

Recharge Ponds for Protection of Springs in the Mid-Hills of Nepal:

Experience from a pilot study in Kavre

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ICIMOD

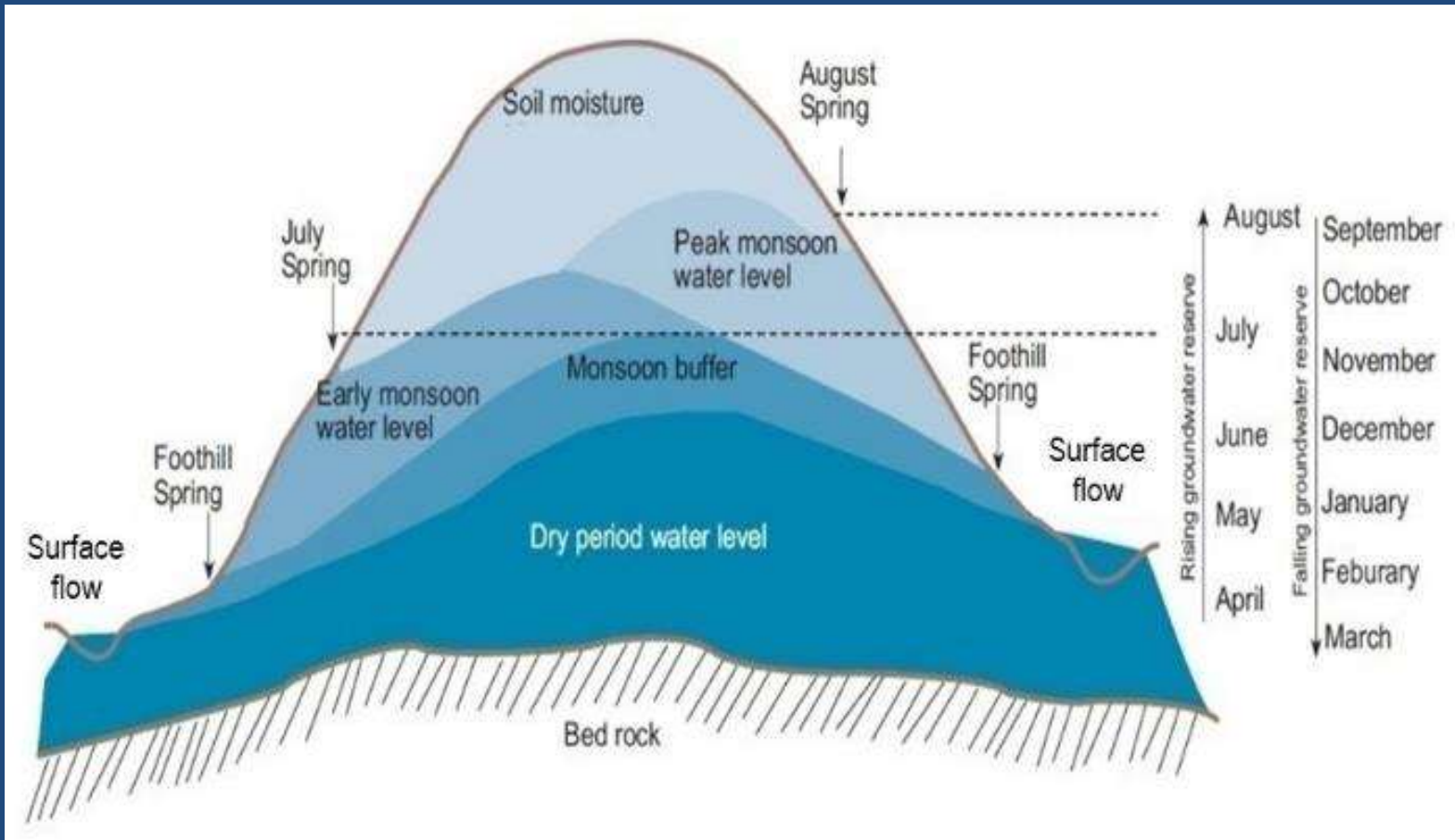
FOR MOUNTAINS AND PEOPLE





**Springs are the main source of
Water in the mid-hills**

But many springs are now drying up

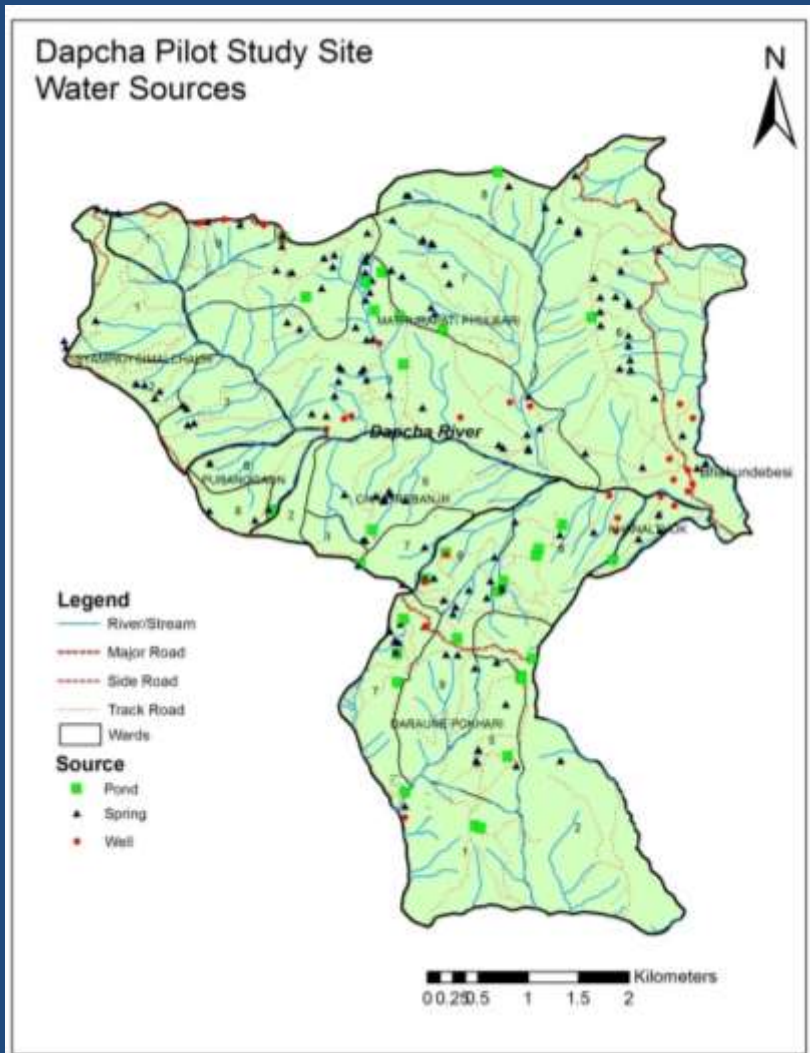


The concept of “Water Tower” helps understand the springs

Some springs are permanent and most are seasonal

Springs become active at different times depending on season and amount of rainfall

Water sources: Mapping the springs



Area – 25 Sq. Km.

