



Mid-term Evaluation JSTP

China Netherlands
Joint Scientific Thematic Research Program

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Authors:

Stein Smeets
Jaap Veldkamp
Svend Remøe
Pim den Hertog



Management summary

At the request of the program's project partners, Dialogic *innovatie & interactie* conducted a mid-term evaluation of the China-Netherlands Joint Scientific Thematic Research Program (JSTP). This evaluation took place from December 2010 until March 2011.

JSTP kicked off in 2009 with a three-year pilot. The JSTP implementation plan stipulated that the pilot was to be evaluated after two years. Based on the outcome of the evaluation, a decision will be made on the continuation of the program. Also, modifications may possibly be introduced to improve the program format.

Research objective & methodology:

The aim of this evaluation study is threefold:

1. Analyse the early development and actual implementation of the program's process, and how this implementation is viewed by different stakeholders;
2. Analyse to what extent the objectives of JSTP (sustainable research collaboration, high visibility, low administrative burden) have been / are being met;
3. Compare JSTP to other research programs that include China.

To answer the questions underlying these research objectives, (1) several of the program's internal documents were collated and analysed (desk research); (2) 12 semi-structured interviews were conducted with relevant stakeholders; and (3) a survey was sent out to all 88 researchers that ever applied for a JSTP grant, resulting in a response of 64%.

Main findings:

The overall view on JSTP, of both project partners and researcher applicants, is a quite positive one. Project partners praise the friendly, flexible and non-bureaucratic cooperation and view the program as a joint learning process and an example for bilateral research cooperation with other European countries. JSTP is seen by researcher applicants as a welcome addition to existing programs, enabling real research collaboration when compared to several exchange-focused programs (e.g. CEP), and more flexible and less bureaucratic when compared to other research-focused programs (e.g. PSA and EU).

That being said, there are widespread complaints from researcher applicants on the assessment process. To the researchers, it is unclear how their proposals are scored and how the Dutch and Chinese reviews are weighed. Given the elaborate and careful process in place, this seems largely due to communication problems. This feeling of intransparency seems to be strengthened by the fact that MoST has decided to fund a number of projects (at least the Chinese researchers involved in these projects) that were not selected by the Assessment Committee.

Also, the timeline is criticized: there have been considerable delays between the decision of the Assessment Committee, and the funding by project partners, mainly MoST. According to MoST, the delay on their account has been the result of a temporary lack of personnel, a problem that has now been resolved.

When it comes to addressing these problems, the Program Committee might not be functioning properly. Although the problems have been acknowledged in any case by the Dutch partners, they are not dealt with effectively. On the basis of interviews, one gets the impression partners are not willing to really put their foot down on this, because they are afraid to damage their good relationships. Of course, these relationships are important:

China and the Netherlands have been cooperating for decades and intend to continue doing so in the future. But there should be a better balance between the relationships among partners on the one hand, and the researcher applicants' interests (a timely and transparent assessment process) on the other.

Recommendations:

Most importantly (further recommendations can be found in chapter 6 of this report), we find that:

- The assessment process should be improved, focusing on more transparency: it should be clear both to researchers who were granted as well as those not granted, how their proposal scored on which criteria, and thus why they were or were not selected. In addition, the situation where a project that is not selected by the Program Committee, is funded by one project partner anyway, should be avoided.
- The timeline should be improved, focusing on two points. There should be a better balance between the time researcher applicants are allowed to write their research proposal and their rebuttal to the peer review, and the time project partners take to decide on which projects are funded. Secondly, there should be considerable effort to minimise delays in funding.
- Both issues (assessment process and timeline) call for better communication between project partners (within the Program Committee), and for better communication towards the researcher applicants.

Assuming JSTP will succeed to incorporate the above points for improvement, the continuation of JSTP seems a logical choice. Given the positive feedback received from project partners as well as researchers, the program seems to be the right way to further intensify relations between Chinese and Dutch scientists.

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1 Introduction

1.1 Background

At the request of the program's project partners, Dialogic *innovatie & interactie* conducted a mid-term evaluation of the China-Netherlands Joint Scientific Thematic Research Program (JSTP). This evaluation took place from December 2010 until March 2011.

JSTP kicked off in 2009 with a three-year pilot. The JSTP implementation plan stipulated that the pilot was to be evaluated after two years. Based on the outcome of the evaluation, a decision will be made on the continuation of the program. Also, modifications may possibly be introduced to improve the program format.

1.2 Evaluation objectives and questions

The aim of this evaluation study is threefold:

JSTP process (A)

First of all (and primarily) it is about the JSTP process. The aim is to analyse the early development and actual implementation of the program. More specifically, the aim is to answer the following research questions:

1. How have the different stages of the program been implemented?
2. How does this implementation compare to the 2009 implementation plan? (including a comparison of planned budget to realisation)
3. How is the JSTP implementation viewed by the various stakeholders?
 - a. Are the different stages functioning properly? (including compliance of deadlines)
 - b. Are the Program Committee, Assessment Committee and Virtual Secretariat functioning properly?
 - c. Is there proper cooperation and communication between the Program Committee, Assessment Committee and Virtual Secretariat?
 - d. Is there proper cooperation and communication between the seven parties (OCW, NWO, KNAW, MoST, MoE, CAS, CASS) that initiated JSTP?
4. Are there any changes in the implementation stakeholders would recommend?
5. Is the registration of key data consistent with future reporting and evaluation needs?

JSTP objectives (B)

Secondly, this evaluation study will analyse to what extent the objectives of JSTP have been / are being met. The objectives of the program, as set out in the implementation plan, are as follows:

- "To foster synergies between excellent research groups by calling for proposals demonstrating complementary expertise between Chinese and Dutch research teams in which both China and the Netherlands excel."

- “High level of visibility of the projects and their outputs”.
- “Sincere effort to restrict the administrative and bureaucratic burden for the researchers by designing a researcher-friendly web-based submission procedure”.

Since the program only started in 2009 and the funded research projects last 3-4 years, it is too early to evaluate the quality of scientific output. It is however possible to analyse the input side: the (content of the) proposals that have been selected and the researchers associated with these proposals. Based on these factors, we will answer the following research questions:

1. To what extent has JSTP stimulated (sustainable) research collaboration between Chinese and Dutch researchers?
 - a. How many proposals have been submitted and what is the budget related to these proposals?
 - b. What is the number of applicants associated with these proposals and what is the profile of these applicants (institutional affiliation, gender, seniority)? (including: the extent to which JSTP has reached its target group)
 - c. To what extent has JSTP led to new research groups? (i.e. did researchers work together before applying for a JSTP-grant?)
 - d. What activities are planned within the research proposals and to what extent are these supportive of collaboration/group forming?
2. To what extent has JSTP been visible?
 - a. How was the program announced?
 - b. In what way has milestone news been disseminated?
 - c. What set-up is in place for the dissemination of (future) project results?
3. To what extent is JSTP believed to be flexible and researcher-friendly?
 - a. What actions have been undertaken to simplify procedures? Is there a web-based submission procedure in place?
 - b. Does JSTP have the capacity to adapt to emerging science trends?

