

**Arrangement
On
A Five Year Roadmap
For
New Zealand -- China Science and Technology
Cooperation**

The Ministry of Science and Innovation of New Zealand (MSI) and the Ministry of Science and Technology of the People's Republic of China (MOST) (hereinafter referred to as "the Participants"):

RECALLING the *Agreement between the Government of New Zealand and the Government of the People's Republic of China on Scientific and Technological Cooperation* of 2003; the *Joint Statement Establishing the New Zealand - China Strategic Research Alliance* of 2010 ("SRA"), and the *Joint Announcement on New Zealand and China Research Fund* of 2010;

NOTING the achievements of bilateral science and technology cooperation and exchange in recent years and the collaborative spirit which exists between each country's science communities;

WISHING to further enhance and support bilateral science and technology cooperation and exchange for mutual benefit;

Have hereby decided to formulate this *Five Year Roadmap for New Zealand - China Science and Technology Cooperation* (hereinafter referred to as "the Roadmap") to further refine the areas for bilateral science and technology cooperation and exchange over the years spanning 2012 to 2016.

PARAGRAPH 1 FRAMEWORK & FUNDING

1. The Roadmap will operate under the framework of the SRA and will represent a five year refinement of bilateral priority research areas. The Roadmap will operate in accordance with the processes and purposes of the SRA.
2. The Participants have jointly decided to increase funding under the SRA to RMB 10 million Yuan per year from 2012 to 2016, for funding the implementation of the Roadmap. Funding will be borne evenly by the two Participants, and will be affected through the Joint Fund.

3. Funding through the Joint Fund over the period 2012 to 2016 will be directed towards those projects falling under the Roadmap focus areas of Food Safety and Security; Non Communicable Disease; and Water Research. New projects falling under the scope of the four (4) recognised bilateral priority areas more generally will still be considered, but will not be prioritised in the presence of strong Roadmap projects. Existing SRA projects will not be affected by the Roadmap's refinement of bilateral priority areas.

PARAGRAPH 2 PRIORITY AREAS

1. The Second Joint Commission on Science and Technology in 2009 jointly decided on the following four (4) bilateral priority research areas, which have subsequently directed projects under the SRA:
 - a) Food (particularly animal and plant biotechnology);
 - b) Health and Biomedical Sciences (including chronic disease and traditional medicines);
 - c) Environmental Science (clean and renewable energy, climate, biodiversity, water research, natural hazards, pollution on land and sea); and
 - d) High Technology Platforms (including but not limited to nanotechnology and superconductivity).
2. During the visit by China's Minister of Science and Technology, Dr Wan Gang, to New Zealand in March 2011, it was jointly decided that a Five Year Roadmap spanning the period 2012 to 2016 would be formulated to refine collaborative research efforts to focus on Food Safety and Security; Non-Communicable Disease; and Water Research. These collaborative research efforts may include but are not limited to:
 - a) Food Safety and Security:
 - Collaborations on forage management;
 - Sustainable production methods and metrics;
 - Agri-chemical rationalisation in farm systems (i.e. reduced usage of chemicals for pest control and as fertilisers);
 - Innovative farm systems;
 - Animal pest management, with particular reference to rodents;
 - Risk profiling, assessment, attribution of foodborne hazards;
 - Exposure assessment of foodborne hazards and nutrients;
 - Improved detection and subtyping methods for foodborne pathogens;
 - Methods/strategies to control pathogens in the food chain.

- b) Non Communicable Disease (NCD):
- Development of novel methods for NCD data collection, characterisation, and analysis;
 - Development of novel or personalised approaches to NCD prevention diagnosis and management;
 - Understanding the basis and pathophysiological mechanisms contributing to NCDs;
 - Reducing the impact of common risk factors for NCDs, particularly cancers, cardiovascular disease, chronic respiratory disease and diabetes;
 - Traditional medicines in treatment of NCDs.
- c) Water Research:
- Developing understanding of hydrologic connectivity in key regions: relationships between soil, ground, and surface water at a range of scales, and sensitivity of the hydrologic system to environmental change;
 - Determine the ecological resilience/capacity of receiving environments;
 - Considering water as part of the environmental system: how water quality and quantity are affected by land use and management practices, including reducing pressure on water supply and maximising efficiency of utilisation;
 - Reducing agri-chemical entry into the hydrologic system;
 - Remediation for degraded hydrologic and aquatic systems;
 - Water allocation methodologies and tools.

