

International Workshop on Soil Erosion and Riverine Sediment in Mountainous Regions

November 17-18, 2022

Beijing, China + Yangling, Shaanxi, China + Online



Organizers

1. Institute of Tibetan Plateau Research, Chinese Academy of Sciences (CAS)
2. Research Center of Water and Soil Conservation and Ecological Environment, CAS & Ministry of Education (MOE)
3. Institute of Soil and Water Conservation, Northwest A&F University (NWAUFU)
4. International Research and Training Center on Erosion and Sedimentation
5. State Key Laboratory of Tibetan Plateau Earth System, Environment and Resources (TPESER)
6. State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau
7. World Association of Soil and Water Conservation

Time and Venue

1. Time: November 17-18th, 2022

2. Venue:

Meeting Room 915 Institute of Tibetan Plateau Research, Chinese Academy of Sciences (16-3 Lincui Road, Beijing, China)

Meeting Room 203, State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Research Center of Water and Soil Conservation and Ecological Environment, CAS & Ministry of Education (MOE)(No.26, Xinong Rd., Yangling, Shaanxi)

Online ZOOM meeting: 852 8450 7933 Password: 369665

Aims and Scope

Soil erosion is one of the most widely distributed issues in the world, which poses threat to world food security and ecological environment. It has become a hot issue of global public concern. With the global climate change, the types, intensities and the development and evolution process of soil

erosion in mountainous regions have changed greatly, which affects the sediment transport in high mountain areas and downstream rivers and the design and operation of water conservancy and hydropower projects. To explore the opportunities and challenges of soil erosion in mountainous regions in the new era, to analyze the new progress, new trends and new problems of soil erosion and riverine sediment research in high mountain areas, and to put forward new countermeasures to cope with the impact of climate change are not only important directions of basic soil erosion research, but also urgent needs for the sustainable development of high mountain areas. The goal of this workshop is to invite well-known experts in related fields to exchange the latest research results, identify the current opportunities and challenges, and discuss the strategies to deal with climate change through online and offline means.

Scientific Committee

CHEN Fahu, Institute of Tibetan Plateau Research, CAS

WU Pute, Northwest A&F University (NWAUFU), China

PAN Qingbin, International Research and Training Center on Erosion and Sedimentation

ZHANG Yili, Institute of Geographic Science and Natural Resources Research, CAS

LIU Baoyuan, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE

Organizing Committee

FENG Hao, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE

ZHU Liping, Institute of Tibetan Plateau Research, CAS

WANG Fei, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE

WANG Yafeng, Institute of Tibetan Plateau Research, CAS

LIU Xiaoying, International Research and Training Center on Erosion and Sedimentation

LI Shiqing, State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, China

FENG Min, State Key Laboratory of Tibetan Plateau Earth System, Environment and Resources, China

ZHANG Tibin, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE

ZHANG Fan, Institute of Tibetan Plateau Research, CAS

AN Shaoshan, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE

Agenda

Thursday, November 17, 2022	
Opening ceremony	
08:30-08:50	<p>CHEN Fahu, Institute of Tibetan Plateau Research, CAS, China</p> <p>FENG Hao, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE, China</p> <p>PAN Qingbin, International Research and Training Center on Erosion and Sedimentation</p>
Keynote Speech	
Chaired by ZHANG Fan	
08:50-09:20	<p>Topic: Soil erosion assessment in Pan-Third Pole</p> <p>LIU Baoyuan, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE, China</p>
09:20-09:50	<p>Topic: Impacts of Asia water tower changing and countermeasures</p> <p>ZHU Liping, Institute of Tibetan Plateau Research, CAS, China</p>
09:50-10:00	Tea Break
10:00-10:30	<p>Topic: Scaling soil erosion estimates in time and space</p> <p>Richard Cruse, Agronomy Department at Iowa State University, USA</p>
10:30-11:00	<p>Topic: Soil conservation and ecosystem rehabilitation on Loess Plateau , Benefit and Prospective</p> <p>LIU Guobin, Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE, China</p>
11:00-11:30	<p>Topic: Representing global soil erosion and sediment flux in Earth System Models</p> <p>TAN Zeli, Pacific Northwest National Laboratory, United States, USA</p>
11:30-12:00	<p>Topic: Impact of modern climate change on fluvial sediment delivery in High Mountain Asia</p> <p>LI Dongfeng, National University of Singapore, Singapore</p>
12:00-14:00	Lunch
Keynote Speech	
Chaired by An Shaoshan	
14:00-14:30	<p>Topic: Freeze-thaw erosion landscape and subsurface flow observation in cold alpine critical zone on the Qinghai-Tibet Plateau</p> <p>LI Xiaoyan, Beijing Normal University, China</p>
14:30-15:00	<p>Topic: Sediments contribution to soil contamination and loss of nutrients in EU agricultural soils</p>