JSTP compared to other programs (C)

Finally, the evaluation includes a comparison of JSTP to other research programs that include China:

What position does JSTP take in the context of other bilateral and multilateral programs between China and the Netherlands and between China and Europe? That is to say, what is the distinctive added value of JSTP?

1.3 Methodology

The evaluation study consisted of three work packages:

- WP I: Desk research

Several of the program’s internal documents were collated and analysed. An overview of these documents can be found in Annex 1.

- WP II: Interviews with relevant stakeholders

Using a semi-structured interview protocol, which was verified by the principal, both Chinese and Dutch stakeholders were interviewed. With two exceptions, all interviews were carried out face-to-face. Since a number of stakeholders relevant to the program are situated in China, about half of these interviews were carried out in Beijing. Thereby, Dialogic was assisted by two researchers from China's National Centre for Science and Technology Evaluation (NCSTE). A list of interviewees can be found in Annex 2.

- WP III: An online survey among researcher applicants

A total of 88 researcher applicants were invited to participate in an online survey on JSTP, which again was verified by the principal. The survey was distributed among those PIs (Principal Investigators) whose work e-mail address was known. After sending out two reminders, the response to this survey came to 64%. More details on the responses can be found in Annex 3.

The tables below show to which research questions the work packages refer.

Research Objective A: JSTP Process	I	II	III
1. How have the different stages of the program been implemented?	X	X	
2. How does this implementation compare to the 2009 implementation plan?	X	X	
3. How is the JSTP implementation viewed by different stakeholders?		X	X
a. Are the different stages functioning properly?		X	X
b. Are the Program Committee, Assessment Committee and Virtual Secretariat functioning properly?		X	
c. Is there proper cooperation and communication between the Program Committee, Assessment Committee and Virtual Secretariat?		X	
d. Is there proper cooperation and communication between the 7 parties (OCW, NWO, KNAW, MoST, MoE, CAS, CASS) that initiated JSTP?		X	
4. Are there any changes in the implementation stakeholders would recommend?		X	X
5. Is the registration of key data in check with future reporting and evaluation needs?	X	X	

Research Objective B: JSTP objectives	I	II	III
1. To what extent has JSTP stimulated (sustainable) research collaboration between Chinese and Dutch researchers?	X	X	X
a. How many proposals have been submitted and what is the budget related to these proposals?	X		
b. What is the number of applicants associated with these proposals and what is their profile?	X		X
c. To what extent has JSTP led to new research groups?		X	X
d. What activities are planned within the research proposals and to what extent are these supportive of collaboration / group forming?	X	X	X
2. To what extent has JSTP been visible?	X	X	X
a. How was the program announced?	X	X	X
b. In what way has milestone news been disseminated?	X	X	
c. What set-up is in place for the dissemination of (future) project results?	X	X	
3. To what extent is JSTP believed to be flexible and researcher-friendly?	X	X	X
a. What actions have been undertaken to simplify procedures? Is there a web-based submission procedure in place?	X	X	
b. Does JSTP have the capacity to adapt to emerging science trends?		X	

Research Objective C: JSTP vs. other programs	I	II	III
What position does JSTP take in the context of other bilateral and multilateral programs between China and the Netherlands and between China and other European countries? I.e. what is the distinctive added value of JSTP?	X	X	X

(I = Desk Research; II = Interviews; III = Online Survey)

1.4 Outline

The remainder of this evaluation report consists of 5 chapters. Chapter 2 functions as background information on JSTP, dealing with the JSTP design and stakeholders. Chapter 3 is about the JSTP process. It describes the actual implementation of JSTP and how this process is assessed by relevant stakeholders (both the project partners and the research applicants). The chapter thus answers the questions in objective A. Chapter 4 analyses to what extent the objectives of JSTP have been / are being met. The chapter thus answers the questions in objective B. Chapter 5 compares JSTP to other research programs involving China, thus answering the questions in objective C. Chapter 6, finally, summarises the main findings of the study and presents a number of recommendations to improve the program.

2 JSTP background

This chapter provides background information on JSTP. We will discuss the basic set-up of JSTP in more detail, explaining the main goals and structure of the program. We also give a brief description of the JSTP partners and their position in the Dutch and Chinese science systems.

2.1 JSTP context

In 2008, the Dutch OCW (Ministry of Education, Culture and Science) invited NWO (Netherlands Organisation for Scientific Research) and KNAW (Royal Netherlands Academy of Arts and Sciences) to design a new program for bilateral research collaboration between China and the Netherlands.

Research collaboration between China and the Netherlands is nothing new; it dates as far back as the 1970s. A Memorandum of Understanding (MoU) was first signed with the Chinese Ministry of Education (MoE), soon followed by MoUs with the Chinese Academy of Science (CAS) and the Chinese Academy of Social Science (CASS). An MoU with the Chinese Ministry of Science and Technology (MoST) was signed immediately after this Ministry was founded. To complement these MoUs, China and the Netherlands set up a number of programs, among which the China Exchange Program (CEP) and the Program Strategic Scientific Alliances (PSA). These programs will be discussed in more detail in chapter 5.

In 2008, however, parties felt the need to come up with a new program, which has resulted in the China Netherlands Joint Scientific Thematic Research Program. JSTP kicked off in 2009 with a three-year pilot consisting of three yearly calls taking place in 2009, 2010 and 2011.

2.2 JSTP partners

JSTP is a partnership of four Chinese and three Dutch organisations. This is rather unique, as although there are many bilateral programs between China and Europe. To our best knowledge not many programs have this many partners on both sides. All project partners see this as a strong point of JSTP, as will be pointed out in more detail in chapter 5.

2.2.1 China

The Chinese partners, first of all, comprise two Ministries:

- The **Ministry of Science & Technology** is in charge of developing and coordinating science and technology activities.
- The **Ministry of Education** is responsible for the educational system in China.

Besides these Ministries, two academic institutions are involved in JSTP:

- The **Chinese Academy of Sciences** is an academic institution and research and development centre in natural science, technological science and high-tech

innovation in China, with a focus on six sectors.¹ It comprises over 100 institutes, one university and one graduate school.

- The **Chinese Academy of Social Sciences**, on the other hand, focuses on philosophy and social sciences and is responsible for 35 research institutes, over 90 research centres, and one graduate school.

2.2.2 The Netherlands

On the Dutch side, first of all the **Ministry of Education, Culture and Science** (OCW), is a JSTP partner. This ministry, unlike that in China, has the responsibility for both the educational system and support of science and technology.

The second Dutch partner is KNAW, the **Royal Netherlands Academy of Arts and Sciences**. This academy promotes quality in science. The KNAW has been encouraging cooperation with China, as one of the rapidly developing countries, for more than 30 years. KNAW has been delegated by OCW to execute the bilateral science programs between China and the Netherlands since 1980. From 2008, KNAW and NWO (see below) embarked on a joint China strategy.

