



(月刊)

# 中国水土保持

ZHONGGUO SHUI TU BAOCHI

2026年第4期

(总第529期)

4月5日在郑州出版

1980年创刊

主管 中华人民共和国水利部  
主办 水利部黄河水利委员会

全国水利系统优秀科技期刊

全国优秀农业期刊

河南省自然科学一级期刊

中国学术期刊综合评价来源期刊

中国核心期刊(遴选)数据库收录期刊

EBSCO 学术数据库收录期刊

JST(日)收录期刊

CACJ 中国应用型入库期刊

知网、万方、维普、超星等数据库全文收录

## 编辑委员会

主任 祖雷鸣

副主任 莫沫 马永来 胡甲均

常务委员(以姓氏笔画为序)

王玉杰 朱小勇 乔殿新

肖昌虎 沈雪建 张文聪

张续军 陈琴 陈冬奕

尚润阳 赵瑞娟 胡续礼

郜国明 徐清华 臧贵敏

委员(以姓氏笔画为序)

于孟波 马志华 马德仁

王成 王镇 王亚红

王海军 方建瑞 冯浩

司环宇 朱后坤 刘纪根

刘建国 许晓鸿 孙发政

李文运 李旭春 肖培青

苏里坦·达尼尔汗 吴伟峰

张娴 张利超 张晓晨

陈涛 陈发先 易兴涛

郑凤 郑志宇 孟凡荣

赵立东 姜德文 秦伟

党维勤 高士军 姬跃红

黄华爱 曹文洪 曹泽红

崔建国 韩剑桥 葛瑛

提包次仁 熊奎 黎明

## 目次

### □建设项目防与治□

再谈生产建设项目水土保持工程界定 ..... 赵永军(1)

基于无人机遥感和地面观测联动的风沙区生产建设项目水土保持监测技术  
..... 巩建宁,王玲玲,荆可(4)

基于 AHP-CRITIC 法的生产建设项目水土保持工作评估  
..... 王刚,段彤,郭锐,等(7)

### □小流域治理□

松树沟生态清洁小流域一体化治理 ..... 廖凯(12)

平陆县水土保持监督管理实践与思考 ..... 刘雯霞(14)

广西水土流失治理进展及存在问题 ..... 张益源,李栋,孙艳(17)

坑镇河小流域片水土保持与特色产业综合体建设成效及建议  
..... 杜秋月,李玉亭婷,杨凯,等(21)

### □新时代水土保持□

生产建设项目水土保持监测验收管理平台设计与应用  
..... 周春波,王嘉,秦晓蕾,等(26)

### □新思考新探讨□

《水土保持项目前期设计文件编制技术规程》解读  
..... 孟繁斌,闫俊平,王治国,等(31)

云南省保山市森林防火通道建设水土保持模式探索  
..... 顾祝军,杨清辉,吴家晟,等(37)

北京市水土保持生态产品价值实现探索与实践  
..... 宋秀瑜,李世荣,王晓雨,等(43)

利用激光水平仪开展九孔分流桶的水平校正 ..... 王世雷(48)

### □新探索新实践□

生产建设项目水土保持生态产品价值实现的实践与思考  
..... 黄华爱,周旺,李娴婧,等(51)

贵州省水土保持重点区域划定技术方法探讨 ..... 廖章志(56)

水土保持生态建设成就与展望 ..... 王博雅,章宝宁(60)

新时代背景下水土保持监测精细化的创新与实践  
..... 曹恩浩,陈明安,代雪静(63)

天水市麦积区水土保持助力乡村振兴的途径与建议 ..... 白洁(68)

### □县域水保□

新时代甘肃省会宁县水土保持工作思路与经验 ..... 韩弘志(71)

嵩县水土保持工作经验及成效 ..... 闫俊飞,范占国,杨金榜(74)



(月刊)

# 中国水土保持

ZHONGGUO SHUI TU BAOCHI

2026年第4期

(总第529期)

4月5日在郑州出版

1980年创刊

主任(主编) 翟戎亮(0371-66022338)

副主任 孙占锋(0371-66020720)

(副主编)

责任编辑 徐素霞 李杨杨 张绪兰

李佳星 杨傲秋 赵小娜

美术编辑 李晓辉

发行主管 闫耕(0371-66022619)

QQ:838347450

编辑出版 《中国水土保持》编辑部

地址 河南省郑州市金水路11号

邮政编码 450003

编辑部 0371-66028761

66022610

稿件查询 0371-66022338

投稿网址 www.swcczz.cn

电子信箱 swcc2000@vip.sina.com

印刷 河南瑞之光印刷股份有限

公司

国内发行 《中国水土保持》编辑部

国外发行 中国国际图书贸易集团

有限公司(北京399信箱)

