



**International
Water Resources
Association**

Global Youth-Led Action for Water

Youth for Water, the story of drinkPani in Nepal

Amrita Gautam

Civil Engg., PhD Researcher
TH Koeln, Germany/ drinkPani



drinkPani

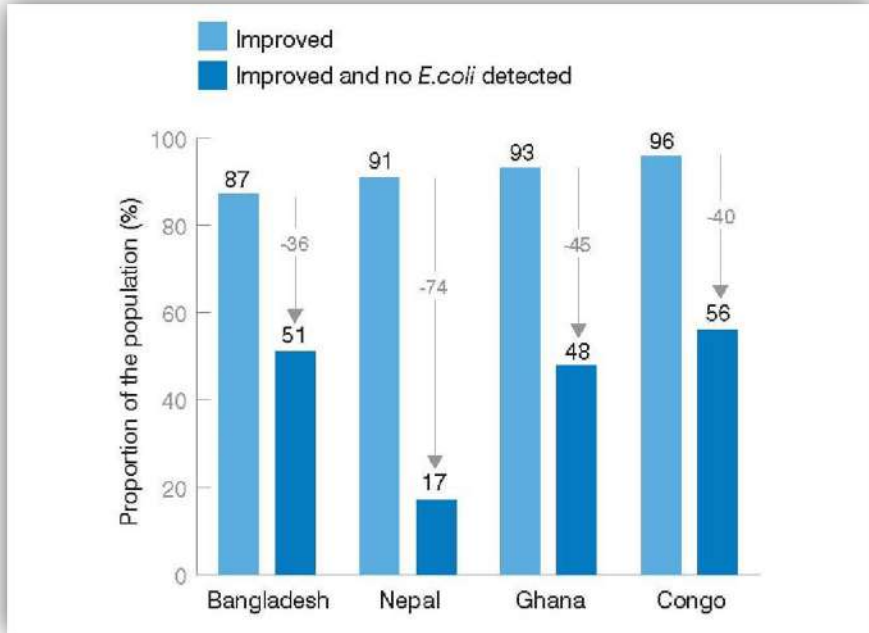


Janapriya drinkPani Club



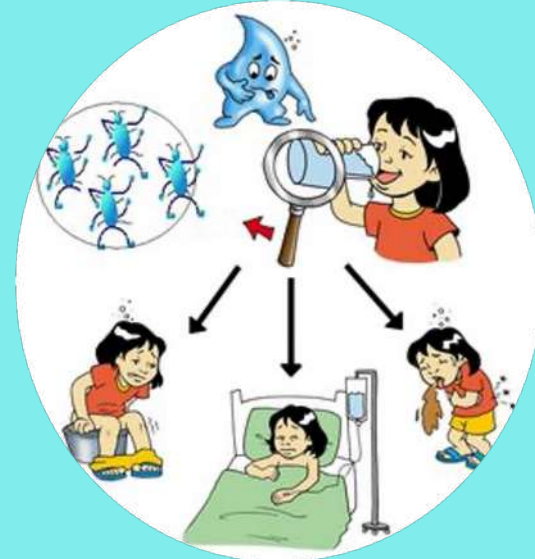
Gurukul drinkPani Club

Water and Public Health



Overview on proportion of the population using **improved source** and **case of E.coli detection**

(Source: Guardian 2018)



About **2.2 million people** die from **diarrhea** each year

90% - children, mostly in **developing countries**

Nepal - 44,000 children under the **age 5 die/year**

(Source: WHO, 2017)

Issues to Consider

Data Scarcity
Climate Risks

Adequate Manpower
Capacity Building

Shaping Future
Gender Perspectives

Questions?







Regulation in drinking water quality monitoring mechanism?