The third and final Dutch partner is NWO, the **Netherlands Organisation for Scientific Research**. NWO is the national agency for science, aiming to structurally invest in world-class scientists and excellent research. With programs like JSTP, they stimulate collaborative activities between countries where collaboration between researchers does not take place naturally (e.g. China, India, and Brazil).

2.3 JSTP objective

JSTP aims at stimulating sustainable research collaboration between Chinese and Dutch researchers / research groups. It does so in two quite distinctive ways:

- Firstly, it funds research projects in which Dutch and Chinese research teams work together. These projects last for 3 to 4 years. Research proposals should cover a yearly changing thematic priority, always a multidisciplinary area in which both China and the Netherlands excel.
- Secondly, it funds thematic dialogue seminars. These serve as foresight activities aimed at identifying future research topics for joint research. But they also function as a networking event for Dutch and Chinese researchers. As opposed to the research projects, which have to be in line with a given thematic priority, the seminars are aimed at all scientific disciplines. A seminar should have 10 to 15 scientists participating from each side.

2.4 JSTP structure

JSTP consists of several different entities:

- Program Committee

This committee consists of one mandated representative from each participating organisation, KNAW and NWO on the Dutch side (who also represent OCW), and all four Chinese partners: MoST, MoE, CAS and CASS. The committee is responsible

¹ Chemistry, Earth Sciences, Information Technical Sciences, Life Sciences and Medicine, Mathematics and Physics, and Technological Sciences.

for the strategy and implementation of the program including: (1) definition of the yearly changing thematic priority; (2) nomination of the Assessment Committee (see below); and (3) final decision on funding of projects.

- Virtual Program Secretariat

The secretariat is responsible for the day-to-day management of the program. Its main activities are (1) collecting applications, performing eligibility checks; (2) organising the peer review process (see below); and (3) monitoring on-going projects. The secretariat consists of several parties: in China, each of the participating organisations is responsible for their own eligible applicants, whereby MoST and MoE cooperate since they have the same applicants. In the Netherlands, NWO operates as the back office. It administers the JSTP calls and coordinates the assessment and selection procedure. KNAW serves as the front office, being the main contact point for the four Chinese organisations.

- Assessment Committee

This annually changing committee is composed of ten independent scientific experts (five from the Netherlands, five from China). It is established directly after the call for proposals has been published, on the basis of scientific qualification. The Assessment Committee's main task is to rank submitted proposals on the basis of given criteria, among which the scientific quality of the proposals.

To judge the scientific quality of the proposals, the Assessment Committee relies on the opinion of independent referees. Every proposal is reviewed by two (three when there are large differences of opinion) referees selected by the Dutch partners, and two (again, three if necessary) referees selected by the partners. These referees have to be independent experts in their respective fields. Applicants then have the opportunity to respond to this review (rebuttal).

Note that the Program Committee ultimately decides which proposals will receive funding. The role of the Assessment Committee is purely to advise the Program Committee on the quality of the proposals.

3 JSTP Process

This chapter focuses on the JSTP process. It aims to solve the research questions in objective A. Section 3.1 compares the actual implementation of JSTP to its initial design, thus answering questions A1 and A2, and also dealing with question A5. Section 3.2 describes how the implementation of JSTP is viewed by the various stakeholders (project partners and researcher applicants) and whether these stakeholders would recommend any changes to the implementation. It thus answers questions A3 and A4.

The table below shows which work packages have answered these questions.

Research Objective A: JSTP Process	WP I	WP II	WP III
1. How have the different stages of the program been implemented?	X	x	
2. How does this implementation compare to the 2009 implementation plan? (including a comparison of planned budget to realisation)	X	x	
3. How is the JSTP implementation viewed by different stakeholders?		X	X
a. Are the different stages functioning properly?		X	X
b. Are the Program Committee, Assessment Committee and Virtual Secretariat functioning properly?		X	
c. Is there proper cooperation and communication between the Program Committee, Assessment Committee and Virtual Secretariat?		X	
d. Is there proper cooperation and communication between the 7 parties (OCW, NWO, KNAW, MoST, MoE, CAS, CASS) that initiated JSTP?		X	
4. Are there any changes in the implementation stakeholders would recommend?		X	X
5. Is the registration of key data in check with future reporting and evaluation needs?	X	X	

(I = Desk Research; II = Interviews; III = Online Survey)

3.1 JSTP process: design vs. implementation

Based on the 2009 JSTP implementation plan, and the 2009 and 2010 calls for proposals, the JSTP process is designed to comprise the following stages:

- Preparation stage

Every year calls are published for the research proposals as well as for the joint seminars. The call for joint research proposals features a different thematic priority every year. These themes are selected by the Program Committee and chosen in order that the proposal may cover a variety of research questions both on natural sciences and social sciences. The calls for joint seminars are not related to any specific topic.

- Submission stage

Dutch and Chinese research groups submit one joint research proposal to NWO, using NWO's electronic grant application system, Iris. The proposal consists of two parts, namely a fact sheet and the core proposal. When the call is closed, NWO

forwards all proposals to all Chinese JSTP partners. The eligibility of the proposals is checked both in China and in the Netherlands. In the Netherlands proposals are handled by NWO. In China the proposals are handled by the relevant Chinese harbors: (i) the Ministry of Science and Technology and the Ministry of Education, (ii) the Academy of Science and (iii) the Academy of Social Science.

- Selection stage

Each joint research proposal is reviewed by preferably 2 to 4 external referees: scientific experts in the field of the thematic priority, who are selected by various members of the secretariat. They report on the extent to which the proposals fulfil the criteria specified in the call (see also below). Applicants of research proposals are given the opportunity to respond to these reports (rebuttal). An Assessment Committee with independent scientific experts from China and the Netherlands is appointed by the JSTP Program Committee and ranks the proposals on the basis of the following criteria: (i) relevance to the theme of the call, (ii) scientific quality of the research proposal, (iii) quality of the research groups, and (iv) Sino-Dutch cooperation. This ranking is sent as advice to the Program Committee who decides which projects will be funded.

The assessment procedure for the thematic dialogues differs from the joint research proposals. After the eligibility check, the quality of the proposals is assessed in both China and the Netherlands by the various partners (the harbours in China and the KNAW-NWO in the Netherlands), focusing on (i) originality of the topic, (ii) quality of the applicants and (iii) mutual scientific interest and mutual benefit to China and the Netherlands. The results of this assessment procedure are sent to the JSTP Program Committee and serve as advice. Again, it is the Program Committee who decide which dialogues will be funded.

- Project execution stage

Selected projects are executed by Dutch and Chinese researchers and, in the meantime, monitored by the different partners.

In the remainder of this section, we will discuss how these stages have been implemented in practice, focusing on relevant differences between design and implementation. Also, we compare the planned budget to the realised budget.

