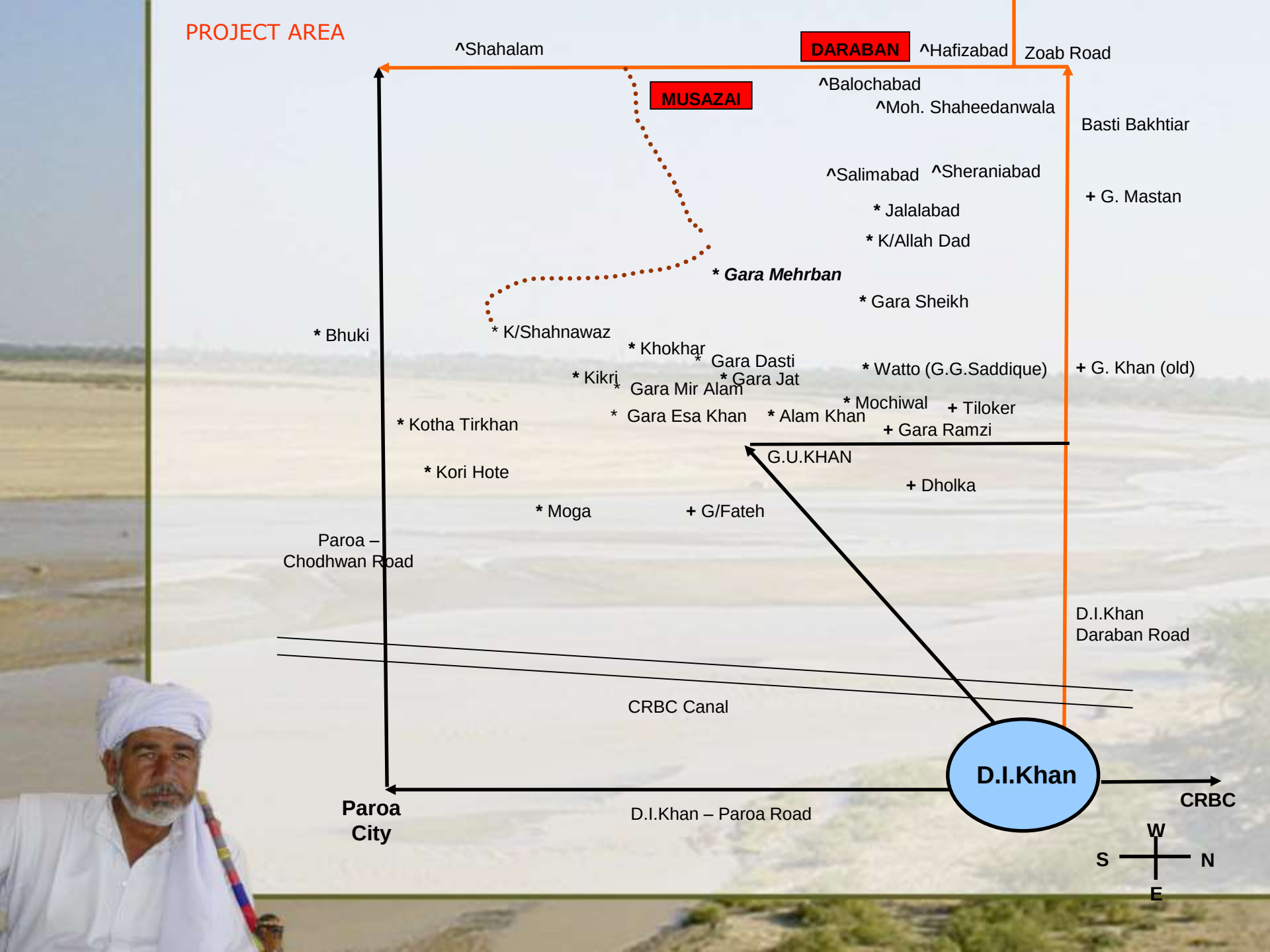
2.4

CASE STUDY:
DARABAN ZAM WUA (DI KHAN, PAKISTAN)


PROJECT AREA
^Shahalam
DARABAN
^Hafizabad
Zoab Road
^Balochabad
MUSAZAI
^Moh. Shaheedanwala
Basti Bakhtiar
^Salimabad
^Sheraniabad
+ G. Mastan
* Jalalabad
* K/Allah Dad
* Gara Mehrban
* Gara Sheikh
* K/Shahnawaz
* Bhuki
* Khokhar
* Gara Dasti
* Kikri
* Gara Jat
* Watto (G.G.Saddique)
+ G. Khan (old)
* Gara Mir Alam
* Mochiwal
+ Tiloker
* Gara Esa Khan
* Alam Khan
* Kotha Tirkhan
+ Gara Ramzi
G.U.KHAN
* Kori Hote
+ Dholka
* Moga
+ G/Fateh
Paroa –
Chodhwan Road
D.I.Khan
Daraban Road
CRBC Canal
D.I.Khan
CRBC
Paroa
City
D.I.Khan – Paroa Road
W
S
N
E

View of the selected ephemeral rivers (zams)

In DI Khan no permanent structures allowed that block the flow
All permanent structures need permission of AC Rod Kohi

Flood Irrigation

OBJECTIVES of WUA

- **To minimize the conflicts on water rights.**
- **To ensure judicious use of irrigation water through close coordination.**

Why WUA?

