



中国西北地区
再造山川秀美

战略研究与试验示范

李佩成 等 编著



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中国西北地区再造山川秀美科技行动计划前期研究项目成果

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内 容 简 介

本书内容分三篇。

第一篇为西北区情、生态修复与再造秀美山川总论。在详细调研的基础上，分析了西北区情，并论述了西北地区生态与环境优势和劣势，提出了实施西北地区再造秀美山川科技行动计划的指导思想、研究目标及技术路线与指标体系，介绍了西北地区再造秀美山川的分区，提出了为再造秀美山川需要开展的科研规划，包括：已有成果的集成推广、科技攻关和试验示范区建设。

第二篇为西北各省（自治区）分论。从战略研究的高度，调研了西北地区省（自治区）情及存在的主要生态问题，阐明了各省（自治区）实施再造秀美山川的具体步骤和内容。

第三篇为试验示范区建设。介绍了不同省（自治区）各有特色的七个试区建设的模式与成就。

本书可供农、林、水、牧有关产业及研究部门的科技工作者、国家有关部门的决策者、管理者及高等院校相关专业的师生参考。

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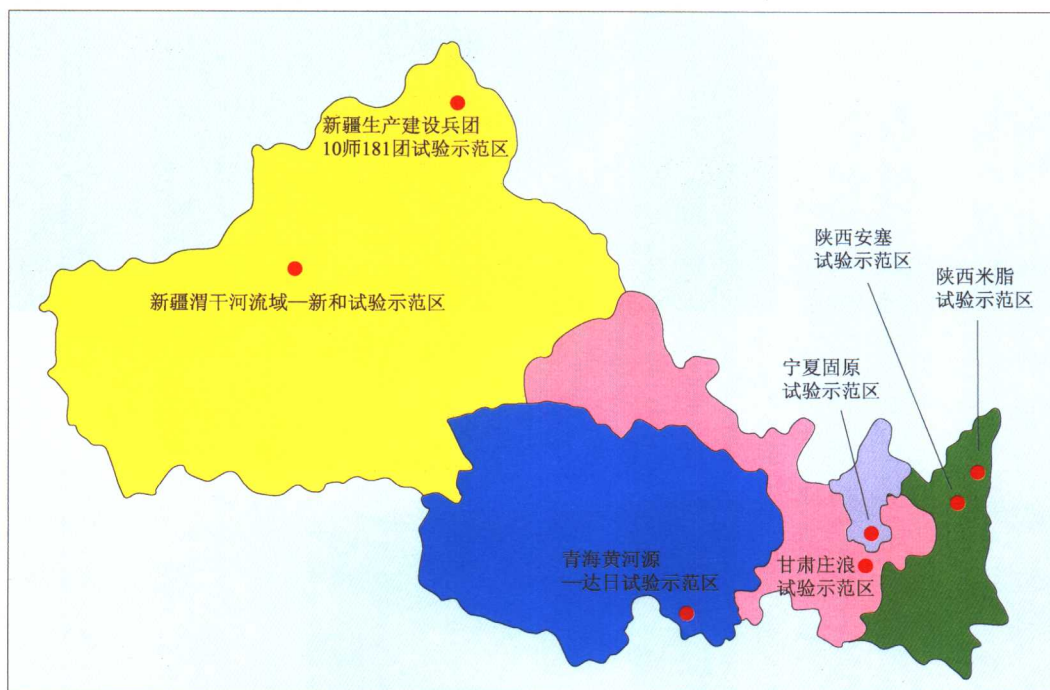
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前 言