- *Youth at the centre of drinking water quality monitoring initiatives? Does it support ?*
- *Suitable Design? How about data accuracy-reliability and sustainability of the model?*
- *The knowledge of local women in this process?*

Location Map- Case Study Area



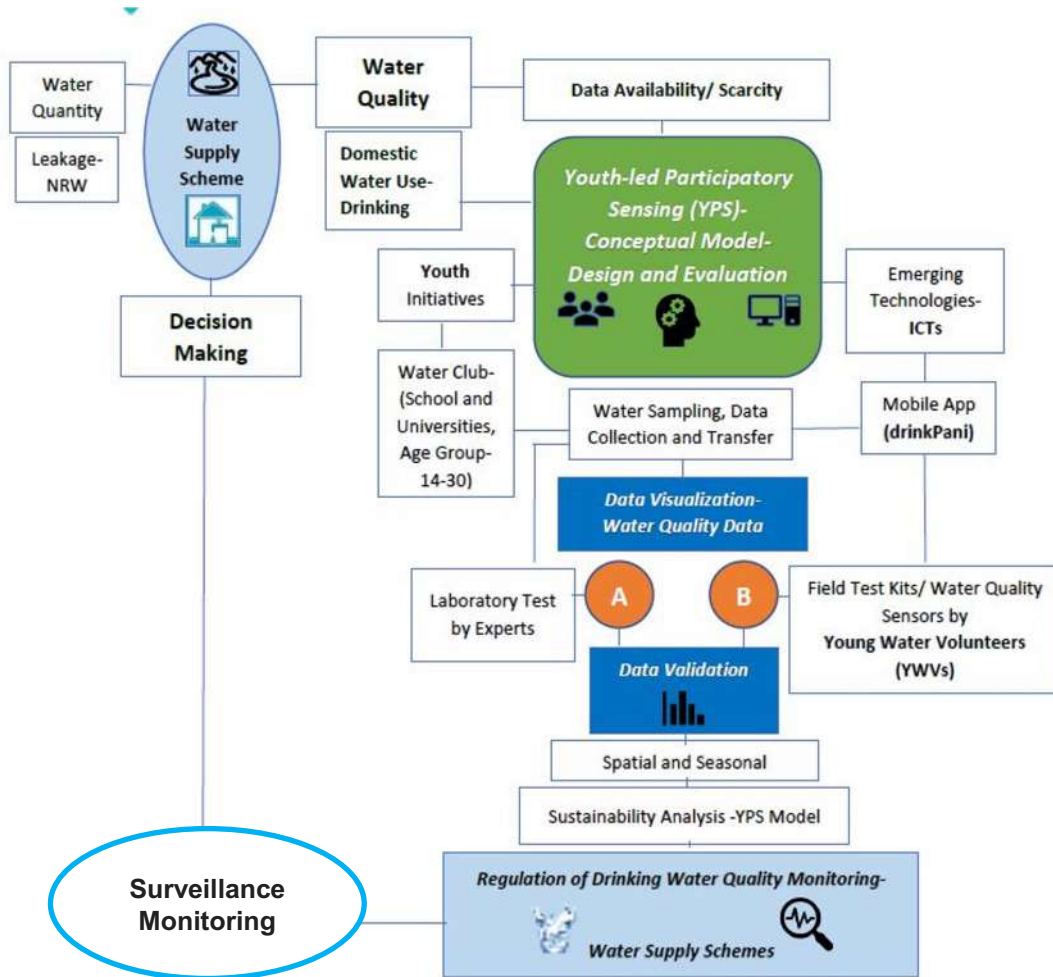
Legend

-  Pokhara_metropolitan
-  Kaski
-  Districts
-  Gandaki_zone
-  Development Regions
-  Nepal

Objective

“ Intends to bridge the gap between water utilities & communities in information flow on water supply and quality with Youth as key actors & ICTs as the main tool to navigate the path to reach policy makers for evidence-informed decision making”

