



# The Best Performing Projects in 2016

## 2016年度 最佳表现贷款项目

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## **2016年度 最佳表现贷款项目**

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# The Third Loan Project Award Program

## 第三届亚行贷款项目评奖活动

Following the successful implementation of the loan project award program in 2013 and 2015, the biannual loan project award was again undertaken in 2017. This year is to select and award the best performing projects in 2016. The award is to recognize the projects with an effective institutional set up, timely start-up of implementation, smooth disbursement and procurement, strict compliance with loan covenants, and effective delivery of scheduled project outputs.

紧随着亚行贷款项目评奖活动在2013年和2015年的成功实施，两年一次的亚行贷款项目评奖活动再次于2017年成功开展。这次的评奖活动是为了表彰2016年度最佳表现贷款项目。该奖项的评选主要是基于其高效的项目管理机构、项目实施启动及时、支付和采购进展顺利、严格遵守贷款协议，并能切实实现项目的预期产出。

In the third loan project award program, 84 ongoing projects in the PRC were eligible to participate, but only 22 PMOs submitted their self-evaluation results. The top one projects in the ranking from each sector were selected as the best performing projects in 2016, based on the PMOs' self-evaluation results that were validated by the ADB's project officers.

在第三届亚行贷款项目评奖活动，在中国的84个在建亚行贷款项目有资格参加评奖，但只有22个项目办提交了对他们项目的自评结果。对项目办的自评结果，亚行项目官员进行了复核和确认。根据确认后结果的排名，每个行业的第一名被评选为“2016年度最佳表现贷款项目”。

**The Best Performing Projects in 2016**  
**2016年度最佳表现贷款项目**

No. 序号	Loan No. 贷款号	Project Name 项目名称
<b>Agriculture and Nature Resources</b> 农业和自然资源		
1	Loan 2943-PRC	Comprehensive Agricultural Development Project 农业综合开发项目
<b>Energy</b> 能源		
1	Loan 2885-PRC	Shanxi Energy Efficiency and Environment Improvement Project 山西能效与环境改善项目
<b>Transport and Communications</b> 交通和通信		
1	Loan 3074-PRC	Yunnan Sustainable Road Maintenance (Sector) Project 云南可持续道路养护(行业)项目
<b>Urban and Social Development</b> 城市和社会发展		
1	Loan 2903-PRC	Gansu Urban Infrastructure Development and Wetland Protection Project 甘肃城市基础设施建设及湿地保护项目

# **Agriculture and Nature Resources**

## **农业和自然资源**



# LN 2943- PRC:

## Comprehensive Agricultural Development Project

## 综合农业开发项目



### A. Project Profile

#### 项目概况

The Project is an ADB-financed nationwide project, covering 68 counties in Jilin Province, Heilongjiang Province, Anhui Province, Henan Province, Yunnan Province, and the Ningxia Hui Nationality Autonomous Region. It aims to improve basic agricultural production conditions, enhance overall agricultural productivity through the construction of high-standard farmland, strengthen agricultural infrastructure, and improve the environment. An additional objective is to upgrade management of comprehensive agricultural development through the introduction of ADB's advanced project management concepts and experiences. To achieve this, five measures are being undertaken, including water conservancy measures, agricultural measures, ecological measures, modern agricultural development, and institutional capacity building. The estimated project investment totals CNY198.2 billion, including a \$200 million ADB loan.

综合农业开发项目，是一个由亚行贷款资助、覆盖全国六省、一自治区的68个县（市、区）建设项目。项目旨在通过改造中低产田，建设高标准农田，加强农业基础设施和生态建设，改善农业基本生产条件，提高农业综合生产能力；通过引进亚行项目管理的先进理念和管理经验，提高农业综合开发项目管理水平。项目通过实施水利措施、农业措施、生态措施、现代农业发展和机构能力建设五方面的措施内容实现项目目标。计划总投资19.82亿元，其中亚行贷款2亿美元（折合人民币12.6亿元）。

The project launched in 2013, and as of the end of 2016, investments of CNY1.42 billion had increased the irrigation area by 22,186.44 ha, increased the irrigation area by 58,234.17 ha, increased the drainage area by 8,651.76 ha, improved the drainage area by 12,677.9 ha,



Project activities are combined with local rural tourism in one of the participating counties  
项目活动与乡村旅游相结合

increased the water-saving control area by 50,631.78 ha, improved soil by 29,527.87 ha, promoted, and demonstrated 29 varieties of new agricultural technology. Other benefits included developing the demonstration and promotion area by 2,223 ha, carrying out 15 study/research subjects, planting 972,300 trees as agricultural protection forests, building afforestation areas of 2,880.24 ha, creating effective protection areas of 28,586.4 ha, planting 978,800 trees as eco-economic forest, creating afforestation areas of 187.68 ha, returning crop stalks to 11,313.93 ha of fields, building demonstration greenhouses in an area of 212,800 ha, demonstrated, and promoting pollution-free agro-product in an area of 15,182.93 ha. The project has also provided training to 154,814 farmers, including 72,959 women, 11,280 ethnic minority farmers, and 38,558 poverty-stricken

farmers, as well as 382 persons per month training on project management to project management office (PMO) staff.

到2016年底，已完成投资14.20亿元，增加灌溉面积22,186.44公顷，改善灌溉面积58,324.17公顷，增加排涝面积8,651.76公顷，改善排涝面积12,677.90公顷，增加节水控制面积50,631.78公顷；改良土壤29,527.87公顷，示范推广农业新技术新品种29项，示范推广面积2,223公顷，进行课题研究15项；栽植农田防护林97.23万株、造林面积2,880.24公顷、有效防护面积28,586.40公顷，栽植生态经济林97.88万株、造林面积187.68公顷，秸秆还田11,313.93公顷；建设示范用温室面积21.28公顷，进行无公害农产品示范推广15,182.93公顷；培训农民154,814人，其中女性72,959人、少数民族11,280人、贫困人口38,558人，组织培训项目管理人员382人/月。



A Project Site in Jilin Province  
吉林省项目现场

## B. Project Management Highlights

### 项目管理的亮点

#### 1. Project Team and Coordination 项目团队和协作

One of the important factors for successful project implementation lies in stable staff from PMOs at national, provincial, municipal/prefectural, and county levels for:

- effective coordination with key stakeholders, such as project designers, government agencies, and participating communities to ensure that the project outputs and activities are scientific and justifiable in terms of meeting actual demands;
- ensuring that the project is implemented to hit its objectives;
- addressing issues encountered and taking corrective actions on non-standard operations during project implementation;

As project implementation agencies, the county offices of comprehensive agricultural development have broken down various project activities and tasks to a grassroots level, including agricultural technical extension stations, villages, and production teams. The key staff of these grassroots units are assigned clear responsibilities regarding specific tasks to be implemented so that they progress as scheduled and in compliance with specified standards.

项目顺利实施的一个重要方面是国家、省、地、县均有稳定的农业综合开发机构和人员，协调多方，与设计单位、各部门、建设地村民及村民委员会沟通协作，确保项目建设内容科学合理，能满足实际需要，符合项目建设方向。及时解决项目实施过程中存在的疑难问题，及时纠正各县在项目实施和管理中不规范的地方，协调解决遇到的困难和问题。县级农发办是项目具体执行机构，实行分工负责制，将任务层层分解，落实到站所、落实到村组、落实到人头，落实到具体施工单位，明确任务、标准、质量、进度，做到职责明确，责任到人。

As the project executing agency, the state office of comprehensive agricultural development leads project implementation. Each participating province has set up ADB-funded steering groups for comprehensive agricultural development, with responsibility for project implementation organization and day-to-day implementation management. Every participating county has established a project implementation steering group led by the county governor/city mayor as the director with the deputy county governor/mayor overseeing work as the deputy director. Meanwhile, key local government authorities such as county finance bureaus, and agriculture, water resources, forestry, and land resources bureaus are responsible for formulating, organizing, and coordinating the master plan during project implementation, encouraging all stakeholders to comprehensively complete the project in a timely and quality manner. At the township level, every township has set up an implementation steering group similar to that of the county level. At the construction sites, project implementation headquarters led by township governors have been set up to cooperate in organizing project implementation.

国家农发办统领项目实施，项目省成立亚行农业综合开发项目领导小组，负责本项目的组织实施和日常管理工作。各项目县(市)也成立了以县(市)长任组长、分管副县长(市)长任副组长、县(市)财政局(农发办)、农业局、水利局、林业局、国土资源局等单位主要负责人为成员的项目建设领导小组，负责项目的总体规划和实施过程中的组织领导和协调等工作，督促按期保质全面完成项目的建设任务。各项目乡镇成立由乡镇长任组长，分管副乡镇长任副组长，农、林、水、土地等站所主要负责人为成员的项目建设领导小组，并在开发工地设立由乡镇长任指挥的工程建设指挥部，负责配合项目的组织实施。

## 2. The "nose of the ox" — Procurement 采购—项目管理的“牛鼻子”

Project procurement, or the "nose of the ox," is the key first step in project implementation, and is fundamental to follow-up work. Intensive efforts were made to proceed with procurement activities as rapidly as possible, and PMOs at all levels prepared the bidding documents accordingly. Upon receiving no objections from ADB on the first 18-month project procurement plan, project tendering agents coordinated for the prepared bidding documents to be advertised. As of the end of 2016, 565 contract packages of a total planned 659 packages have obtained ADB's procurement contract summary sheet (PCSS) for loan disbursement.

抓住招标采购“牛鼻子”。招标采购是项目实施的第一环节，是后续工作的基础。组织各级项目办及时准备招标采购材料，在收到亚行同意的18个月采购计划后，及时与招标代理机构协调，发布招标公告，完成招标工作。预计总合同包659个，已获得亚行报账PCSS号合同包565个。

## 3. Institutional management 创新和实行制度化管理

To achieve more effective project implementation management, one of the participating project cities—Jieshou City, Anhui Province—has adopted "10 systems" to manage implementation of its respective subprojects. These 10 systems are: division of responsibilities, work attendance checks, regular meetings, famers inspections, model demonstrations, comparative group performance appraisals, discussion-based construction supervisor appraisals, worksite inspections, positioning, and publicizing



completed works before acceptance. Examples include: electing five farmers as inspector for 10,000 mu of farmland; electing three famers as inspectors for 5,000 mu farmland (a mu is a Chinese unit of measurement—1 mu = 666.67 m<sup>2</sup>).

安徽省界首市亚行项目管理实行“十项制度”。即实行分工负责制、考勤制、例会制、农民监督员制、示范样板制、班组评比制、监理评议制、一线工作制（巡查制）、定位制、工程公示报验制管理。如每万亩选5名农民监督员，0.5万亩选3名农民监督员。

In Qinyang, Henan Province, a supervisory system of substituting subsidies for rewards and the cooperation and mutual trust between the construction team and the sites' supervisors have formed positive interactions, realizing comprehensive detailed management. On the basis of "six-level supervisions," a village representative appraisal system has been introduced. Detailed procedures are as follows: After the completion of the project, a villagers' representative meeting is held in the project village and the village representatives make public comments on the construction and supervisors. Regarding project quality problems, the project implementer summarizes them and then provides written feedback to the construction team. Only after the issue has been resolved within a prescribed time limit will the village representative who has commented provide an acceptance signature at the project completion.

河南沁阳市探讨以奖代补的有偿监督机制、施工队与六级监督之间的合作互信机制，形成良性互动，实现了全程精细化管理。并在六级监督的基础上，推出了村民代表评议制

度，具体做法是在工程完工后，在项目村召开村民代表大会，由村民代表对所建工程及监督员进行公开评议，对于村民代表提出的工程质量问题，项目执行单位汇总并书面形式反馈给工程队，限期整改到位后，由提问题的村民代表签字认可后，方可进行竣工验收。

#### 4. Project monitoring and evaluation 重视项目的监测评价工作

Project implementation and monitoring and evaluation were launched and carried out simultaneously. Firstly, consultants for project monitoring and evaluation were recruited through an open bidding process and a package of agreements on technical assistance service were signed; secondly, implementation plans for project monitoring and evaluation were prepared; thirdly, a project monitoring and evaluation management information system (MIS) were developed; fourthly, a project monitoring and evaluation network was established.