Total Sources – 246

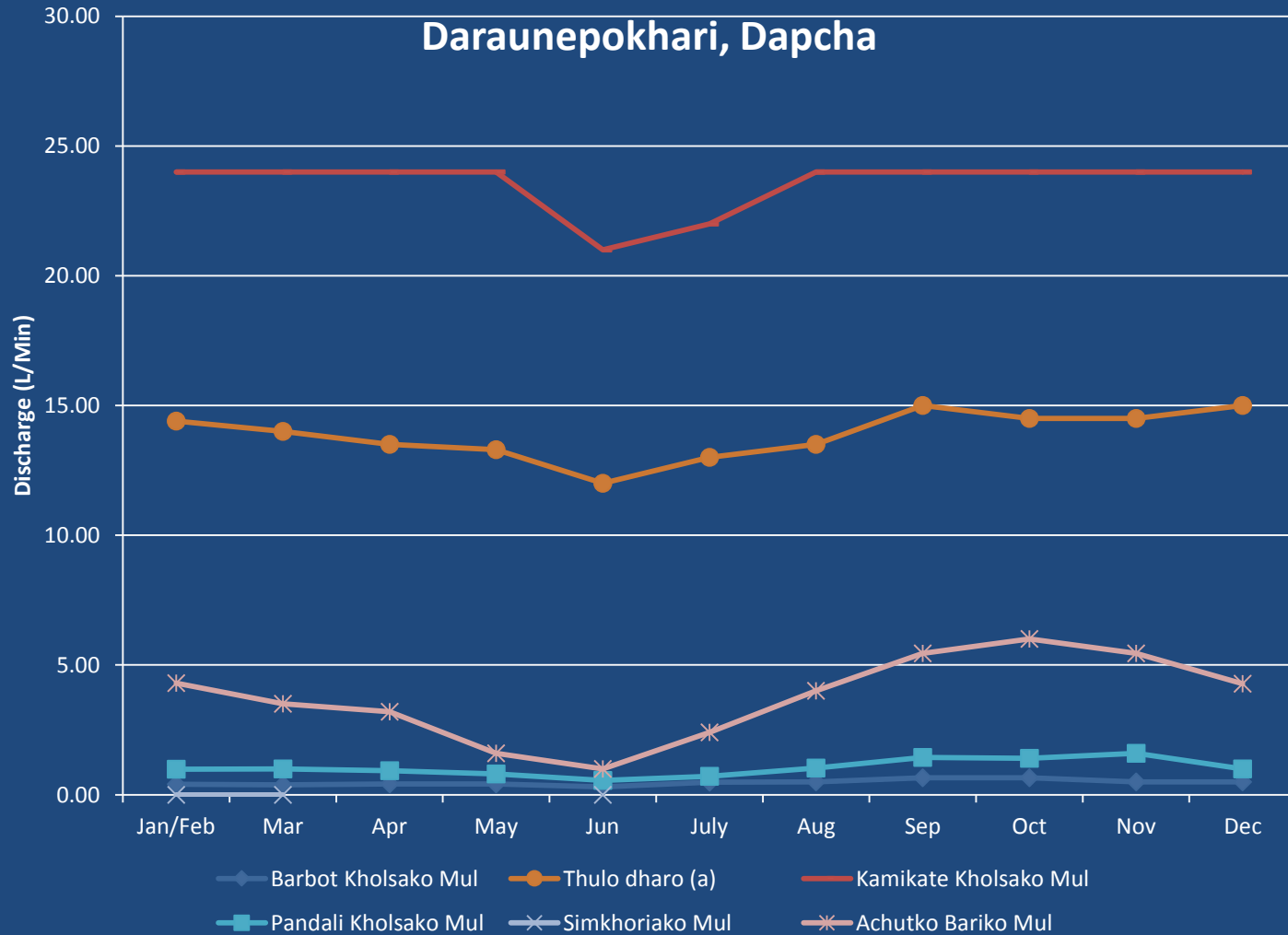
Springs – 174

Spring density – 7 per sq.km.

51 springs out of **174** – dried up
(29%)

19 ponds out of **24** – dried up

Discharge measurements of selected springs



Pond and Spring, Daraune Pokhari, Dapcha



Local participation in recharge pond construction



Recharge Ponds for Survival of Springs



Before

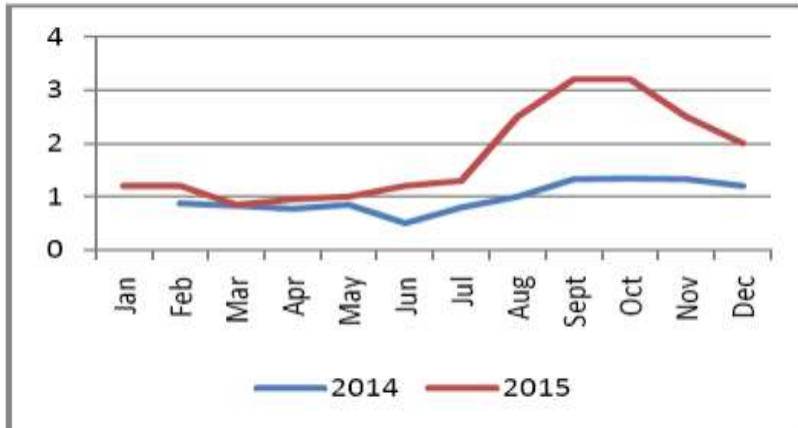


After

Comparison of Spring Discharge Measurements 2014 and 2015

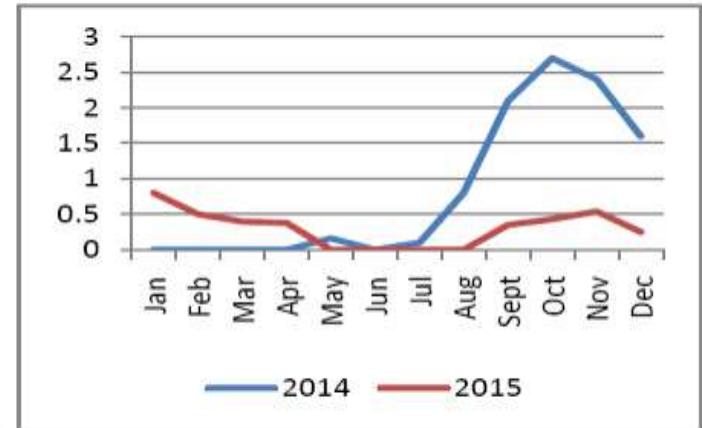
Mandane Kuwa, Tinpiple, Panchkhal

Spring discharge (lit/min)

