement policy guidelines and procedures for the proper and efficient exercise of powers available under this Ordinance by the various entities and their directors and employees and to prescribe training requirements and programs which may be conducted by the various entities under this Ordinance in this behalf.

(8) To conduct any inquiries and hear any complaints and adjudicate on any dispute or differences of opinion between the Authority and different entities established under this Ordinance and any individual and the said entities in accordance with the principles of natural justice relevant thereto and to faithfully and punctually implement such decisions as per letter and spirit thereof.

(9) To prescribe and adhere to the procedures for the filing of documentation regarding water allocation in the Province and all concessions, licenses and leases granted by any entity under this Ordinance and to ensure availability thereof to the general public for inspection and taking of copies thereof.

(10) To establish criteria and procedures for granting, modifying, reassigning, renewing, suspending or revoking any concessions, licenses, subleases granted by the Authority to any other entity or person and for the management of the infrastructure in the event of suspension or revocation of a concession, license or sublease.

(11) To operate and maintain the irrigation tubewells, drainage, storage reservoirs and flood control infrastructure in the Province including hill torrent control and development works for irrigation of adjoining lands including watershed management practices in catchment areas.

(12) To plan, design, construct and improve the irrigation, drainage, storage reservoirs and flood control system with a view to ensure optimal utilization of the water resources of the Province on an equitable and efficient basis.

(13) To maintain all relevant and necessary records, registers and data banks as may be relevant or necessary for the effective performance of any or all of its powers and duties.

(14) To issue such directions and take all such steps as may reasonably be necessary for the prevention and removal of encroachments and unauthorized construction along or on the properties of the Authority.

(15) To prescribe rates, fees and other charges to be payable in respect of various types of services which the Authority may be required to render or provide under this Ordinance.

(16) To operate and maintain the equipment, machinery and stores of the Authority effectively, efficiently and in a business like manner.

(17) To undertake anti-erosion operations including conservation of forests and reforestation and with a view to achieve this purpose, to restrict or prohibit by general or special order the clearing or breaking up of land in the catchment areas of any rivers, hill torrents and/or other streams.

(18) To undertake any work, incur any expenditure, procure machinery, plant and stores required for use by the Authority and to negotiate, execute adopt and ratify all such contracts as may be considered necessary or expedient.

(19) To acquire, dispose of any land, property or machinery or equipment or any other interest in or regarding any land or property.

(20) To direct that any work required to be earned out by a person in connection with training of rivers, hill torrents and any other streams or undertaking of anti-erosion measures including conservation of forests and reforestation but remaining undone shall, after reasonable notice to such person and due consideration of any objections raised by him in this regard be undertaken by the authority and determine the cost to be borne by such person or after notice and due enquiry by any other person who may be held by the Authority to be liable for the same.

(21) To utilise the Authority Fund to meet the cost and expenses incurred on account of and in connection with the due performance of the various functions of the Authority under this ordinance including the payment of salaries and other remunerations to the management and employees of the Authority.

(22) To formulate, implement and continuously review and improve the policies and procedures relevant to the management of finances and maintenance of the accounts of the Authority as well as for the inventory and assets valuation and disposal and for the recruitment promotion, retirement (upon attainment of age of superannuation or otherwise) and earlier conclusion of employment of the employees of the Authority.

(23) To formulate financial policies aimed at ensuring that the finances of the Authority are managed in a consistent, conservative and diligent manner as to protect its assets including providing for their maintenance and periodic replacement as necessary, preserve its capital and reserves, and promptly service its debts and obligations.

(24) To formulate, adopt and implement policies aimed at promoting, formation, growth and development of Area Water Boards, Farmers Organizations and compilation and faithful monitoring of the results thereof as per the requirements prescribed under this ordinance and to ensure orderly and systematic induction thereof into the operations of the Authority.

(25) To prepare or cause to be prepared and regularly update or cause to be updated Staffing, Operational and Financial Plans.