	Panagos Panos , European Commission Joint Research Centre (JRC), Italy
15:00-15:30	Topic: The response of soil erosion to vegetation restoration and rainfall events in the loess hill and gully region JIAO Juying , Northwest A&F University (NWAUFU), China
15:30-15:40	Tea Break
15:40-16:10	Topic: Steep-Slope Viticulture and Climate Change: Threats, Monitoring, Sustainable Management Paolo Tarolli , University of Padova, Italy
16:10-16:40	Topic: Effects of Ecological Engineering Projects on Soil Erosion and Sediment Yields in Southern Tibetan Plateau, China XIONG Donghong , Institute of Mountain Hazards and Environment, CAS, China
16:40-17:00	Topic: Policy implications of multiple concurrent soil erosion processes in European farmland Pasquale Borrelli , Department Science of Roma Tre University, Italy
17:00-17:30	Topic: Soil organic matter losses: $\delta^{13}C$ to disentangle erosion and decomposition Yakov Kuzyakov , Georg-August-University of Göttingen, Germany
17:30-18:00	Topic: Soil Erosion and Riverine Sediment over the Tibetan Plateau ZHANG Fan , Institute of Tibetan Plateau Research, CAS, China
Friday, November 18, 2022	
Invited Presentation of Session on the Tibetan Plateau Chaired by Zhao Guangju	
08:30-08:50	Topic: Recent sediment budget changes in a large high mountainous drainage basin Khawaja Faran Ali , University of Northern British Columbia, Canada
08:50-09:10	Topic: Glacial erosion and GLOFs exacerbate riverine sediment NIE Yong , Institute of Mountain Hazards and Environment, CAS, China
09:10-09:30	Topic: Impact of river-bed freeze-thaw process on bed load sediment transport WANG Le , North China Electric Power University, China
09:30-09:50	Topic: Quantitative attribution of riverine sediment to hydrological, cryospheric and vegetation effects SHI Xiaonan , Institute of Tibetan Plateau Research, CAS, China
09:50-10:10	Topic: Numerical simulation of morphodynamic processes of braided pattern in the Yarlung Zangbo River SUN Jian , Tsinghua University, China

10:10-10:20	Tea Break
Invited Presentation of Session on the Loess Plateau Chaired by SHI Xiaonan	
10:20-10:40	Topic: Sediment sources tracing in the high erodible watershed of the Northern Loess Plateau ZHAO Guangju , Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE, China
10:40-11:00	Topic: Watershed sediment and nutrient process on the Loess Plateau XU Guoce , College of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, China
11:00-11:20	Topic: Soil erosion quantification in the crisscross region of the Chinese Loess Plateau using radionuclide tracing ZHANG Jiaqiong , Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE, China
11:20-11:40	Topic: Source apportionment of eroded soil organic matter on the Loess Plateau of China LIU Chun , College of Life Science and Technology, Jinan University, China
11:40-12:00	Topic: Effects of soil and water conservation measures on flood process under extreme rainstorms HAN Jianqiao , Institute of the Soil and Water Conservation, Northwest A&F University, China
12:00-14:00	Lunch
Discussion Chaired by AN Shaoshan and ZHANG Fan	
14:00-16:40	Declaration of opportunities and challenges for the study of soil erosion and river sediment in mountainous regions around the world
16:40-17:00	Closing ceremony

Invited Speakers

LIU Baoyuan

Dr. Baoyuan Liu is currently a professor of Beijing Normal University and director of State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau. He was granted by National Science Fund for Distinguished Young Scholars, second class National Natural Science Award of China, the National Outstanding Scientific and Technical Workers of China, and the National Advanced Individual in Field Science and Technology of China, etc.



