

ACEDP Lake Tai Water Pollution Treatment Project

ACEDP太湖水污染治理项目

Newsletter

项目通讯

Issue 2 (Jul. 2009~Jan. 2010)

第二期 (2009年7月~2010年1月)



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编制: Earth Systems公司领导的澳洲都市系统集团

Foreword

WARMLY welcome you to open the second edition of the ACEDP Lake Tai Water Pollution Treatment Project Newsletter. This edition briefly summarizes the project activities since its commencement in July 2009. Also, it will highlight interesting developments in Australia related to the Project's components.

We will keep you in touch with the update information pertaining to the Project in the Chinese New Year of the Tiger. On behalf of the AUS Cluster team, we wish you and your team a happy and prosperous Year of the Tiger.

热忱欢迎您打开这份《ACEDP太湖水污染治理项目“项目通讯（第二期）”》。透过这份通讯，您将了解到项目自2009年7月实施以来所有的项目活动。同时，它也将继续为您开启了解澳大利亚湖泊环境整治成功经验的窗户。

虎年新春，太湖项目组在此诚挚地恭祝您：新春快乐，万事如意！在新的一年里，我们将继续为您及时送上本项目的《项目通讯》。

Nigel Murphy

Project Director 项目主任



AUS Cluster Lead by Earth Systems Consulting

Earth Systems公司领导的澳洲都市系统集团

PROJECT BRIEFING

项目简介

THE Australia and China Environmental Development Partnership (“ACEDP” hereafter) is a five-year, \$25m Australian Government, AusAID initiative with the objective of supporting and improving policy development in China in the area of environmental protection and natural resources management. ACEDP aims to facilitate enduring partnerships between Australian and Chinese agencies, institutions and individuals engaged in national environmental policy development and implementation through a combination of high level policy dialogue, capacity building measures and collaboration on discreet activities that demonstrate good environmental governance.

Lake Tai (Taihu Lake) is the third largest lake in China, which situated on the border of Jiangsu and Zhejiang Province, with the majority of it lying in Jiangsu Province and a very small slice in the southern part of the lake in Zhejiang Province. Water quality and algal blooms in Lake Tai is recognized as a serious national issue particularly following the severe algae outbreak in 2007. A comprehensive restoration program has been approved by the State Council and it is a priority in the 11th Five Year Plans. On behalf of the State Council, the NDRC has taken a lead role in coordinating

“中澳环境发展伙伴项目”（如下简称“ACEDP”）为期五年，由澳大利亚发展署出资2500万澳元，旨在帮助中国加强环境保护和自然资源管理及在相关方面的政策支持。ACEDP通过高层政策对话、能力建设以及环境整治示范活动等多方面的合作，使中澳两国政府机构、组织和个人参与国家环境政策的制订和实施，促进两国间持续的伙伴关系。

太湖是中国的第三大淡水湖泊，主要位于江苏省和浙江省的交界处。太湖主要水域面积归江苏省管辖，仅有南岸一小部分隶属于浙江省管辖。太湖流域的水环境管理和藻类暴发是一个问题，在2007年太湖流域暴发大规模蓝藻“水华”之后引起了中国政府的高度重视。太湖流域的水环境综合整治已被国务院列入“十一五”规划的重点。在国务院的指示下，国家发改委在太湖流域水环境综合整治中肩负重要的协调职责，在水环境整治的总

PROJECT BRIEFING

项目简介

development of the plan and its implementation.

ACEDP Lake Tai Water Pollution Treatment Project (“Project” hereafter) is a 15-month, \$1.8m project, implemented by the AUS Cluster lead by Earth Systems Consulting, and the Chinese counterpart ICC-NDRC. The Project was launched in August 2009. The objective of the Project is to increase awareness of IRBM approaches including institutional governance, science based management, and technical measures for pollution and algal control. The Municipalities of Suzhou and Huzhou respectively located along the bank of the Lake Tai were nominated as the pilot cities of the Project.

The Project concentrates on 3 main components; Integrated River Basin Management (IRBM), Science Based Lake Management, and Technical Measures in Support of Governance and IRBM (approximately 21 activities, workshops & study tours in total) both in China and Australia.

Source (Part): ACEDP Website

<http://www.acedp-partnership.org/en/default.aspx>

体规划和项目实施中，起到核心的作用。

“ACEDP太湖水污染治理项目”（以下简称“项目”）为期15个月，项目总额约180万澳元由Earth Systems公司代表澳大利亚都市系统集团（AUS）负责实施。本项目的中方合作伙伴是国家发改委国际合作中心。项目于2009年8月正式启动，目的是促进流域综合管理体制的改革，提高机构的科学管理能力，及交流控制蓝藻治污的技术方法。太湖沿岸的苏州市和湖州市被确定为本项目的试点城市。

本项目将重点关注流域综合管理、科学的湖泊管理和支持流域综合管理和环境整治的技术措施等三个领域，预期在中国和澳大利亚相继实施约21个具体活动。

部分信息来源: ACEDP网站

<http://www.acedp-partnership.org/en/default.aspx>

PROJECT IMPLEMENTATION PARTNERS

BOTH the Chinese Partner and its Australian counterpart are included in the project implementation partners.

