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- *INTERNATIONAL RESEARCH AND TRAINING CENTER
ON EROSION AND SEDIMENTATION*
(Secretariat of World Association of Soil and Water Conservation)
- *CHINA WATER & POWER PRESS*





INTERNATIONAL RESEARCH AND TRAINING CENTER ON EROSION AND SEDIMENTATION (IRTCES)

The International Research and Training Center on Erosion and Sedimentation (IRTCES) was jointly set up by the Government of China and UNESCO on July 21, 1984. It aims at the promotion of international exchange of knowledge and cooperation in the studies of erosion and sedimentation. IRTCES provides technical services in sediment information exchange, training of sediment engineers and consultation on sediment management, erosion control and environmental and ecological protection of watersheds.

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WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION (WASWAC)

The World Association of Soil and Water Conservation (WASWAC), an independent worldwide academic society, inaugurated in August 1983, is a non-governmental, non-profit organization. The mission of WASWAC is to promote the wise use of management practices that will improve and safeguard the quality of land and water resources so that they continue to meet the needs of agriculture, society and nature. The International Soil and Water Conservation Research is the official journal of WASWAC from 2013.

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CHINA WATER & POWER PRESS(CWPP)

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Liu Ning

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Cover photo: Comprehensive Management in Dulidong Watershed,
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Foreword

Due to recent scientific and technological progress, enormous physical wealth has been produced via unprecedented rapid economical development in modern times. However, severe environmental problems, such as desertification, stone desertification (a kind of desertification, and used only to describe the erosion in the Karst areas of China, where soil is eroded almost completely, the land begins to become barren and underlying stones are exposed), and soil and water losses still exist all over the world. Poverty and environment deterioration are hence caused by land degradation, river and lake sediment deposition, and ecological destruction. Under these circumstances, the benefits from soil and water conservation on maintaining good ecological environment and ensuring the sustainable development of economy and society have been increasingly realized by all countries of the world.

China is one of the countries suffering the most from serious soil erosion and other forms of land degradation. There are a total of 2.95 million km² of soil erosion areas, with more than 960,000 gullies. Many parts of China, such as the Loess Plateau in middle Yellow River, the upper reaches of Yangtze River, and the red soil areas have experienced severe soil erosion. Facing this great challenge that economical development is rapid but ecological environment is deteriorated, the Chinese government has implemented an overall plan for promoting economic, political, cultural, social, and ecological advancement. The comprehensive treatments for desertification, stone desertification, and soil and water losses have been targeted for implementation and will undoubtedly be important measures to bring about what may be called “Beautiful China Construction”.

In the last 60 years, Chinese government has attached a great importance to soil and water conservation. A series of measures were taken to control soil and water losses in Yellow River valley, the Yangtze River, the northeastern black soil zones and the southwestern limestone regions of China. The Law of Water and Soil Conservation of the People's Republic of China was enacted, which strengthens management of construction and production programs, and hence prevents soil loss effectively. In addition, numerous scientific and technological studies and applications in soil and water conservation were also developed to contribute to the great achievements in soil erosion prevention and control. So far, soil and water conservation measures have been installed in a total area of 992,000 km², and at least 58,000 silt storage dams have been built around this country. The total area of soil erosion has decreased from 3.56 million km² in 2002 to 2.94 million km² in 2012. Accordingly, the amount of sediment going into rivers and lakes was reduced dramatically. About 150 million people benefited from it and 20 million people hence got rid of poverty and became rich, which has laid solid foundation for regional economic and social development.

In this context, it is very meaningful and timely to launch the Journal of International Soil and Water Conservation Research (ISWCR) as the official journal of the World Association of Soil and Water Conservation (WASWAC). The journal is supervised by the Ministry of Water Resources of P. R. China, and is published under the auspices of the International Research and Training Center on Erosion and Sedimentation (IRTCES) and China Water & Power Press (CWPP). The application to publish the journal was approved by the General Administration of Press and Publication of P. R. China since October 2012. This is a significant and memorable event to be filed under the great field of soil and water conservation. On behalf of the Ministry of Water Resources of P. R. China and the Chinese Society of Water and Soil Conservation, I would like to extend my warmest congratulations, and wish this journal to be helpful in accelerating the conservation of soil

and water resources through being a good communication platform for researchers and scientists who are involved in the field all over the world.

We anticipate that the ISWCR will play an important role, not only in offering timely scientific and technological innovations to researchers, but also in documenting and presenting all efforts and achievements in soil erosion and land degradation prevention and environmental improvement of China to other countries as well as for China to benefit from researches by foreign scientists to overcome its own difficulties. I expect that scientists and technologists will be able to master the advances in soil and water conservation science by means of this journal and hence promote the leapfrog development of related sciences and technologies.