3.1.1 Preparation stage

Themes:

Early in 2009, the Program Committee agreed on the theme for the 2009 call (*Integrated water management in relation to climate change and sea level rise*), and the broad focus for the 2010 and 2011 calls: Energy and Health. In August 2009, the decision was reached to focus the 2010 theme on *Hybrid conversion of biomass*. In August 2010, the project partners decided that the 2011 theme would be *Medical devices for an ageing society*.

In practice, NWO takes the lead when it comes to defining both the broad focus and possible themes for a given year. The various NWO divisions are asked to come up with topics that are believed to be strong and important to both China and the Netherlands. These topics are then presented to the Chinese, and the project partners try to reach a consensus.

Calls for proposals:

The calls for proposals are launched on a central website, but at the same time communicated separately by the various project partners. For CAS, CASS and NWO, this is believed to be fairly straightforward. There are close links with researchers, which makes it easier to target those researchers for whom the call might be relevant. MoST/MoE simply communicate the call via a central website.

The figure below depicts how researchers first learned about JSTP.

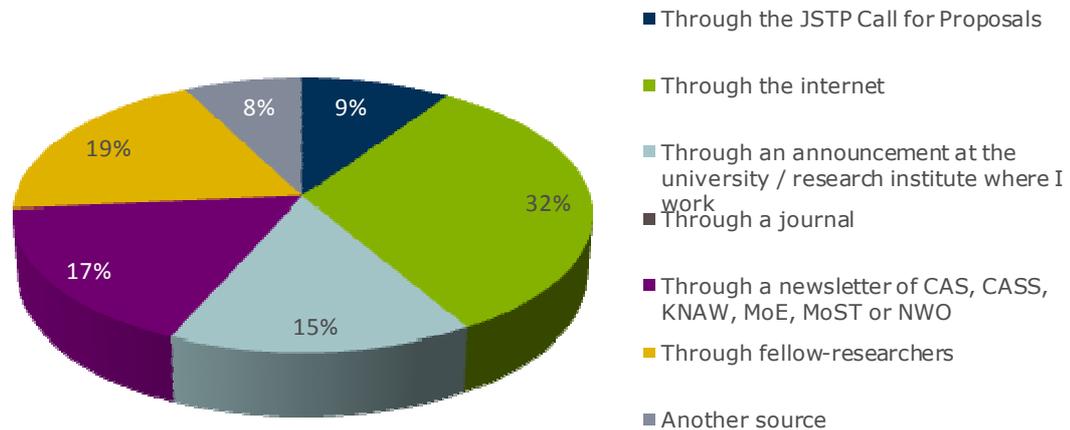


Figure 1. The source through which researcher-applicants first heard about JSTP (n=53)

3.1.2 Submission stage

Additional workshop:

At the first Program Committee meeting (beginning of 2009), the project partners decided to organise an additional workshop for potential researcher applicants aimed at networking and joint proposal development. This workshop took place in China in May 2009. Around 30 research teams were present.

According to several participants, this workshop has been a very useful addition. The Program Committee apparently felt the same, as it decided to repeat this workshop in 2010. It was decided to pay the extra expenses out of the budget for the thematic dialogue seminars. The workshop was held in the Netherlands in March 2010, and around 10 research teams attended.

Interest:

Figure 2 (page 19) depicts the number of proposals that are submitted per year: 34 research proposals in 2009, 13 in 2010, and 2 thematic dialogue proposals in 2009 and 3 in 2010. Comparing 2009 and 2010, there is a considerable difference in the number of research proposals. This seems to be the result of the breadth of the respective themes. Knowing there was less budget available, the project partners purposely defined the 2010 theme more narrowly.

The interest in the joint research projects is in line with the project partners' expectations. Given the budget limitations, neither a much higher, nor a much lower number of proposals would be desirable. In both years, the conversion ratio has been around 30% (for the number of selected proposals, see below), meaning there was both sufficient quality to choose from, and the researcher applicants had sufficient opportunity to be selected.

Interest in organising a thematic dialogue is on the other hand lower than expected. As mentioned in the previous chapter, there is a budget for 3-4 seminars per year. The fact that interest is lower than anticipated is not seen as a major problem by most project partners. In fact, the seminars have been included in JSTP mainly at the request of CASS. Since this Academy's main focus is on social sciences, unlike the other parties involved, it felt the need for a modality in which there would be sufficient room for social science and humanities. Also, CASS sees the seminars as a worthwhile opportunity to expand on its somewhat less developed international links.

The reason for this low interest might be due to the way the call for seminar proposals is communicated, although we were not able to verify this as part of the call for research proposals. This might suggest (although the call for proposals clearly states the opposite), that the seminars should also be about the annual theme, which is not the case. This had already been observed by the project partners and has been changed for the 2011 call.

Interestingly enough, only 42% of the survey respondents indicated that they were aware of the possibility to organise a thematic dialogue seminar. Of those that were aware, almost half indicated they have no interest in organising such a seminar, mainly because there are already sufficient opportunities for such dialogues through other channels.

3.1.3 Selection stage

The selection stage is a three-step process, and two of the steps, the peer review and Assessment Committee were mentioned at the beginning of this section. In practice, however, the decision making on which projects will be funded is apparently a separate step, and one which can create a bottleneck.

All three steps are described below.

Step 1 | Peer review and rebuttal:

In 2009, 34 eligible research proposals were submitted, while in 2010, there were 13. In both years, peer review reports were collected by NWO (international peers), CAS and CASS (Chinese peers) and sent for rebuttal to the applicants. For the projects resorting under MoST/MoE, no Chinese peer reviews were collected.

In China, it is uncommon to send applicants a peer review. This did not appear to be problematic as all Chinese researchers cooperate with a Dutch researcher. The latter did receive a peer review from NWO, and shared this review with their Chinese counterpart. In the end, the rebuttal was a Sino-Dutch cooperation: both the Dutch and the Chinese researchers could contribute.

Step 2 | Assessment Committee:

The Assessment Committees met in August 2009 and August 2010 at the Dutch Embassy in Beijing. In 2009, the committee comprised six experts, three of them Chinese, three of them from European countries. The Dutch project partners deliberately chose to include peers from different European countries, because they felt there were insufficient independent experts in the Netherlands. In 2010, the committee comprised seven experts, three of them Chinese, four of them Dutch, one of whom from industry.

Figure 2, as mentioned, shows the number of submitted and granted proposals. In 2009, NWO was able to provide €1.5M in additional funding from the national budget for water-related research. This was matched on the Chinese side, allowing for five extra research projects to be funded. In total, ten projects were selected, resulting in a conversion ratio of almost 30%. Of these ten projects, five Chinese PIs resort under MoST, four Chinese PIs

resort under CAS and one Chinese PI resorts under CASS. Two proposals for thematic dialogue seminars were submitted (both MoST/MoE). Only one of the proposals was eligible, and was granted after a positive assessment.