He mainly engaged in research on soil erosion mechanisms, models, and monitoring technologies. He designed the soil erosion census in the First China Water Resources Census and led the Pan-Third Pole soil erosion assessment, etc. He has published more than 200 papers in peer-reviewed journals. He is currently Editor-in-Chief of *International Soil and Water Conservation Research* and *Journal of Soil and Water Conservation* and associate editor of *Catena*.

ZHU Liping

Dr. Liping Zhu is currently a professor at Institute of Tibetan Plateau Research, Chinese Academy of Sciences. His research focuses on Global Changes and Quaternary Environment, especially specialized in lake modern processes, lake sediments and their reflected environmental changes. His main achievements are focusing the temporal and spatial differentiations of lakes response process and mechanism to the synergistic reaction



between the westerlies and Indian monsoon based on the lake sediments and modern lake water storage and water quality variations. He is now serving as deputy director of the institute and academic editor of several international and domestic journals.

Richard Cruse

Richard Cruse is a professor in the Agronomy Department at Iowa State University and Director of the Iowa Water Center. He served the President of the National Institutes for Water Resources from 2015 – 2016. Dr. Cruse's research focuses on quantifying water-driven soil erosion rates as affected by rainfall, soil type, soil slope, and management. He is a co-leader of the Daily Erosion Project and the National Hub for



the Agricultural Conservation Planning Framework. Some of his career highlights include being an author, or co-author of 115 peer-reviewed publications and 15 book chapters, giving 25 invited international presentations and 6 keynote presentations since 2011. Since 2010 he has served as Principle Investigator on grants totaling \$2.5 million and as co-Principal Investigator on grants totaling \$20.9 million. Dr. Cruse serves on the editorial board of Journal Land. He received his BS from Iowa State University and his MS and Ph.D. from the University of Minnesota.

LIU Guobin

Dr. Guobin Liu is currently a professor at Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources. He has more than 35 years experiences on soil conservation and ecosystem rehabilitation, particularly in vegetation restoration, integrated management of watershed and benefit assessment as well as strategy of regional soil



conservation and rehabilitation in Loess Plateau of China, and has got more than 200 papers published. He also involved in planning of National Project and Chinese Academy of Sciences Action on soil conservation and ecological restorations, and as a principal investigator undertaken the national project from Ministry of Sciences and Technology continue for 20 years.

TAN Zeli

Dr. Zeli Tan is currently a Research Scientist of the Atmospheric Sciences and Global Change Division at the Pacific Northwest National Laboratory, United States. He got her B.S and M.S. degrees at the Wuhan University in 2005 and 2007, respectively, and Ph.D degree at the Purdue University in 2015. He worked as Postdoctoral Research Associate at the Pacific Northwest National Laboratory during 2016-2018. His research focuses on soil erosion and sediment transport, aquatic biogeochemistry, and carbon and nutrient cycles. He has published more than 30 SCI papers and is now serving as the co-Chair of the methane working group under the Inter-Sectoral Impact Model Intercomparison Project's Lake Sector.



LI Dongfeng

Dr. Dongfeng Li is currently a research fellow at the National University of Singapore. His research focuses on climate change and river sediment transport. He is now serving as the associate editor of the JGR: Earth Surface and the editorial board of the Hydrological Processes.



LI Xiaoyan

Dr. Xiaoyan Li is a professor at Faculty of Geographical Science, Beijing Normal University. He is a recipient of distinguished scholar of NSFC. He is vice director of State Key Laboratory of Earth Surface Processes and Resource Ecology, and the associate editor of Soil Science Society of America and Vadose Zone Journal. His major research works focus on earth critical zone science, watershed ecohydrology, slope hydrogeology. carbon-water couplings in arid and cold regions.