Water is the origin of life and soil is the basis of all living things. Water and soil are the most elementary factors and the most important conditions for normal succession of ecological environment. At the moment of inauguration of this journal, please allow me to express my sincere wishes to ISWCR, that it will report innovations frequently, and will be a good carrier to disseminate findings from soil erosion and land degradation prevention and control studies. Good wishes are also extended to the editorial board, that they can keep their high standard by publishing scientific and technological papers with a high level of academic quality, making the ISWCR an authoritative journal approved by peers throughout the world.

I believe that people will be moved by the great contribution made by ISWCR while mankind is pacing into the times of the ecological civilization, because it records permanent proofs for all related contributors who have made efforts to soil and water conservation!



Liu Ning

*Vice Minister of the Ministry of Water Resources of P. R. China &
President of Chinese Society of Water and Soil Conservation*

《国际水土保持研究》发刊词

近代,人类借助于科技进步,创造了以往任何时代都难以企及的经济迅猛发展。在物质财富已十分发达的今天,全球仍面临着沙漠化、荒漠化、石漠化和水土流失加剧等严重问题,由此引发的土地贫瘠、江河淤积、生态破坏,是导致人口贫困、社会落后和环境恶化的重要因素。世界各国越来越意识到水土保持对于维护良好生态环境,保障经济社会可持续发展的重要性。

中国是水土流失最为严重的国家之一,全国现有土壤侵蚀面积 294.91 万 km^2 ,侵蚀沟道 96 万余条。黄河流域的黄土高原地区、长江流域源头区和红壤区都是水土流失严重的地区。面对经济快速发展而资源生态环境问题突出的严峻挑战,中国政府做出了经济建设、政治建设、文化建设、社会建设和生态建设“五位一体”的战略部署,并将荒漠化、石漠化、水土流失综合治理放在突出位置,作为建设“美丽中国”的重要措施。

多年来,中国政府加大投入,不仅在黄河流域、长江流域、东北黑土区、西南岩溶区等水土流失严重的区域,开展了一系列大面积的水土流失综合治理工程,而且还颁布并实施了《水土保持法》,规范生产建设行为,预防人为水土流失的发生。此外,还开展了大量的科技研究和推广应用工作。通过坚持不懈的努力,中国的水土流失防治取得了令人瞩目的成就,全国现有水土保持措施面积 99.16 万 km^2 ,淤地坝 5.8 万余座,土壤侵蚀面积已由 355.55 万 km^2 (2002 年)减少到目前的 294.91 万 km^2 ,这使得进入江河的泥沙大幅度减少,近 1.5 亿人从中直接受益,2000 多万贫困人口实现脱贫致富,为区域经济社会发展奠定了坚实基础。

在这样的背景下,经中华人民共和国新闻出版总署(原)批准,由水利部主管,国际泥沙研究培训中心、中国水利水电出版社主办的《国际水土保持研究》创刊发行,恰逢其时,更具意义。这是国际水土保持领域的一件大事,我代表中华人民共和国水利部和中国水土保持学会向其表示热烈祝贺,并希望该期刊为全球从事水土保持科学研究、教学和实践人员搭建良好的学术交流平台,引导和推动水土保持学科和水土保持事业的发展与繁荣。

作为世界水土保持协会会刊的《国际水土保持研究》在中国出版,不仅可以为世界水土保持科技工作者推开“科技之光”的窗口,照亮水土流失防治科学发展的征程,而

且还可以向国际社会全面展示中国在水土流失防治、改善生态环境方面所作出的努力和取得的成效。他山之石,可以攻玉。期待广大科技人员藉以能及时了解水土保持科学研究的方向、前沿和动态,引领、促进水土保持相关科技发展的重点跨越。

水是生命之源,土是生存之本。水和土是生态环境良性演替最基本的要素和最重要的条件,水土孕育生境,润物载物。我诚挚地希望《国际水土保持研究》也效水土之功,能兼容并蓄、推陈出新,培育生机无限的科技创新沃土,大音频、大视野地传播、催生水土流失防治的学术研究;坚守如水至清的学术氛围,高质量、高标准地刊载、推广水土保持领域的科技成果,将《国际水土保持研究》办成业界认同、世界载誉的权威性刊物。

我相信,当人类迈进生态文明的时代,人们都会因《国际水土保持研究》所做的有益贡献而感动,因为它注定将为推动这一进程的学者、专家,乃至广大水土保持工作者镌刻下永久的见证:你们曾经为之而努力探索!

中华人民共和国水利部副部长
中国水土保持学会理事长



二〇一三年五月二十日