这是一本取材于科研成果的书，她凝聚着成百上千人的心血；也是一本表达希望和展示宏图之书，因为造就和谐安祥富裕康乐的生活和生产环境，再造山川秀美，一直是人们梦寐以求的。对于经常遭遇干旱缺水、风沙尘暴的西北人民来说，更是如此！因而，当1997年8月5日时任国家主席的江泽民同志作出“再造一个山川秀美的西北地区”的批示时，西北的党政军民如久旱逢甘霖，欣喜非常，并决心为其早日实现而奋斗！陕西、甘肃、宁夏、青海、新疆五省（自治区）科学技术厅及新疆生产建设兵团科委顺乎党心、民心、积极配合，他们本着科技先行的精神，联合发起了“中国西北地区再造山川秀美科技行动计划”，并组织专家学者投入这一事业。值得高兴的是，五个兄弟省区和新疆生产建设兵团一起，由陕西省科技厅牵头，为了一个共同的目标实施联合科技攻关，这既是一种精神飞跃，也是一种行动创新。国家科技部大力支持了这一事业，遂于1999年10月，批准立项开展两项研究：“中国西北地区山川秀美科技行动计划基础调查与战略研究”及“中国西北不同地域再造山川秀美试验示范区建设”，统称为“中国西北地区山川秀美科技行动计划前期研究”。

“再造山川秀美”是一项宏大而艰巨的系统工程，项目的实施应充分体现综合性、阶段性、地域性、创新性和实用性。为此，我们从三个层面开展此项研究工作，即：已有成果的集成配套、难题攻关和试验示范区建设。在完成已有成果集成配套、进行基础调查和战略研究的同时，前期研究还在不同的生态地域设立了七个试验示范区。通过三个层面结合，开展滚动式研究，利用战略研究成果推动技术研究，用技术研究丰富战略研究，使再造山川秀美科技行动向纵深发展。

三年来，参加研究的广大科技人员不畏寒暑，拼搏奋进，取得了可喜成果，出色地完成了任务，写出了研究报告，并于2003年元月在北京通过了国家科技部组织的验收。本书便是在研究报告的基础上编写而成的。本书共分三篇：第一篇着重论述了西北总体区情，生态修复于再造山川秀美战略研究；第二篇是各省（自治区）及新疆生产建设兵团再造山川秀美战略研究分论；第三篇展现了七个位于不同生态地域的试验示范区建设成果。

需要说明的是，全书仅仅反映了课题研究内容的一部分。其中有关基础调查的主要成果，包含在已经出版的《中国西北地区生态环境与再造山川秀美》一书中，另一部分成果将在续研项目中进一步验证和深化。而对于在改

造山河中满怀激情的广大科技人员和人民群众，那些谱写在大地上的如诗如画的篇章，本书难免挂一漏万。

在项目的实施过程中，广大科技人员深入实际，深入群众，在当地党政领导的支持以及群众的参与下，群策群力发挥了集体智慧，实现了不少具有战略意义的创举。例如，在甘肃的庄浪县，把再造山川秀美的新庄浪作为动员干部和群众投入农村二次创业致富奔小康的动力和奋斗目标；又如在宁夏，通过再造山川秀美科技行动，把改造自然与再造山川秀美的过程与栽种葡萄与加工葡萄酒等产业相结合，明确提出了“兴办沙产业”的创举；再如新疆生产建设兵团，通过调整产业结构，在改造高寒荒漠的同时，走出一条戍边富兵的新路子、新措施，如此等等。而这一切都是以科技创新为支撑的！

战略研究和试验示范区建设的相互促进，使研究者加深了对再造山川秀美内涵的全面认识，并做出科学的界定：认为再造山川秀美就是以生态学原理、可持续发展原理、社会主义经济学原理为依据，以文明美好、富裕康乐为理念，以先进生产力为手段，因地制宜地对第一自然和第二自然进行保护修复和改造，从而形成万物蓬勃、相伴相生、生境处于良性循环的国土社会环境——秀美山川。用通俗的语言表达“再造山川秀美”，就是造就“天蓝、地绿、山青、水秀、人富”的境界。