PARAGRAPH 3 TIMELINE OF COLLABORATIVE ACTIVITIES

The Participants have jointly decided on the following timeline of collaborative activities:

2012/13

- Continue New Zealand-China Scientist Exchange Programme
- Continue established SRA projects
- Hold 3rd New Zealand-China Joint Commission on Science and Technology (April 2012)
- Call for new projects under SRA/Roadmap with a focus on Roadmap areas.

2013/14

- Continue New Zealand-China Scientist Exchange Programme
- Continue established SRA/Roadmap projects
- Call for new projects under SRA/Roadmap with a focus on Roadmap areas.
- Hold MSI/MOST interim workshop for SRA/Roadmap projects (video conference)

2014/15

- Continue New Zealand-China Scientist Exchange Programme
- Continue established SRA/Roadmap projects
- Call for new projects for SRA with a focus on Roadmap areas

2015/16

- Continue New Zealand-China Scientist Exchange Programme
- Continue established SRA/Roadmap projects
- Hold 4th New Zealand-China Joint Commission on Science and Technology, review Roadmap and SRA/Roadmap projects, discuss cooperation plans for the future

PARAGRAPH 4 SETTLEMENT OF DIFFERENCES

Any differences arising out of the interpretation of this Arrangement will be settled by consultations between the Participants.

PARAGRAPH 5 AMENDMENT

At the request of either Participant, this Arrangement may be revised or amended by mutual written consent of the Participants.

PARAGRAPH 6 COMMENCEMENT AND TERMINATION

1. This Arrangement will come into effect upon its signature and will remain in effect for a period of five years or until terminated by six months' prior written notice of either Participant through diplomatic channels.
2. Any revision, amendment or termination of this Arrangement will not affect any ongoing cooperation activities initiated during the operation of this

Arrangement. These cooperation activities will be carried out to their completion unless the Participants decide otherwise.

Signed in Hangzhou, China on 23 April 2012, in duplicate, in the Chinese and English languages, both texts having equal validity.

For the Ministry of Science and
Innovation of New Zealand

For the Ministry of Science and
Technology of the
People's Republic of China



Murray BAIN
Chief Executive



CHEN Xiaoya
Vice Minister

新西兰-中国科学技术合作五年路线图协议

新西兰科学与创新部和中华人民共和国科学技术部（以下简称双方）；

鉴于 2003 年签署的《新西兰政府与中华人民共和国政府科学技术合作协定》、2010 年双方签署的《新西兰与中国战略研究联盟联合声明》和《新西兰与中国合作研究基金联合声明》；

注意到近年来双边科技合作与交流的成效以及在两国科学界已有的合作精神；

希望继续加强和支持互利的双边科技合作与交流；

特制定新西兰-中国科学技术合作五年路线图（以下简称“路线图”），以进一步明确 2012 年至 2016 年双边科技合作与交流活动的。

第一节 框架与资金

1、路线图将在新西兰-中国战略研究联盟（以下简称联盟）框架下运作，并提出双边优先研究领域。路线图将与联盟的进程和目标保持一致。

2、双方共同决定，为执行本路线图，从 2012 年至 2016 年，将联盟框架下的资金增加到每年 1000 万元人民币，由双方通过合作研究基金各出资一半。

3、2012年至2016年期间合作研究基金的出资将用于路线图规定的食品安全与食品保障、非传染性疾病和水资源三个优先领域中的合作项目。双方之前认可的四个优先领域中的新项目仍会被考虑，但在有优秀的路线图项目的情况下不会被优先支持。已有的联盟项目不受路线图优先领域的影响。