Year		Submitted	Granted	Conversion ratio
2009	Research Proposals	34	10	29%
	Thematic Dialogue	2	1	50%
2010	Research Proposals	13	4	31%
	Thematic Dialogue	3	2	67%

Figure 2. Number of submitted and granted proposals

In 2010, the JSTP budget allowed for the funding of five research projects. Four research projects were selected (conversion ratio just over 30%), of which one Chinese PI resorts under MoST, two Chinese PIs resort under CAS and one PI under CASS. Three proposals for thematic dialogue seminars were submitted, all three with PIs resorting under CASS. One of the proposals was not eligible while the other two were granted after a positive assessment.

Step 3 | Funding:

Regarding the funding of projects, there is a significant difference between China and the Netherlands. In the latter case, an earmarked budget exists for JSTP projects, meaning that projects which are positively assessed by the Assessment Committee and selected by the Program Committee, are automatically granted funding, as soon as the Chinese budget is approved. CAS, CASS and MoST/MoE do not have such an earmarked budget, meaning that a positive decision by the Program Committee has to be endorsed by the organisation itself.

	2009	2010
Call for proposals published	March 15	January 18
Deadline for expression of interest	April 27	March 10
Workshop for joint proposal development	May 13 & 14	March 29 & 30
Deadline for submitting proposal	June 15	April 27
Deadline for peer review	July 29	June
Deadline for rebuttal	August 4	July
Assessment Committee meeting	August 17	August 13
Program Committee meeting	August 20	August 19
Start of project	Planned: January 2010 NWO + CAS: Dec 2009 NWO + CASS: March 2010 NWO + MoST: Nov 2010 / 2011	Planned: January 2011 NWO + CAS: Dec 2010 NWO + CASS: Dec 2010 NWO + MoST: 2011

Figure 3. Timeline for the 2009 and 2010 JSTP process

First of all, as this endorsement is done only once a year, the selection stage is quite a lengthy process (the timetables for both 2009 and 2010 are shown on page 19). For the 2009 proposals, NWO released the funding for the projects resorting under CAS and CASS as soon as their internal procedures were finalised: in December 2009 for CAS projects, in March 2010 for CASS projects. The procedures at MoST were delayed due to lack of staff (see also the next section). Funding for two projects was approved by MoST in November

2010 and at that time NWO released the funding for these two projects. Funding for the other three projects resorting under MoST is pending. In 2010, funding for the proposals resorting under CAS and CASS was released on time, namely in December 2010. Formal approval from MoST is expected in June 2011.

Secondly, the endorsement is not always in line with the Program Committee's decision. MoST has decided to fund a number of projects that were not selected by the Program Committee. This only relates to the Chinese part of the project. As NWO does follow the Program Committee, the Dutch researchers do not receive funding.

3.1.4 Project execution stage

As nine out of fourteen research projects only started within the past couple of months, it is too early to discuss the project execution stage in great depth. One issue does however emerge, namely that the various project partners seem to set different requirements regarding researchers' feedback reports. These requirements have not been coordinated, as a result of which, the various project partners all apply their own regular requirements. This could result in the rather strange situation where the Dutch PI might have to meet stricter demands (say a yearly report) than the Chinese PI within the same project (say a two yearly report).

Registration of data

One of the questions posed at the beginning of this chapter was whether the registration of data is consistent with future reporting and evaluation needs. There seem to be three crucial points when data on the research projects are gathered:

1. The project proposal, which is submitted during the submission stage;
2. An interim feedback report, which is to be submitted during the project execution stage;
3. A final feedback report, which is, again, to be submitted during the project execution stage.

Given the above issue – that the demands for feedback reports differ among project partners – the situation could arise where not all partners collect the correct information. As no-one on the research project has yet submitted a feedback report, we do not know whether this will actually occur, but it is a risk. In the final chapter of the report we will discuss which data should best be collected from an evaluation point of view.

3.1.5 Program Budget

The total JSTP budget planned for the initial three year pilot phase was €4.8M on the Dutch side. Funds are mainly supplied by NWO and OCW, with KNAW as 3rd supporting partner.

The Dutch input will be matched on the Chinese side. Note that this matching will probably not result in a direct €4.8M investment in the program, because among other things the funding for Chinese PhD students is not paid out of the Chinese JSTP budget, but comes from the Chinese project partners' regular annual budget. The remainder of this section concentrates on the Dutch budget as the authors of this report do not know the exact Chinese budget.

Taking into account management and other overhead costs, around 15 research projects and 10 seminars were planned to be funded within the JSTP budget, more or less equally

distributed over the three yearly calls. Research projects have a maximum budget of €280k, seminars of €30k (again, both on the Dutch side).

The figures below present the planned and realised budget for JSTP.

	Total	2009	2010	2011
<i>Budget</i>	€4.8 M			
OCW Contribution	€2.25 M			
NWO contribution	€2.25 M			
KNAW contribution	€0.3 M			
<i>Expenses</i>	€ 4.77 M	€1.54 M	€1.51 M	€1.675 M
Joint research project	€4.2 M	€1.4 M	€1.4 M	€1.4 M
Thematic Dialogue	€0.21 M	€0.09 M	€0.06 M	€0.06 M
Workshop	€0.06 M		€0.03 M	€0.03 M
Management costs	€0.15 M	€0.05 M	€0.05 M	€0.05 M
Monitoring (2012-2016)	€0.045 M			
Evaluation	€0.045 M			€0.045 M
JSTP Event	€0.06 M			€0.06 M
<i>Income - expenses</i>	€0.03 M			

Figure 4. Planned budget on the Dutch side, matched on the Chinese side

	Total	2009	2010	2011 (est.)
<i>Budget</i>	€6.03 M			
OCW Contribution	€2.25 M			
NWO contribution	€3.75 M			
KNAW contribution	€0.3 M			
<i>Expenses</i>	€ 5.67 M	€2.72 M	€1.26 M	€1.645 M
Joint research project	€5.13 M	€2.61 M	€1.12 M	€1.4 M
Thematic Dialogue	€0.15 M	€0.03 M	€0.06 M	€0.06 M
Workshop	€0.09 M	€0.03 M	€0.03 M	€0.03 M
Management costs	€0.15 M	€0.05 M	€0.05 M	€0.05 M
Monitoring (2012-2016)	€0.045 M			
Evaluation	€0.045 M			€0.045 M
JSTP Event	€0.06 M			€0.06 M
<i>Budget - expenses</i>	€0.36 M			

Figure 5. Budget realised on the Dutch side, matched on the Chinese side (green = higher budget or lower expenses than planned, red = lower budget or higher expenses than planned).

Several issues are significant:

- The NWO contribution is higher than planned, as mentioned earlier in this section. This corresponds with the higher expenses for joint research projects in 2009.
- Expenses on thematic dialogues are lower than planned. Instead, this budget is used to organise an additional networking workshop. Again, this was mentioned earlier in this section.
- Although not visible in the above figures, an interim report from NWO to OCW expects the management costs to be higher than planned due to travel costs: originally, meetings of the Program Committee and Assessment Committee were planned to be hosted in China and subsequently the Netherlands. Later on,

however, the Program Committee decided to have all its meetings and all Assessment Committee meetings in China, resulting in a significant increase in travel costs on the Dutch side.