- Flood water availability decreases from upstream to down stream in Daraban Zam, farmers at downstream gets water two years out of ten.
- About 84% of the respondents mentioned that the amount flood water availability has decreased during the past ten years.
- The quality of surface as well as ground water is marginal.
- In project area 40 percent of the total respondents received rod-kohi water last year, while this year 90% got flood water.
- Due to limited water supply the cropping intensity is very low.

- The yield of crops downstream of the Rod is relatively low as compared to the upstream due to limited water availability.
- For perennial stream water management the organization set up is strong as compared to flood water management.
- In general there exits an informal water user's Association for management of flood water but has weaken with time especially at the downstream of the Rod due to unreliable flood water availability

- Average depth of flood water applied by farmers ranges from 40 to 80 cm, due to large and unleveled fields the depth of water is relatively more than required.
- Lands of the project area are not leveled with great variation among the fields.

- For perennial stream water management the organization set up is strong as compared to flood water management.
- About two-third of the respondents reported that water distribution laws are followed.
- Most of the respondents mentioned that the rod-kohi system should be improved.
- Sixty-one percent of total respondents replied that they attend regular WUAs meetings which shows that people in this part of project area are more keen to involve their selves in the system improvement and important decision-making regarding efficient usage.
- Hereditary tenants are responsible for maintenance – they are also in WUA

Support provided by local NGO

Posters showing the resolutions on responsibilities, construction and maintenance of bunds, forest planting, and livestock activities.

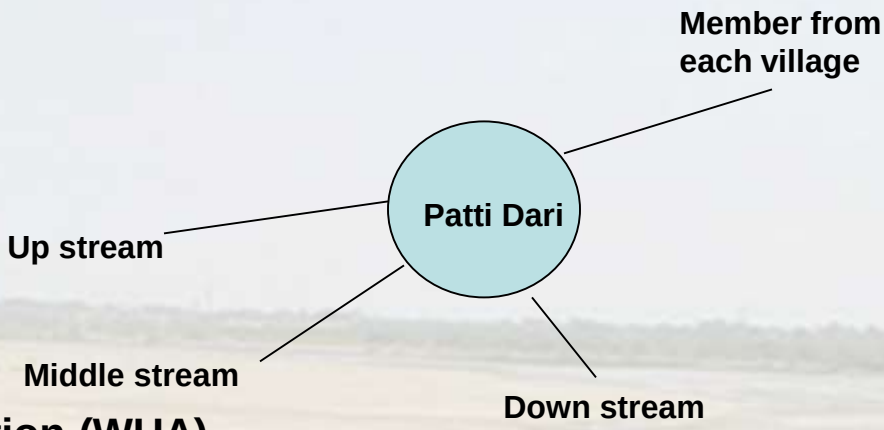
Local Traditional System

Patti Dari (Flood irrigation).

Gandi

Bund level

Stream level



Water User Association (WUA)

- ⇨ **Village organizations for each village is WUA at Gandi level.**
- ⇨ **3 members from each VOs become members of WUA at stream level.**

Executive Body

General Body – loose forum.

e.g.

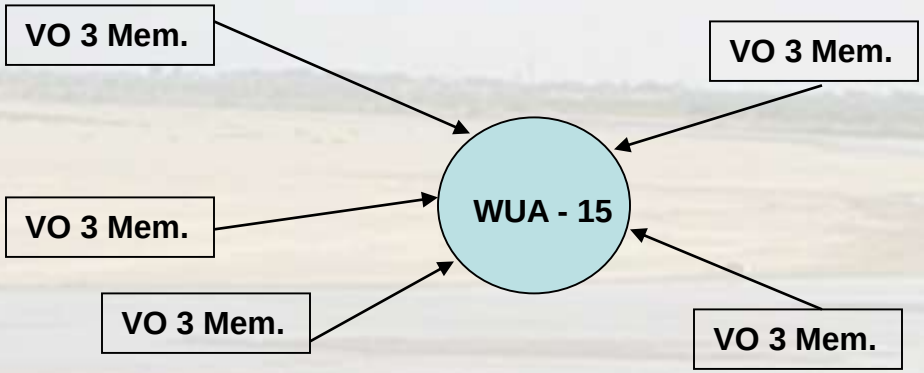
WUA Down stream

1. **Gandi Umer Khan**
2. **Ramzi**
3. **Dholka**
4. **Gara Mian Fateh**
5. **Mochiwal**

Different from Patti Dari – having 3 members from each village

5 VOs

- Total member in Executive Body = 45
- Total member in General Body = 125
- 3 Members from each VO for WUA = 15
- Total member of WUA (G.Body) = 110



WUA for Down Stream

Down stream total Bund/Gandi = 05

Some results

ACHIEVEMENTS

2 Gated structure at G.Ramzi & Mochiwal

10 Inlets at Mochiwal + Ramzi + Gandi Umer Khan

G. Ramzi 400 ha irrigated after physical investment of USD 10000

Mochiwal production value USD 200000 after investment USD 20000

Breakage of 4 bunds after irrigating their command area, through the coordination with middle stream WUA and VOs.