战略研究还提出再造山川秀美应进行科学规划，实现分区分期实施的设想；提出了西部大开发要与再造山川秀美相协动的战略决策……这些已为社会所广泛认可，并开始付诸行动。项目组还向国家科技部提交了“中国西北地区山川秀美科技行动计划”续研项目立项建议，其中“西北不同生态地域山川秀美试验示范区建设与重大科技难题研究”已获准立项。

试验示范区建设创立了七个不同模式，取得创新性成果 35 项，辐射面积已达 7990 平方千米，取得经济效益 8.8 亿元。更加令人鼓舞的是，山川秀美项目的实施，为国家也为各省（自治区）培养出一批熟悉西北、熟悉乡土、具备真才实学，推进生态环境建设、再造山川秀美的年轻专家，他（她）们中的不少人，现已被吸纳投入各省（自治区）、区、县、乡的生态环境建设和再造山川秀美的事业中，有的还成为青藏铁路建设中的生态保护、江河源、河西走廊生态环境修复、黄土高原综合治理等宏大建设工程的科技骨干力量。

通过执行本项目，我们深深地体会到，团结就是力量。西北五省（自治区）及兵团的合作，可以攻克单家独省开展研究难以克服的种种困难，确保重大科学研究的顺利实施。与此同时，我们还深深地认识到，“再造山川秀美”是“三个代表”在西北地区的重大体现，她不仅推动着先进生产力的发

展，催生着“生态文化”、“秀美文化”的萌发和成长，而且对于长期生活在干旱缺水、飞沙走石恶劣环境中的西北人民来说，“再造山川秀美”更代表着广大人民的最大利益！本书的编辑出版正是为此而作的继续努力。

本书前言、目录等英译文是由亢树森教授、李早霞讲师完成的，编者在此表示深深的谢意！还要感谢郑飞敏同志，初稿的图文大都是由她誉清打印的。

在项目执行中和本书出版中，国家科技部发展计划司、农业与社会发展司的领导和同志们给予了热情指导和支持；同行专家提供了十分有益的帮助，再次深表谢意！

编著者们还要十分感激本书的责任编辑赵峰先生，他所表现出的科学出版社的认真求实精神，令人钦佩！

对书中可能出现的疏漏甚至错误，敬请读者批评指正。



2003年春节于西安

Preface

This book is based on the scientific research achievements; it crystallizes thoughts and energies of thousands of the people; and also, it is a book to express the expectations and to exhibit the grand prospect, since creating the harmonious, imperturbable, affluent, happy and peaceful life and production environs and reconstructing graceful landscape with green mountains and clean-limpid rivers have been long-cherished or craved by the people. This is even more important than anything else to the people who have long suffered from severe droughts, water shortage and sandstorms in the northwest region in China. Accordingly, in August 5, 1997 when President Jiang Zemin made an important written instruction — **Reconstructing Graceful Landscape with Green Mountains and Clean-limpid Rivers in Northwestern China**, the Party, the governments, the army and the people in the northwest region met genial shower after a long drought, felt joyful and were determined to work hard for the realization of the written instruction earlier. The scientech departments in such 5 provinces (autonomous regions) as Shaanxi, Gansu, Ningxia, Qinghai and Xinjiang and the Scientific Commission of Xinjiang Production and Construction Army Division have complied with the Party's heart and the people's hearts to make an active matching with the union in launching "Scientech Action Plan for Reconstructing Graceful Landscape with Green Mountains and Clean-limpid Rivers" and also to organize the experts and scholars of various types to plunge themselves into this great cause. It is worth being glad that the 5 provinces (autonomous regions), along with Xinjiang Production and Construction Army Division, have come together with a common goal to implement the unified scientech project attacks, with Shaanxi Scientech Department taking the lead. Accordingly, this is not only a kind of spirit to leap forward but an action innovation as well. The Ministry of Science and Technology of the People's Republic of China has made the intensive efforts to support this vital cause so that in October, 1999, the Ministry of Science and Technology approved the establishment of carrying out two research projects: "Scientech Action Basic Investigation & Overall Strategy Study of Reconstructing Graceful Landscape with Green mountains and Clean-limpid Rivers in North-

western China” and “Establishing Experiment and Demonstration Zones for Reconstructing Graceful Landscape with Green mountains and Clean-limpid Rivers in the Different Local Regions of the Northwest Areas in China” which are known as “the Pre-stage Research on Sciotech Action Plan for Reconstructing Graceful Landscape with Green Mountains and Clean-limpid Rivers in Northwestern China”.

