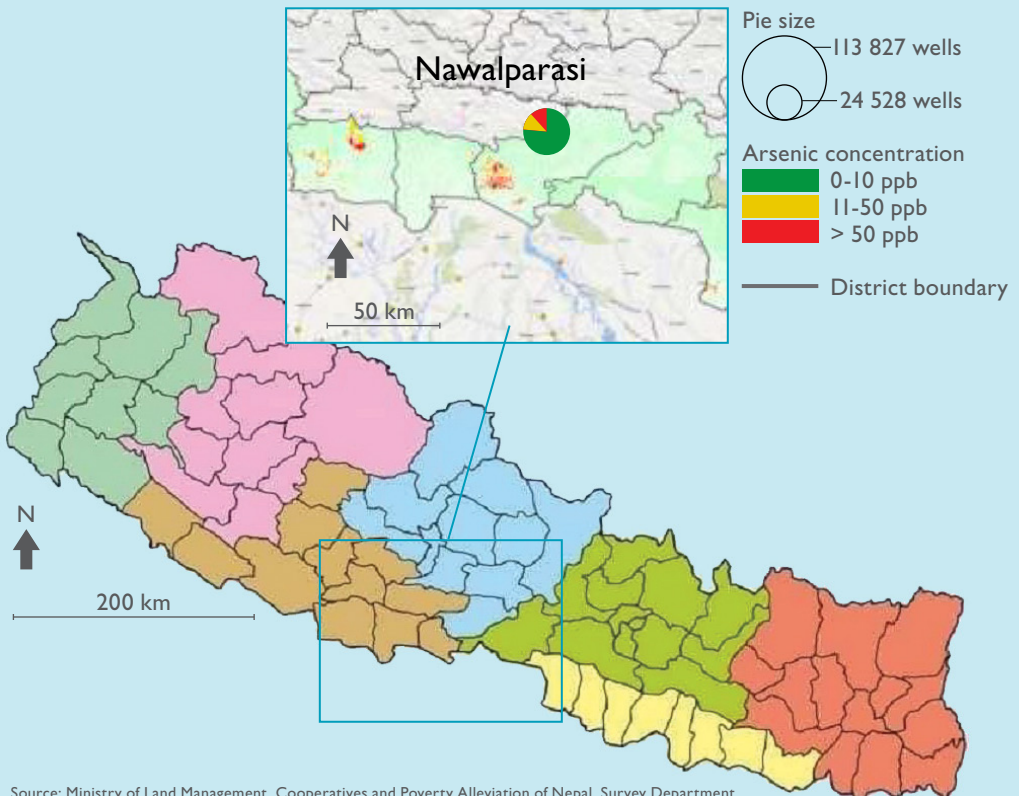




Towards arsenic safe drinking water in Nepal

Finnish-Nepalese project for improved capability of the Government of Nepal to guide and support the water supply actors in arsenic mitigation

www.syke.fi/projects/neas



Finnish-Nepalese co-operation aims at arsenic safe drinking water in Nepal

During the last 25 000 years, rocks rich in arsenic have eroded from high mountain areas of Himalaya and deposited in low lying flood-plain areas in Terai, where arsenic poses a significant risk to groundwater. The Department of Water Supply and Sewerage Management (DWSSM) under the Ministry of Water Supply is responsible for ensuring safe water services nationwide in Nepal. In 1999, DWSSM has started to implement the arsenic mitigation programme.

Geological Survey of Finland (GTK) and Finnish Environment Institute (SYKE) started cooperation with DWSSM in 2020. The NeAs project is funded by the Ministry for Foreign Affairs of Finland (MFA) and takes place in 2020–2023. The aim of NeAs project is the Improved capacity of DWSSM to guide and support the water supply actors in arsenic mitigation.

Four goals of NeAs

- DWSSM has better capacity for data management and established data sharing practices.
- DWSSM has strengthened capacity to utilise arsenic related conceptualisation and establish recommendations to improved water sector management.
- Improved arsenic monitoring capacities and practices in DWSSM.
- Improved communication skills and means in awareness rising and increased networking among DWSSM and relevant actors.



Arsenic filtration at Narmi Devi Chaudhary's home.



Elevated water tank.



Symptoms of arsenosis.

1 000 000

In Nepal unsafe arsenic levels are posing health risk for an estimated 1 million people of the 15.7 million living in the Terai region.

10 ppb

Arsenic in safe drinking water as defined by WHO is 10 ppb (~1 000 000 population exposed to As >10 ppb in Terai).

50 ppb

National As limit for drinking water in Nepal is 50 ppb (~300 000 population exposed to As >50 ppb in Terai).

20

In order to create a database on arsenic, a blanket testing was conducted from 2005–2008 in 20 districts of Terai covering 1 084 346 tubewells.

11.7%

The most affected district was Nawalparasi where nearly 11.7 % of the tube wells have the arsenic concentration over 50 ppb.

The pilot area in NeAs project is the Parasi district (West Nawalparasi).



NeAs water samples at Central Water Quality Testing Laboratory DWSSM together with Deepak Nath and Kishor Pandey.



Bailer sampling by Hannele Penson and Pekka Forsman.



Water sampling from hand pump well by a Pekka Forsman and a local assistant.



Arsenic water analysis with arsenator by Kishor Pandey.



NeAs project partners and local operators at Nawalparasi Water Supply and Sanitation Division Office.



Project members

Department of Water Supply and Sewerage Management (DWSSM)
www.dwssm.gov.np/en/



Geological Survey of Finland (GTK)
www.gtk.fi/en/



Finnish Environment Institute (SYKE)
www.syke.fi/en/



With support from
 Finland's development
 cooperation

Ministry for Foreign Affairs of Finland
www.um.fi
 Embassy of Finland, Kathmandu
www.finlandabroad.fi/web/npl/