Chinese Implementation Partner

International Cooperation Center, National Development and Reform Commission (ICC-NDRC)

Chinese Local Implementation Partner

Suzhou Municipal Development and Reform Commission (MDRC) and Huzhou MDRC

Australian Implementation Partner

Aus Cluster Lake Tai consortium lead by Earth Systems Consulting

The Cluster comprises Earth Systems, Hyder Consulting, Melbourne Water, Victorian Environment Protection Authority (EPA), and Victorian Department of Sustainability and Environment (DSE).

For more information, please visit the Website below

ICC-NDRC <http://www.icc-ndrc.org.cn/>

Suzhou MDRC <http://www.fgw.suzhou.gov.cn/>

Huzhou MDRC <http://fgw.huzhou.gov.cn/>

Earth Systems <http://www.earthsystems.com.au/>

Hyder Consulting <http://www.hyderconsulting.com/>

Melbourne Water <http://www.melbournewater.com.au/>

Victorian EPA <http://www.epa.vic.gov.au/>

Victorian DSE <http://www.dse.vic.gov.au/>

项目执行方

项目执行方包括中方执行机构和澳方执行机构两部分。

中方执行机构

国家发改委国际合作中心

中方地方执行机构

苏州市发改委、湖州市发改委

澳方执行机构

澳洲都市系统集团由Earth Systems公司牵头组成的“太湖项目组”

项目组由Earth Systems公司、Hyder Consulting公司、墨尔本水务、维多利亚州环保署和维多利亚可持续和环境部组成。

更多详情，请访问以下网站

国家发改委国际合作中心 <http://www.icc-ndrc.org.cn/>

苏州发改委 <http://www.fgw.suzhou.gov.cn/>

湖州发改委 <http://fgw.huzhou.gov.cn/>

Earth Systems公司 <http://www.earthsystems.com.au/>

Hyder Consulting 公司 <http://www.hyderconsulting.com/>

墨尔本水务 <http://www.melbournewater.com.au/>

维多利亚州环保署 <http://www.epa.vic.gov.au/>

维多利亚可持续和环境部 <http://www.dse.vic.gov.au/>

PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

Inception Workshop

In order to coordinate with NDRC and other line-ministries as well as relevant cities' governments to thoroughly implement National Masterplan on Lake Tai Basin Integrated Water Environment Governance, the inception workshop of the Project, organized by ICC-NDRC and AUS Cluster, co-hosted by Suzhou Municipal Government, was held successfully in August. All 60 representatives from miscellaneous stakeholder agencies attended the 2-days inception workshop. The Project outcomes would, on one hand, provide reference for NDRC and other line-ministries to formulate scientific and effective institutions on IRBM, on the other hand, help local cities to obtain high-efficient environmental governance technologies with particular reference to IRBM approaches, and then further promote to basin level and nationwide.

The Project gained great support from DRCEP of NDRC as well as local cities such as Suzhou, Wuxi, Huzhou, etc., and carried out its works under the guidance of the Leading Group composed by concerning leaders and experts from DRCEP of NDRC, ICC-NDRC, Suzhou and Wuxi.

项目活动

(2009年7月~2010年1月)

项目启动会

为配合国家发改委等部委及有关城市政府贯彻落实《太湖流域水环境综合治理总体方案》的有关工作，本项目启动会于2009年8月在苏州市成功举办，会期两天，共有60名各界代表出席了启动会。“太湖水污染治理试点项目”系“中澳生态与环境发展项目”根据2007年召开的第一届中澳高层圆桌会议上确认的“优先领域”而设立，旨在为实施《太湖流域水环境综合治理总体方案》提供支持。项目成果，一方面可为国家发改委等部委制定科学有效的流域综合管理制度提供参考；另一方面也可帮助城市获得高效的环境治理技术，特别是流域综合管理的方法，进而在流域层面乃至全国推广。

“太湖水污染治理试点项目”得到了国家发改委资源节约和环境保护司，以及苏州、无锡、湖州等城市的大力支持，并在由国家发改委资源节约和环境保护司、国家发改委国际合作中心、苏州市、无锡市有关领导和专家组成的“太湖水污染治理试点项目领导小组”的指导下开展工作。

PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

The Project General Advisor is Mr. Wei Jianguo, who had been a leader in Ministry of Commerce for a considerable time in charge of international trade and economic cooperation, having rich experiences in the aspect of international cooperation and now Secretary-General of China Center for International Economic Exchanges.