定价 15.00元

中国标准连 ISSN 1000-0941

续出版物号 CN 41-1144/TV

## 本刊声明

本刊已入编中国学术期刊(光盘版)、万方数据-数字化期刊和中国核心期刊(遴选)数据库等电子出版物,作者著作权使用费与本刊稿酬一次性给付,作者如有异议,可在来稿时注明或来函说明。

### □试验与研究□

太湖流域片水土保持生态产品价值实现典型模式研究

..... 陈俊颖,周婷昀,李昱彤(77)

基于PSR模型的南小河沟流域生态系统健康评价

..... 幸萌,邱子恒,袁静(81)

准格尔旗厅子堰煤矿排土场人工植被修复效果研究

..... 吴昊,赵蕾,童方瑶,等(85)

晋北典型小流域林草措施碳汇核算及增汇适宜覆盖度研究

..... 蒋洁,刘仕尧,张晓明,等(90)

新时期定西市淤地坝坝地利用研究 ..... 栾秀萍,张文祥,赵天娇,等(95)

自然降雨条件下不同径流小区水土流失特征分析

..... 唐学芬,刘原峰,柴亚凡,等(98)

荒漠戈壁区扰动面砾石压盖对土壤入渗特性的影响

..... 谭岷山,李晶,蔡海珍,等(104)

小流域尺度国家级水土流失重点治理区划定

..... 苏利平,张国军,马文涛,等(108)

### □水保强监管□

陕西省横山风电场项目水土保持监测分析

..... 李娟,杨霞(112)

### □简讯□

..... (103)

### □服务窗口□

本刊宣传协作网(116)·2025年度本刊发行前10名(116)

### □四封□

封一 陌上花开(四川省广安市广安区花桥镇) ..... 张国盛 供稿

封二 西安市创新水土保持监管机制 助力企业高质量发展

..... 霍春平 供稿

封三 守土护水筑根基 法治护航创示范——济南市章丘区开展《中华

人民共和国水土保持法》宣传活动 ..... 王恩义 供稿

封四 生产建设项目水土保持方案、监测季报、设施验收报告智能编审

系统 ..... 广告

前插 打造产学研协同创新高地:四川省直属水土保持监测实验站推介

..... 陈骥,徐丽,张兰萍 供稿

后插1 纪念《中华人民共和国水土保持法》修订施行15周年专题征

稿启事 ..... 本刊

后插2 纪念人民治黄80年暨黄河流域水土保持与生态文明建设

专题征稿启事 ..... 本刊

后插3 纪念长江经济带发展战略实施10周年暨长江流域水土保持

与生态文明建设专题征稿启事 ..... 本刊

# SOIL AND WATER CONSERVATION IN CHINA



No. 4 ( Total 529)

Apr. 5, 2026

## Main Contents

---

Further Discussion on the Definition of Soil and Water Conservation Engineering in Production and Construction Projects .....	ZHAO Yongjun (1)
Monitoring Technology of Soil and Water Conservation in Production and Construction Projects in Sandy Areas Based on the Integrated UAV Remote Sensing and Ground Observation .....	GONG Jianning, WANG Lingling, JING Ke (4)
Evaluation of Soil and Water Conservation Work in Production and Construction Projects Based on the AHP-CRITIC Method .....	WANG Gang, DUAN Tong, GUO Rui, et al. (7)
Integrated Control of the Songshugou Ecological and Clean Small Watershed .....	LIAO Kai (12)
Practice and Reflection on Soil and Water Conservation Supervision and Management in Pinglu County .....	LIU Wenxia (14)
Progress and Existing Problems in Soil Erosion and Water Loss Control in Guangxi .....	ZHANG Yiyuan, LI Dong, SUN Yan (17)
Effect and Suggestion on the Construction of the Complex of Soil and Water Conservation and Characteristic Industry in the Kengzhenhe Small Watershed Area .....	DU Qiuyue, LI Yutingting, YANG Kai, et al. (21)
Design and Application of a Management Platform for Acceptance of Soil and Water Conservation Monitoring in Production and Construction Projects .....	ZHOU Chunbo, WANG Jia, QIN Xiaolei, et al. (26)
Interpretation of <i>the Technical Specification for the Preparation of Preliminary Design Documents for Soil and Water Conservation Projects</i> .....	MENG Fanbin, YAN Junping, WANG Zhiguo, et al. (31)
Exploration of Soil and Water Conservation Models for Forest Fire Prevention Road Construction in Baoshan City of Yunnan Province .....	GU Zhujun, YANG Qinghui, WU Jiasheng, et al. (37)
Exploration and Practice of Value Realization of Ecological Product for Soil and Water Conservation in Beijing City .....	SONG Xiuyu, LI Shirong, WANG Xiaoyu, et al. (43)
Horizontal Calibration of Nine-Hole Split Flow Bucket Using the Laser Level .....	WANG Shilei (48)
Practice and Reflection on Realizing the Value of Ecological Products of Soil and Water Conservation in Production and Construction Projects .....	HUANG Huaai, ZHOU Wang, LI Xianjing, et al. (51)
Discussion on the Technical Method for Delineating Key Areas for Soil and Water Conservation in Guizhou Province .....	LIAO Zhangzhi (56)
Achievements and Prospects of Ecological Construction for Soil and Water Conservation .....	WANG Boya, ZHANG Baoning (60)