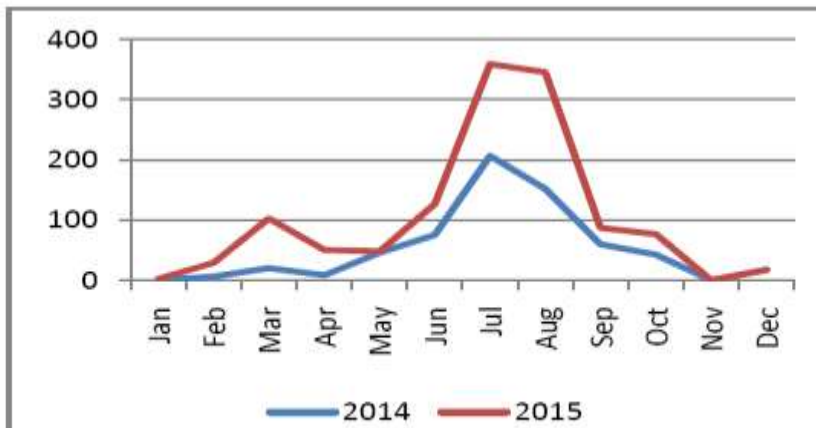


Jogipani Kuwa, Daraune Pokhari, Dapcha

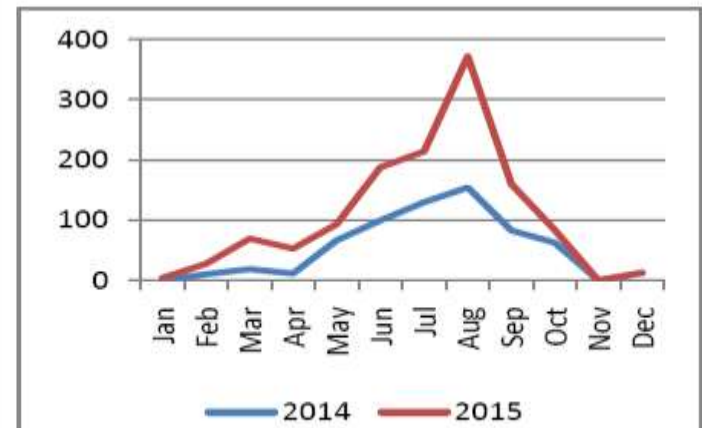
Spring discharge (lit/min)



Rainfall (mm)