The successful launch of the Project has important significance. Most developed countries are now gradually reducing the donor projects to China due to their economic difficulties in the worldwide financial crisis. However, in view of the importance of ecological and environmental issues as well as strengthening China-Australia cooperation, AusAID conquers various negative factors, prioritizing its support to the Project so as to ensure the smooth implementation of the Project. The Project will facilitate China and Australia's governments and experts to enforce exchanges and cooperation in water resources management and pollution control, enhance the environmental management capacity of Chinese government by drawing on Australia's relevant experiences and technologies, carry out Scientific Outlook on Development and promote sustainable development.

项目活动

(2009年7月~2010年1月)

项目总顾问由曾经长期担任商务部领导，分管国际经贸合作，以及中国政府对外援助和双边合作事务，在国际合作方面具有丰富经验，现任中国国际经济交流中心秘书长的魏建国同志担任。

本项目的成功启动具有重要意义。当前全球普遍受金融危机冲击，多数发达国家面临经济困难，正在逐步减少对中国的援助项目。但是鉴于生态与环境问题的重要性，以及加强中澳合作的重要性，澳大利亚国际发展署克服危机带来的种种不利因素，承诺优先支持“太湖水污染治理试点项目”。项目的成功实施，将有效促进中澳双方政府、专家在水资源管理和污染治理领域加强交流合作，充分借鉴澳大利亚的有关经验，提高中国政府的环境管理能力，切实落实科学发展观，促进可持续发展。



PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

Integrated Management of Algal Blooms

The Project conducted and completed algal blooms workshop in Suzhou between 28 and 30 October, as part of Subcomponent 3.3 of the Project. The Project technical team was mainly composed of Professor Dr. Justin Brookes, Dr. Mike Burch and Chinese lake expert Professor Jackie Qin and Professor Lin Hai. A total number of about 30 personnel from relevant government agencies participated in the three days workshop.

Speeches were delivered on the topics of algal monitoring, algal control techniques, water treatment for algal blooms, and action plans for algal management. The Suzhou Environmental Protection Bureau (EPB) also presented on their current program of algal monitoring and treatment within Lake Tai .

There was a strong consensus that the Chinese expectations and the workshop objectives had been met. Several agreements and activity plans had been confirmed and proposed for follow up activities including further work in the areas of algal monitoring and emergency planning, modelling of algal blooms and applied research into techniques for control of algal blooms.

项目活动

(2009年7月~2010年1月)

水华综合管理研讨会

2009年10月28日至30日，中澳“太湖水污染治理试点项目”下第一个子活动——“水华综合管理专题研讨会”在苏州召开。来自中、澳的专家组和项目管理人员，以及苏州市发改委、环保局、农林局、排水管理处、环科所，湖州市发改委、环保局、水利局、无锡市环保局等单位的领导和专家参加了相关活动。

研讨会主要涉及藻类监测、藻类毒性监测和评估、藻类暴发的应急处理机制、藻类控制等四部分内容。

中澳专家围绕上述四部分内容，先后展开了“藻类生态学概述以及藻类暴发的原因”、“控制藻类暴发的水处理技术”、“相关技术措施在太湖控制和处置藻类暴发中的应用”、“藻类监测技术及风险评估”、“藻类暴发管理的行动计划”、“控制藻类暴发的有效技术措施”、“太湖水质监测、作用和责任概述”等7个专题的介绍。

此次研讨会得到了与会者的充分肯定和好评。中澳双方在藻类监测和预警、藻类暴发的模型预测和藻类暴发的控制技术等方面达成初步共识，并确认今后开展合作的领域和方向。此次研讨会为中澳两国相关部门间、专家间搭建良好的交流平台，为中方充分借鉴澳在水华综合管理方面的经验和技术，更好地治理太湖提供了有益信息。



PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

Wastewater Treatment & Recycling (WWTR) Review

A WWTR review and working meetings was conducted in the two pilot cities in late October 2009 as part of Subcomponent 3.2 of the Project. The events of the review included visits to the local wastewater treatment plants (WWTPs), as well as meetings with local government officials and experts to develop an understanding of the status & background in wastewater treatment in these two cities, and identifying the issues & gap being faced.

The aims of WWTR Review were to assess the priority concerns and opportunities regarding WWTR technologies, particularly the removal of nitrogen (N) and phosphorous (P), and relate with Australian based approaches and technologies in order to identify future directions of technological support. The review was also considered as the technical preparation of the Australian WWTR Study Tour taken place in December. The objective of the WWTR review had been well met.