项目实施与监测评价同步启动、同步实施。一是公开招聘咨询服务机构，签订了一揽子技术援助协议；二是制定了监测评价实施方案；三是开发了监测评价管理信息系统；四是构建了监测评价工作网络。

In the early stages, the project embraced ADB's comprehensive monitoring and evaluation management information system, using the system platform to collect project data in an effective and timely manner. Through systematic and rapid unified analysis, the system has reduced duplication of work in routine work and improved the project implementation plan. It has also helped in summarizing project progress, in project mid-term reviews, in restructuring, and in terms of data reliability. Moreover, the

flexible use of information tools has facilitated effective communication among multi-level stakeholders.

项目在建设初期开发亚行项目综合监测评价管理信息系统，运用系统平台及时有效的收集项目数据，并通过系统快速的进行统一分析，减少了项目日常工作中的重复作业，提高了项目的实施计划、进度汇总、中期调整等的工作效率，更是提高了数据的有序性和可靠性。信息化工具的灵活运用，为本项目多层次多机构的有效沟通提供的及大的便利。



Handover Agricultural Equipment to Farmers  
农机设备发放现场



Public Consultations  
公众咨询

## 5. Public awareness 重视宣传工作

Public awareness campaigns have been continuously carried out through the entire project cycle from preparations to actual implementation. For instance, the status of project implementation progress is publicized via multimedia channels, including journals, networks, TV stations, newspapers and other platforms. This has been supplemented by exchanges of experience and by promotions.

从准备阶段到实施阶段均积极对项目的各个阶段进行对外宣传，如：通过杂志、网络、电视、报纸等平台媒介向社会介绍和宣传项目的进展情况和成效，同时做好系统内部好的经验做法交流和宣传工作。

## 6. Good practice in implementing safeguarding policies 落实保障政策措施

The project aims to transform medium- and low-yield fields into high-yield farmland without any permanent land occupation, land-use adjustment or road construction. Nevertheless, it involves some land borrowing for the establishment of rural infrastructure, such as road building and canal lining. Resettlement measures involved:

- a) Minimizing permanent land acquisition by ensuring that ditches, canals, roads, and pumping stations are rebuilt on the basis of existing ones. straightening twisting roads and canals, and filling unused ditches and canals;
- b) when building bridges, culverts, well platforms, roads, and irrigation pumping stations, pre-mixed concrete products are specified in the bidding documents so that on-site materials are not required and it is not necessary to borrow arable lands; in laying

pipelines or rural power transmission cables, which takes around 3–5 days, construction is usually arranged for farmland idle periods, allowing land to be immediately returned after work is completed; construction of electro-mechanical wells generally takes less than 5 days, and are best scheduled in increments, making it possible to return land after construction; meanwhile, wastewater from well washing is discharged directly from drainage canals near the farmland.

本项目是将原中低产田进行改造为高标准农田，不涉及永久性占地，也不涉及土地调整，个别修路、渠系衬砌涉及到临时占地，在项目实施前即制定了较为实用的移民安置措施。a) 为避免永久性占地，项目设计的沟、渠、道路和提灌站均在原有的基础上改建、完善和提升，并对项目建设内容进行优化设计，如将弯曲的渠道和道路进行取直、对无用和废弃的沟渠进行填平等措施进行施工建设。b) 临时性占地：项目建设的桥涵闸、路、井台等，均使用搅拌好的混凝土成品，施工现场不需要料场，无需占用耕地；变压器房和排灌站均建在路边，所需建筑材料均放在临近道路旁，也不存在占用耕地；地埋管道以及农用输电线路施工期均在3-5天，工期通常安排在农地闲置期，施工后立即恢复原状；机电井的施工一般也在5天以内，且采取分批进料分批实施的方式进行施工，完工后立即恢复原状，洗井产生的废水，直接从田边疏浚渠道排走。

To minimize adverse environmental impacts during the design phase of the project, city, county, and district environmental protection agencies actively participated in the preparation and design of the project and worked together with the departments of agriculture, forestry, and water resources, among others. Local environmental protection bureaus (EPBs) actively participated in studies on comprehensive decision making for the project, allowing for more scientific

and democratic decision making. Local EPBs recruited third-party consultants, established monitoring and evaluation steering groups and set up monitoring and evaluation networks with technical staff of the agricultural, forestry, water resources and environmental protection agencies of the project cities and counties so as to provide strong technical backup.

针对项目建设对环境的影响，在项目设计阶段，县（市、区）环境保护主管部门应积极参与项目的立项、设计等过程，并与农开、农业、林业、水利等部门一起参与项目管理，积极参与项目综合决策研究，使项目决策更科学化、民主化。同时通过招聘第三方咨询机构，成立监测评价领导小组，以及与项目市县农、林、水、环保部门技术人员组成的监测评价网络，为项目监测评价提供了强有力的技术支持。

During construction, strict implementation of measures proposed in the environmental management plan shall be taken: a) air environmental protection: during construction, strict controls on implementation quality are imposed, reducing impacts on air quality. The spread of dust during concrete mixing should, in general, be restricted to a radius of 50 meters, coupled with regular sprinkling of water, with mixing stations on the leeward side, 300 meters from residential areas. Mixing devices should be sealed, and roads should be cleaned to maintain good road conditions and excessive dust, while all refuse and waste should be removed, and materials such as cement and lime that create dust should be covered—especially during transportation. b) Noise-pollution protection: during construction, low-noise construction machinery should be used as far as possible in tandem with sound insulation, dampening and other measures to counteract noisy equipment, and noisy operations should be



Construction Sites at Baoqing County in Heilongjiang Province  
黑龙江宝清县施工现场

avoided when residents are resting. c) Solid waste disposal: waste soil from field works should be piled according to the plan and returned to the fields when the irrigation and water conservancy has been carried out to level the land; construction should be arranged, as far as possible, to be in the slack farming season(s) so as to avoid excessive impact on people's production and daily life; constructors' awareness was raised prior to the project launch and people in the project area have been encourage to exercise their monitoring rights. d) Ground water protection: The Henan Province project area has a strict water-drawing permit management system to plan, dispatch, and use water from water resources within the project area in a unified manner in terms of water-drawing permission and charges, plus unified water quantity and quality management. Those who wish to dig a well should apply to the water resources administration for permission, and applications will be subject to scientific

deliberations and appraisals, checking the drawing spot and water quantity requirements to ensure reasonable development and utilization of water resources in the project area. Construction is best not carried out in the rainy season and appropriate construction techniques are employed according to the actual situation in the project area. The living quarters of the construction team must be located at a distance from water sources. Vegetation damage must be strictly controlled during construction.

在施工过程中严格按照环境管理措施执行：a) 空气：在施工过程中，严格控制工程建设质量，减少因施工对空气的影响。混凝土搅拌时产生扬尘的影响范围一般在搅拌棚周围50米左右，施工过程中采用了定期洒水、料场和拌合站设置在居民区下风方300米以外、拌合设置密封、对施工道路氢气养护和清扫等方法，保证了降尘和路况；施工方及时清理垃圾废料，容易引起扬尘的石灰水泥等料物存放时进行覆盖，拉运水泥时采用遮挡措施。b)



声环境：施工期间尽量选用低噪声施工机械，并对噪声较大的设备采用隔声、消声等措施，使用高噪声设备时避开居民休息时间。c) 固体废物：对田间工程的弃土就近按计划堆放，同时结合农田水利基本建设工程的平整土地工程复耕还田；并且工期尽量安排在农闲季节，对区域内群众安排生产、生活不会造成太大影响；对施工方提前做好环保宣传，并发动项目区群众积极监督。d) 地下水：河南省项目区严格执行取水许可管理，对项目区的水资源实施统一规划、统一调度、统一实施取水许可制度和征收水费，统一管理水量和水质。凡是直打井工程，都必须先向水资源管理部门提出申请，经过科学论证后核准取水地点和取水量，以保证合理开发利用和科学调配项目区的水资源。施工尽量避开雨季，根据各项目区实际情况选择适宜施工工艺，施工队生活区要远离水源地，尽量控制施工过程对植被的破坏。

## 7. Sound financial management practices 良好的财务管理措施

Standardized capital management procedures have been practiced during project implementation in order to ensure that project funds are used exclusively for the project. The "3S", "5D" system was implemented—i.e. specific personnel (appointed to be in charge), specific accounting (separately established for the project), and specific use of capital (exclusively for the project); define project activities, define investment quota to each activity, define schedules for loan payment, define penalty/incentive measure, and define the regulatory system. Project funds are well managed from budgeting in project planning stage to final settlement, from the review of planning and counterparty fund allocation or loan disbursement to the project account to auditing the final settlement at the completed works acceptance. Detailed requirements and specified procedures for managing the project

funds, the project accounting, and financial reporting are documented to guide financial management staff at various levels. These measures and procedures altogether form a sound project financial management system.

为保证项目资金专款专用，实行“三专五定”管理制度。即：专人管理、专帐核算、专款专用；定开发任务、定投资额度、定还款时间、定奖罚措施、定制度条文。亚行农发项目资金管理从预算到决算，从拨付到报帐，从项目计划审核到竣工验收，以及账务设置、核算办法、报表送达等都有具体要求和规定程序，形成了比较完整的财务管理体系。

Focusing on the key links of reimbursement and disbursement, annual training in financial management and disbursement were provided to give detailed instructions and explanations on disbursement procedures, data, accounting and financial management. Counties with rich experience in financial disbursement were asked to take the lead and guiding function for counties with less experience in financial disbursement, standardizing disbursement data, carefully verifying financial data for disbursement, intensifying overall-process management and supervision of project capital use, and effectively preventing capital misuse, diversion, and falsified expenses, stepping up stringent financial management, and ensuring standardized capital use.

抓住提款报账的关键环节。每年开展财务和提款报账培训，对报账手续、报账资料、会计核算和账务处理详细讲解，利用报账经验丰富的项目县带动经验少的项目县，规范报账资料，认真核对报账内容，加强项目资金的全过程管理和监督，有效防止了资金被挤占、挪用以及虚列支出的现象，严格了财务管理，保证资金规范使用。



Financial management staff at the Ningxia PMO cross-check financial data  
宁夏亚行项目财务人员审查财务资料

## C. Project Impacts and Benefits 项目影响及效益

### 1. Economic benefits 经济效益

The project has markedly improved farmland infrastructure to such an extent that fields are irrigated or drained in dry or wet seasons, the roads and canals are interconnected, the woods and trees are networked and lined up, and the fields are leveled and fertile, with obvious economic returns.

亚行项目的实施，使项目区农田基础设施得到显著改善，基本能够达到旱能灌涝能排、路相通渠相连、林成网树成行、田地平整肥沃的整体效果，综合经济效益明显。

- **Raised yields of main crops and increased farmers' incomes.** In Dongfeng County, Jilin Province, for example, paddy yields increased by 1,800 kg/ha and incomes increased by CNY4,320 per ha; in the project area of Heilongjiang Province, farmers' net incomes rose by 441.87 yuan in 2015; in the project area of Henan Province, wheat yields increased by 120 jin/mu,

corn by 150 kg/mu, and peanut by 100 kg/mu; in Wuzhong City of Ningxia Huizu Autonomous Region, the per capita direct income was about 150 yuan for residents of the project area.