- If we count all other expenses than those spent on research projects and seminars as overhead, the JSTP overhead is 7.4%.

3.2 Stakeholders' assessment of the JSTP process

Up until now, we have presented mainly factual information on the JSTP process. The remainder of this chapter deals with the opinions of stakeholders (project partners, based on the interviews conducted, as well as researcher-applicants, based on the survey and interviews with researchers) on the functioning of this process. We choose not to go through the entire JSTP process once more (this was dealt with in paragraph 3.1), but instead focus on positive aspects and points for improvement (proposed changes) as put forward by these stakeholders. Thereby, this section answers research questions A3 and A4.

3.2.1 Functioning of the different stages

This section deals primarily with both the functioning of the different stages (A3a), as well as the functioning of (A3b) and cooperation between (A3c) the Program Committee, Assessment Committee and Virtual Secretariat. As these different entities play such a prominent role in the different stages, it is simply impossible to separate the two issues.

Positive aspects:

Researcher applicants perceive the program's themes to be current and well balanced: not too narrow and not too broad, and linked with both Chinese and Dutch expertise. The themes are, however, perceived to be mainly focused on the sciences. This explains once more why especially CASS would be interested in thematic dialogues, as these allow more scope for social subjects (see also figure 6 below). There is no relevant difference between the 2009 and 2010 themes.

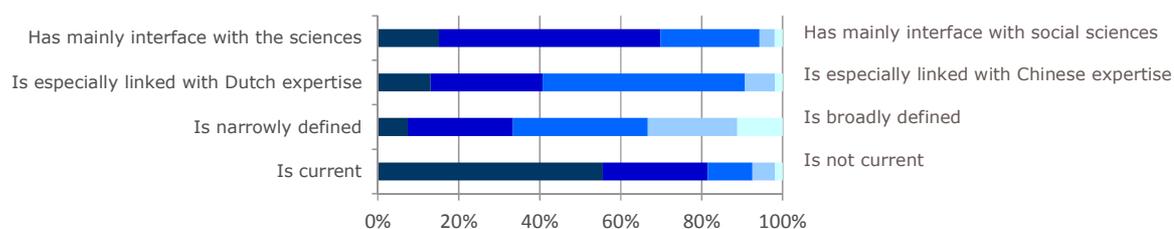


Figure 6. What is your opinion on JSTP's thematic focus? In the above graph, a dark blue bar indicates respondents agree with the statement on the left, light blue indicates they agree with the statement on the right.

(data from survey, n = 53, based on input from all respondents)

The project partners are also positive about the themes chosen up until now. As researcher applicants, the partners consider the themes to be current and in line with the needs and strengths of both China and the Netherlands. One Chinese partner, however, wonders whether researchers should be more involved in the choice of themes. We will come back to this issue in section 4.3.

The majority of researcher applicants is very positive about their contact with the JSTP secretariat and other JSTP partners. The people they contacted were well aware of content, friendly and approachable. This is shown in Figure 7.

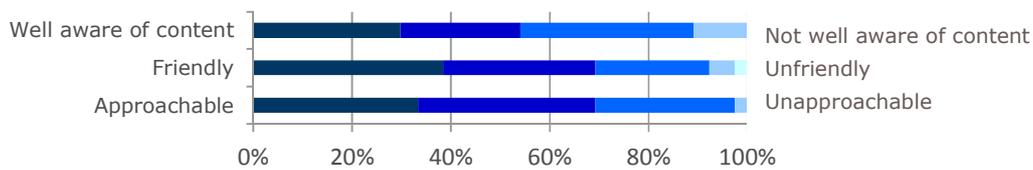


Figure 7. How do you find the contact with JSTP secretariat / partners? In the above graph, a dark blue bar indicates respondents agree with the statement on the left, light blue indicates they agree with the statement on the right.

(data from survey, n = 53, based on input from all respondents)

According to the great majority of researcher applicants, the Calls for Proposals have been sufficiently clear. Only 8 out of 48 survey respondents (17%) mentioned points for improvement. It was said to be unclear (1) which technological topics were excluded from JSTP, and (2) on what criteria the proposal would be reviewed. Also, it was mentioned that the proposal format inhibits creativity (it best allows for standard proposals) and interdisciplinary proposals.

Also, the submission procedure is evaluated positively. Researcher applicants characterise the submission procedure as simple, straightforward and clear. In line with the first point regarding project execution, advice from JSTP partners was available when necessary. Also, the preparatory workshops were mentioned by various researchers as very useful.

Points for improvement:

Points put forward for improvement either relate to the timeline or to the assessment procedure.

Regarding the timeline (see also Figure 3), researcher applicants first of all complain that the timeline was not immediately clear. This most likely relates to the 2010 call, in which year the call for proposals did not mention all relevant dates. Secondly, rebuttal took place during the summer holidays. Thirdly, in 2009 there was insufficient time to draw up a proposal after visiting the workshop in Beijing. This seems to have improved somewhat in 2010, when there were a couple of additional weeks available. Finally, mainly related to the assessment procedure (see also below), the entire process is perceived to be too long.

Project partners also feel the timeline of the project has been somewhat unfortunate in the past two years. First of all, NWO admits Dutch researchers did have to write their rebuttal in the middle of the summer holidays, and in a very short time period. Secondly and more importantly, several project partners agree it has taken (is taking) too long for all researcher applicants selected by the Program Committee to receive their funding. Thirdly, researcher applicants who were not selected by the Program Committee, are informed too late. MoST has indicated it has had problems with manpower during much of the project period so far, which is probably a significant explanation for these delays. Fortunately, this problem now belongs to the past, with the recruitment of a new employee to man the NL desk.

Regarding the assessment procedure, researcher applicants put forward three types of criticism: (1) an insufficiently transparent assessment procedure, (2) a too lengthy procedure, and (3) some discrepancies between the granting decisions of Chinese and Dutch project partners. Interestingly, there are no major differences between the 2009 and

2010 calls, between Chinese and Dutch researchers, and between accepted and rejected proposals, which seems to indicate the criticism is widespread.

- First of all, several researcher applicants characterise the assessment procedure as a “black box”. They would prefer more information on how their proposal is ranked compared to other proposals, based on clearly defined indicators, so they can better understand the weakness of their proposal. These clear indicators should preferably be distributed up-front, so that potential applicants can make a better informed decision on whether it is worthwhile to submit a proposal or not. One respondent suggested that more experts should review the proposals. This is probably due to doubts about the reviewers’ expertise, which are expressed by more researchers. Also, as the Chinese and Dutch reviews can differ considerably, it is unclear which of the two is leading.

More than two-thirds of the respondents whose proposal was rejected, state it is insufficiently clear to them on what grounds the submission was rejected. Some researcher applicants mention they were not informed at all, and heard the news from their research partner. This uneven communication to research partners is more widespread, there have been cases where the Dutch researcher was asked to improve his proposal on a certain aspect, while the Chinese researcher had to improve a completely different aspect.