项目活动

(2009年7月~2010年1月)

废水处理和循环利用情况调查

2009年10月底，太湖水污染治理项目“废水处理和循环利用情况调查”活动在两试点城市分别展开。活动包括对当地污水处理厂进行实地走访，并与当地政府职能部门官员和技术专家等就所在城市的废水处理和循环利用的现状、政策、技术、管理措施以及面临的主要问题等进行了深入探讨。

本调查的目的旨在评估废水处理和循环利用领域（尤其是脱氮除磷技术）应优先关注的技术措施，了解澳大利亚正采用的较为先进的技术措施相衔接，确定澳大利亚在该领域向太湖流域污水处理厂提供技术支持的方向。同时，本次调查也是为在12月份组织中 方代表团赴澳大利亚展开“废水处理和循环利用”考察活动做好了充分的准备。调查活动达到了预期的目的，并取得较好的效果。

PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

WWTR Study Tour to Australia

A delegation of 8 senior officials from Suzhou, Huzhou and Beijing, from EPBs, Water Bureaus, and MDRCs and NDRC flew to Australia for a study tour on WWTR over 14 days from the 7th to the 19th of December 2009. The study tour was organized and led by Project Manager Mr. James Machin and Dr. John Messenger, the Project's waste water expert.

The study tour is a follow up activity of a previous WWTR review in Suzhou and Huzhou in late October. The study tour aims to introduce Chinese delegates WWTR technologies and approaches currently being applied in Australia, especially for nitrogen (N) and phosphorous (P) removal. The mode of the study tour mainly includes site visits, bilateral meetings and discussions between the Chinese and Australian participants.

Key aspects of WWTR covered during the study tour included:

- Technology of nitrogen and phosphorous removal for prevention of eutrophication of sensitive water;
- Technology for recycling (Reverse Osmosis and membrane bioreactor, MBR);
- Advanced sludge treatment;

项目活动

(2009年7月~2010年1月)

废水处理和循环利用技术赴澳工作访问团

废水处理和循环利用技术工作团于2009年12月6日至19日赴澳大利亚进行为期14天的工作访问。该团共8名成员，包括国家发改委、湖州市发改委以及苏州市发改委、市水利局和环保局等。

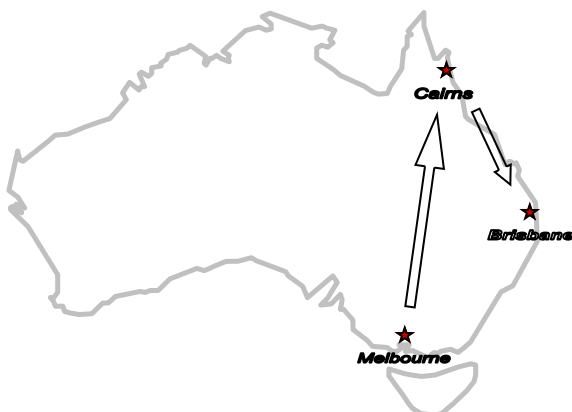
此次赴澳大利亚工作访问主要侧重于废水处理和循环利用技术（特别针对氮和磷）。工作考察主要以座谈会或研讨会形式，向中方代表介绍澳大利亚在相关领域采取的先进技术和措施，并与澳方相关机构和专家一起鉴定太湖目前使用方法的不足之处，并为太湖改进废水处理和循环利用技术提出新方法和未来方案，以提高太湖的水质状况。



PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

- Domestic (3rd pipe) and industrial water recycling;
- Methods for design and procurement of infrastructure;
- Setting of treated wastewater standards for various end uses by the EPA;
- Odour control and energy recovery

The study tour included the first week in Melbourne having meetings with different water & environment related stakeholders including the Victorian Environment Protection Agency, Melbourne Water, City West Water, as well as the Victoria Water Industry Association. The tour also included visits to the regional water and waste water operator, Barwon Water in the regional centre of Geelong as well as to Melbourne's biggest wastewater treatment plant (Western Treatment Plant) at Werribee. A factory of treating industrial waste was also visited in Melbourne.



项目活动

(2009年7月~2010年1月)

活动主要包括以下几个方面:

- 敏感水体富营养化的脱氮除磷技术;
- 水循环处理技术(反渗透、膜处理等);
- 先进的污泥处理技术;
- 生活废水和工业废水循环回用技术;
- 基础设施的设计和招标方法;
- 环保机构废水处理标准的设定; 及
- 恶臭控制与能量回收等。

第一周的工作访问在墨尔本进行, 代表团拜访了维多利亚州的一些水和环境相关机构, 并举行了一系列会谈, 包括: 维多利亚州创新、工业和地区发展部、墨尔本水务、维多利亚水业协会、市西水务、维多利亚州环保署和巴文水务。此外, 代表团还实地考察了西部污水处理厂。



PROJECT ACTIVITIES (JULY 2009~JANUARY 2010)

During the second week of the study tour, the delegation flew to Cairns to meet Cairns Water and review how they perform removal of Phosphorous for protection of the Great Barrier Reef, and visited both the Northern and Southern wastewater treatment plants which are currently being upgraded. The delegation then travelled to Brisbane Queensland, where they met the Water Secure for a description of the Western Corridor recycled water project, and visited the Luggage Point Advanced Water Treatment Plant. In Brisbane they also had the opportunity to meet University Department of Environment and Resource Management (DERM) officials and discuss their approaches to regulating waste water treatment plants in Queensland as well as approaches to water recycling and control of Non Point Source pollution in Queensland. The Delegation also visited the University of Queensland's Advanced Water Treatment Centre in Brisbane.

