

वातावरण, उर्जा तथा जल अनुसन्धान केन्द्र Center of Research for Environment, Energy and Water Harmonize Research and Development with Nature



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About Us

Centre of Research for Environment, Energy and Water (CREEW) is a non-governmental, not-for-profit scientific research based and development organization established in 2008. It works on the domains of environment, energy and water. All endeavours of CREEW are directed towards ensuring harmony of human activities with nature.

Mission

To contribute in addressing environment, energy and water related problems and issues.

Vision

To become a center of excellence on fundamental and applied research in the thematic areas of environment, energy and water.

Objectives

- Promote scientific research and research-based development interventions.
- Develop and/or promote cost-effective technologies and practices.
- Utilize research outputs for development and practice.
- Enhance capacity of early to mid-level researchers, professionals and practitioners.
- Link science to policy and to development.

Thematic Areas

CREEW has prioritized, but not limited to, six thematic areas (TAs).



Impacts

CREEW awards research grant to post-graduates' scholars at universities and fellowships to early career researchers. These programs have been successful in advancing high quality research by scholars at universities and early-career researchers and professionals at various institutes. Similarly, CREEW has conducted various skill development trainings and workshops on GIS applications, hydrological and/or hydraulic modeling, water quality analysis, etc. These capacity building activities have enriched participants' knowledge and sharpened professional skills. Furthermore, annually organized groundwater symposium by CREEW have been able to contribute to bring groundwater to the forefront for discussion and sharing on its various research, policy and management aspects among diverse stakeholders from researchers, academicians, government bodies, non-government organization and private companies.

90+	200+	1100+
Research Grantees and	Capacity Building	Workshops and
Fellows	Activities Participants	Symposium Participants

Programs

We conduct some grant and fellowship programs, and research and dissemination programs annually.

Programs/Funding Partner(s)	Duration	Partners/ Collaborator(s)	
CREEW-Young Researcher Fellowships (CREEW-YRF) Program	Since 2017		
International Young Researchers' Workshop on River Basin Environment and Management	Since 2014	Interdisciplinary Center for River Basin Env. (ICRE) Univ. of Yamanashi (UY) Japan/Asian Inst. of Tech. (AIT) Thailand/Univ. of Brawijaya (UB) Indonesia/Univ. of Newcastle (UNC) Australia	
Monitoring of seasonal water quality of Bishnumati and Dhobikhola Rivers	Since 2012		
National Groundwater Symposium	Since 2009	Small Earth Nepal (SEN) Nepal/Env. & Public Health Organization (ENPHO) Nepal/Kathmandu Valley Water Supply Mgt. Board (KVWSMB) Nepal/Groundwater Resources Devt. Board (GWRDB) Nepal/WaterAid Nepal/SmartPhone4Water Nepal (S4W-Nepal)	
CREEW Research Grant Program (CREEW- RGP)/ Kurita Water & Env. Foundation (KWEF) Japan	Since 2008	Grantees have been from universities and their departments and affiliate colleges. From Tribhuvan Univ. (TU) (Inst. of Engg., Central Dept. of Env. Sc., Central Dept. of Geology, Khwopa College, GoldenGate College), Pokhara Univ. (PU) (Nepal Engg. College, School of Env. Sc. & Mgt.), Kathmandu Univ. (KU)	

Recent Projects

CREEW has completed 17 projects both as lead and collaborator under various thematic areas. Most of them are in the area of groundwater and surface water, water treatment, climate change, energy, and watershed management.