- **提高了粮食等主要农作物产量，增加了农民收入。**如吉林省东丰县水稻增产1,800公斤/公顷，效益可增加4,320元/公顷。黑龙江省项目区2016年农民纯收入较2015年提高441.87元。河南省项目区亩均小麦增产120公斤、亩均玉米增产150公斤、花生增产100公斤。宁夏自治区吴忠市项目区群众从项目中人均获得直接收益150元左右。
- **Lowered the costs of agricultural production and reduced farmers' expenses in the project area.** After project implementation, the irrigation conditions, rural power transmission lines, and other supporting facilities have improved, which has raised agricultural production efficiency and lowered agricultural production costs in the project area. In the project area of Henan Province, the average cost for irrigation per mu has been lowered by 30 yuan, and time required for irrigation has been shortened by half; hardened roads now connect field paths, lowering plowing and planting costs by 20 yuan per mu. Lingwu City, Ningxia Province, provided the Fengshou Agricultural Mechanization Professional Cooperative with five large tractors. In the autumn of 2016, the cooperative made an announcement that it could carry out autumn plowing at the price of CNY50 per mu compared to a market price of CNY60 per mu. It plowed 1,850 mu of land in the project area of Huaxin Village in the autumn of that year and made residents the subject of priority support and benefits. Due to a

series of supporting policies, residents saved CNY18,600 and the cooperative increased its income by CNY92,500.

- **降低了农业生产成本，减少项目区农民的支出。**项目实施后，灌溉条件和农电路路等配套设施的改善，提高了项目区农业生产效率，更是降低了农业生产成本。河南省项目区亩均灌溉节省了约30元成本，灌溉周期缩短近一半时间；硬化道路联通田间地头，使亩均耕种成本降低了20元。宁夏灵武市通过项目给丰收农业机械化专业服务合作社补配了5台大型拖拉机，2016年秋季，合作社通过公示，秋翻地市场价为60元/亩，现优惠让利为50元/亩，在项目区华新村秋翻地1,850亩，通过优惠让利的方式，使项目区群众成为优先扶持和享受群体，通过这一系列的扶持政策，使项目区群众少支出18,500元，合作社增收92,500元。
- **Alleviated farmers' labor intensity in the project areas, and increased reemployment opportunities.** Apart from improving the irrigating conditions, since its implementation the project has greatly improved roads in the fields, promoted mechanization of planting and transportation, increased labor productivity, lowered labor intensity, and saved work time. Farmers in the project area are relieved of heavy and tiring agricultural production, and they have more time and opportunities to participate in second and the tertiary industries, and therefore, supplement their incomes. For example, in Zhongmou County, Henan Province, male workers were responsible for irrigating the farmland before the project implementation, and after the project implementation, women, old people, and children can all finish the task of irrigation so that male workers may have more time for other work, which

can bring another 2,000 to 3,000 yuan to a family every month.

- **减轻项目区农民的劳动强度，增加了再就业的机会。**项目的实施，在改善灌溉条件的同时，田间道路得到大大改善，促进了机械化耕作运输，提高了劳动生产率，降低了劳动强度，节约了劳动时间。项目区农民群众从繁琐的农业生产中得到了解放，有更多的时间和机会参与二、三产业的生产活动，从而取得一定的务工收入。如河南中牟县项目区，在项目实施前耕地灌溉必须有男劳力才能完成，项目实施后妇女、老人、儿童都可以完成浇地，使男劳力有更多的时间外出打工，一个家庭每月可增加收入两、三千元。
- **Promoted adjustments to optimize agricultural planting structure, and enhance capacity to adapt to the market.** With the help of this project, Anhui Province has vigorously developed high-efficiency plants—non-grains such as vegetables, melons, and oil crops. Yunnan Province has guided farmers in in-depth development and utilized local natural resources, vigorously developing quality grain varieties and agro-products with local characteristics, transforming advantages of natural resources to economic advantages, all of which have enabled farmers to achieve higher yields and incomes, with the result that the agricultural economy has become prosperous and flourishing in the project area.
- **促进了农业种植结构的优化调整,增强适应市场的能力。**安徽省通过本项目实施,除粮食生产外,大力发展高效作物如蔬菜、瓜类、油料等种植。云南省引导农民深度开发利用本地的自然资源,大力发展具有本地特色的优质粮食和农产品种植,把自然资源优势转化为经济优势,促进农民增产增收和项目区农业经济繁荣与发展。



Project Area in Binxian County of Heilongjiang Province  
黑龙江省宾县亚行项目现场

## 2. Positive Social Impacts 社会效益

The project has effectively propelled rural economic development in the project area, laid solid foundations for sustainable agricultural development in the region, and promoted the building of a harmonious society and an overall well-off society in the rural area, with significant comprehensive social benefits.

亚行项目实施，有效助推了项目区农村经济的发展，为区域内农业的可持续发展奠定良好基础，促进了农村和谐社会的建设和实现全面小康的进程，综合社会效益显著。

- **Impact on farmers' incomes and employment.** The project has effectively improved the infrastructure

for local agricultural production, lowered production costs, liberated manpower, increased employment opportunities, and raised farmers' incomes in the project area steadily. The project area in Jilin Province, for example, has provided jobs for farmers, with cumulative employment totaling 3,846 person-times, and the per-capita income is CNY120 per day.

- **对农民增收及就业的影响。**项目有效改善了当地农业生产基础设施条件，降低了生产成本，解放了劳动力，增加了就业机会，促进了项目区农民收入稳步提高。吉林省项目为农民提供了就业机会，累计增加就业3,846人次，人均收入120元/天。
- **Impact on advancing agricultural science and technology in the project area.** The project has demonstrated and promoted 29 new agricultural technologies and products in an area of 2,223 ha. The



project has increased yields of quality seeds by 1,313 tons.

- **对项目区农业科技进步的影响。**项目示范推广农业新技术新品种29项，示范推广2,223公顷，增加优质种子产量1,313吨。
- **Impact on the promotion of farmers' competence.** Training and surveys of 3,646.93 person-months were held for farmers and farmer cooperatives in the project area. Cumulatively, 432 workshops were offered, training 154,814 farmers, which has enabled farmers to master basic knowledge of planting and soil improvement technologies, guided and supported them to expand planting scales, improve pest-control abilities, and apply pesticides and fertilizers rationally to provide services for comprehensive agricultural production, leading to capacity improvement and continuous income increases.
- **对农民素质提升的影响。**组织项目区农民及农民合作组织培训考察3,646.93人月，累计培训432次，培训农民154,814人。让受益农民掌握种植及土壤改良技术的基础知识，引导和扶持参训农民扩大种植规模、提高病虫害的管理水平，合理使用农药和化肥的使用，为农业综合生产能力提高和农民持续增收服务。
- **Improved farmers' organization.** Twenty-three farmer professional associations/cooperatives have been established and strengthened. Training and surveys of 85.89 person-months were offered, supporting 17 water-user associations, with training and surveys of 12.5 person-months, allowing farmers to transition from the traditional loose model of individual household production operations to the relatively centralized large-scale production operation model

that takes product as the link and the market as the orientation in the principle of "shared responsibilities and benefits". These changes have improved the organizational level of farmers, expanded the scale effect of agricultural products, enhanced the ability of farmers to respond to market fluctuations, and significantly raised the organizational level of farmers.

- **对农民组织化程度提高的影响。**组建及强化农民专业协会/合作社23个，开展培训考察85.89人月，支持用水者协会17个，开展培训考察12.5人月，使农民群众由过去的一家一户松散型生产经营模式向以产品为纽带、市场为导向，“责任共担、利益共享”相对集中的规模化生产经营方式转变。提高了农民的组织化水平，扩大了农产品的规模效应，增强了农民群众应对市场变化的能力，显著提升了农民的组织化程度。



Farmers Receiving Training in Jilin Province  
吉林省亚行项目农民培训



Project Site in Huanan County, Heilongjiang Province  
黑龙江省桦南县亚行项目区

- **Impact on poverty alleviation.** The project has paid special attention to poverty-stricken people in terms of selection, design, implementation and operation, and trained 38,558 poor people. The technical training, publicity, mobilization, etc., have provided farmers in the project area with real planting and livestock techniques, and even updated farmers' awareness and helped the project area by thoroughly eradicating poverty.
- **对贫困人口减少的影响。**项目选择、设计、实施和运行等方面特别关注贫困人口，培训贫困人口38,558人。通过农民技术培训与宣传发动等方式，为项目区农民带来实实在在的种养技术，更是更新了农民的思想意识，从根本着手帮助项目区彻底摆脱贫困。

### 3. Ecological Benefits 生态效益

The project implementation has played an active role in improving the environment of the project area.

- **Improved microclimates in the project area.** Through the establishment of farmland shelter belts and ecological economic forests, the project has further increased the forest coverage rate, enlarged the capacity of the ecological system in the project area, improved the ability to resisting natural disasters, and also regulated temperatures, purified the air and beautify the environment. For instance, the project area in Henan Province, through the establishment of farmland shelter belts, has increased the protected area by 28,586.40 ha,

effectively improving the microclimate of the farmland area, reducing sand-storm disasters, and winning praise from local farmers.

- **改善项目区的田间小气候。**项目通过农田防护林和生态经济林的建设, 进一步提高了林木覆盖率, 增加了项目区内生态系统的容量, 提高抗御自然灾害的能力, 并起到调节气温、净化空气和美化环境的作用。如河南省项目区, 通过农田防护林建设, 完善提升防护面积28,586.40公顷, 有效改善了农田区域小气候, 减少风沙灾害, 受到当地农民群众的好评。
- **Improved the soil ecological system of the project area.** Through the improved supporting facilities of water conservancy and the promoted water-saving irrigation technologies, the project can effectively resolve the problem of irrigation and drainage, and reduce soil hardening and water loss. The measures of deep plowing and field leveling, increased applications of organic fertilizers, returning stalks to the fields, and fertilizing according to soil tests, using pest control facilities and solar insecticidal lamps have improved the granular structure of soil, raised soil fertility, increased the organic matter content in soil, and reduced applications of fertilizers and pesticides. The comprehensive use of crop stalks have reduced stalk burning, protecting the environment. For instance, the ADB project in Qinyang City, Henan Province, through such agricultural technology measures such as returning stalks to the fields and so on, has increased the organic content matter of soil in the project area from 2.1% to 2.35%, the content of total nitrogen from 0.102% to 0.11%, available phosphorus from 16 mg/

kg to 21 mg/kg, and available potassium from 160 mg/kg to 171 mg/kg, which has markedly improved soil fertility.

- **改良项目区土壤生态环境系统。**通过项目区水利设施的配套完善, 节水灌溉技术的推广, 可有效解决灌溉和排水问题, 减轻土壤板结和水土流失; 对土地深翻平整、增施有机肥、秸秆还田、测土配方施肥、使用病虫害防治设备和太阳能杀虫灯等措施, 改善了土壤的团粒结构, 提高了土壤肥力, 提高有机质含量, 减少化肥和农药的施用量; 通过农作物秸秆综合利用, 减少了秸秆焚烧, 保护了生态环境。如河南沁阳市亚行项目, 通过秸秆还田等农业科技措施, 使项目区内土壤有机质含量由2.1%提高到2.35%、全氮由0.102%提高到0.11%、有效磷由16毫克/公斤提高到21毫克/公斤、有效钾由160毫克/公斤提高到171毫克/公斤, 土壤肥力明显改善。
- **Conserved water resources.** The project has conserved agricultural irrigation water by a series of engineering measures such as canal lining, low-pressure pipeline burying, sprinkling irrigation, micro-irrigation and so on, and by supporting water-user associations, and by carrying out reforms on water use in irrigation areas, such as establishing scientific water supply and billing systems. For instance, the field seepage control canal built in Qinyang, Henan Province, has reduced the seepage loss by 60%–70% in the project area.
- **节约了水资源。**通过渠道衬砌、埋设低压管道、喷灌和微灌等工程措施, 及扶持农民用水者协会, 建立科学的供水和计费制度等灌区用水体制改革, 节约了农业灌溉用水。如河南省沁阳市建设的田间防渗渠道为项目区减少了60%-70%的渗漏损失。
- **Reduced carbon emissions.** There are two solar photovoltaic drainage systems



on Nanliang Farm, Ningxia Province. The farm uses the operation mode of "self-generation and self-use, with surplus electricity supplied to the grid." Every day, it generates electricity of about 85 kWh, which has reduced carbon emissions, saved energy, increased revenues, and achieved excellent benefits. In the Zhongmou County project area of Henan Province, before the project implementation, diesel engines pumped water for irrigation, but after project implementation, electric well-supporting

devices are used for all the irrigation, thus avoiding air pollution caused by diesel combustion.