The study tour finished with a workshop which identified gaps between the current approaches used around Lake Tai, and proposed approaches and future activities for improving WWT and recycling to improve Lake Tai conditions.

项目活动

(2009年7月~2010年1月)

工作访问的第二周，代表团赴凯恩斯市与凯恩斯水务以保护大堡礁的控磷措施为主题进行了会谈，并参观了正在进行升级改造的凯恩斯北部和南部污水处理厂。随后，代表团赴布里斯班参观了Water Secure和Luggage Point污水处理厂，重点考察了“西部走廊循环水项目”，并与昆士兰州环境和资源管理部的官员就污水处理厂、回用水和面源污染控制的措施和法律法规等问题展开了深入讨论。

结束考察前，代表团召开了讨论会，总结了考察收获、分析了太湖流域正面临的问题，找出了存在的差距，为下一步的考察成果转化奠定了基础。



PROJECT COMMUNICATION ACTIVITIES

On September 15, Project Director Mr. Nigel Murphy made a presentation on the Project to a gathering of Australian businesses through the AUS Cluster initiative in Melbourne.

In October, Earth Systems and AUS Cluster organized a World Bank Beijing Office Delegation to conduct a two day visit to Melbourne .The World Bank project, “the Jiangsu, Wuxi Lake Tai Environment Project”, which is similar in scope to the Lake Tai Project. The visit aimed to further familiarize the World Bank with the ACEDP Lake Tai Project, provide an introduction to Australian experience in Integrated Catchment Management, management of Non Point Source Pollution and techniques for management of algal blooms and to explore the area of potential collaboration between the ACEDP Lake Tai and World Bank initiatives.



项目交流活动

9月15日，Earth Systems公司董事长 Nigel Murphy先生在由澳大利亚都市系统集团发起的澳大利亚商务会议上就“ACEDP太湖水污染治理项目”发表演讲。

10月，Earth Systems公司和澳大利亚都市系统集团组织世界银行北京办公室的官员在在墨尔本展开了为期两天的会议和考察，重点是考察澳大利亚在流域管理方面的经验。由世界银行提供贷款的“江苏无锡太湖环境项目”目前正处于可行性研究和项目设计规划阶段，其活动框架内容与“ACEDP太湖水污染治理项目”有许多相同或相近之处。此次考察和交流旨在使世行官员进一步了解“ACEDP太湖水污染治理项目”，考察澳大利亚在流域综合管理、湿地建设、面源污染管理等方面的技术经验和优势，寻求本项目与世行“江苏无锡太湖环境项目”潜在的合作机会。

PROJECT COMMUNICATION ACTIVITIES

In late October, The Project team also extended to Nanjing and meetings were held with the Jiangsu Provincial Water Resources Department, Jiangsu Provincial Environmental Protection Department and Nanjing Institute of Environmental Science. The purpose of these meetings was to develop an understanding of WWTR from the provincial levels including the role of provincial level agencies and perception of their gaps in knowledge and understanding in the WWTR field. These meetings also provided a general introduction to the ACEDP Lake Tai Water Treatment Project, introducing the AUS Cluster and its expertise, and explored further areas for potential cooperation.

In November, the 13th World Lake Conference was held in Wuhan. The conference concentrated on the theme of “Rehabilitate the Lake Ecosystem. The Project Director Mr. Nigel Murphy delivered a speech on “ACEDP Lake Tai Water Pollution Treatment Project” to the con-



项目交流活动

10月下旬，为了进一步全面深入掌握相关情况，太湖项目组团队赴南京，分别与江苏省水利厅、环保厅和环保部南京环境科学研究所的官员和科研人员进行了会谈。会谈目的旨在从省级层面了解太湖流域水环境状况，特别是废水处理和循环利用现状。会谈中，澳方专家介绍了“ACEDP太湖水污染治理项目”、澳大利亚都市系统集团及其技术实力概况，拓宽了未来在此领域开展潜在合作的机会。

11月，“第13届世界湖泊大会”在中国武汉召开。大会的主题是“让湖泊修养生息”。项目主任Nigel Murphy先生在大会上发表题为“ACEDP太湖水



PROJECT COMMUNICATION ACTIVITIES

ference. Mr. Nigel Murphy was honored to receive a brief interview from Wuhan TV Station, where he emphasized the importance of applying comprehensive strategies and techniques in lake treatment in China. The AUS Cluster team also had meetings with the Wuhan Environmental Protection Institute during the 4 day conference and explored areas for potential lake remediation cooperation both in Lake Tai and the East lake in Wuhan.