Recent Projects/Funding Partner(s)	Duration	Partner(s)/ Collaborator(s)	
Evaluation of domestic water supply source using stable hydrogen and oxygen isotope in the Kathmandu Valley, Nepal/International Atomic Energy Agency (IAEA) Vienna, Austria	April 2018 - April 2021	Interdisciplinary Center for River Basin Env. (ICRE) Univ. of Yamanashi (UY) Japan	
Mapping groundwater resilience to climate change and human development in Asian cities/Asia-Pacific Network (APN) Japan	January 2018 - December 2020	Asian Inst. of Tech. (AIT) Thailand/Inst. of Global Env. Strategies (IGES) Japan/ Intl. Waterlogging & Salinity Res. Inst. (IWSRI) Pakistan/ Dept. of Groundwater Resources (DGR) Thailand/ Div. of Water Resources Planning & Investigation (DWRPI) Vietnam	
Hydro-microbial approach for water security of Kathmandu Valley/Sc. & Tech. Research Partnership for Sustainable Devt. (SATREPS) Program, Japan	May 2014 - Oct. 2019	Inst. of Eng. (IoE) Tribhuvan Univ. (TU) Nepal/ICRE - UY Japan/ Kathmandu Valley Water Supply Mgt. Board (KVWSMB) Nepal/Small Earth Nepal (SEN)	
Climate smart watershed management in the Thuligaad Watershed/USAID Paani Program	June 2018 - June 2019	Rural Community Devt. Center (RCDC) Nepal	
Assessment of climate-induced long-term water availability in Ganges Basin and impacts on energy security in South Asia/ Asia-Pacific Network (APN) Japan	July 2014 - May 2019	Inst. of Global Env. Strategies (IGES) Japan/Bangladesh Univ. of Engg. & Tech. (BUET) Bangladesh/Central Univ. of Rajasthan (CURAJ) India	

Recent Activities

CREEW and its partners/collaborators have carried out various capacity building activities for early and midcareer researchers and professionals; and local government personnel and communities.

Recent Projects/Funding Partner(s)	Duration	Partner(s)/ Collaborator(s)
Workshop on preparation of sub-watershed management plan in Badikedar and Jorayal Rural Municipalities in Doti District/USAID Paani Program	19 -25 May 2019; 30 May-3 June 2019	Rural Community Devt. Center (RCDC) Nepal
Training on basic GIS and its application to water resources, held in Lalitpur	10-14 Sept. 2017	Cross Momentum Engineers (CME) Nepal
Introductory training on application of GIS in water resources, held in Lalitpur	2-5 April 2017	Water Modeling Solutions (WMS)
Training on GIS-based Flood Modeling using HEC-RAS, held in Kathmandu	3-6 April 2016	Water Modeling Solutions (WMS), Nepal
Training on SWAT model, held in Kathmandu	6-16 July 2014	

Recent & Major Publications

(Authors with * indicates their affiliation and/or association with CREEW)

- Shrestha M*., Manandhar, S., Shrestha, S. (2020). Forecasting water demand under climate change using Artificial Neural Network: a case study of Kathmandu Valley, Nepal. *Water Supply*. IWA Publication.
- Khatiwada K.R.*, Pandey V. P. (2019). Characterization of hydro-meteorological drought in Nepal Himalaya: A case of Karnali River Basin. *Journal of Weather and Climate Extremes*. Elsevier Publication. Vol. 26. <u>https://doi.org/10.1016/j.wace.2019.100239</u>.
- Malla R.*, Sapkota A.*, Prajapati P.* (2019). Estimation of water use coefficient for assessing industrial water demand of various industries of Kathmandu valley. *Journal of Environment Science*. 21-26 (5). Government of Nepal. Ministry of Forest and Environment. Department of Environment. Babarmahal Forestry Complex.
- Lama, F., Thakuri, S., Ghimire N. P., Malla, R.* (2018). Ecotone vegetation and water quality of Rara and Begnas Lakes, Nepal. *Himalayan Biodiversity 6: 27-37*.
- Shrestha S., Pradhananga D., Pandey V.P.* (Eds.) (2012). *Kathmandu Valley Groundwater Outlook*. Asian Institute of Technology (AIT), The Small Earth Nepal (SEN), Center of Research for Environment, Energy and Water (CREEW), International Research Center for River Basin Environment-University of Yamanashi (ICRE-UY), Kathmandu, Nepal.