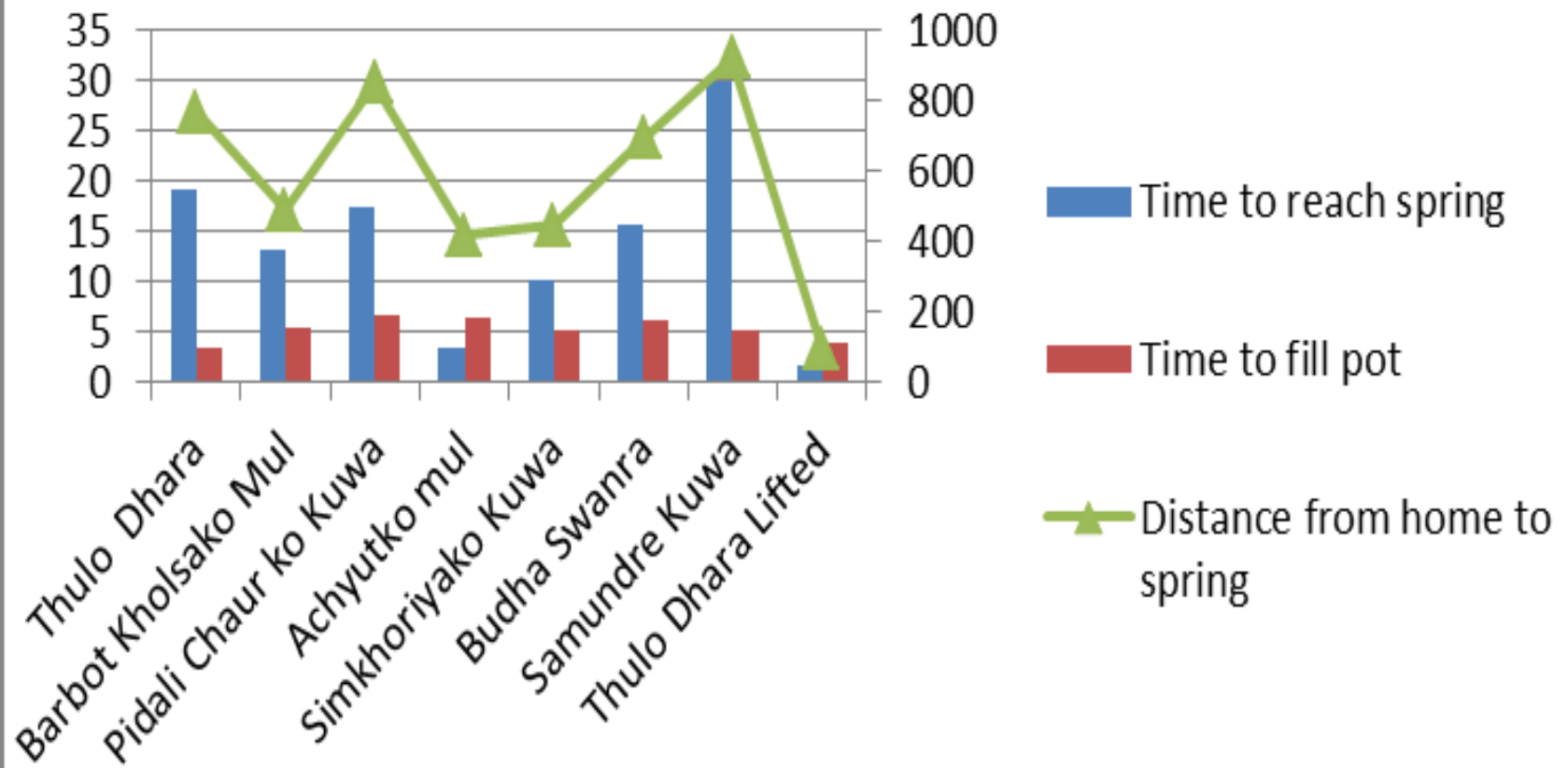
Rainfall (mm)