In early December, as invited by the World Bank (WB) and on behalf of Earth Systems and AUS Cluster, the Project Technical Coordinator Mr. Henry Wang participated in the one-week mission of the WB Wuxi Lake Tai Environment Project. The participation aims to further familiar with the scope of work of the WB project, introduced the ACEDP, ACEDP Lake Tai Project, Australian experiences in Integrated River Basin Management to the attendances, especially to the Wuxi Project Management Office and other stakeholders, and explored the areas for the cooperation between the two projects.



项目交流活动

污染治理项目介绍”的演讲。他介绍了“中澳环境发展伙伴项目”、本项目的进程、以及澳大利亚在流域综合管理、水处理和藻类控制方面的经验和措施。演讲得到了与会各方的关注和好评。Murphy先生十分荣幸地接受了武汉电视台的采访，采访中他强调了中国在湖泊治理中采用综合的管理措施和技术手段的重要性。此外，在为期4天的会议中，项目组有幸与武汉环境保护科学研究所进行会谈，具体讨论了本项目与武汉环科所目前正在进行的武汉东湖修复项目展开合作的可能性。

12月初，应世界银行的邀请，项目组技术协调员王耘先生代表“澳洲都市系统集团太湖项目组”参加了世行“江苏无锡太湖环境项目”在无锡举办的研讨会活动。通过本次活动，更加深入地了解了世行项目，并在会上就项目之间的合作展开广泛交流。

AUSTRALIAN HIGHLIGHTS

Water Governance Framework in Victoria

Clear and efficient governance arrangements are critical to the sustainable management of water resources and delivery of water services in Victoria.

As part of the *Our Water Our Future* action plan, clearer roles for organizations, increased accountability and more innovative service delivery have driven a new approach to governance in the water sector.

Sources:

http://www.ourwater.vic.gov.au/__data/assets/pdf_file/0012/12801/Institutional.pdf

澳大利亚湖泊整治经验

维多利亚州水环境管理构架

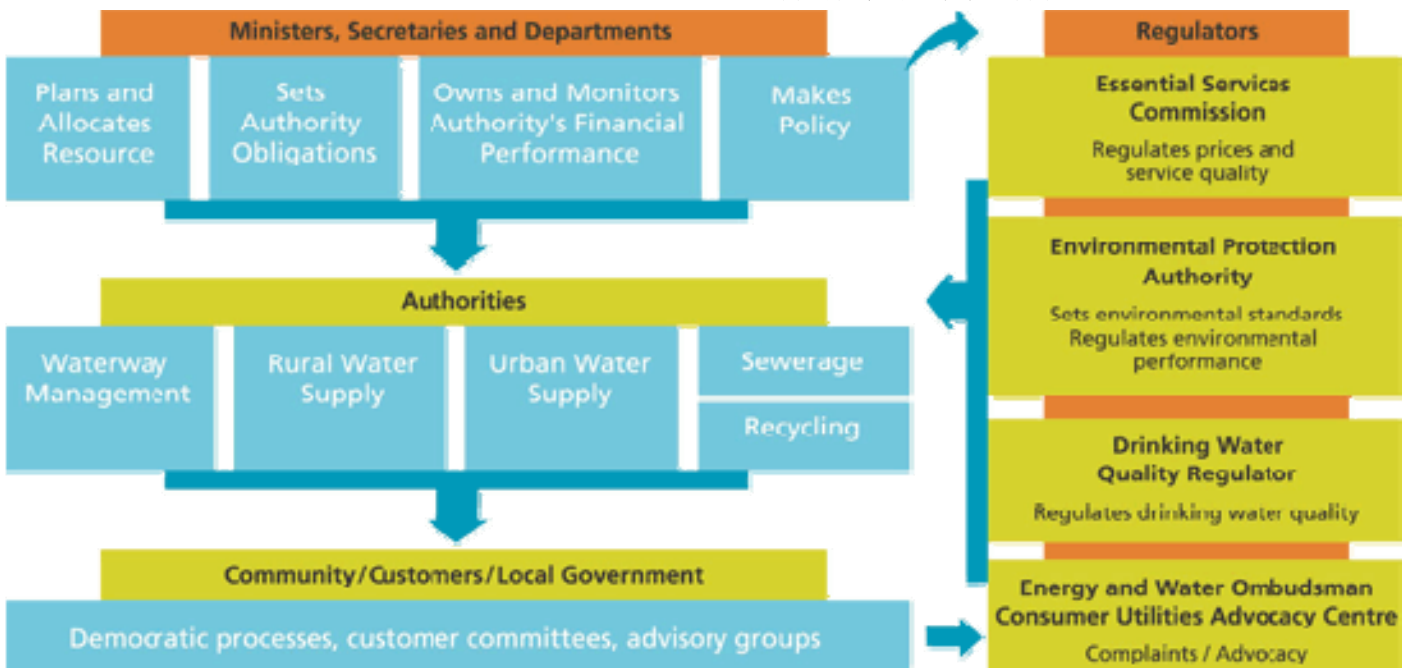
对于维多利亚州水资源的可持续利用以及供水服务来说，清晰且高效的水环境管理构架是至关重要的。