“Reconstructing Graceful Landscape with Green mountains and Clean-limpid Rivers” is a huge and arduous system engineering project. The project implementation should fully embody its comprehensiveness, stages, regionalization, innovation and practicality. For this reason, we have started our research work from three ranges or sections, i. e. the existing research achievements integrated and realigned, the attacks of the difficult key projects, and the establishment of experiment and demonstration zones. The 7 experiment and demonstration zones are established in the different ecological regions during the pre-stage research work while the obtained achievements are integrated and realigned; and basic research and strategic studies are being carried out. The rolling type of research work is conducted via the combination of three ranges or sections; and research results obtained from strategy studies can be used to boost technology research; and technology research can, in turn, enrich strategic research, whereby rendering the sciotech action for reconstructing graceful landscape with green mountains and clean-limpid rivers to develop in longitudinal depth.

The broad masses of sciotech personnel who participated in this research project have for 3 years feared neither coldness nor hotness and struggled hard to advance boldly so as to obtain the important research achievements, to complete the tasks with better results and to compile the research reports. As a result, the research project was approved of the identification and acceptance by the experts organized by the National Ministry of Sciences and Technology in Jan. 2003, in Beijing. This book is compiled on the basis of research reports of this project and divided into three sections or parts: Section 1 is mainly concerned with the overall situations, eco-repairing and strategic research on reconstructing graceful landscape with green mountains and clean-limpid rivers in northwestern China; Section II deals with strategic research on reconstructing graceful landscape with green mountains and clean-limpid rivers by each province (autonomous region) and Xinjiang Pro-

duction and Construction Army Division; Section III describes the great achievements obtained from 7 experiment and demonstration zones located in different eco-regions.

What needs to explain is that the whole book can only reflect a part of research items or contents in this research project, of which the related achievements from the basic investigation have already been included in the published book-*Eco-Enviorns and Reconstruction of Graceful Landscape with Green Mountains and Clean-limpid Rivers in Northwestern China*; and another part of research achievements will be further tested and deepened in the following-up projects. The broad masses of the people and the scientech personnel who are full of enthusiasms have created wonders in transforming the mountains and rivers, and the new chapters just like the poems and pictures have been written over this vast land, but it is unavoidable that one thing is cited, and ten thousand things may have been left out in this book.

In the course of the project implementation, the broad masses of scientech personnel have gone deep into the realities of life and the masses of the people to achieve a great number of unprecedented undertakings of strategic importance under the support of the local Party and government leaders and with the participation of the masses of people via making joint efforts to give full play to the collective wisdom. For instance, in Zhuanglang County of Gansu province, reconstructing new Zhuanglang County with graceful landscape of green mountains and clean-limpid rivers is served as the motive force and struggle for the objective or purpose to mobilize the masses of the people and cadres to throw themselves into starting the second undertaking to bring about the prosperity for advancing on the well-off life. Again, for instance in Ningxia, the people have combined the nature transformation with the course of reconstructing graceful landscape with green mountains and clean-limpid rivers, and combined grape cultivation with the grape wine processing industry via reconstructing graceful landscape with green mountains and clean-limpid rivers, on the basis of which the unprecedented undertaking of "running sand industry" has been definitely advanced. Again, for instance, Xinjiang Production and Construction Army Division has adopted new measures and opened up a new road or vista for defending the frontiers and making the soldiers prosperous via the industrial restructures while transforming high and cold areas as well as deserts, etc. All this depends upon scientech innovation