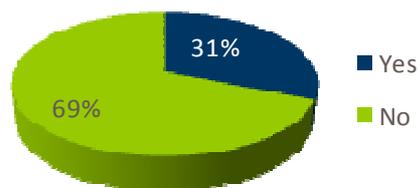


Figure 8. Did the JSTP selection committee give you sufficient clarity on what grounds your submission was rejected? (n=32)

- The second criticism is related to planning and communication about planning. Various researchers mentioned that the time lag between selection and formal granting was too long, sometimes more than a year. As a result, researchers had to turn down several well-qualified PhD candidates because the funding had not been secured. Furthermore, this timeline was not clearly communicated. A suggestion by one of the respondents was to build a “track and trace” system, where researchers would be able to see the status of their proposal and when the next decision would take place.

As mentioned above, this criticism is recognised by the project partners. CAS and CASS have been able to eliminate delays in 2010. MoST has indicated its delays have been mainly due to a lack of staff.

- The final criticism relates to the discrepancy between Chinese and Dutch partners’ decisions on the granting of projects: MoST has decided to fund projects that were not selected by the Program Committee. Researchers feel that as they are submitting a joint research program, it is essential that either both sides receive funding or no side receives any funding. It is often not possible to only execute the Chinese part of the research project (unless of course the proposal is adjusted, see also Figure 21 in Chapter 4).

The Dutch project partners agree with the researchers on this. They can, to some extent, understand MoST's wish to fund additional projects, especially if these projects are of good quality and in line with MoST's priorities. But they find the resulting confusion as well as the questions researchers are now raising on the assessment process, very undesirable. In short: the Dutch project partners would rather MoST does not fund the additional projects.

3.2.2 Cooperation and communication between JSTP's project partners

All project partners, both on the Chinese as well as on the Dutch side, are generally very positive about JSTP. An important reason is the cooperation among the partners, which is highly praised. This cooperation is perceived as "flexible, non-bureaucratic and friendly". The Program Committee is said to provide "an effective environment for a joint learning process". There is a "built-in capacity for continuous improvement through effective dialogue".

The latter is perhaps best illustrated by a number of challenges the program committee feels it has successfully overcome.

- Meetings were initially planned to take place at one of the project partners' premises. But that would mean that the project partner would also have to chair the meeting, something the Chinese partners did not favour, because it could raise questions regarding the hierarchy among project partners. As a solution, the Dutch offered to plan all meetings in a neutral environment, namely the Dutch Embassy in Beijing.
- Not all Chinese partners were used to sending peer reviews to research applicants for rebuttal. The peer review is now only sent to the Dutch researcher applicant, who then shares the information with their Chinese counterpart, allowing for a joint rebuttal.

In fact, the ability of the Dutch to deal with challenges as these so easily, is highly valued by the Chinese.

4 JSTP objectives

As explained in the introduction, this evaluation study is primarily about the JSTP process. The previous chapter dealt with the implementation compared to the initial design and the opinion of stakeholders (both project partners and researcher applicants) regarding this process.

This chapter's aim is to analyse to what extent the objectives of JSTP have been / are being met. As previously mentioned, the objectives of the program are as follows:

- "To foster synergies between excellent research groups by calling for proposals demonstrating complementary expertise between Chinese and Dutch research teams in which both China and the Netherlands excel." Also, the plan mentions the active involvement of senior researchers as a key prerequisite for funding.
- "High level of visibility of the projects and their outputs" as JSTP should be one of the flagships of research cooperation between China and the Netherlands.
- "Sincere effort to restrict the administrative and bureaucratic burden for the researchers by designing a researcher-friendly web-based submission procedure".

These three issues are dealt with in section 4.1, 4.2 and 4.3 respectively, corresponding with research questions B1, B2 and B3.

The table below shows which work package answered these questions.

Research Objective B: JSTP objectives	I	II	III
1. To what extent has JSTP stimulated (sustainable) research collaboration between Chinese and Dutch researchers?	X	X	X
a. How many proposals have been submitted and what is the budget related to these proposals?	X		
b. What is the number of applicants associated with these proposals and what is their profile?	X		X
c. To what extent has JSTP led to new research groups?		X	X
d. What activities are planned within the research proposals and to what extent are these supportive of collaboration / group forming?	X	X	X
2. To what extent has JSTP been visible?	X	X	X
a. How was the program announced?	X	X	X
b. In what way has milestone news been disseminated?	X	X	
c. What set-up is in place for the dissemination of (future) project results?	X	X	
3. To what extent is JSTP believed to be flexible and researcher-friendly?	X	X	X
a. What actions have been undertaken to simplify procedures? Is there a web-based submission procedure in place?	X	X	
b. Does JSTP have the capacity to adapt to emerging science trends?		X	

(I = Desk Research; II = Interviews; III = Online Survey)

4.1 Effects on research collaboration

Number of proposals:

The average budget requested by the Dutch research groups involved, was €267k in 2009, and €275k in 2010. The Chinese research groups are well below this, with €124k in 2009 and €97k in 2010. The reason for this considerable difference is, as mentioned before, the different financial structure. These figures do not differ significantly when looking only at the granted proposals.

Year		Average	Std.
2009	Budget Netherlands	€ 266,500	€ 22,690
	Budget China	€ 124,190	€ 64,710
2010	Budget Netherlands	€ 275,380	€ 11,200
	Budget China	€ 97,260	€ 85,620

Figure 9. Requested budget and standard deviation for Dutch and Chinese research groups (data from research proposals, n = 47, based on input from all research applicants)

The table above also shows the standard deviation for both the Dutch and Chinese budget requests. The Chinese standard deviation is quite striking, due to the fact that some Chinese research groups request a budget of only €10k, while others ask well over €100k. The budget requested by CASS proposals is lower than the budget requested by CAS and MoST/MoE.

Of those research proposals that did not receive any funding, the majority could not take place at all. Some research projects did continue, but no longer with the collaboration of the research partner from the other country.