- **减少了碳排放。**宁夏农垦南梁农场开展太阳能光伏排水2处，采取“自发自用、余电上网”运行模式，每处日发电量85度左右，不仅减少了碳排放，而且节省能源，增加了收入，具有良好的效益。河南省中牟县项目区项目实施前利用柴油机抽水灌溉，项目实施后全部采用井电配套设施灌溉，避免了柴油燃烧对空气的污染。



Vegetable greenhouses in Wuzhong, Ningxia  
宁夏吴忠市蔬菜大棚



**Energy**  
**能源**

# LN 2885-PRC:

## Shanxi Energy Efficiency and Environment Improvement Project

## 山西能效与环境改善项目

### A. Background

#### 项目概况

With the approval of the ADB Board to provide a \$100 million loan for supporting Shanxi Province to implement the Shanxi Energy Efficiency and Environment Improvement Project at an estimated total cost of \$166.12 million on 31 August 2012, the project loan became effective on 26 April 2013. It will be closed on 31 December 2017. The project comprises three components: 1) improved district heating systems in the urban areas of four project cities; 2) expanded coalbed methane (CMM) gas supply and distribution system in Liuling County; and 3) enhanced institutional strengthening and capacity. The project impact is greater energy efficiency and a cleaner environment in Shanxi Province. The outcome is better air quality and reduced greenhouse gases emissions in five urban areas in Shanxi.

2012年8月31日，亚行批准1亿美元贷款支持实施总投资估算为1.66亿美元的山西能效与环境改善项目。本项贷款于2013年4月26日生效，并将于2017年12月31日关帐。项目包括三个组成部分：1) 改善4个项目城市城区的集中供热系统；2) 扩建柳林市煤矿甲烷气供气系统；3) 加强机构能力。项目影响是提高能源利用效率和环境，成果为提高山西省5个参项市、县（晋中市、中阳县、柳林市、黎城县和沁县）城区的空气质量、减少温室气体的排放。

With the strong leadership of the project leading group—including the Shanxi Provincial Finance Department, the Provincial Development and Reform Commission, the Provincial Auditing Department, and the Environmental Protection Department—and enhanced management and

effective coordination and cooperation among key stakeholders, the project has been implemented smoothly and is approaching the completion stage. After 4 years of implementation efforts, as of the end of 2016, the improvement of the four district heating systems were basically completed. About 87% of the project activities were completed with a total of \$95.44 million disbursed from the proceeds of the loan account, accounting for 95.5% of the total. Project expenditures have totaled CNY899.2 million, accounting for 85.5% of the total costs of CNY1.058 billion estimated at the appraisal stage. Project implementation is expected to be completed by the second half of 2017, and the loan will be closed at the end of 2017 as planned.

自贷款生效以来，项目实施顺利并接近尾声，经过四年的建设，项目已完成87%的实施任务。已从亚行贷款账户拨付的亚行贷款资金总额为9554.44万美元，占亚行贷款总额1亿美元的95.5%；项目累计完成投资8.99亿元人民币，占评估时计划项目总投资10.5815亿元的85.5%。预期2017年下半年完成所有工程建设并能在年底如期关帐。

## B. Project Initial Benefits

### 项目初建成效

With the implementation of the project, completed district heating facilities have gradually come online since 2014, generating the project initial social, economic, and environmental benefits. Greater benefits are expected looking ahead.

随着项目的实施有集中供热系统设施的建成并最早从2014年供热季节起陆续投入使用。在项目总体完工、贷款关帐前，就展现了初期的社会、经济和环境效益，并将有今后的运行中持续产生出更大的效益。

## 1. Social Benefits 社会效益

According to incomplete statistics, during its construction, the project has generated 25,230 person-months employment opportunities for local people in the project areas. The partial operations of district heating facilities developed under the project increased urban heating coverage by 6.34 million m<sup>2</sup>. Around 223,650 residents including 110,560 women and 53,510 children, 13 schools and eight hospitals have benefited from the project through the provision of stable and reliable heat supply services. The operations of the project facilities have created 230 permanent jobs. In addition, 2,286 poor residents enjoy heating-fee waivers.

据不完全统计，项目的建设为项目区提供了约25,230人月就业机会，部分项目设施的运行新增集中供热面积达到634万平方米，约有223,650居民得到稳定可靠的供热服务，包括110,560名女性、53,510名儿童、13所学校、8家医院，项目设施的运行新增了230个固定就业岗位；此外，2,286名贫困人群还享受供热费减免。

## 2. Economic Benefits 经济效益

The operations of four district heating systems enable the project's operating companies to increase their operation revenues and improve their financial viabilities on an annual basis. The revenues generated from the heating services totaled CNY50.6 million in 2014, CNY75.74 million in 2015, and CNY104.4 million in 2016. Furthermore, energy costs have been considerably reduced as a result of reduced energy consumption



District Heating Plant of Qin County  
沁县集中供热热源厂

and improved higher energy efficiency of the heating systems. It is estimated that the project helped to save 4,189 tons of standard coal energy in 2014, 8,759 tons of standard coal energy in 2015, and 25,986 tons of standard coal energy in 2016.

4个集中供热项目的建设运行，提高项目公司的经营水平，增加经济收入，2014年、2015年和2016年，项目实现的合计供热收入分别为5,060万元、7,574万元和10,440万元；与此同时，项目的实施提高了供热设施的能源利用效率，降低能源消耗，减小能源费用支出，2014年、2015年和2016年，项目合计节约的能源分别为4,189吨、8,759吨和25,987吨标准煤。

### 3. Environmental Benefits 环境效益

During project implementation, mitigation and monitoring measures have been strictly undertaken in line with the project's Environmental Management Plan (EMP) to

ensure compliance with national, provincial, and local environmental laws, regulations, and standards, as well as ADB's environmental safeguards. The project facilities are generating very positive environmental impacts. Monitoring results show that in 2014, 2015, and 2016 reductions of emissions resulting from the operations of district heating facilities under the project were greatly reduced (see Table 1). As a result, air quality in the project areas has considerably improved, with an increase of 15% to 20% in the number of days when monitored air quality reached Class II air quality.

项目的建设严格执行国家、省和地方政府的环境法规、标准与程序、执行的安保政策以及环境影响报告和环境管理计划规定的环保措施与监测要求。项目支持建设的集中供热设施运行已产生了正面的环境作用。环境监测结果显示，在2014年、2015年和2016年采暖季，项目集中供热设施运行而减小的各种污染物排放如表所示。项目对改善项目区空气质量作出了预期的贡献，使得项目区II级空气质量达标天数增加15%至20%。

**Table 1: Reduction of Air Pollutants Emission in Project Areas**  
**项目区大气污染物减少量**

	Reduced pollutants emission (t/a) 减排的大气污染物 (吨/年)				
	CO <sub>2</sub>	SO <sub>2</sub>	NO <sub>x</sub>	TSP	PM <sub>10</sub>
<b>2014</b>	14,955	307	131	1,914	266
<b>2015</b>	27,113	515	212	2,859	557
<b>2016</b>	79,297	11,114	460	4,645	973

### C. Innovation Features

#### 项目的创新特点

The project's design and implementation is focused on conceptual and technological innovation, with innovation in three areas that distinguish it from normal heating projects; namely:

本项目的设计与实施注重理念与技术等的创新，具有与一般常规供热项目不同的创新示范意义，主要体现在下列3个方面：

#### 1.) Innovative development and utilization of clean energy.

创新开发与应用清洁能源

In accordance with the energy resource status of the five project cities (counties), clean energy has been innovatively developed and utilized to improve the environmental quality of the project areas:

- In utilizing the abundant coal-gas resources in the Liulin area, the project has supported Liulin in developing CMM gas-supply facilities to realize coal gasification, greatly reducing coal consumption and improving the local environment.

- The project has supported Zhongyang county to develop district heating facilities by constructing a new 29 MW gas-fired boiler as a heat source for the heating of 1.6 million m<sup>2</sup> of buildings, replacing 106 small coal-fired boilers, and reducing emissions of 327 tons of sulfur dioxide and 788 tons of soot.

根据5个项目市（县）的能源资源状况，创新开发和应用清洁能源，促进提高项目区的环境质量。

- 开发柳林地区具有丰富煤层甲烷气资源，实施柳林煤层甲烷气供气设施建设，实现煤改气，大大降低燃煤消耗，提高当地的环境质量。
- 在中阳县城城区创新实施燃气锅炉替代燃煤锅炉的集中供热设施建设，新建1台29MW燃气热水锅炉，全面替代106台小型燃煤锅炉，实现对160万平方米建筑的集中供热，每年减少各类锅炉二氧化硫排放327吨，烟尘788吨。

#### 2) Innovative Adoption of New Technologies in District Heating to Improve Energy Efficiency

创新应用集中供热新技术，提高能源利用效率



When implementing the Jinzhong district heating subproject, five innovative initiatives were adopted, including: 1) introduction of no-compensation cold-installation embedding technology and the "invisible loop" concept for reduction of construction costs; 2) innovative applications of new technology—i.e. a primary network supplementing secondary network technology, and the establishment of large-scale water-treatment centers for improvement of water utilization efficiency; 3) innovative use of international-standard heat-exchanger units and box-type heat stations for improvement of energy efficiency and reduction of energy consumption; 4) the use of automated control technology to conduct real-time online monitoring of heat-exchange stations in order to improve

energy efficiency; 5) the introduction of energy-management concepts to establish an energy management system to fully realize "demand-based heating," "reasonable heating," "intelligent control," and "detailed management." Through the implementation of the above innovative initiatives, the energy efficiency of the district heating system has increased by 30%, and the heating service capacity of the district heating system increased from 3 million m<sup>2</sup> to 4.11 million m<sup>2</sup>, exceeding 30% of the designed capacity.

晋中集中供热项目实施过程中，创新应用了5个方面的技术与理念，具体包括：1) 无补偿冷安装直埋技术和隐形环状管网新理念，降



Coalbed methane (CMM) gas supply and distribution facilities developed by the project  
项目建设的清洁能源煤层气供气设施



Natural gas heated district heating facilities in Zhongyang developed by the project  
项目建设的中阳天然气集中供热设施

低建设成本；2）创新应用一网补二网技术、建立大型水处理中心，提高水利用率；3）创新建设具有国际先进水平的换热机组及箱式热力站，提高热能利用效率并节约电能消耗；4）采用自动化控制技术，实时监控换热站运行，提高节能降耗水平；以及5）引入能源管理理念，建立能源管理系统，完全实现“按需供热”、“合理供热”、“智能控制”、“精细管理”。该项目通过上述创新，项目支持建设的集中供热设施的能源利用效率将提高30%，使得该系统的集中供热能力由300万平方米提高到411万平方米，超过原设计供热能力的30%多。

3) Development of District Heating Facilities in Counties with Relatively Backward Economic Status

在经济发展相对落后的县城，创新实施集中供热

The project innovatively supports economically less developed counties, including Licheng County and Qin County, by developing district heating facilities to fully replace scattered coal-fired boiler heating, significantly improving energy utilization efficiency and the stability of heating, reducing coal consumption, heat-supply costs, and pollution emissions, while also improving the quality of the air.

本项目在经济相对比较落后的黎城和沁县的县城，创新实施集中供热设施的建设，全面替代燃煤小锅炉的分散供热，显著提高能源利用效率，提高供热的稳定性，节约燃煤消耗，降低供热成本，同时减少供热的污染排放，提高项目地区的大气质量。

## D. Experiences Gained

### 成功经验总结

#### 1. Active Local Government Support 项目区政府的高度重视和积极支持， 为项目实施提供有利的环境

Because the project's development goals—greater energy efficiency, a cleaner environment, and provision of reliable heat services to people in Shanxi Province—is highly consistent with the government's priority of socio-economic development, governments at all levels, including provincial and county governments, are highly committed to project implementation, listing it into priority project pipelines and practical local-level projects. The provincial government and county governments provide policy, moral, technical, and financial support for the project. All concerned parties have

demonstrated ownership of the project. With firm government commitment, all participants—including project companies' management staff—have demonstrated a keen sense of responsibility in ensuring the successful implementation of the project.