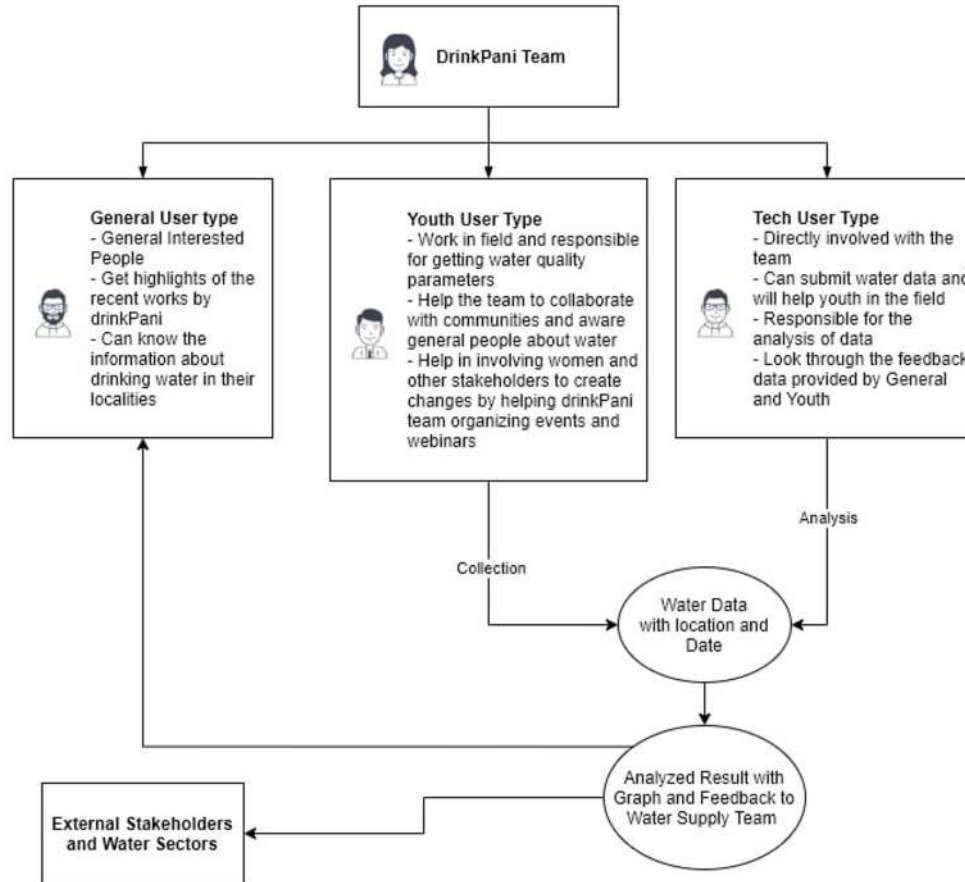
drinkPani : research based initiative



Methodological Approach

From supply system to decision making in a loop!

DrinkPani Team Responsibilities



Our Mobile App & the Website

Water works in the first line of defense to drive healthy living & drinkPani believes in Shaping Digital Water Future!

How well is
your
Water Health?

Help your community to be water wise.



Phone Number / Email

Password

Save login credentials

Create a free account

Already have an account?