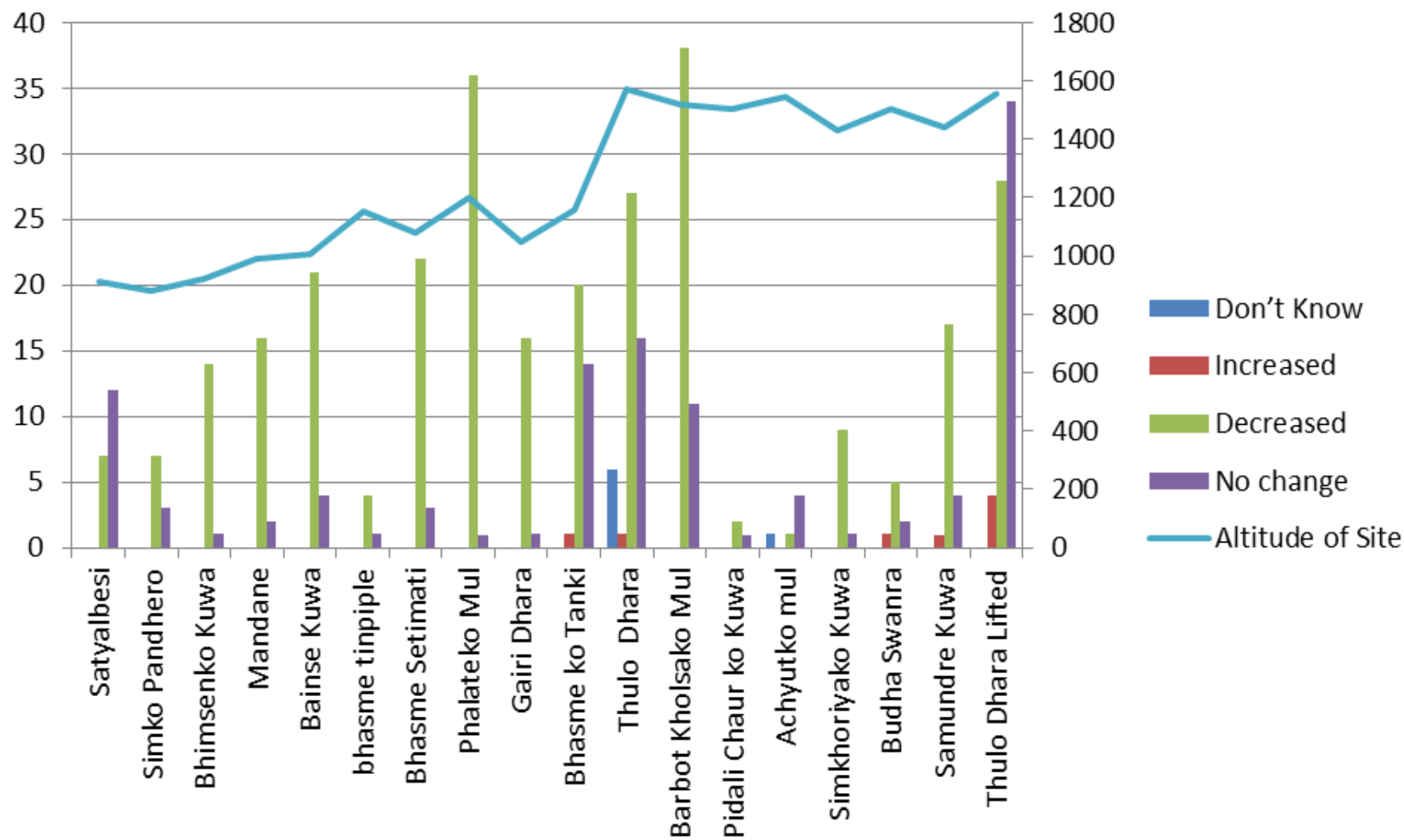
Social Survey and Gender Perspective

Dapcha