Panagos Panos

Dr. Panagos Panos currently works in European Commission Joint Research Centre (JRC), Land Resource Management Unit, Ispra, Italy. Panos Panagos is the project leader of AGSOL (Healthy soils for an environment and climate friendly food system). Panos has a PhD in soil erosion modelling from University of Basel, and Master in Business



Administration from Patras University and an Information Technology degree from Athens University of Economics & Business. Panos leads the European and Global soil erosion assessments and contributes to modelling assessments of soil organic carbon, diffuse pollution and nutrients in soil. He has more than 160 publications in peer-review journals and he has been awarded the Web Of Science highly cited award in 2019, 2020 and 2021. He is coordinating the Working Group on "Soil erosion in relation to land degradation, climate change & food security" in the European Soil Observatory.

JIAO Juying

Dr Juying Jiao is currently a professor and doctoral supervisor in the Institute of Soil and Water Conversation, Northwest A&F University. She obtained PhD on agricultural water and soil engineering at Northwest A&F University in 2000. She attended the group training course in "Irrigation Water Resources in Arid & Semi-arid Region and EIA for Sustainable Development" organized by the Japan International Cooperation Agency from



July to Nov 2002. She was a visiting scholar in Imperial Collage on landscape ecology and restoration in 2004. She has engaged in the study of the relationship between soil erosion and vegetation, seed ecology, watershed erosion and sediment yield, benefit of soil-water conservation measures. She was responsible for nine Chinese National Natural Scientific Research Projects and other national and CAS projects. She has published more

than 200 research papers, including 63 SCI papers.

Paolo Tarolli

Paolo Tarolli is Full Professor in Soil & Water Conservation and Agricultural Water Management at the University of Padova (Italy). He is also Visiting Professor at Dalian University of Technology (P.R. China), and Adjunct Professor at University of Georgia (USA) and Alexandru Ioan Cuza University of Iași (Romania). He is Vice President of Soil and Water Conservation



Division of Italian Society of Agricultural Engineering (AIIA), and he was Deputy President of the Natural Hazard division (EGU) from 2019 to 2022. He is an expert in digital terrain analysis, earth surface processes analysis, natural hazards, geomorphology, hydro-geomorphology, lidar, structure-from-motion photogrammetry; new research directions include the analysis of topographic signatures and the impact of human activities, focusing on agricultural landscapes & land degradation. Tarolli is Chief Executive Editor of Natural Hazards and Earth System Sciences, and Associate Editor of International Soil and Water Conservation Research, Land Degradation & Development, Remote Sensing, and in the editorial board of other 7 journals. He is the author of more than 150 articles published in international peer-reviewed journals, including Nature Food. He is ranked in the list of 100,000 top world's most cited scientists (source Scopus by Elsevier BV) since 2019.

XIONG Donghong

Donghong Xiong is currently a professor at Institute of Mountain Hazards & Environments, Chinese Academy of Sciences. He has been doing research on soil erosion process, mechanism, and effect, especially on gully erosion in Dry-hot Valley Region, Southwest China more than 15 years. And during the last three years, he conducted some research work on soil erosion and runoff sediment in Southern Tibetan Plateau.



Pasquale Borrelli

Dr. Pasquale Borrelli is currently professor at the Department Science of Roma Tre University. He obtained his PhD in Physical Geography at the Institute of Geographical Sciences of the Freie Universität Berlin in 2011. Dr. Borrelli has extensive international collaboration with research institutions (EU JRC, UN FAO, UN WFP) and scholars from over 30 universities. He specialises in Soil



erosion, Land degradation, Geomorphology, GIS modelling, Remote sensing, Land-use/cover change, SOC, Policy support, and so on. So far, Dr. Borrelli has published over 100 international peer-reviewed publications with 9800+ citations, h-index 45, including high impact factor journals such as Nature, PNAS, Nature Communications, Global Change Biology and Nature Sustainability, and is co-Chair of the Soil Erosion Working group of the European Union Soil Observatory (EUSO). Distinguished Researcher Medal (2019) of the World Association of Soil and Water Conservation (WASWAC).