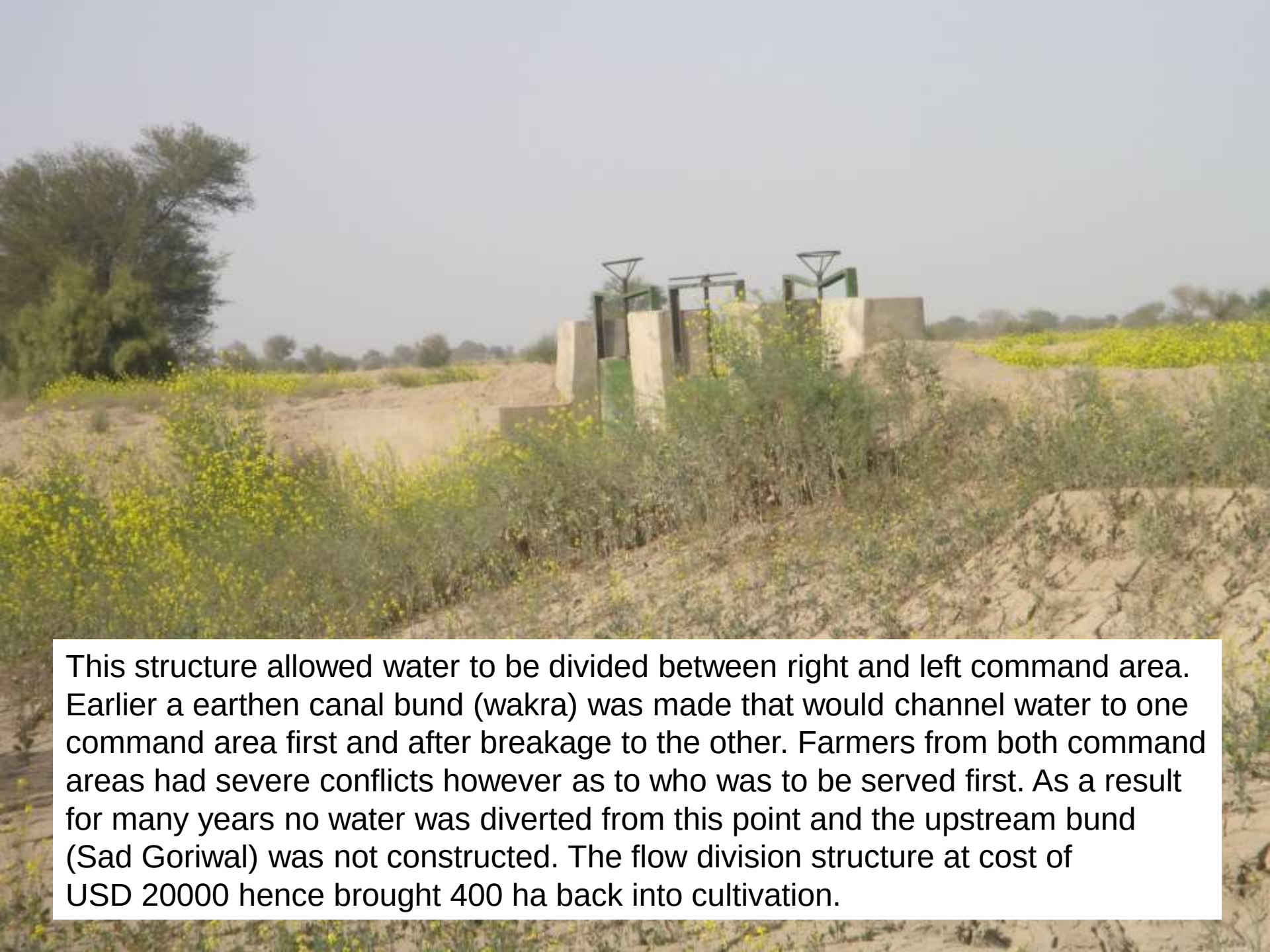
⇨ **Self initiative taken by WUA**

1. **Construction of Sad Ghorewal with the support of SAF by PLI with 60:40 ratio (60% by WUA).**
2. **Construction of Gatti Sarkar by WUA/VO itself.**
3. **Construction of Gatti Dholka by WUA/VO (Dholka) by itself.**
4. **Resolve conflicts regarding water rights issues.**

Sad Gorewal constructed at cost of USD 800, diverting and spreading water of Drabadam Zam to right.

This followed construction of flow division structure that solved a long standing water dispute

With this flow division structure also pressure was taken off the ‘sad’, preventing its early breakage



This structure allowed water to be divided between right and left command area. Earlier a earthen canal bund (wakra) was made that would channel water to one command area first and after breakage to the other. Farmers from both command areas had severe conflicts however as to who was to be served first. As a result for many years no water was diverted from this point and the upstream bund (Sad Goriwal) was not constructed. The flow division structure at cost of USD 20000 hence brought 400 ha back into cultivation.

Results sharing With farmers

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