由于设计的项目目标—山西省更高的能源效率和更清洁的环境以及为更多的百姓得到更可靠的供热服务，与项目区各级政府的社会发展战略高度吻合，使得项目区各级政府高度重视项目的实施，将本项目的实施作为政府重点项目和为民办实事项目，省和项目县政府为项目的实施提供政策、道义、技术以及资金支持。各有关单位和部门将项目实施作为本身职责予以支持。由于具有各级政府的坚定承诺，所有的项目参加者（包括项目业主和项目管理人员）对确保项目的成功实施具有更强的责任感。



Innovative heat-exchange station with high-energy efficiency in Jinzhong  
项目在晋中开发建设的高能效新型换热站





Energy Management Center at the Jinzhong direct heating system  
晋中集中供热系统能源管理中心

## 2. Backed up by Robust Project Preparation

项目设计合理、前期准备工作扎实，使得项目按计划启动实施

During project preparation, due diligence is carried out by all parties, making it possible for the project to be designed to respond to actual local demands with feasible and applicable technologies. Local approval processes have progressed smoothly and on time, based on solid preparation, which has laid a robust foundation for the project's ready implementation and allowing it to launch soon after loan effectiveness. The major procurement activities of the contracts were completed within one year of loan effectiveness. During implementation, no significant contract variations, disputes, or contractual difficulties have caused delays. Furthermore, there have been no significant project design changes either. As a result, project implementation has taken place according to the planned schedule, with no delays.

项目前期充分、问题分析透彻，项目设计完全符合当地的实际需要，采用的技术方案合

理可行，各项前期准备工作扎实到位，项目国内审批及时，使得贷款一生效，即能够启动项目实施。在项目启动实施1年，就完成了大部分的项目合同的招标采购工作，而且合同执行过程中，没有出现大的合同变更以及合同纠纷。在项目实施过程中，没有出现影响项目实施进程的重大项目设计变更，使得项目的实施能够按计划推进，没有出现项目实施的延误。

## 3. Cooperating for Success

各相关部门各司其职、通力合作，确保项目实施按计划推进

All relevant agencies involved in project implementation fulfilled their responsibilities and cooperated to successfully implement the project. Financial authorities managed their ADB loan management functions, with timely transfers to match loans, ensuring ADB loans take effect when they should, managing the use of loan funds, effectively managing provincial finance department capital accounts, and providing ADB loan funds to project implementation units (PIUs) in a timely manner. All relevant departments have approved required documents in time for project implementation, while also providing policy guidance during implementation. The PMO took on additional management responsibilities, supervising project implementation, and identifying issues and resolving them. All county governments and companies involved in the project allocated sufficient resources, including human resources and counterparty funds, while ADB has proactively provided support by streamlining procedures as far as possible and replying promptly and constructively to PMO and PIU inquiries and requests. Lastly, all contractors and suppliers fulfilled their contractual responsibilities on time and in compliance with the design standards.



DH facilities in less-developed Licheng County  
项目在相对落后的黎城县建设的集中供热设施

涉及项目实施的各部门认真履行其职责，通力合作，积极推进项目的建设实施。财政部门履行亚行贷款资金管理职能，及时转贷亚行贷款，使得亚行贷款按时生效，提用贷款资金，省财政厅有效管理周转金账户，及时处理亚行贷款提款报账申请、回补亚行贷款资金等，并及时给项目实施单位拨付亚行贷款资金，满足项目建设实施需要。各级发改部门积极审批项目文件，按时启动项目建设实施，同时对项目的建设实施提供政策指导。项目办强化项目实施的管理和监督，及时发现和帮助解决项目实施中遇到的问题。各项目县政府和项目公司，安排足够的人力和财力等资源，积极推进项目的建设实施。亚行及时回应项目实施要求，尽可能简化程序，积极帮助解决项目实施中遇到的问题和困难。各参建的承包商和供货商，履行施工建设和供货合同义务，保质保量按时完成施工建设任务或供货任务。

# Transport and Communications 交通和通信

# LN 3074- PRC:

## Yunnan Sustainable Road Maintenance (Sector) Project

## 云南可持续道路养护(行业)项目



### A. Background

#### 项目背景

Yunnan Province is a mountainous and poor province, with a total population of 46 million. It is bordered by the Lao People's Democratic Republic (Lao PDR), the Republic of the Union of Myanmar and the Socialist Republic of Viet Nam. About 60% of freight transport and 80% of passenger traffic rely on the highway network. The Yunnan Highway Administration Bureau (YHAB) manages trunk highways of more than 24,000 kilometers (km).

云南省为贫困省份，人口总数为4,600万，紧邻老挝、缅甸和越南，大约60%的货运和80%的客运需要通过公路网运输，云南省公路局管理着超过24,000公里的干线公路。

The Project is financed by ADB with a \$80 million loan. It comprises the following four components:

- (1) 890 km trunk-highway network rehabilitation;
- (2) Implementation of a performance-based, new-road maintenance model pilot on the 164 km trunk highway section;
- (3) Strengthening of highway asset management system; and
- (4) Strengthening of the institutional capacity of YHAB.

云南可持续道路养护（行业）项目获得亚行贷款8,000万美元支持，本项目包含以下四个组成部分：

- (1) 890公里干线路网修复；
- (2) 在164公里干线路段上进行以绩效为基础的新型公路养护模式试点；
- (3) 加强公路资产管理系统；
- (4) 云南省公路局机构能力加强

Due to efficient management of implementation, the project has progressed smoothly and as scheduled. By the end of 2016, the total contract signed-off value of phases I and II was CNY975.88 million (\$146.76 million), of which seven packages funded by ADB amounted to a total of CNY395.19 million and the remaining 12 packages fully funded by domestic sources amounted to CNY580.69 million. The accumulated total cost of the project was CNY803.95 million, at a payment proportion of 91.82% of the total contract value of CNY975.88 million. The total contract value for the seven packages funded by ADB was CNY362.85 million (including an ADB disbursement of \$30.085 million, equivalent to CNY199.451 million). The total contract value of the 12 packages funded domestically was CNY441.1 million.

强有力的项目实施管理，使得项目推进顺利。到2016年底，已签订的第一第二期子项目合同总额为人民币97,588万元。其中：亚行资助的7个合同总合同价39,519万元人民币，国内配套资金全资助的12个合同总额为人民币58,069万元；本项目完成支付总额为人民币80,395万元，支付比例为合同总价97,588万元的91.82%。其中亚行资助7个合同支付总额人民币36,285万元（含亚行提款到账3,008.5万美元，等值人民币20,202.2万元）。12个国内配套资金子项目支付总额44,110万元。

## B. Innovative Features and Challenges

### 项目创新和挑战

#### 1. Phased implementation of the trunk-highway rehabilitation component 分期实施干线公路修复

It will take four phases in four years to implement the trunk-highway upgrade component, in accordance with the YHAB's annual maintenance plan. The sections to be upgraded in each phase are selected based on annual inspections of highway conditions, a traffic survey from the previous year, and other basic data. The highway asset management system software, HDM4, is employed to screen the road sections to be upgraded, according to the internal financial rate of return, in consideration of all other factors, such as social benefits, the availability of funds, and the urgency with which maintenance is required. Due diligence is carried out for environmental protection and social development of proposed road sections, as well as safety audits of the construction design of roads to maximize social and economic benefits of the maintenance funds.

干线公路修复：对应于云南省公路局的年度养护计划，干线公路修复工程分为4期实施。各期的修复路段根据上一年度路况检测和交通量调查等基础数据，应用公路资产管理系统软件HDM4按照经济内部收益率筛选出年度备选修复路段，再综合考虑其他所有因素比如社会效益，国内资金配套及实施养护的迫切性等确定年度维修路段。同时需要对所选路段进行环境保护和社会发展的尽职调查，以及施工设计的道路安全审计，确保养护资金取得最大的经济效益和社会效益。





Improved Road Safety Measures  
改善的道路安全措施

## 2. Performance-based Highway Maintenance Work Model 以绩效为基础的公路养护模式

A new performance-based highway maintenance pilot contract model has been introduced. In accordance with the technical standards defined by the contract, the contractors are to carry out highway maintenance, with revenue dependent on compliance with performance standards based on inspections. Deductions are applicable in the event of non-compliance.

引入新型的以绩效为基础的公路养护合同模式试点。承包商按照合同要求的技术参数要求，实施公路养护工程，其报酬依赖于绩效标准合规的检查情况，可能扣除不合规的工作所对应的费用。

## 3. Highway Asset Management System 引入道路资产管理系统

A computerized road-asset management system was established by YHAB, implementing highway design and management software such as HDM4 for planning and systemic management of YHAB's daily maintenance work, in order to maximize the social and economic benefits within budgetary constraints.

在云南省公路局建立起一个计算机化的道路资产管理系统，与公路设计和管理软件如HDM4对接，用于公路局年度日常养护的规划和系统管理，在预算限制内最大限度优化经济和社会效益。

#### 4. Institutional Capability Building 机构能力建设

The YHAB's management capacity in terms of road maintenance, environmental and social development, and road safety have strengthened. Highway maintenance strategies and institutional capacity strengthening programs have also been enhanced.

提高云南省公路局在管理道路养护包括环境、社会和道路安全方面的管理能力，并实施道路行业养护战略和机构能力加强计划。

#### 5. Special Challenges 特殊挑战

As a pilot project, the following three special challenges have been encountered:

- The four annual phased subprojects demand a huge volume of the most up-to-date data on road conditions for candidate section screening by highway asset management software HDM4, but very few experts are adept at HDM4;
- Pilot performance-based contracts require very sound and practical definitions of relevant technical criteria, scoring standards, and contract formats;
- The number of subcontracts is large and distributed over a very wide area, and local project management offices (PMOs) lack management experience in ADB projects.

本示范项目在以下三个方面具有特别的新的挑战：

- 划分为四期的年度子项目实施需要巨量的每年道路状况检测的最新数据，用于公路资产管理软件HDM4筛选年度候选子项目路段。而能够熟练应用HDM4的专家非常稀少；
- 示范性的基于绩效的养护合同要求非常完善和实用的绩效技术标准，评分体系和新的合同格式；
- 子项目数量大，分散在非常广泛的地州，当地的指挥部缺乏亚行项目的管理经验。

#### C. Sound Project Management 良好的项目管理

YHAB, the executing agency attaches great importance to the ADB loan project. Before the project was officially launched, an ADB Loan Project Leadership Group—led by a YHAB deputy director—was set up, under which a PMO, staffed by a director and other key management staff, was established. At the same time, it was required that the subordinate highway bureaus involved in the project set up project management directorates, taking responsibility for the implementation and management of subprojects within their respective jurisdictions.

云南省公路局对本亚行贷款项目高度重视。在项目正式开始前发文成立了亚行贷款项目领导小组并下设亚行贷款项目办公室，指定一名副局长牵头负责亚行项目，委派了专门的亚行项目管理办公室主任和主要管理人员。同时要求凡涉及亚行贷款子项目的下属公路局成立项目指挥部，履行建设单位职责，负责辖区内亚行贷款项目的具体实施管理。

As the project is spread out over a wide area, subproject PMOs and project implementation units (PIUs) are similarly dispersed and

are unfamiliar with ADB procedures and requirements. Consequently, three senior highway engineers were designated as contract-management and procurement instructors, and are responsible for daily project planning, contract procurement, contract management, construction management, and other related work. They also oversee implementation, coordination and guidance for environmental protection, social development, and road-safety audits in keeping with ADB procedure. In addition, English-language professionals are also provided for translations and ensuring effective communication with ADB.