Yakov Kuzyakov

Prof. Dr. Yakov Kuzyakov currently works in Dept. of Soil Science of Temperate Ecosystems, Dept. of Agricultural Soil Science Georg-August-University of Göttingen, Germany, and is the Research Project Leading of > 30 projects from DFG (German Research Foundation), EU, DAAD, etc. He has received 15 awards, such as John Waid Award for the best Review paper in



Soil Biology & Biochemistry, EGU Outstanding Editor Award, Changjiang (Yangtze River) Scholar Award, Visiting Professor, TyumGU, Tyumen. Dr. Yakov specialises in Ecosystem sustainability, Biogeochemistry, Soil degradation, C and N cycles, Land use, etc., and has contributed 660+ papers to ISI Publications in 2015-2022 with 37,000+ citations, H-index 90, >35 highly cited papers (top 1% citations), 13 hot papers (top 0.1% citations) with . He occasionally reviews papers of > 40 journals, and is the Editorial Board member of notable journals such as Soil Biology & Biochemistry, Land Degradation & Development, Global Change Biology (2010-2014).

ZHANG Fan

Dr. Fan Zhang is currently a professor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. She got her B.S and M.S. degrees at the Tsinghua University in 1998 and 2000, respectively, and Ph.D degree at the University of Central Florida in 2005. She worked for the Environmental Sciences Division in the Oak Ridge National Laboratory as Research Associate and then



Research Staff Scientist during 2005-2009. Her research focuses on alpine watershed hydrology, soil erosion and sediment transport, and reactive transport. She has published more than 90 SCI papers and is now serving as the co-Editor-in-Chief of Journal of Hydrology: regional studies

Khawaja Faran Ali

Dr. Faran Ali is an assistant professor in the Physical Geography and Engineering Programs at UNBC. Dr. Ali holds an undergraduate degree in Civil Engineering from Lahore, Pakistan, a master's degree in Hydrological Engineering from Delft, the Netherlands, and a PhD from the University of Saskatchewan. He also held a postdoctoral fellowship at the University of British Columbia



(UBC). His expertise is in fluvial hydrology, sediment transport, and climate change impacts in high mountainous areas of the world. Currently, Dr. Ali is serving as a supervisory committee member for 4 PhD students at UNBC. Dr. Ali has published in high impacts academic journals like Water Resources Research, Hydrological Processes, and the Journal of Hydrology. In addition, Dr. Ali is a regular reviewer for several peer-reviewed journals and research funding agencies.

NIE Yong

Dr. Yong Nie is currently a professor at the Institute of Mountain Hazards and Environment, Chinese Academy of Sciences. He got his Ph.D degree at the Institute of Geographic Science and Natural Resources Research, CAS. His research focuses on glacial lake and glacier changes, glacial lake outburst floods (GLOFs), water resource, and scientific data sharing. He has published more than 50 SCI papers and is now serving as the referee for ERC, NERC, NSFC and the reviewer for Nature Climate change、 Nature Geoscience、 Nature Sustainability、 Remote Sensing of Environment、 ESSD、 Geomorphology、 Global and Planetary Change et al.

**WANG Le**

Dr. Le Wang is an associate professor at North China Electric Power University. He completed his doctorate research at Heriot-Watt University in 2016 and then participated in a NSFC funded Post-Doctoral Research program in fluvial dynamics at Tsinghua University. His research primarily focuses on sediment transport and bed morpho-dynamics in different flow conditions. Recently, his study is concentrated on bed-load sediment transport in high-altitude rivers. He is now serving as a committee member on Landslide and Debris-Flow Control in China and review editor of Frontiers in Environmental Science.



SHI Xiaonan

Dr. Xiaonan Shi is currently an associate professor at Institute of Tibetan Plateau Research, Chinese Academy of Sciences. Her study focuses on riverine sediment change in alpine regions and response to climatic and environmental factors, soil erosion mechanism driven by snowmelt runoff and freeze -thaw, erosion parameters measurement techniques.



SUN Jian

Dr. Jian Sun is currently an associate professor at Tsinghua University, China. He got his B.S., M.S. and Ph.D. degrees at the Department of Mechanics, Tianjin University from 2001 to 2007, and then he worked as a lecturer at Tianjin University. He went to Cardiff University UK as a visiting scholar in 2010. Since 2012 he worked at the Department of Hydraulic Engineering, Tsinghua University. His research focuses on computational hydrodynamics, sediment transport, river morphodynamics, as well as urban flooding, with more than 80 papers published.