第二节 优先领域

1、2009年第二届联委会共同决定了以下四个双边优先研究领域，在联盟框架下已开展了这些领域中的合作项目：

- a) 食品（特别是动植物生物技术）；
- b) 卫生与生物医学科学（包括慢性病和传统医药）；
- c) 环境科学（清洁与可再生能源，气候，生物多样性，水资源研究，自然灾害，土地与海洋污染）；
- d) 高技术平台（包括但不限于纳米技术和超导技术）。

2、2011年3月中国科技部万钢部长访问新西兰期间，双方决定2012至2016年五年路线图将把合作研究聚焦于食品安全与食品保障、非传染性疾病和水资源领域。合作研究工作可包括但不限于：

- a) 食品安全与食品保障
 - 饲草管理合作
 - 可持续的生产方式和指标
 - 农场系统中农业化学品的合理使用（即减少农药和

化肥用量)

- 创新的农场系统
- 动物虫害的治理，尤其是啮齿类动物
- 食源性危害的风险概况、评估和成因分析
- 食源性危害和营养素的暴露评估
- 改进食源性致病菌的检测和亚型分析方法
- 食物链中致病菌的控制方法和策略

b) 非传染性疾病

- 采用新方法，收集、描述和分析非传染性疾病的数
据
- 制定个性化的新方案，预防、诊断和管控非传染性
疾病
- 了解非传染性疾病的基础及病理生理学机制
- 降低常见风险因子对非传染性疾病的影响，尤其是
癌症、心血管疾病、慢性呼吸系统疾病和糖尿病
- 研究传统医药对非传染性疾病的治疗

c) 水资源

- 了解重点地区的水文联系，如在各种尺度下土壤水、
地下水和地表水之间的联系以及水文系统对环境变化的
敏感性
- 确定环境的生态复原能力和承载力
- 将水资源作为环境系统的一部分来考虑土地使用和

管理对水质和水量的影响，包括缓解水资源供给压力和提高水资源使用效率

- 减少农业化学品进入水文系统
- 修复退化的水文系统和水生系统
- 水资源分配的方法学及手段

第三节 合作活动时间表

双方共同商定以下合作活动时间表：

2012 至 2013 年

- 继续实施新中科学家交流计划
- 继续执行既定的新中战略研究联盟项目
- 举行第三届新中科技合作联委会（2012 年 4 月）
- 在路线图优先领域征集新中战略研究联盟项目

2013 至 2014 年

- 继续实施新中科学家交流计划
- 继续执行既定的新中战略研究联盟/路线图项目
- 继续在路线图优先领域征集新中战略研究联盟/路线图项目

- 新西兰科学与创新部-中国科技部举行战略研究联盟/路线图中期研讨会（视频会议）

2014 至 2015 年

- 继续实施新中科学家交流计划

- 继续执行既定的新中战略研究联盟/路线图项目
- 继续在路线图优先领域征集新中战略研究联盟项目

2015 至 2016 年

- 继续实施新中科学家交流计划
- 继续执行既定的新中战略研究联盟/路线图项目
- 举行第四届新中科技合作联委会，审议路线图，总结新中战略研究联盟/路线图项目，并讨论未来合作计划

第四节 分歧解决

因本协议解释而产生的分歧将由双方协商解决。

第五节 修订

应任一方要求，本协议可经双方同意以书面形式修订。

第六节 起止时间

- 1、本协议自签字之日起生效，有效期五年，除非任一方提前六个月通过外交渠道书面通知对方终止本协议。
- 2、本协议的任何修订或终止均不影响在本协议运作期间启动的正在执行的合作活动。除非双方另行商定，这些合作活动将执行完毕。

本协议于 2012 年 4 月 23 日在中国杭州签署，一式两份，
每份均以中文和英文写成，两种文本同等作准。

新西兰科学与创新部

中华人民共和国科学技术部



穆雷·贝恩
常务副部长



陈小娅
副部长