(26) To prepare and implement policies with a view to ensure that the staffing levels within the Authority and other entities under this Ordinance conform with the corresponding levels indicated in the Staffing, Operational and Financial Plans prepared and updated as above.

(27) To formulate and implement policies with a view to ensure that the Authority and other entities as the case may be under this ordinance become fully operative as self supporting and financially self sustaining entities to the extent of full recovery of O&M cost of canals and subsidiary drains within a period of 7 to 10 years.

(28) To formulate, implement and regularly update policies, studies and research programmes with a view to development and management of water resources, solve and eliminate and prevent water logging and salinity, and to develop irrigated agriculture in the Province.

(29) To conduct studies with a view to regularly analyze and evaluate the impact of the operations and policies of the Authority on the ecology and environment within the Province with a view to establish the various available options for the minimization of the adverse impact of such operations and policies, if any, and to adopt the optimal options for further action.

(30) To coordinate and regulate the measures being undertaken or required to be undertaken in the Province for recording and gauging surface waters, monitoring of ground water table and quality

of water and the compilation of data relevant thereto and in this regard to establish and regularly maintain proper liaison with similar work being undertaken in other provinces.

(31) To cause studies, surveys, experiments, technical investigations and research to be conducted in connection with or regarding the functions and duties of the Authority or of any other entity under this Ordinance.

(32) To publish or cause to be published various policies, details, data and information relevant to the affairs of the Authority on a regular basis and to ensure reasonable access of the public to the same.

6. Right of entry.- (1) The Managing Director, or any other person authorized by him in writing, may, after reasonable prior notice to that effect, enter upon and survey any land, erect pillars for the determination of intended lines of work, make borings and excavations and do all other acts which may be necessary for the preparation and unplementation of any scheme under any provision of this Ordinance.

(2) If the affected land does not vest in the authority, the povver conferred by the above sub-section shall be exercised in such manner as to cause the least interference with and damage to such land and the rights of the owner thereof.

(3) When any person enters into or upon any land pursuant to sub-section (1) above, he shall, at the time of such entry or as soon thereafter as may be practicable but in no case later than 60 days from the date of such entry, pay or tender payment for all necessary damage likely to be caused on account of any operations proposed to be carried out or carried out under sub-section (1) above.

(4) In case of any dispute, the same shall be referred to the Collector/Deputy Commissioner of the district who shall decide the same within a maximum period of 60 days from the date of such reference.

7. Arrangement with local bodies or other agency.- (1) As soon as any scheme has been completed by the Authonty or at a later date, the Authority may arrange by a written agreement with a Local Body or other agency within whose jurisdiction any particular area covered by the scheme lies, to take over and maintain any of the works comprising such scheme in the said area.

(2) The Government shall have the power to direct the Authority to har-d over any scheme completed by the latter to any agency of the Government or a Local Body or take over such schemes completed by any agency.

(3) In any such case, the Authority shall be entitled to receive the expenditure incurred on such schemes.

8. Control over Provincial Water resources.- Subject to the Indus Water Treaty (1960) and Water Apportionment Accord (1991), the Authority shall have control over all the rivers, canals, drains, streams, hill torrents, public springs, natural lakes, reservoirs (except such reservoirs as are under the control of WAPDA) and underground water resources within the Province to give effect to schemes to be prepared under this Ordinance in relation to public purposes.

9. Appointment of officers, servants etc.- The Authority may employ such officers and servants or appoint such experts or consultants as it may consider necessary for the performance of its functions, on such terms and conditions as it may deem fit.

10. Delegation of powers to Managing Director etc.- The Authority may, by general or special order, delegate to the Managing Director, a Member of the Board of Management or officer or servant of the Authority any of its powers, duties or functions, under this Ordinance subject to such conditions as it may deem fit to impose.

11. Persons serving in the Provincial Irrigation and Power Department.- (1) All employees of the Irrigation Wing of the Provincial Irrigation and Power Department except such employees as may be specified by the government in this behalf shall, subject to any other provisions contained herein, on coming in force of this ordinance, become the employees of the Authority.