ZHAO Guangju

Dr. Guangju Zhao currently works in the Research Center of Water and Soil Conservation and Ecological Environment, CAS & MOE (Ministry of Education, China), Institute of Soil and Water Conservation, NWAUFU (Northwest A&F University). He obtained the B.S. in the Liaoning Normal University, M.S. in the Nanjing Institute of Geography & Limnology Chinese Academy of Sciences, and PhD in Kiel University in Germany. He focuses on soil erosion monitoring and modeling at different scales using various approaches (sediment tracing, measuring and



modeling); and assesses the responses of river flow and sediment changes to human activities and climate changes at catchment scale via statistical analysis and hydrological modelling. He has presided over 20 scientific projects funded by National Natural Science Foundation of China, Ministry of Science and Technology of China, and Chinese Academy of Sciences etc. He has published more than 100 domestic and international peer-reviewed papers in the fields of hydrology, soil erosion, sediment source tracing etc.

XU Guoce

Dr Guoce Xu is currently a professor at Xi'an University of Technology. He got the PhD at Institute of Soil and Water Conservation, CAS & MWR in 2013. He was the head of the "Runoff and Sediment and Ecological Hydrology" young innovation team of Shaanxi universities, the head of the dry area ecological hydrological process team of the key laboratory of the



State Forestry Administration, and the leader of the watershed sediment and eco-hydraulics discipline of Xi'an University of Technology. He won second prize of Shaanxi Science and Technology Award in 2019, second prize of Shaanxi Provincial Science and Technology Award in 2015. He was granted as National Science Fund for Distinguished Young Scholars, Young star of science and technology in Shaanxi Province and the "Young Outstanding Talents Support Plan" of Shaanxi universities. His research mainly focuses on runoff-sediment-nutrient transfer process and regulation, nutrient process and non-point source pollution, and watershed management. He has published 105 academic papers including 52 SCI papers and 4 papers in the top 1% cited papers of ESI. He has edited 1 monograph, and participated in editing 3 monographs in Science Press.

ZHANG Jiaqiong

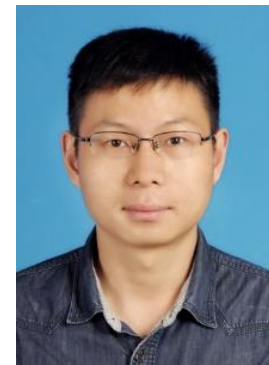
Dr. Jiaqiong Zhang, Associate Professor. She was focused on soil wind erosion study when she studied at Beijing Normal University and Kansas State University/Engineering and Wind Erosion Research Unit, USDA-ARS. She has been working on soil erosion driven by multiple agents (water, wind and freeze–thaw action) and sediment source tracing since joining the Institute of Soil and Water Conservation of Northwest A&F University. Dr. ZHANG is



interested in exploring new methods and technologies to solve soil erosion issues. She has published more than 60 peer-reviewed articles and has coedited three books to date with the support of projects including the National Natural Science Foundation of China, the National Key R&D Program of China, the Strategic Priority Research Program of the Chinese Academy of Sciences, and the West Light Foundation of the Chinese Academy of Sciences.

LIU Chun

Dr. Chun Liu is currently an associate professor at the department of Ecology, Jinan University, Guangzhou, China. He got his Ph.D degree at the Hunan University in 2019. He worked for the soil biogeochemistry lab (Prof. Asmeret Asefaw Berhe) as joint Ph.D candidate student at the University of California, Merced during 2017-2018. His research focus on soil erosion and carbon cycling, source apportionment, climate change. He has published more



than 40 SCI papers and is now serving as the associate editor of Online Journal of Ecology & Environment Sciences and the editorial board members of *Catena*, *Plos One*, and *Water*.

HAN Jianqiao

Dr. Jianqiao Han is currently an associate professor at the Institute of the Soil and Water Conservation, Northwest A&F University. He is a member of the Professional Committee of Comprehensive Management of Small Watersheds of the Chinese Society of Soil and Water Conservation. His research focuses on flood and sediment hazards, hydrological simulation in watershed. He has presided more than 20 scientific research projects such as



National Natural Science Foundation of China, and the State Key Program of National Natural Science Foundation of China. He has published more than 60 papers, applied for 13 patents and was selected into the 5th Young Talents Lifting Project of China Association for Science and Technology.