作为维州“我们的水源，我们的未来”行动计划的一部分，机构间采取更明确的组织、更有效的权责分工，以及更有创新意识的服务模式，将构建起全新的水环境管理构架。

信息来源:

http://www.ourwater.vic.gov.au/__data/assets/pdf_file/0012/12801/Institutional.pdf

Water Governance Framework in Victoria 维多利亚州水环境管理构架



AUSTRALIAN HIGHLIGHTS

The Western Corridor Recycled Water (WCRW) Project

The \$2.4 billion WCRW Project is being funded by the Queensland and Australian Governments. The WCRW Project is to construct a water supply network for South East Queensland consisting of more than 200 kilometers of large diameter underground pipeline, three advanced water treatment plants, eight storage tanks and nine pumping stations. The network will have the capacity to deliver up to 232 megalitres a day of purified recycled water to power stations, industry and agriculture.

Three advanced water treatment plants form the backbone of the WCRW Project. The plants – located at Bundamba, Luggage Point and Gibson Island – use world-class technologies to produce purified recycled water. Advanced water treatment plants create purified recycled by further treating secondary treated wastewater to remove suspended solids, dissolved salts, organic chemicals and microbiological parameters such as viruses, bacteria and parasites.

Water recycling benefits the environment by significantly reducing the discharge of nitrogen, phosphorous and contaminants that

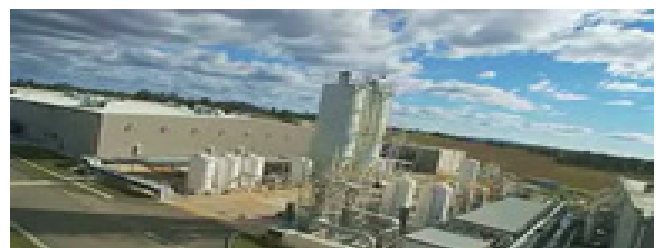
澳大利亚湖泊整治经验

昆士兰州西克立多废水回用项目

西克立多废水回用项目总投资24亿澳元，由昆士兰州政府和澳洲联邦政府共同出资，为解决昆士兰东南部水资源问题而建造的供水系统，项目由200多公里长的大型供水管网、3个水深度处理厂、8个蓄水池和9个泵站组成。供水管网每天将输送23.2万立方米循环水用于发电厂、工厂、农田灌溉和大坝等。

水深度处理厂是西克立多废水回用项目的主要组成部分。位于Bundamba, Luggage Point和Gibson Island的3个水深度处理厂均使用世界领先的技术生产净化的循环水。

水深度处理厂对经二级处理的水做进一步处理以去除水中的悬浮颗粒物、



AUSTRALIAN HIGHLIGHTS

flows into Brisbane River and Moreton Bay.

Prior to the WCRW Project, six wastewater treatment plants discharged water into the Brisbane and Bremer rivers, which flow into Moreton Bay. Even though wastewater is filtered and treated to an acceptable quality it still contains suspended solids, organic content and nutrients. Scientists estimated these plants collectively released more than one tonne of nitrogen and one tonne of phosphorous into our waterways and the bay each day.

Since the WCRW Project opened, there has been a significant reduction in nitrogen and phosphorous discharge by water treatment plants into Brisbane River, Bremer River and Moreton Bay.

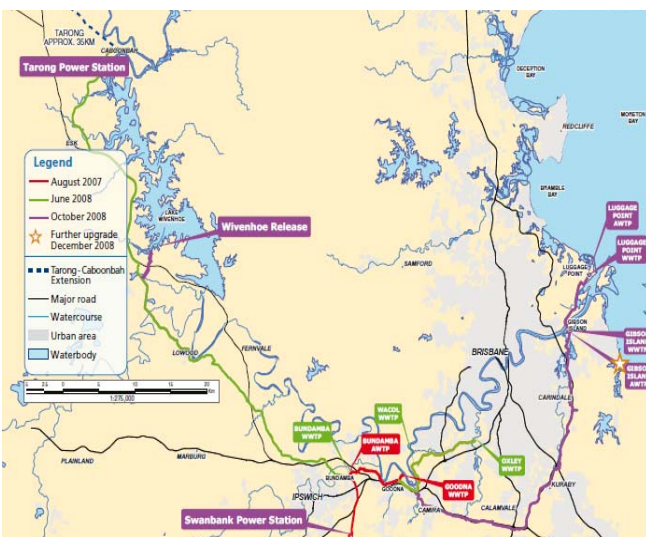
Source: <http://www.westerncorridor.com.au/>