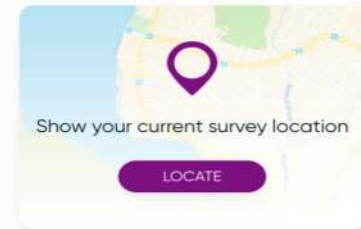
Log in

© drinkPani
Terms and Conditions

Data Collection

Status Parameters

Enter Survey Location Coordinates Manually

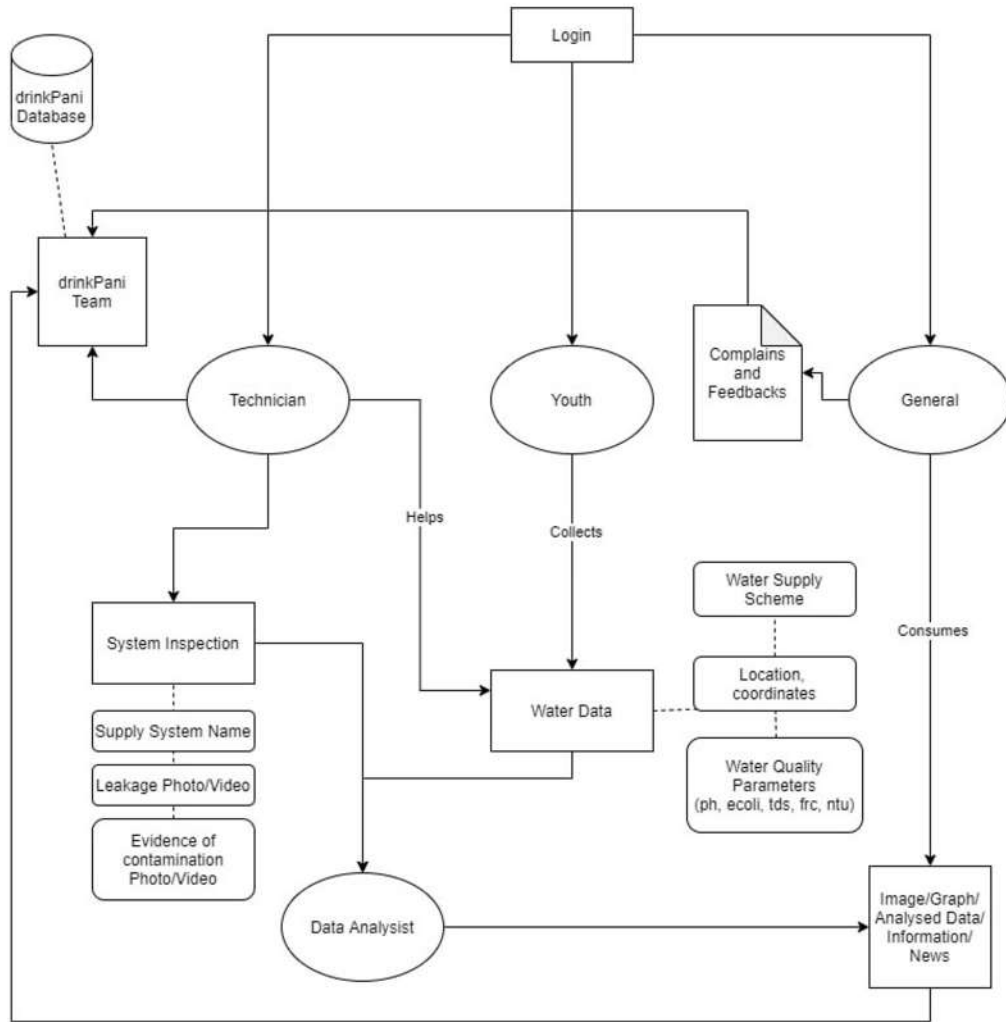


Water Supply Chain

eg. Nepal Water Supply Chain (NWSC)