由于本项目涉及的地州比较多，地域分布广，各子项目涵盖的内容之间差别也比较大，各地州的项目管理办公室不熟悉亚行贷款项目的要求和程序。为此云南省公路局亚行项目办公室指定了3名高级公路工程师担任合同管理和采购指导人员，负责日常的项目规划，招标采购，合同管理和施工管理等各种相关的工作，对各地州指挥部实施协调和指导，并确保亚行程序中有关的环境保护，社会发展和道路安全审计等工作的顺利实施。此外，还配备了英语专业人员为翻译，便于及时有效地与亚行的沟通。

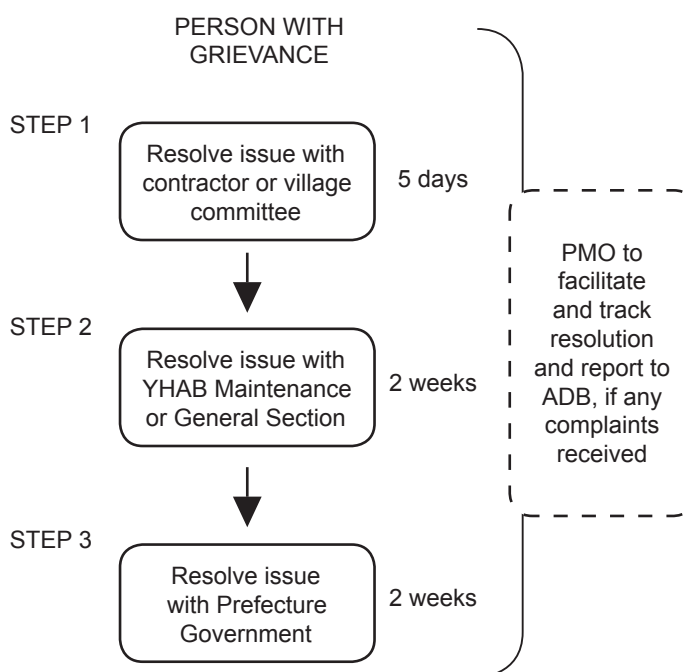
Disbursement of ADB funds is an important part of project implementation. The YHAB-ADB PMO assigned full-time financial management staff familiar with ADB procedures to take charge of coordinating and guiding the disbursement of local payments. They are responsible for all financial transactions between ADB, the Yunnan Provincial Department of Finance, and all subproject PMOs.

亚行贷款资金的提款报账是项目实施中的一个重要环节，公路局亚行办特别指派了熟悉

亚行财务管理的财务专职人员，负责协调和指导各地州指挥部的计量和提款支付，负责与亚行、财政厅及各项目指挥部支付往来业务的全部工作。

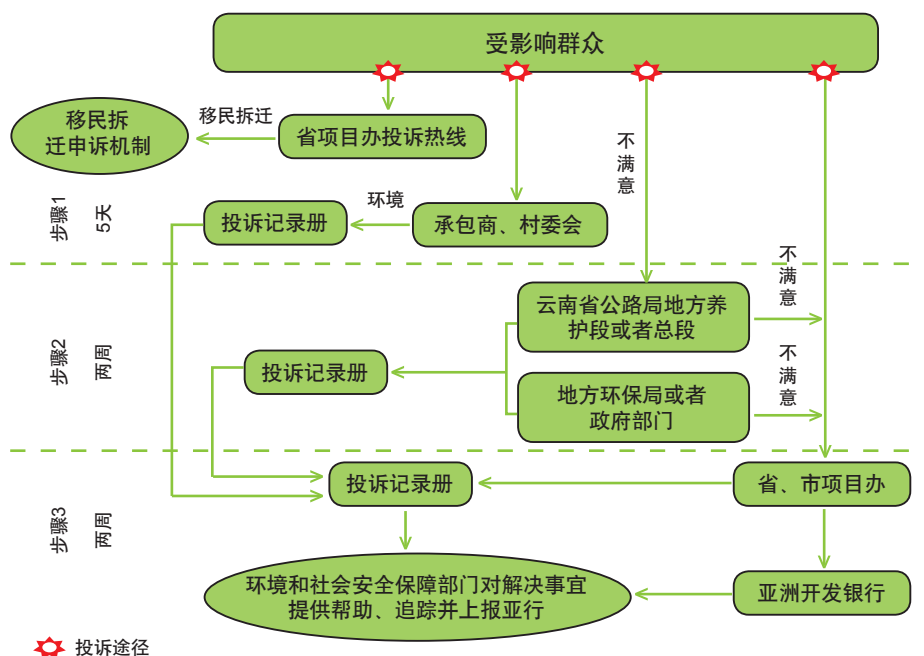
In order to ensure the social and economic benefits of the project, the YHAB PMO established a grievance redress mechanism so that local residents affected during construction have a clear channel for redress. Due to adequate preparation and improvement to the daily communication mechanisms, no complaints have been received. The steps are as follows:

为了确保项目的经济和社会效益，公路局项目办专门建立了抱怨和申诉机制，使施工期可能受影响的当地居民有畅通的抱怨和申诉途径。由于项目准备充分，日常沟通机制完善，本项目在建设期间尚未收到任何投诉意见。申诉步骤如下所示：





## The Project Grievance Redress Mechanism 项目投诉处理机制



### D. Policy Planning and Monitoring for Effective Safeguards

#### 有力的保障政策的规划和监测

##### 1. Environmental Management 环境管理

YHAB has always emphasized environmental protection, and has strictly implemented domestic environmental regulations and related ADB requirements. All road design and construction must meet the necessary conditions for environmental protection, and an environmental management plan must be in place before any construction work is carried out.

云南省公路局一直十分重视环境保护，严格执行国内环境的规章和相关的亚行要求。所

有的道路设计和施工都必须满足环境保护这一必须的条件，环境管理计划必须在任何实施维修工程前准备就绪。

PMOs, contractors, and construction supervisors fulfill their duties and obligations strictly in accordance with the requirements of the Environmental Management Plan. During the implementation period, environmental impact mitigation measures effectively control any negative impacts on the surrounding environment and risks health during the entire construction process. Environmental impact mitigation measures are taken to minimize the impact of pollution emissions.

项目管理办公室，承包商和施工监理方都严格按照环境管理计划的要求履行了各自的职责和义务。在实施期间，环境减缓措施有效地

控制了整个施工过程对周边环境和人群健康的负面影响。环境减缓措施确保了最小的污染。

## 2. Road Safety Evaluation, Design, and Audit 道路安全评估、设计和审计

International road safety experts and YHAB road safety experts cooperate and work together to audit road safety of the subproject designs in various phases. Road safety training sessions are held for local directorates, design institutes, and contractors. In the subproject screening stage, each directorate and design institute was requested to respond to all road safety audit issues one by one to clarify which recommendations should be accepted and which should not.

国际道路安全专家和公路局的安全专家一起协调工作，对各期的子项目设计都进行了道路安全审计。举办了面向各地州指挥部，设计院和承包人的道路安全培训。在子项目选择阶段，各路段的道路安全审计意见要求各指挥部和设计院逐条回应，是否已经采用或者不采用的理由以及改进措施等。



A Local Road K3065+900 Before Rehabilitation  
修复前的农村道路

## 3. Social Development Action Plan 社会发展行动计划

All upgrade works for the project are carried out based on original old roads and do not involve significant resettlement or the acquisition of land. However, the development of ethnic minority areas in Yunnan Province is of great significance, and is particularly important to YHAB. Taking into account the requirements of ADB's loan agreement and the PRC's great emphasis on people's livelihoods in recent years, YHAB conducted the subprojects under a one-vote veto practice for any significant issues.

本项目是在原来老路的基础上实施大中修，不涉及任何有影响的移民和征地拆迁。但社会发展对于少数民族聚集地区云南有着重要的意义。环境和少数民族发展成为云南省公路局历来工作的重点之一。考虑到亚行的贷款协议要求以及国家近年来对这两个有关民生问题的十分重视，对此类问题云南省公路局实行子项目一票否决的实践。

The PMO conducts monitoring of the Social Development Action Plan every year. The main activities include: 1) local villagers are



A Local Road K3065+900 After Rehabilitation  
修复后的农村道路

prioritized for non-technical work, with a special priority to the right of women to work; 2) road safety training for local workers and nearby villagers; and 3) HIV/AIDS prevention and control campaigns for workers and villagers.

项目办每年都要进行社会发展行动计划实施的监测。主要活动有：1) 当地村民优先就业于非技术工作，尤其是妇女权益；2) 对当地工人和附近村民的道路安全培训，以及3) 对于工人和附近村民的HIV艾滋病防治宣传活动。

For any individual section of highway in which a small number of public facilities such as electrical poles or cables might be affected due to road safety needs, the local directorate is to take great care and negotiate with all involved to reach a satisfactory compensation package. The aim is to achieve results that not only meet the requirements of engineering road safety, but also consider the convenience and economy of public facilities.

对于个别的线路由于道路安全需要可能影响少量公用设施如移动少数电线杆或电缆的情况，相关的指挥部都给予了十分重视，与所涉及的单位充分友好协商，达成了完全使对方满意的补偿方案，既满足了修复道路的安全要求，又考虑了公用设施的方便和经济性。

## E. Effective Project Financial Management System

### 有效的项目财务管理制度

YHAB has specially prepared the "Financial Management Manual for the ADB-Funded Yunnan Sustainable Road Maintenance Project." The seven-chapter manual covers tasks and responsibilities of the project implementation agency, requirements

for financial management, requirements for financial accounting, ADB loan-fund management, internal control and monitoring, and auditing. It also includes operational standards for specific requirements such as ADB loan-fund management, documents required to be submitted for disbursement, overall procedures, year-end annual financial statements, and correspondence. At the same time, YHAB conducted special training sessions for local directorates and contractors' financial staff to make them familiar with disbursement requirements and procedures for use of ADB funds.

云南省公路局特别制定了《云南省公路局亚行贷款-云南省可持续道路养护（行业）项目财务管理手册》。手册共分七章，分别从项目执行机构的任务及职责、财务管理要求、财务核算管理、亚行贷款资金管理、内部控制与监督、审计等方面作了阐述和规定，对亚行贷款资金管理，提款报账程序需要提交的资料、整个流程操作、年终年度财务报表填报、表间关系的对应等具体业务给出了操作标准。同时对各地州指挥部和承包人的财务人员进行业务培训，使他们充分了解亚行资金使用的提款要求和程序。

For this ADB loan project, YHAB required that all subproject directorates in all areas establish separate accounts for all funds—including ADB funds and those from domestic source—in accordance with financial management requirements, and also ensured that all financial accounting for projects be carried out in accordance with the "National Accounting System for State-owned Enterprises."

针对本亚行贷款项目，云南省公路局要求各地州的项目指挥部，所有资金包括亚行资金和国内配套项目均必须按财务管理要求单独设

立账套，确保按《国有建设单位会计制度》对项目进行财务核算。

The YHA PMO has designated one experienced disbursement staff member to review documents submitted by disbursement staff from local subproject directorates. Disbursement applications are submitted to the Yunnan Provincial Department of Finance after being signed and stamped by the YHAB director. Subproject directorate accountants are required to maintain close and professional communications with the appointee responsible for disbursements.

云南省公路局项目办专门有一名富有经验的提款报账人员，负责对各指挥部的财务提款人员提交的文件进行再次审核，并填写提款申请书，经省公路局授权签字人签署盖章后提交云南省财政厅。各子项目指挥部专设的提款报账人员要求与局专设的提款报账人员一直保持密切的业务沟通。



A Local Road K53+500 Before Rehabilitation  
修复前的农村道路



A Local Road K53+500 After Rehabilitation  
修复后的农村道路

# Urban and Social Development 城市和社会发展



# LN 2903-PRC:

## Gansu Urban Infrastructure Development and Wetland Protection Project

## 甘肃城市基础设施建设及湿地 保护项目

### A. Project Briefing

#### 项目概况

The ADB-financed Gansu Urban Infrastructure Development and Wetland Protection Project covers two project cities in Gansu Province: Zhangye City, which is located amid two national nature reserves in the Qilian mountains and the Heihe wetlands, and is a national pilot city of ecological improvement, and Dingxi City, an important gateway to the Silk Road, a birthplace of China's ancient Yellow River civilization, and is also renowned for its potatoes and medicinal herbs.