# SOIL AND WATER CONSERVATION IN CHINA



No. 4 (Total 529)

Apr. 5, 2026

- 
- Innovation and Practice of Refined Soil and Water Conservation Monitoring in the New Era  
..... CAO Enhao, CHEN Ming'an, DAI Xuejing (63)
- Approaches and Suggestions for Soil and Water Conservation to Support Rural Revitalization in Maiji District of  
Tianshui City ..... BAI Jie (68)
- Train of Thought and Experience of Soil and Water Conservation in Huining County of Gansu Province in the New  
Era ..... HAN Hongzhi (71)
- Experience and Effectiveness of Soil and Water Conservation Work in Songxian County  
..... YAN Junfei, FAN Zhanguo, YANG Jinbang (74)
- Typical Models for Realizing the Value of Ecological Products of Soil and Water Conservation in the Taihu Lake  
Basin Area ..... CHEN Junying, ZHOU Tingyun, LI Yutong (77)
- Ecosystem Health Assessment of the Nanxiaohegou Watershed Based on the PSR Model  
..... XING Meng, QIU Ziheng, YUAN Jing (81)
- Study on the Restoration Effect of Artificial Vegetation at the Waste Dump of Tingziyan Coal Mine in Jungar Banner  
..... WU Hao, ZHAO Lei, TONG Fangyao, et al. (85)
- Accounting for Carbon Sink of Forest and Grass Measures and Suitable Coverage for Increasing Carbon Sink in  
Typical Small Watersheds in Northern Shanxi ..... JIANG Jie, LIU Shiyao, ZHANG Xiaoming, et al. (90)
- Study on the Utilization of Check Dam Land in Dingxi City in the New Era  
..... LUAN Xiuping, ZHANG Wenxiang, ZHAO Tianjiao, et al. (95)
- Analysis of Soil Erosion and Water Loss Characteristics in Different Runoff Plots Under Natural Rainfall Conditions  
..... TANG Xuefen, LIU Yuanfeng, CHAI Yafan, et al. (98)
- The Influence of Gravel Cover on Disturbed Surfaces on Soil Infiltration Characteristics in Desert and Gobi Areas  
..... TAN Minshan, LI Jing, CAI Haizhen, et al. (104)
- Delineation of National Key Areas of Soil Erosion and Water Loss Control at the Small Watershed Scale  
..... SU Liping, ZHANG Guojun, MA Wentao, et al. (108)
- Analysis of Soil and Water Conservation Monitoring for the Hengshan Wind Farm Project in Shaanxi Province  
..... LI Juan, YANG Xia (112)

---

**First Issue** 1980    **Publishing Cycle** Monthly

**Competent Department**

The Ministry of Water Resources of P. R. C.

**Sponsor**

The Yellow River Conservancy Commission of MWR

**Editor and Publisher**

Editorial Board of "Soil and Water Conservation in  
China" (No. 11 Jinshui Road, Zhengzhou, Henan

450003, China)

**Editor-in-Chief** ZHAI Xuliang

**Associate Editor** SUN Zhanfeng

**E-mail** swcc2000@vip.sina.com

**URL** <http://www.swcczz.cn>

**Overseas Distributor**

China International Book Trading Corporation  
(P. O. Box 399, Beijing, China)

# SOIL AND WATER CONSERVATION IN CHINA

No. 4 (Total 529) 2026

## Abstracts

### Further Discussion on the Definition of Soil and Water Conservation Engineering in Production and Construction Projects

..... ZHAO Yongjun  
(Monitoring Center of Soil and Water Conservation, Ministry of Water Resources, Beijing 100053, China) (1)

To clarify the definition of soil and water conservation engineering in production and construction projects, ensure the effectiveness of soil erosion and water loss control and the implementation of the three-simultaneous system of soil and water conservation, starting from key issues, the paper systematically explores the necessity of defining soil and water conservation engineering based on recent institutional evolution and technical practice. It analyzes the methods for defining soil and water conservation engineering in slope protection, slag interception, and drainage projects, and discusses issues such as the granularity of engineering definition, the estimation of prevention and control effectiveness, soil and water conservation engineering management, and the relativity of engineering definition.

