Impact of Low cost Irrigation technologies on livelihood and women empowerment

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Context

• Impact of irrigation on the livelihood is obvious
• However impact of conventional irrigation schemes on the livelihood of poor and marginalized HHs is not so obvious
• Poor households lives at the margin of the settlements, in small numbers, making it difficult for the conventional schemes to reach them.
• Low cost irrigation technologies cater the irrigation need of marginalized households

Fig # 1 – A typical Village in western Nepal

Main settlement
Marginalized HHs
Low Cost Irrigation technologies

- Pond
- Jar
- MUS
- Barsha Pump
- Drip
- Sprinkle
How does it help?

- Fill the gaps left out by conventional irrigation schemes
- Increase water use efficiency – important in the water scare areas
- Sustainable – small and homogenous users
- Affordable to poor people – low cost, easy to adapt
<table>
<thead>
<tr>
<th>Description</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>0.5 Ropani</td>
<td>2.5 Ropani</td>
</tr>
<tr>
<td>Time spent on irrigation</td>
<td>3 hours</td>
<td>1 hour</td>
</tr>
<tr>
<td>Production</td>
<td>50 Kg</td>
<td>900kg</td>
</tr>
<tr>
<td>Income</td>
<td>Rs 5000</td>
<td>Rs 70,000</td>
</tr>
<tr>
<td>Change</td>
<td>Dependent on Husband</td>
<td>Own a plot of land and Support her husband</td>
</tr>
</tbody>
</table>
How does it help in women empowerment?

- **Directly linked to the income generation** – Cash crops/vegetable farming
- **Multiple use** - Irrigation, feeding cattle and sanitation
- **Closer to home** : Reduce drudgery, save time/energy, can attend other household chores simultaneously
- **Affordable and simple to operate**
Conclusion

• 21st Century defined by technological revolution
• However, benefit is lopsided
• Rich have more access to the technology
• Technological innovation are inclined to meet the desires of the rich then the needs of poor.
• Poor bear the brunt of negative consequences of indiscriminate use of technology
• Practical Action call it **Technology Injustice**
• Promote **Low cost Technologies** to reduce the injustice
• Micro irrigation are among the technologies which hold a lot of promise

More money is spent on balding care then Maleria
The Barsha Pump
• Max. Output head: 20 meters
• Max. Output flow: 40,000 liters/day
• Land that can be irrigated: up to 2 hectares
• Zero Emissions
• Zero Operating Costs
Demonstration in Nepal
Surkhet
Pump implemented by HVAP
Bheri River
Pumped Height: 16 metres
Output Flow rate: 22000 liters/day
Total Area Irrigated: 1 hectare
Total area that needs irrigation in the same cluster (>20 hectares)
Water also being used for drinking water by the community
Dukuchhap - Bagmati River

Replaces carrying water in buckets
Bajura- Thuli Bheri

Lifts to 19 metres
Pumps 800 metres far from canal
Run 5 micro sprinklers simultaneously
Scaling up the Technology

1st wave: Demonstration

2nd wave: Organizational Network

3rd wave: Localization & Expansion

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Thank you!
Video