亚行贷款甘肃城市基础设施建设及湿地保护项目涵盖甘肃境内的两个城市：张掖市和定西市。张掖市是使张掖成为坐落在祁连山、黑河湿地两个国家级自然保护区之上的城市，被国家列为生态文明示范工程试点市；定西市是“丝绸之路”的重要通道、中华民族黄河文明的重要发祥地之一，也被称为“中国薯都”和“中国中药材之乡”。

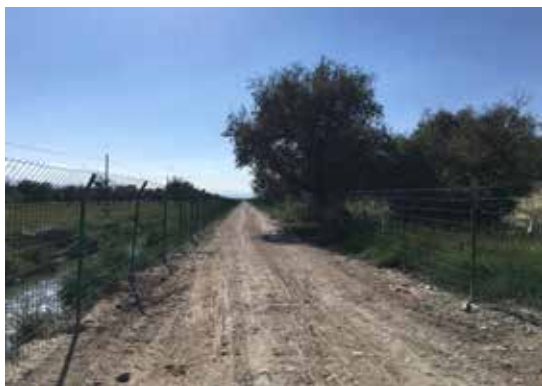
The project aims to promote sustainable social and economic development, as well as environmental development, by improving urban infrastructure, enhancing protection, and recovering wetlands. It comprises the following three components:

项目旨在通过改善城市基础设施，保护和恢复张掖湿地，促进张掖市和定西市经济社会和可持续发展。项目包括以下三个部分：

1. Improving the urban infrastructure in Zhangye, including: (1) 26.9 kilometers (km) of urban road construction involving the construction of 15 new urban primary and secondary roads in Binhe New District; (2) a new water supply plant with capacity of 40,000 m<sup>3</sup> per day (completed with domestic funds); (3) a wetland protection and restoration project, sustainable utilization project, and wetland protection equipment.

改善张掖城市基础设施—包括：（1）城市道路建设，包括在滨河新区新建15条城市主次干道路，道路总长为26.9公里；（2）新建日供水能力为40,000 立方米的供水厂一座（内资完成）；（3）湿地保护与恢复工程、可持续利用工程和湿地保护设备。

2. Improving urban infrastructure in Dingxi, including (1) upgrades to one road and construction of five roads with a total length of 12 km; (2) construction of supporting facilities, including three bridges and 14 culverts, street lighting, road greening, and traffic management facilities.



Wetland fence  
湿地围栏

改善定西城市基础设施 -包括（1）在安定区新城区内拓宽修复1条和新建5条 道路，总长度为12.0公里；（2）配套设施建设，包括3座桥梁和14个涵洞，路灯照明、道路绿化、交通管理设施

3. The project's management and capacity development components include capacity building and training activities related to urban planning and management, environmental management, public transport and non-motorized traffic planning and safety, and storm-water pollution control. A comprehensive capacity building and training program will increase public awareness and provide education on wetland protection and restoration, while also enhancing wetland management and the monitoring capacity of the wetland management agency.

项目管理和能力发展—包括一系列能力建设 and 培训活动，涉及城市规划、环境管理、公共交通和非机动车交通规划和安全，雨水污染控制。加强对湿地保护和恢复的公众意识和教育，进一步增强湿地管理能力和监测能力。

The total estimated cost of the project is \$255 million, of which \$100 million is financed by ADB. The project loan became effective



Wetland Boardwalk  
湿地栈道



Project road  
项目道路

on May 2 2013 and will be closed on April 30 2018.

项目总投资2.55亿美元，张掖子项目约1.55亿美元，定西市项目约1亿美元。其中亚行贷款额1亿美元，张掖6,000万美元，定西4,000万美元，其余为国内配套资金。贷款于2013年5月2日生效，贷款关账日期为2018年4月30日。

## B. Project Management Highlights

### 项目管理的亮点

#### 1. Strong Leadership and a Stable Project Team 领导重视、队伍稳定

Zhangye and Dingxi cities are implementing an ADB-financed project for the first time. Under the leadership, guidance, and coordination of the Gansu Provincial Development and Reform Commission (DRC), the Finance Department, and key

authorities the two project cities established project leadership groups led by vice mayors responsible for urban development. Other group members are drawn from the municipal DRC, and the finance, construction, and land departments at an early stage of project implementation, forming a stable team. A strong sense of social responsibility makes it possible for team members to coordinate and cooperate, while their familiarity with both domestic and ADB procedures and requirements lends to their effectiveness. Altogether, the stability of the key staff team, including the project management office (PMO) director, financial officers, and translators play a crucial role in the rapid and steady progress of project implementation.

亚行贷款项目是张掖和定西市联合实施的第一个外贷项目，在甘肃省发改委、财政厅等主管部门强有力的领导、指导和协调下，两个项目市专门在项目准备初期就成立了项目领导小组，由分管城建的副市长任领导小组组长，成员由发改、财政、建设、国土等相关部门组

成，下设项目办公室，配备了员由一批具有集体荣誉感和有社会责任感、业务知识精通、熟悉项目程序管理，协调及协作能力强的队伍的工作人员，工组成相了对稳定的项目团队。其中，主要工作人员，包括项目办主任、财务管理人员、翻译等从项目策划、论证直至实施阶段保持相对稳定而未发生变化，使工作连续不断档，这对项目快速、稳定的推进起了不可替代的作用。

## 2. Strengthened Coordination and Seamless Connections 加强协调无缝衔接

As the project involves multiple levels and multiple stakeholders, including ADB, the National Development and Reform Commission (NDRC), the Ministry of Finance (MOF), high-level provincial authorities, project-related/affected communities, contractors, and domestic and international consultants, PMOs are key to effectively connecting and coordinating seamlessly with stakeholders, which is also key to orderly and smooth project implementation.

Based on modern modes of project management, detailed responsibilities are assigned to individual staff. Meanwhile, incentives are generated to motivate staff enthusiasm, productivity, creativity, and sense of accomplishment.

亚行贷款项目上对亚行、国家及省发改、财政部门、下对村组、群众；相关单位涉及勘察、设计、评估咨询、施工、监理，项目办作为核心纽带，始终对上积极汇报，对下深化协调，无缝衔接，确保项目有条不紊，顺利推进。按照现代项目管理模式运作，工作责任到人；同时善于激发人员积极性、主动性和创造性，真正使人员在工作中获得成就感。

## 3. Getting planning right at the preparation stage

### 项目论证策划深入，做到心中有数

During project preparation, the selection of project components and activities took both the urgent needs of the urban socio-economic development and ADB's China Country Partnership strategy into consideration. Factors such as technical, financial, and economic feasibility, social risks due to land acquisition and resettlement, and construction durations were carefully considered. Whenever proposed activities are not within ADB's investment priorities or are unjustifiable, alternative subprojects are immediately considered and made available.

项目的筛选既考虑本地经济社会发展的迫切需要，又考虑亚行的资金投向；既考虑技术、经济的可行性，又考虑征地拆迁等社会风险、建设周期等可控性。若筛选项目与亚行投向不符或技援论证结果不被支持，则迅速启用备选项目。

## 4. Establishing standardized project-management regulations 建章立制，规范管理

With the assistance of consultants, soon after project implementation, the Zhangye and Dingxi PMOs formulated Project Management Regulations and the Project Management Manual, among other similar initiatives. This made it possible to establish codes of practice for managing and controlling variations, quality, time, safety, and costs, while also carrying out external environmental and resettlement monitoring, and overseeing loan disbursements. Meanwhile, in responding to the requirements of the Auditors Report,

financial management has been strengthened. During project implementation, PMOs, together with consultants, organized several training sessions for project implementation units (PIUs), contractors, environmental monitors, and external resettlement monitors to enhance project implementation efficiency and quality.

在项目进入实施阶段后，张掖和定西项目办在咨询专家组的帮助下制定了《亚行项目管理办法》、《亚行项目财务管理手册》等制度，按照亚行项目管理要求和本地、本项目实际，进一步明确了项目办、实施机构等的职责，对于工程质量、进度、安全、投资控制以及环境监测、移民外部监测、签证变更、提款报账等各个环节都明确规范，责任到人。同时按照项目《审计报告》要求，对于财务管理等方面进一步规范管理。项目实施过程中，项目办和咨询专家一起，组织实施机构、施工、监理、环境监测、移民外监等单位相关人员进行多次培训，使其掌握亚行项目管理要求，提高了项目推进的效率和质量。

## C. Safeguards Implementation

### 保障政策的实施

#### 1. Timely Land Acquisition and Resettlement 及时完成征地拆迁

Land acquisition and resettlement is the most important work prior to construction, but it can also be both a bottleneck and the key to controlling progress and quality for the entire project implementation. With great patience, PMO staff have undertaken to protect affected people and have assisted poorer households in overcoming difficulties, responding to reasonable demands. Whenever issues related to the vital interests of those affected by the project

were raised, but not clearly defined in terms of resettlement plans, consultation meetings were immediately organized to enable the government to implement policies or find satisfactory solutions to address the issues. Whenever there was a dispute, the parties concerned were informed in advance and the dispute settled legally.

征地拆迁工作是整个项目建设最重要的前置工作，往往成为整体工作的瓶颈、成为进度和质量控制的关键。在征地拆迁工作中，深入群众做耐心细致的思想工作，帮助拆迁户解决实际困难，回应合理诉求。针对征地拆迁中出现的群众切身利益，但文件、政策中尚未明确规定的问题，及时启动项目办会商制度，和有关部门协商，出台办法，解决问题，让群众满意。对有争议的问题，在充分告知被拆迁人权益的前提下，采用法律手段解决纠纷。

#### 2. Emphasis on public participation and livelihoods of the displaced 注重公众参与，解决生计

In the process of land acquisition and resettlement, PMO staff frequently visited affected households, and organized meetings to disseminate relevant policies and provide opportunities for the affected to voice their ideas and demands. Training is provided to farmers whose land have been acquired by the project and to displaced people to enable them to find jobs with a stable income.

在征地拆迁过程中，时时进村入户，并多次召开会议，宣传本项目土地征收和房屋拆迁的政策，保证受影响的征地拆迁户口均有发言权，包括家庭妇女表达其合同诉求。同时注重失地农民和拆迁户的培训，使他们有稳定的就业岗位和稳定的收入。





Beiguan Resettlement Community  
北关嘉苑安置房

3. Strictly observe civilized construction and environmental protection systems  
严格遵守文明施工及环境保护制度

To mitigate adverse environmental impacts during construction, the construction sites are completely sprinkled with water at least four times a day (except for rainy and snowy days). On windy days with gales higher than grade 4, construction activities are suspended, and the site and building materials are covered. After gale weather has ended, the sprinkler vehicle resumes work.

项目实施过程中，严格落实施工现场目实个100%过防尘抑尘降尘措施和“四个一律”制度，坚决实行100%洒水降尘湿法作业，每天不少于4次（雨雪天气除外）。4级以上大风天气时，所有施工工地一律实行紧急停工措施，对工地内裸地、土堆、石料堆等进行遮挡覆盖，对施工道路进行不间断洒水抑尘。大风天气过后，洒水车辆进行洒水增湿作业。

4. Give full play to consultants to improve project management efficiency  
充分发挥咨询专家优势，提高项目管理效率

After project implementation commenced, project management consultants, external resettlement monitoring agencies, and external environmental monitoring agencies were recruited timely to monitor and report the progress of the project resettlement plan and environment management plan and to provide technical support to solve problems to effectively promote the project.

项目生效后，及时聘用项目咨询专家、移民外部监测机构和环境外部监测机构，及时更新了移民外部监测报告、环境监测等报告，及时对项目中的各种技术难题提供支持，使项目得以高效推进。

# Attachment 附件

## Attachment 1

### Selection Criteria for Best Performing Projects

This is to recognize projects with an effective institutional set up, timely start-up of implementation, smooth disbursement and procurement, strict compliance with loan covenants, and effective delivery of scheduled outputs.