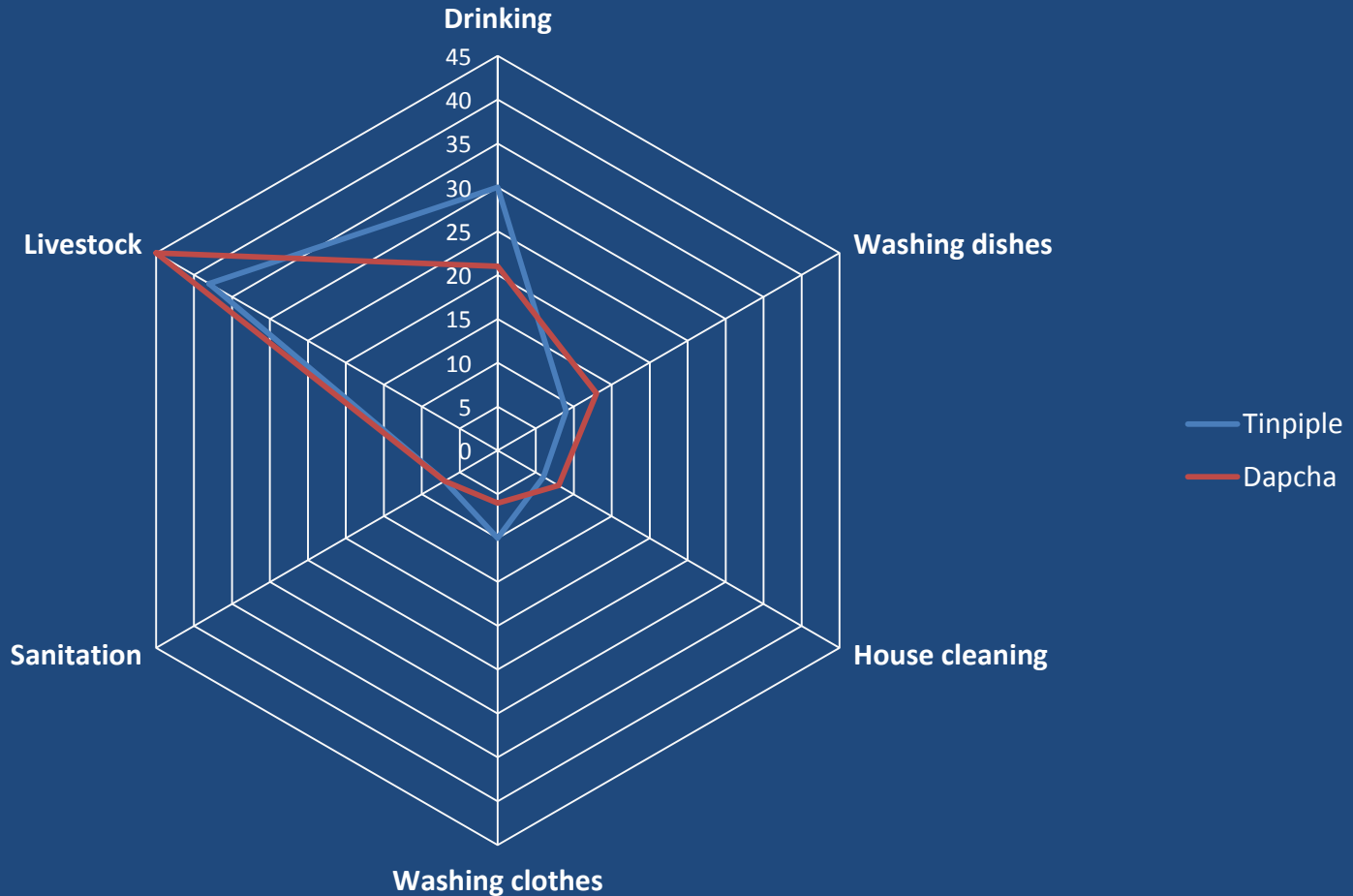
Distance and Time to Collect Water