(2) Employees under sub-section (1) shall serve the Authority on such terms and conditions as may be prescribed by rules and regulations of the Authority but in any case not less favourable than their existing terms and conditions of service.

(3) The Authority shall, through adoption of policies of hiring freeze, reassignment, nonreplacement of employees retiring upon attainment of age of superannuation and providing incentives for early retirement, bring the number of its employees in conformity with the corresponding numbers indicated in the relevant Staffing, Operational and Financial Plans.

(4) The Government shall contribute to the pension, gratuity and final payment of provident fund of the employees of the Provincial Irrigation & Power Department who become the employees of the Authority under sub-section (1) as per the relevant Rules.

12. Authority Fund. - There shall be a fund to be known as the "Punjab Irrigation and Drainage Authority Fund" vested in the Authority to which shall be credited all sums received by the Authority.

13. Budget, audit and accounts. - (1) The budget of the Authority shall be approved and its accounts shall be maintained and audited in such manner as may be prescribed.

14. Establishment of Area Water Boards etc. - (1) The Government may establish Area Water Boards and Farmers Organizations and assign to them such functions as it may deem fit;

G) The Authority shall, within one year of its establishment devise and implement pilot programs, policies and take steps thereunder to ensure that an Area Water Board covering selected canal command and Farmers Organizations at the minor and distributary level are formed in a phased manner in accordance with the relevant Bye-Laws and Regulations framed by the Authority;

(3) The pilot Area Water Board and Farmers Organizations shall be vested with such functions and powers as would be required to enable them to become financially selfsustaining and self-sufficient to the extent of recovering complete O&M charges for maintaining canals and subsidiary drains within a maximum period of ten (10) years in the case of Area Water Board and seven (7) year for Farmers Organizations from the respective dates of their formation; and

(4) The process of setting up of further Area Water Boards and Farmers Organizations will depend upon the successful functioning of the pilot project.

15. Transfer of rights and liabilities. - Upon coming into force of this Ordinance all assets and liabilities and all rights and obligations of the Irrigation Wing of Provincial Irrigation and Power Department shall stand transferred to the Authority, on such terms and conditions particularly as regards use and disposal of the said assets as may be prescribed by the Government.

16. Rules. - The Government may, by notification, make rules for carrying out the purposes of this Ordinance.

17. Regulations. - The Authority may, by notification, make regulations not inconsistent with the provisions of this Ordinance and the rules made thereunder for the administration and management of the affairs of the Authority.

18. Removal of difficulties. - If any difficulty arises in giving effect to any of the provisions of this Ordinance the Government may make such orders, not inconsistent with the provisions of this Ordinance as may appear to it to be necessary for the purpose of removing the difficulty.

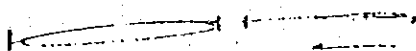
GOVERNOR OF THE PUNJAB

Dated, the 29th May 1997,
Lahore.

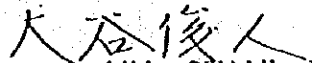
ALI NAWAZ CHOWHAN
Secretary to
Government of Punjab
Law & Parliamentary/Affairs
Department

MINUTES OF MEETING
OF
THE INTERIM REPORT
FOR
THE STUDY
ON
THE LINING OF DISTRIBUTARIES AND MINORS
IN
PUNJAB
IN
THE ISLAMIC REPUBLIC OF PAKISTAN

Lahore, October 15, 1996



Mr. Riaz Hussain Waraich
Secretary,
Irrigation and Power Department
Government of the Punjab



Mr. Toshihito OTANI
Team Leader,
JICA Study Team

Minutes of Meeting for Interim Report

1. Date and Time: October 14, 1996 (11:30 - 14:00) at Committee Room of Irrigation and Power Department
2. Attendants: See attached list.
3. Summary of Discussions:

The Study Team submitted 25 copies of Interim Report to GO Punjab on October 10, 1996. A meeting was chaired by the Secretary, PID to discuss the Interim Report. The Team presented a brief of Interim Report including priority projects, basic concept for canal lining and institutional development with attendance of Mr. Makoto KITANAKA, Deputy Director of Agricultural Development Study Division of JICA. Comments and suggestions made by the PID officials are as follows:

- (1) It was observed that para 3 of 3.4.5 gives the impression as if all the farmers in the system have complained of the informal payments. Since the Team may have met a limited number of farmers during their field survey the observation may be toned down to reflect the actual situation. It was suggested that instead of stating that "the farmers stated" it may be corrected as "the farmers (some) stated." The Team agreed to reflect this position in the final report.
- (2) It was suggested by PID that canal lining be basically made with concrete as membrane lining will be much costly. The Study Team was further requested to study advanced technology for quality control of concrete and its joints; for instance, by introducing mechanized methodology.
- (3) Although, at the stage of Interim Report, water charge is not presented, it is expected that water charge will be estimated in the final report in order to evaluate farm economy from viewpoint of farmers who will be benefited.
- (4) It was observed that the Interim Report accepts the dilemma of political interference in the inequitable distribution of water and O&M degeneration. Under these circumstances how it is expected that participatory approach of transfer of distributary to farmers will eliminate such interference. The Team responded that by transferring the distributary to the farmers, any interference from outside or from within will be directly infringing on the rights of the owners and shareholders and the farmers managing body will be directly answerable to them whose rights are infringed upon against the present system in which O&M operators are not responsible to the farmers.
- (5) It was agreed upon between PID and Study Team that minor changes in the priority channels selected would be made in the LJC System and the CBDC System since lining work for some minors in the former System is scheduled to be performed by PID, and minor modification of contouring of groundwater has been made in CBDC based on the recent information. It should be noted however that the total length of the channels in the respective Systems will not exceed the original length.

List of Participants

Date: 14, October 1996

No.	Name	Position	Organization/Institution
1	Mr. Riaz Hussain Waraich	Secretary	Irrigation and Power Deptt.
2	Mr. Ahmad Khan Malik	CE (Irrigation) Sargodha	Irrigation and Power Deptt.
3	Mr. ATA Mohammad Malik	CE (Irrigation) Lahore	Irrigation and Power Deptt.
4	Mr. Ehsanullah Sardar	C. E. Irrigation, Faisalabad	Irrigation and Power Deptt.
5	Mr. M. H. Siddiqi	Consultant	Irrigation and Power Deptt.
6	Mr. Zaka Ullah Bhatti	Superintending Engineer, LCC (E)	Irrigation and Power Deptt.
7	Mr. Sajjad H. Nasim	Superintending Engineer, LJC	Irrigation and Power Deptt.
8	Mr. Mohammad Waqar Khan	Superintending Engineer, DCC	Irrigation and Power Deptt.
9	Mr. Inayatullah Waraich	Superintending Engineer, LCC (W)	Irrigation and Power Deptt.
10	Shaikh Mohammad Akhtar	XEN Scarp, o/o CE (L)	Irrigation and Power Deptt.
11	Mr. Khadim Hussain	XEN Jhang Canals Division	Irrigation and Power Deptt.
12	Mr. Abdul Ali Sheikh	Deputy Secretary (Development)	Irrigation and Power Deptt.
13	Mr. Makoto Kitanaka	Dept. Director of Agriculture Study Div.	JICA Headquarter (Tokyo)
14	Mr. Toshifito Otani	Team Leader	JICA Study Team
15	Mr. Kenjiro Yatabe	Irrigation Engineer	JICA Study Team
16	Mr. Abdur Rahim Mahsud	Institution/Rural Community	JICA Study Team
17	Mr. Asoka Cooray	Environmentalist	JICA Study Team
18	Mr. Hideaki Higashino	O&M Expert	JICA Study Team
19	Mr. Koichi Yamamoto	Design/Cost Estimate	JICA Study Team
20	Mr. Yoshiniko Ogata	Agronomist	JICA Study Team

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