澳大利亚湖泊整治经验

溶解盐、有机物、病毒、细菌和寄生虫等，从而得到纯净的回用水。对水进行循环处理可以改善环境状况，显著减少氮、磷和污染物向Brisbane河和Moreton湾的排放。

西克立多废水回用项目开工之前，6个污水处理厂处理过的出水经Brisbane和Bremer河排入Moreton湾。即使这些污水经过过滤和处理后可以达到排放标准，但出水中仍含有悬浮颗粒物、有机物和营养元素。科学家估算这些污水处理厂每天仍然要向地表水体排放约一吨的氮和一吨的磷。氮、磷的富集会对河流、水体和海湾造成损害。溶解在水中和附着在底泥上的营养物质随水流向下游富集。这两种元素富集到一定浓度时会造成藻类暴发、鱼类死亡和水质下降等后果。西克立多废水回用项目建成之后，污水处理厂排入Brisbane河、Bremer河和Moreton湾的氮和磷的总量将明显降低。

信息来源: <http://www.westerncorridor.com.au/>



AUSTRALIAN HIGHLIGHTS

The World Wild Foundation (WWF) Project for River Basin Management in Great Barrier Reef done by WWF Australia

Project Background

Sediment, nutrient and pesticide runoff from agricultural activities threatens over 200 in-shore reefs. WWF Australia played a key role in securing some US \$10.5 million for the Sugar Industry Reform Program, to be dedicated to wetland conservation and management in the Great Barrier Reef catchments, principally as a pollution management tool. This funding will be integrated into the Reef Water Quality Protection Plan, to be distributed through a range of mechanisms including incentives and stewardship agreements with landholders, collaborative management approaches, and community education and awareness raising. WWF's main roles have been to raise awareness of the threat to the inshore reefs of the Great Barrier Reef from land-based pollution.

Lessons Learnt from the Project

1. A combination of approaches accelerates the move to integrated river basin management. The awareness-raising campaign could not have delivered the results in isolation.

澳大利亚湖泊整治经验

“世界野生动物保护基金会”（WWF）大堡礁流域管理项目

项目背景

由农业活动产生的含沉积物、营养物和有害农药组成的地表径流严重威胁到大堡礁附近的二百多个近岸堡礁。世界野生动物保护基金会（WWF）澳洲分会在糖料加工工业中投入约一千零五十万美元专项基金，用于堡礁区域湿地保护，以及整个大堡礁地区的流域管理，首先则是污染管理。基金将被纳入“大堡礁水质管理计划”中，通过建立一系列的包括与土地所有者签订环保补偿和奖励、运用综合协作的管理手段、社区教育和公众意识培养等机制，达到有效的流域综合管理的目的。WWF的主要职责是有效提升对岸上污染源的认识，降低近岸堡礁受到污染威胁的可能性。

项目主要成果

- 1) 运用综合的管理手段，将有效提高

AUSTRALIAN HIGHLIGHTS

2. It is helpful to run a range of initiatives in parallel. By running a number of initiatives at the same time, WWF and its partners were not forced to rely on a single process.
3. Forging strong links with the scientific community is an essential component.
4. The strategic use of the media and carefully targeted lobbying are important aspects of any campaign.
5. There can be 'win-win' outcomes when conservation groups form partnerships with industries that are being impacted by land-based pollution. The combination of strong partnerships between industry representatives, scientists and NGOs produced a critical mass and a level of credibility that was resilient to moves to undermine it.

Source: <http://assets.panda.org/downloads/mrwgbreefcasestudy.pdf>



澳大利亚湖泊整治经验

流域综合管理的质量。流域管理应与公众意识的培养有机结合起来。

2) 同时开展范围广泛的流域整治和管理行动将大有裨益。WWF及其合作伙伴可从多方面的管理行动中获得理想的管理效果。

3) 在流域管理中，必须加强同相关科研机构的沟通和合作。

4) 在发起任何“流域管理”行动的同时，充分调动和发挥媒体的宣传作用，使得相关的宣传达到实效是至关重要的。

5) 一旦环境保护组织与受流域污染影响的行业形成伙伴关系，就会产生“双赢”的效果。现在，工业企业、科研机构和非政府组织的代表已建立起紧密的合作关系，并形成强大的合力去抗衡破坏环境的行为。

信息来源: <http://assets.panda.org/downloads/mrwgbreefcasestudy.pdf>

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