



Rainwater cellars used for cropland irrigation

Rainwater Cellars introduced through government support (中国)

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Government takes the lead and propelled by project, the rainwater collection for irrigation technology scales up by demonstration.

Dingxi County of Gansu Province is short of water resource. There is an old saying it's hard to exchange a cup of water for a cup of oil in Anding of Dingxi. During drought years, drinking water became a crisis and people had to walk dozens of miles to get water. With no self-relief capacity the local people live a hard life. To resolve water shortage, the most realistic method is to tap into the potential of local precipitation. Under the support of the Gansu provincial government, researches on rainwater collection were conducted during the period from 1988 to 1992 and water cellar technology was proven technically and economically feasible with its functions in preventing erosion, developing arid cropland and ecosystem recovery.

In 1994, the government disseminated water cellar technology in the northwestern part of the county covering 14 townships and 4376 households. After completion, the drinking water supply problem was mitigated for 22,000 people and 8700 animals. In 1995, a severe drought hit Gansu and the provincial government immediately initiated the 1-2-1 Rainwater Collection Project, under which the government supplied cement and the local people provided sand/stone and labor to build water cellars. According to this project each household should build one water catchment with an area of 100m² made by concrete cement and two water cellars and one backyard cashcrop forest. By the end of 2000, a total of 57800 households were involved in the project to provide drinking water to 60,900 people and 333,900 heads of livestock. In addition, dryland farming has seen great development. Since 1996, water cellar technology has been diversified and evolved. The water collection fields have extended from roof and courtyard to road surface, ditch, hillside, land brink, etc and the application has been widened to scale livestock farming, spot watering and conservation irrigation of farmland based on the achievement of the 1-2-1 rainwater collection project. Moreover, water cellar technology has been gradually combined with greenhouse production, tourism agriculture, etc to form a development model integrating rainwater conservation irrigation, dryland farming and improved livelihood standards.

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地点: Anding, Gansu, 中国

选定地点的地理参考

• 不 □

启动日期: 不 □

终止年份: 不 □

方法的类型

□ 传 □ / □ □
□ □ □ □ / 创 □ 倡 □
□ 于 □ / □ □ □



Rainwater catchment experiment

和利

该方法的主要目的/目标

Aims are to: establish a extension mechanism that promotes sustainable development and involves farmers participation; improve the farmers' knowledge about rainwater utilization; strengthen farmer participation and their confidence in overcoming difficulties; solve drinking water problem; eliminate poverty

The SLM Approach addressed the following problems: lack of effective grass-roots organization; backward economy and lack funds; farmers in lack of the knowledge of water cellar establishment and management; short of drinking water for human and domestic animals

推动实施本办法所应用技术的条件

阻碍实施本办法所应用技术的条件

- **财务资源和服务的可用性/可得性:** Found shortage: Farmers cannot afford water cellar construction Treatment through the SLM Approach: The dissemination approaches include trial operation, demonstration, training, household visit for publicity, media (TV), technical handouts and posters. The key organizer of the extension is the water resources bureau of Anding District.
- **其他:** Knowledge/technology shortage: Short of knowledge of rainwater high efficiency utilization and related agricultural technology Treatment through the SLM Approach: Demonstration and training

关利 关 参与和

该方法涉及的利益相关者及其职责

该方法涉及哪些利益相关者/执行机构?	指定利益相关者	说明利益相关者的角色
使 区		
SLM专 /农业	SWC experts	
国 划、决		

当地土地使用者/当地社区参与该方法的不同阶段

	启动/动员	互动	动员
启动/动员		✓	
划		✓	
		✓	
估		✓	
Research		✓	
			Meetings, household visits
			Participate in the survey and site location arrangement
			Labor input for technological implementation
			Observation, collaboration with the survey of the technicians
			Participate in the surveys

流程图

有关SLM技术选择的决策

决策由谁做出

- ☐ 仅由土地使用者做出
☐ 土地使用者使SLM专家作为参与者之一
☐ 土地使用者和SLM专家共同决策
☐ 仅SLM专家决策
☐ 土地使用者和SLM专家共同决策
- ☒ Land users and decision makers

决策基于

- ☐ 充分SLM知识
☐ 个人经验和SLM知识

以下活动或服务是该方法的一部分

- ☐ 能力建设/培训
☐ 咨询服务
☐ 技术示范
☐ 评估
☐ 其他

能力建设/培训

向以下利益相关者提供培训

- ☐ 土地使用者
☐ 工作人员

培训形式

- ☐ 田间学校
☐ 农民田间学校
☐ 社区会议
☐ 宣传册
☒ publicity brochures

涵盖的主题

water cellar building and management, irrigation etc.

机构强化

机构已强化/建立

- ☐ 否
☐ 是
☒ 是
☐ 是

在下述层面上

- ☐ 国家
☐ 地区
☒ 国家

描述机构、角色和职责、成员等。

支持类型

- ☐ 任务
☐ 能力建设
☐ 其他
☒ capacity building

进一步细节

the technology application strengthened the capacity building of the local water resources departments. Application of the technology helped other projects related to water conservancy and poverty reduction.

研究

研究由谁进行

- ☐ 土地使用者
☐ 社区
☐ 国家
☐ 其他

The research is conducted by provincial level researchers on the ecological, economic, social benefits of the water cellars, mainly.

SLM组成部分的年度预算，以美元计算

- ☐ < 2,000
☐ 2,000-10,000
☐ 10,000-100,000
☐ 100,000-1,000,000
☐ > 1,000,000

Precise annual budget: 不

Approach costs were met by the following donors: government (Local funds): 15.0%; other: 85.0%

已向土地使用者提供以下服务或激励

- ☐ 为土地使用者提供激励
☐ 为土地使用者提供激励
☐ 为土地使用者提供激励
☐ 为土地使用者提供激励

为土地使用者提供财政/物质支援

土地使用者使劳动力为

- ☐ 土地使用者
☐ 以土地使用者支付
☐ 以土地使用者支付
☐ 其他

信贷

条件Repayment conditions: credits are sometimes used, with interest rate similar with that of commercial loan.

- ☐ 信贷提供者不
☐ 信贷提供者不

响分 和

方法的影响

力

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长处: 编制者或其他关键资源人员的观点

- solve the problems of aridness and drinking water for human and livestock (How to sustain/ enhance this strength: continued project support)
- strong extension mechanism (How to sustain/ enhance this strength: further strengthen the role of technical extension organizations)
- Improve farmer's life (How to sustain/ enhance this strength: develop dryland agriculture industry)

弱点/缺点/风险: 编制者或其他关键资源人员的观点如何克服

- high investment for technology adoption use of micro-credits, optimized use of farming technology for high benefit agriculture.
- weak monitoring and evaluation establish participatory monitoring and evaluation mechanism.

参 考 文 献

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WOCAT数据库中的完整描述

https://qcat.wocat.net/zh/wocat/approaches/view/approaches_2432/

链接的SLM数据

Technologies: Rainwater Cellars https://qcat.wocat.net/zh/wocat/technologies/view/technologies_1335/

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文件编制者

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