Observation Parameters



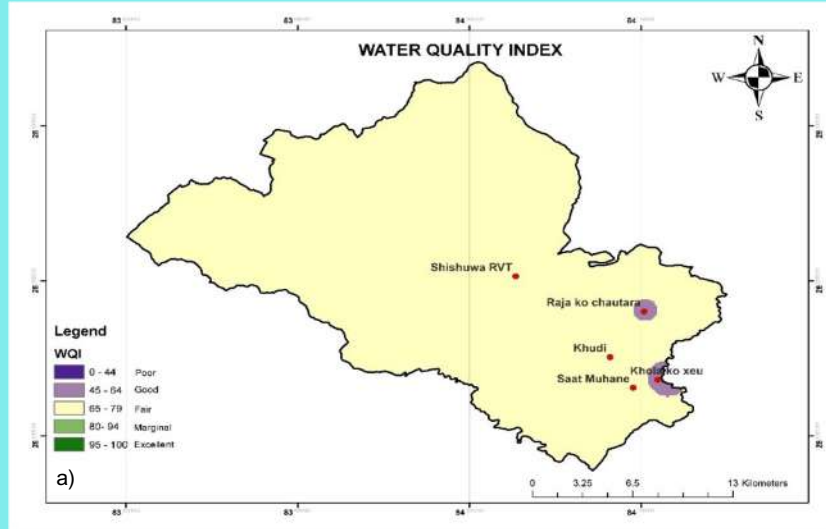


Initial Version Flow Diagram

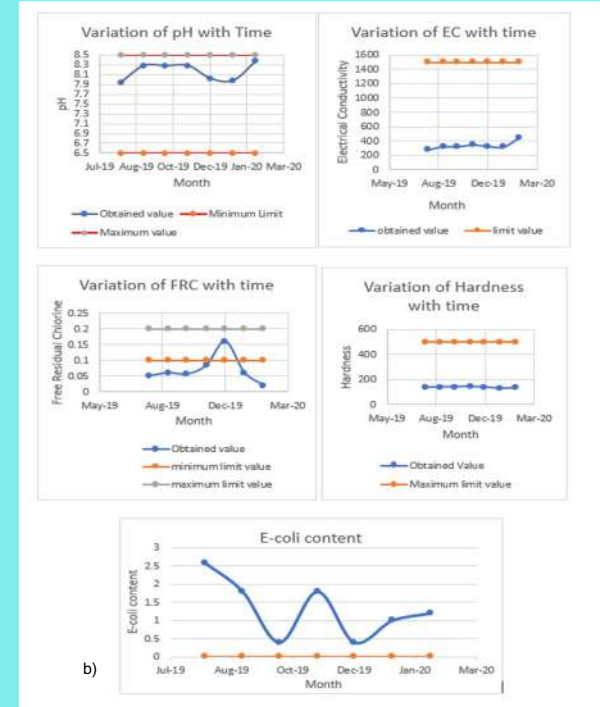


Some impression of field activities

A glimpse of initial findings



Variation of Water Quality Index in the Sisuwakhudi Area – Lekhnath Water Supply Scheme – one of the two selected water supply schemes of Pokhara Metropolitan City, Nepal



Graphs showing the temporal variation of PH, EC, FRC, Total Hardness and E-coli (CFU/100ml)



More impression of field activities
- Water Testing and Water Quality



Challenges & Way Forward!

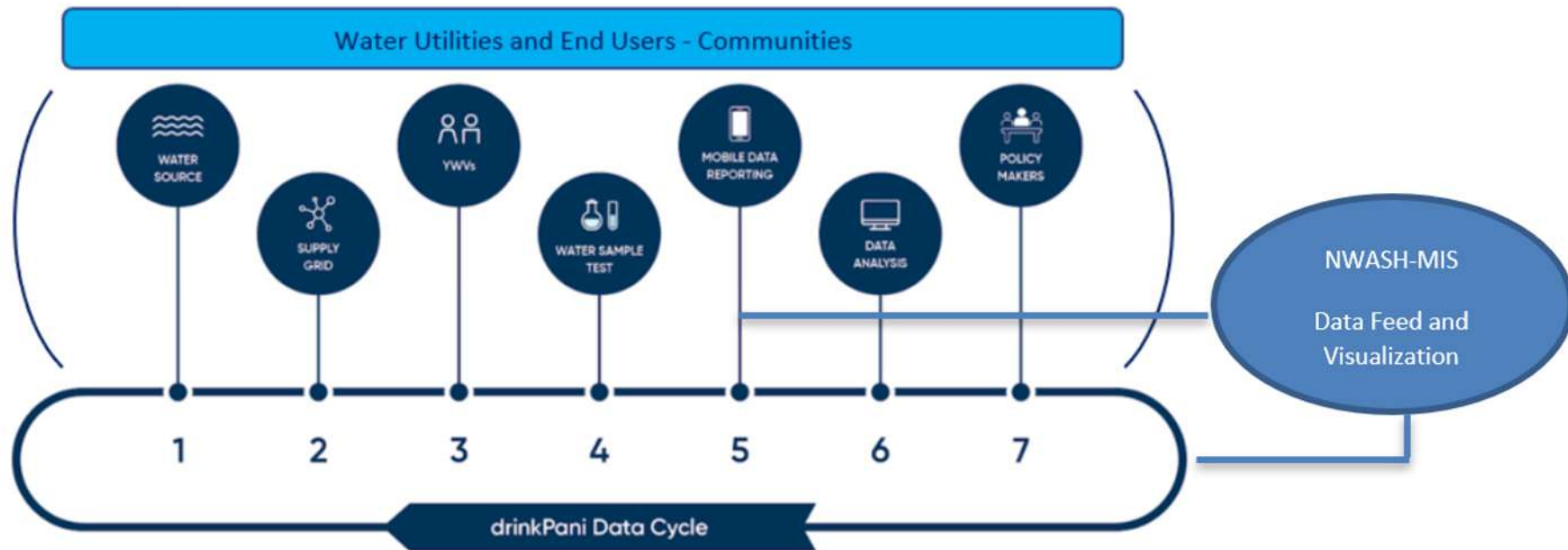


Figure: Water Data Flow-Chain under *Youth-Led Participatory Sensing (YPS) Model in progress* developed by drinkPani 2020