**Key Words:** soil and water conservation engineering; definition; prevention and control measures; production and construction projects

### Interpretation of the Technical Specification for the Preparation of Preliminary Design Documents for Soil and Water Conservation Projects

..... MENG Fanbin, YAN Junping, WANG Zhiguo, et al.  
(General Institute of Water Conservancy and Hydropower Planning and Design, Ministry of Water Resources, Beijing 100120, China) (31)

*The Technical Specification for the Preparation of Preliminary Design Documents for Soil and Water Conservation Projects* (SL/T 447—2026) (hereinafter referred to as “*the New Specification*”) was approved and issued by the Ministry of Water Resources of the People’s Republic of China, and will be officially implemented on April 4, 2026. *The New Specification* was prepared by combing and revising *the Specification for the Preparation of Proposal for Soil and Water Conservation Projects* (SL 447—2009), *the Specification for the Preparation of Feasibility Study Report for Soil and Water Conservation Projects* (SL 448—2009), and *the Specification for the Preparation of Preliminary Design Report for Soil and Water Conservation Projects* (SL 449—2009), incorporating the technical requirements of *Notice on Issuing the Outline for Preparation of Implementation Plans for Comprehensive Management of Soil and Water Conservation for Small Watersheds (Trial)* and *Notice on Issuing the Outline for Preparation of Implementation Plans for Comprehensive Management of Soil Erosion and Water Loss for Slope Farmland (Trial)*, and taking into account the demand of high-quality development of soil and water conservation and project management practices in the new era. To assist designers, managers, researchers, and educators of soil and water conservation in accurately understanding the revision background, core content, and main characteristics of *the New Specification*, and mastering its application points, the paper systematically and deeply interprets *the New Specification* from the aspects of preparation background and necessity, preparation principles, preparation methods and processes, main characteristics, and main content to provide valuable references for relevant personnel to accurately apply *the New Specification* in project practices.

**Key Words:** soil and water conservation; preliminary stage of projects; design documents; technical specification; SL/T 447—2026; interpretation

### Accounting for Carbon Sink of Forest and Grass Measures and Suitable Coverage for Increasing Carbon Sink in Typical Small Watersheds in Northern Shanxi

..... JIANG Jie<sup>1</sup>, LIU Shiyao<sup>2,3</sup>, ZHANG Xiaoming<sup>2,3</sup>, et al.  
(1. Shanxi Water Development Center, Taiyuan, Shanxi 030002, China; 2. State Key Laboratory of Watershed Water Cycle and Water Security, China Institute of Water Resources and Hydropower Research, Beijing 100048, China; 3. Research Center on Ecological Projects of Soil and Water Conservation, the Ministry of Water Resources, Beijing 100048, China) (90)

To systematically state the carbon sink and its enhancement pathways of forest and grass measures of soil and water conservation, and to scientifically determine the optimal vegetation coverage threshold for carbon sink accumulation, taking a typical small watershed in Shahe Town of Shanxi Province as the study area, based on field monitoring and spatial analysis, combined with afforestation carbon sink methodologies, the paper quantitatively assesses the benefits of vegetation and soil carbon sink of forest and grass measures of soil and water conservation. The results show that: a) the total amount of vegetation carbon sink in the research area reached 50 442.43 t, and the total amount of soil carbon sink reached 12 051.94 t, indicating that forest and grass measures of soil and water conservation can enhance carbon sink function; b) vegetation coverage plays a significant role in regulating carbon sinks. The carbon sink of the forest and grass measures shows a fluctuating increases with the increase of vegetation coverage, while the vegetation carbon sink shows an increasing trend with the increase of vegetation coverage; c) the soil carbon sink reaches its peak when the vegetation coverage is between 40% and 60%, which is the appropriate vegetation coverage for soil carbon sink accumulation in the watershed; d) forest and grass measures should optimize their structure and configuration, coordinate vegetation and soil carbon sink enhancement, and work together to promote soil erosion and water loss control and achieve carbon neutrality goals.

**Key Words:** carbon sink benefits; vegetation coverage; forest and grass measures; soil and water conservation; typical small watershed; Shanxi Province