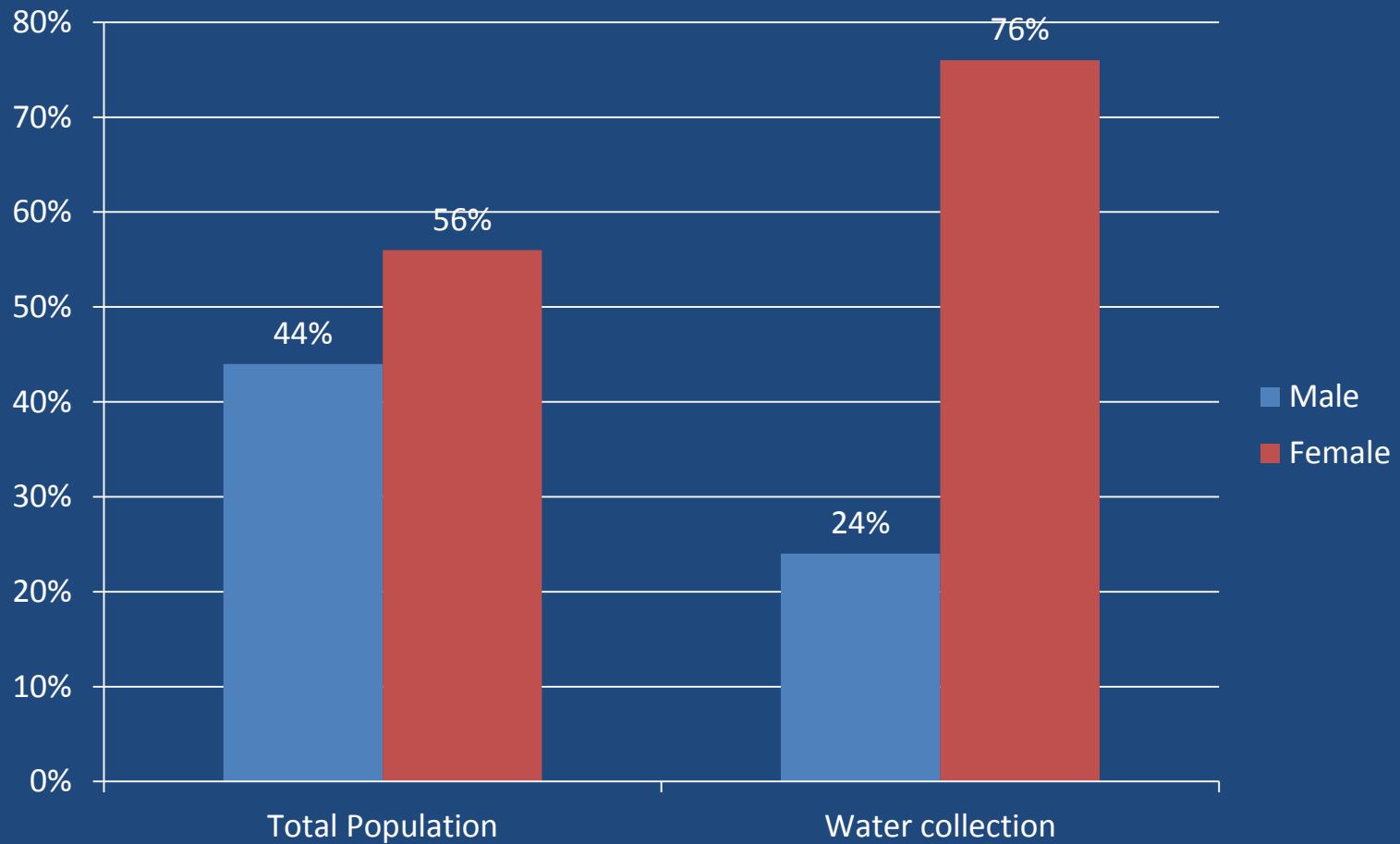
Tinpiple and Dapcha Perception of Water Volume Change