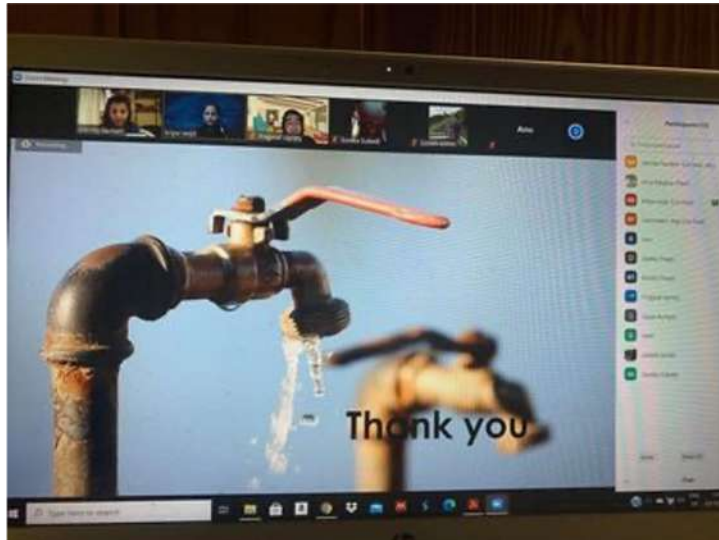
YWVs – Young Water Volunteers at drinkPani Clubs in piloted schools, Pokhara Metropolitan City, Nepal

Collaboration Support to Link ground data collection to national mainstream data repository – NWASH-MIS

drinkPani Bootcamp III (Inception Workshop and Gamified Training for YWVs 2.0) 11th and 12th September 2022 .



Note of thanks and acknowledgements!



References

- Aryal, J., B. Gautam, and N. Sapkota. 2012. "Drinking Water Quality Assessment." *Journal of Nepal Health Research Council* 10(22):192–96.
- Ballard, Heidi L., Colin G. H. Dixon, and Emily M. Harris. 2016. "Youth-Focused Citizen Science: Examining the Role of Environmental Science Learning and Agency for Conservation." *Biological Conservation* 2–6.
- . 2019. "Water Supply, Sanitation and Hygiene Situation in Nepal: A Review." *Journal of Health Promotion* 7(June):65–76.
- CAO. 2008. *Participatory Water Monitoring. A Guide for Preventing and Managing Conflict. The Office of the Compliance/Ombudsman.*
- Christin, Delphine, Andreas Reinhardt, Parag S. Mogre, and Ralf Steinmetz. 2009. "Wireless Sensor Networks and the Internet of Things : Selected Challenges." *Structural Health Monitoring* 5970:31–33.
- Conrad, Cathy C. and Krista G. Hilchey. 2011. "A Review of Citizen Science and Community-Based Environmental Monitoring: Issues and Opportunities." *Environmental Monitoring and Assessment* 176(1–4):273–91.
- Dickinson, Nicolas and Kristof Bostoan. 2013. *USING ICT FOR MONITORING RURAL WATER SERVICES : FROM DATA TO ACTION.*
- Faustine, Anthony and Aloys N. Mvuma. 2014. "Ubiquitous Mobile Sensing for Water Quality Monitoring and Reporting within Lake Victoria Basin." *Wireless Sensor Network* 6(December):257–64..
- JMP. 2017. "Progress on Drinking Water , Sanitation and Hygiene. WHO/UNICEF Joint Monitoring Programme."
- Maharjan, Sujana, Tista Prasai Joshi, and Sujana Man Shrestha. 2018. "Poor Quality of Treated Water in Kathmandu: Comparison with Nepal Drinking Water Quality Standards." *Tribhuvan University Journal of Microbiology* 5(1):83–88.
- MICS-UNICEF. 2015. *Multiple Indicator Cluster Survey. Government of Nepal. National Planning Commission Secretariat. Central Bureau of Statistics. United Nations Children's Fund.*
- Raut, Kalyani. 2014. "Sustainability of Community Water Supply Systems Managed by Water User Committee . - A Case Study of Rural Water Supply System in Nepal ."

Any Questions?

For more details:

research@drinkpani.n
amrita@drinkpani.net