#### Prescreening Criteria:

A project is ineligible to participate in the award if:

1. ADB has declared any misprocurement
2. ADB's Special Project Facilitator has registered any complaints against the project
3. National media have reported any serious construction quality or construction safety issues
4. A major loan covenant has not been complied with

#### Selection Criteria:

The following criteria will be used to evaluate project implementation performance. Narrative evaluation methodology provides details for the evaluation (Attachment 2). Scores will be based on these criteria and bonus and penalty points according to the list below. Nominated projects will be ranked according to their total score by sector.

Criteria	Proposed Allocated Points
<b>1. Institutional Set Up</b>	<b>15</b>
• Specific PMO set up	5
• PMO staffing	5
• Grievance redress mechanism	5
<b>2. Implementation Start-up Performance</b>	<b>20</b>
• Loan approval to first disbursement	10
• Supervision consultant Mobilization	10
<b>3. Project Management</b>	<b>15</b>
• Progress report submission	5
• Safeguards reports submission	5
• Project performance monitoring report or socioeconomic impacts monitoring report submission	5
<b>4. Contract Award and Disbursement</b>	<b>20</b>
• Contract Award Achievement	5
• Disbursement Achievement	5

• Gap between time elapsed versus percentage of cumulative disbursements	10
<b>5. Safeguards Compliance</b>	<b>20</b>
• Compliance with resettlement covenants	10
• Compliance with environment and indigenous people covenants	10
<b>6. Financial Management</b>	<b>10</b>
• Financial management system	5
• Audited project accounts and financial statements Submitted	5
<b>Total</b>	<b>100</b>

#### Additional Bonus/Penalty:

##### **Loan Extension:**

- 10 (for extension  $\geq$  24 months)
- 5 (for extension  $\geq$  12, but  $<$ 24 months)
- + 0 (for extension  $<$  12 months)
- + 5 (within original closing date)

##### **Total Project Cost Increase (in terms of CNY):**

- 10 (over 40% of total project cost at appraisal)
- 5 (over 20% of total project cost at appraisal)

##### **Change of Project Outputs:**

- 10 each (cancelling any main project outputs listed in the RRP)

##### **Counterpart Funds:**

- 10 (inadequate or late counterpart funding)

## 附件1

### 最佳表现项目的评选标准

最佳表现项目是指建立了有效的项目管理机构、项目实施启动及时、支出和采购进展顺利、严格遵守贷款协议，并能切实实现项目的预期产出的项目。

#### 筛选标准：

出现以下情况的项目无参评此奖项资格：

1. 被亚行宣布过错误采购的项目
2. 在亚行特别项目协调人处有对项目投诉的登记的项目
3. 被国家媒体报道过发生任何严重建筑质量或建筑安全问题
4. 存在贷款协议主要条款没有遵守的项目

#### 评选标准：

项目实施绩效将按照以下标准进行评估。评价方法说明将对评价内容加以详细说明（附件2）。评估小组将根据这些标准，以及下表中的加分和扣分来确定项目得分，并分行业对候选项目按总得分进行排序。

标准	计划分值
<b>1. 机构建设</b>	<b>15</b>
• 成立专门的项目管理办公室	5
• 项目管理办公室的人员设置	5
• 对项目受影响人抱怨的申诉机制	5
<b>2. 项目实施启动情况</b>	<b>20</b>
• 自贷款批准到第一笔支付之间的时间跨度	10
• 咨询专家和监理的动员	10
<b>3. 项目管理</b>	<b>15</b>
• 进度报告的提交	5
• 保障政策相关报告的提交	5
• 项目绩效监测报告或社会经济影响监测报告的提交	5
<b>4. 合同授予和支付</b>	<b>20</b>
• 已签订的合同额	5
• 已完成的支付额	5
• 已过去时间百分比与累计支付百分比之间的差距	10
<b>5. 保障政策的遵守</b>	<b>20</b>
• 关于移民安置协定的遵守情况	10
• 关于环境和少数民族协定的遵守情况	10



<b>6. 财务管理</b>	<b>10</b>
• 财务管理体系	5
• 经审计的项目账目和财务报表的提交	5

<b>总分</b>	<b>100</b>
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**额外加分/扣分：**

**贷款延期：**

- 10（延期≥ 24个月）
- 5（延期 ≥ 12个月，但 <24 个月）
- + 0（延期 < 12个月）
- + 5（未超出原截止时间）

**项目总成本增加（以人民币为单位）：**

- 10（比预期项目总成本增加40%以上）
- 5（比预期项目总成本增加20% 以上）

**项目产出变更：**

- 10 每项（取消任何一项行长报告和建议中的主要项目产出）

**配套资金：**

- 10（配套资金不足或到位晚）

## Attachment 2

## Narrative Evaluation Methodology

## 1. Institutional Set up:

1.1 Specific PMO Set Up	<u>Allotted Point</u>
A PMO is set up specifically for the project	2
A PMO director or deputy director designated for the project	(full-time- 3; part-time- 1)
1.2 PMO Staffing	<u>Allotted Point</u>
Designated procurement/contract management staff	(full-time- 2; part-time- 1)
Designated disbursement staf	(full-time- 2; part-time- 1)
Designated coordinator/interpreter	(full-time- 1; part-time- 0)
1.3 Grievance redress mechanism (narrative justification needed)	<u>Allotted Point</u>
Available	5
Not available	0

## 2. Project Start-up:

2.1 Loan approval to first disbursement	<u>% of Allotted Point</u>
< 10 months	100
≥ 10, but < 14 months	75
≥ 14 months, but < 24 months	50
≥ 24 months	0
2.2 Fielding construction supervision consultants (firm or individual; ADB loan or domestic funded)	<u>% of Allotted Point</u>
Within 6 months after loan effectiveness	100
≥ 6 months, but < 10 months	50
≥ 10 months	0

## 3. Project Management:

3.1 Submission of progress reports	<u>Allotted Point</u>
Reports timely submitted	Yes: 2; No: 0
Adequacy of reports	Very good: 3; Good: 2; Acceptable: 1

## 3.2 Submission of monitoring reports, including environmental, resettlement, and ethnic minority

	<u>% of Allotted Point</u>
Timely submitted all monitoring reports with adequate information	100%
One monitoring report submitted with delay or with inadequate information	50%
Two monitoring reports submitted with delay or with inadequate information	0%

## 3.3 Submission of project performance monitoring or socioeconomic impacts monitoring report

	<u>Allotted Point</u>
Reports timely submitted	Yes: 2; No: 0
Adequacy of reports	Very good: 3; Good: 2; Acceptable: 1

**4. Contract Award and Disbursement**

4.1 Contract Award Achievement (Cumulative, as of the end of last year)	<u>% of Allotted Point</u>
Actual/Projection $\geq 90\%$	100
Actual/Projection $\geq 75\%$	50
Actual/Projection $< 75\%$	0

4.2 Disbursement Achievement (Cumulative, as of the end of last year)	<u>% of Allotted Point</u>
Actual/Projection $\geq 90\%$	100
Actual/Projection $\geq 75\%$	50
Actual/Projection $< 75\%$	0

## 4.3 Gap between time elapsed (from loan approval) versus percentage of cumulative disbursement (as of the end of last year)

	<u>% of Allotted Point</u>
$< 10\%$	100
$\geq 10\%$ and $< 20\%$	80
$\geq 20\%$ and $< 30\%$	50
$\geq 30\%$	0

**5. Safeguards Compliance**

5.1 Compliance with resettlement covenants	<u>% of Allotted Point</u>
Full complied	100
One noncompliance	50
More than one noncompliance	0

5.2 Compliance with environment and indigenous people covenants	<u>% of Allotted Point</u>
Fully complied	100
One noncompliance	50
More than one noncompliance	0

## 6. Financial Management

6.1 Financial management system	<u>Allotted Point</u>
Financial management system in use	1
Separate project account maintained	2
Designated disbursement staff	2
6.2 Submission of audited project accounts and financial statements	<u>% of Allotted Point</u>
Timely submission and acceptable	100
Timely submission but unacceptable	50
Delay in submission but acceptable	50
Delay in submission and unacceptable	0

## 附件2

## 评价方法说明

## 1. 机制建设：

1.1 成立专门的项目管理办公室	分值
专门为项目设立了项目管理办公室	2
项目有指定的项目管理办公室主任或副主任	(全职- 3; 兼职- 1)
1.2 项目管理办公室的人员设置	分值
指定采购/合同管理人员	(全职- 2; 兼职- 1)
指定支付人员	(全职- 2; 兼职- 1)
指定协调员/翻译	(全职- 1; 兼职- 0)
1.3 对项目受影响人抱怨的申诉机制（需要详细叙述）	分值
有	5
没有	0

## 2. 项目实施启动：

2.1 自贷款批准到第一笔支付之间的时间跨度	占分值%
< 10个月	100
≥ 10个月， 但< 14个月	75
≥ 14个月， 但< 24个月	50
≥ 24个月	0
2.2 咨询专家和监理的到场时间（包括公司或个人；亚行贷款或国内出资）	占分值%
贷款生效后6个月内	100
≥ 6个月， 但< 10 months	50
≥ 10个月	0

## 3. 项目管理：

3.1 进度报告的提交	分值
及时提交报告	是： 2； 否： 0
提交的报告内容翔实	非常好： 3； 良好： 2； 可接受： 1



3.2 监测报告的提交，包括环境、移民安置和少数民族等	占分值%
及时提交所有监测报告且内容翔实	100%
一份监测报告延期提交或内容不充分	50%
两份监测报告延期提交或内容不充分	0%

3.3 项目绩效监测报告或社会经济影响监测报告的提交	分值
及时提交报告	是：2；否：0
报告内容翔实	非常好：3；良好：2；可接受：1

#### 4. 合同授予和支付

4.1 已签订的合同额（截至上年末的累计数）	占分值%
实际数/计划数≥ 90%	100
实际数/计划数≥ 75%	50
实际数/计划数< 75%	0

4.2 已完成的支付额（截至上年末的累计数）	占分值%
实际数/计划数≥ 90%	100
实际数/计划数≥ 75%	50
实际数/计划数< 75%	0

4.3 已过去的时间百分比（自贷款批准之日起）与累计支付百分比（截至上年末）之间的差距	占分值%
<10%	100
≥ 10%且< 20%	80
≥ 20%且<30%	50
≥ 30%	0

#### 5. 保障规定的执行

5.1 关于移民安置协定的遵守情况	占分值%
完全遵守	100
一个相关协定没遵守	50
超过一个相关协定没遵守	0

5.2 关于环境和少数民族协定的遵守情况	占分值%
完全遵守	100
一个相关协定没遵守	50
超过一个相关协定没遵守	0

6. 财务管理

6.1 财务管理体系	分值
财务管理体系的建立	1
项目单独核算	2
专设提款报账人员	2
6.2 提交经审计的项目账目和财务报表	占分值%
及时提交且合格	100
及时提交但不合格	50
延迟提交但合格	50
延迟提交且不合格	0

## About the Asian Development Bank

### 关于亚洲开发银行

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to the majority of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

亚洲开发银行（亚行）的远景目标是实现没有贫困的亚洲和太平洋地区。亚行的工作旨在帮助其发展中成员体减少贫困，改善亚太地区人民的福祉。尽管亚太地区发展迅速，但全世界大部分贫困人口仍生活在该地区。亚行致力于通过包容性经济增长、环境可持续发展和区域一体化来帮助亚太地区减少贫困。

亚行总部设在菲律宾首都马尼拉，现有67个成员体，其中亚太地区成员48个。亚行主要通过政策对话、贷款、股本投资、担保、赠款以及技术援助等工具向成员体国家提供帮助。



亚洲开发银行

Asian Development Bank

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines （菲律宾马尼拉）

[www.adb.org](http://www.adb.org)

亚洲开发银行驻中国代表处

北京朝阳区建国门外大街1号

国贸大厦（三期）17层

邮编：100004

[www.adb.org/prc](http://www.adb.org/prc)

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