Purpose for which water is used



Male to Female Demographics in Daraune Pokhari, Dapcha: Total Vs Population engaged in water collection



Women's participation in project activities

Activity	Participation of women
FGD/KII	25%
Social survey of springs	75%
Labor contribution in recharge pond construction	>50%
Planning meeting at Bhakundebesi	30%
VDC/Municipality level planning	40 - 50%
Capacity building	30 - 45%
Training/Knowledge park visit	50%
Donors' visit/interaction	50%

What is being done ?

Awareness campaign:

Scaling up and scaling out the findings of the present study in 3 additional VDCs

Issue Brief

February 2015

Reviving the Drying Springs

Reinforcing Social Development and Economic Growth in the Midhills of Nepal

Why are springs important?

Hillside village life in Nepal, an elsewhere in the Hindu Kush Himalayas, is a daily struggle

Drying up

Neglect and leveling of ponds have directly contributed to the drying up of fresh water springs in Nepal's Mid Hills

BINOD SHARMA

Binod Sharma is a senior advisor at ICIMOD. He has worked on water resource management in Nepal for over 20 years. He is currently leading the 'Reviving the Drying Springs' project in the midhills of Nepal. He has a B.Sc. in Agriculture from Tribhuvan University, Nepal, and a Ph.D. in Water Resources from the University of Colorado, USA. He has published several papers on water resource management in Nepal and is a frequent speaker at international conferences.



The dried-up spring in the village of Dapcha, Nepal, is a stark reminder of the water scarcity that has become a daily reality for many hillside communities. The once-thriving spring, which once provided a vital source of fresh water for the local population, has now dried up completely. This is due to a combination of factors, including the leveling of ponds and the neglect of traditional water management practices. The drying up of springs has led to a significant increase in the cost of water for the local population, as they are now forced to travel long distances to collect water from distant sources. This has had a profound impact on the local economy and the quality of life of the community.

The drying up of springs is a serious problem that needs to be addressed urgently. It is not only a threat to the health and well-being of the local population, but it is also a major barrier to economic development and social progress. The ICIMOD project is working to address this problem by promoting sustainable water management practices and restoring traditional water management systems. This includes the construction of ponds, the protection of springs, and the promotion of water-saving technologies. The project is also working to raise awareness of the importance of water and to encourage the local population to take action to protect their water resources.

ICIMOD

FOR SUSTAINABLE AND RESILIENT

Highlights

- ICIMOD in partnership with the Nepal Water Conservation Foundation (NWCF) has worked with local communities to level ponds and protect springs. This has helped to restore traditional water management practices and improve water availability in local communities.
- The pilot project proved that traditional water management practices can be used to improve water availability in local communities.

Dapcha Pilot Study Site: VDCs and Wards

Legend

- Contour
- Water Stream
- Main Road
- Side Road
- Trail
- Ward Boundary

VDCs

- CHHATREBAH
- DARLAHE POKHARI
- KHANALTHOK
- BATHURAPATI PAULBARI
- PURMANGALI
- SYAMPATI SIMALCHOUR

0 0.250 5 1 1.5 2 Kilometers

Ongoing work

- Continuation of monitoring of springs
- Capacity building
- Collaboration with local FM radio station
- Inclusion of recharge ponds and spring protection activities in local development plans

Follow up and future activities

- Further work needed to fully understand the science of the springs
- Capacity building at the local level
- Dissemination of the knowledge through local media like FM station
- Collaboration with other institutions at operational level
- Inclusion of local water management in the local and national policies
- Scaling up and scaling out of the findings

THANK YOU