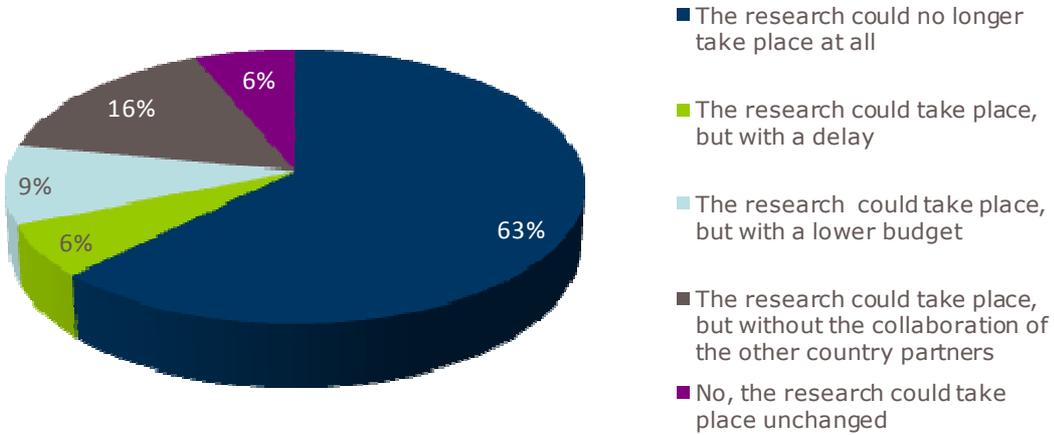


Figure 10. Has the rejection affected the research project you had planned? (data from survey, n=32, based on answers by researchers who did not receive funding)

Number of researchers and their profile:

The number of researchers associated with the proposals cannot be easily determined from the applications. Based on the survey, we find that a single research project has an average of 8 researchers (6 FTE) involved on the Chinese side, of which 44% are PhD students (39% in terms of FTE). On the Dutch side, there are well over 4 researchers involved (3.2 FTE), of which only 11% (27% in terms of FTE) are PhD students (see also the table below).

	Total number involved		Percentage of which PhD	
	Avg.	Std.	Avg.	Std.
Number of persons in China	8.10	3.75	44%	30%
Total FTE in China	5.94	3.61	39%	35%
Number of persons in the Netherlands	4.31	1.91	11%	16%
Total FTE in the Netherlands	3.21	2.56	27%	40%

Figure 11. Number of researchers involved
(data from survey, n=24, based on answers by researchers who did receive funding)

Looking at the profile of the principal investigators, most are above 40 years old, professor and male (see below). These conclusions also hold when looking at the granted proposals.

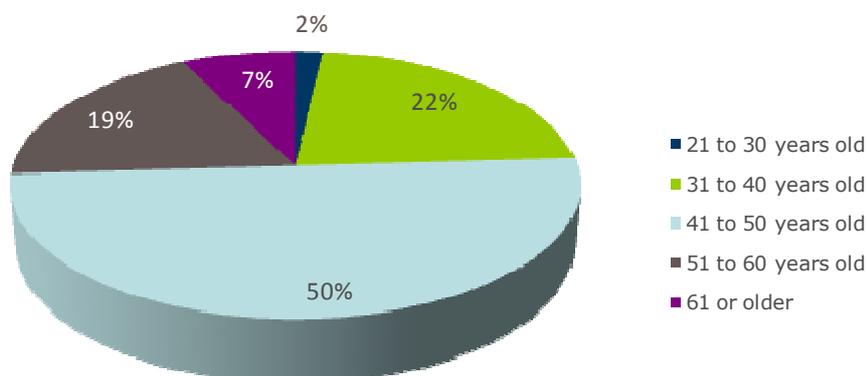


Figure 12. The age of principal investigators
(data from survey, n=54, based on answers from all survey participants)

		Male	Female
2009	Dutch PI 1	31	2
	Dutch PI 2	1	0
	Chinese PI 1	24	8
	Chinese PI 2	0	0
2010	Dutch PI 1	12	1
	Dutch PI 2	5	0
	Chinese PI 1	13	0
	Chinese PI 2	0	0

Figure 13. Gender of principal investigator
(data from research proposals, n = 47, based on input from all research-applicants)

		Associate Professor	Professor
2009	Dutch	13	21
	Chinese	5	28
2010	Dutch	6	12
	Chinese	2	11

Figure 14. Seniority of principal investigators
(data from research proposals, n = 47, based on input from all research-applicants)

On the Dutch side, the high number of proposals from the more applied universities (TU Delft, University of Twente, Wageningen University & Research Centre) is striking. In China, the proposals are more dispersed among universities / institutes, with the Institute

of Geographical Sciences and Natural Resources Research delivering the highest number of applications.

New vs. sustained research collaboration:

Before compiling their JSTP research proposal, most PIs were already in contact with their Dutch / Chinese counterparts, see below. Often, this previous contact was in the form of joint research, joint publication or staff exchange. Only 17% (see figure 15) did not have any earlier contact with the Dutch / Chinese PIs with whom they compiled their proposal. These figures indicate that JSTP, up until now, has mainly resulted in sustaining research collaboration between researchers who knew each other already, not so much in new research collaboration.

PIs who were in contact with fellow researchers who are involved in the research proposal and with fellow researchers who are not involved in the research proposal	48%
PIs who were in contact with fellow researchers involved in the research proposal	35%
PIs who were in contact with fellow researchers not involved in the research proposal	6%
PIs who were not in contact with any Dutch / Chinese researchers	11%

Figure 15. Were you already in contact with Dutch / Chinese researchers? (data from survey, n=56, based on answers from all survey participants)

Moreover, the below figure indicates that many researchers had quite strong ties before submitting a joint proposal. Around 45% indicate having written a joint publication, even 60% conducted joint research.

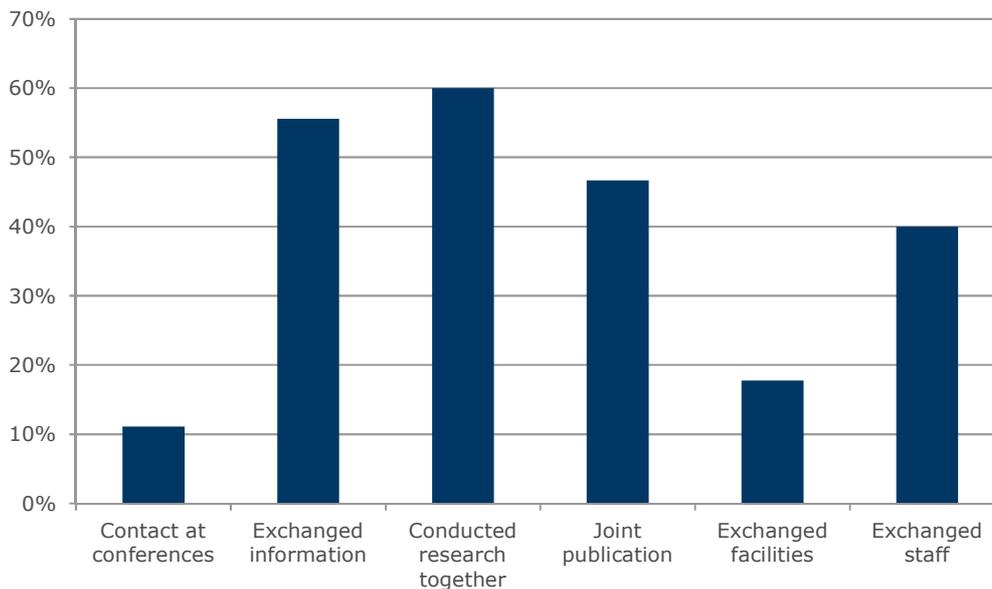


Figure 16. Please describe the previous contact with researchers involved in the research proposals. (data from survey, n=45, based on answers from all survey participants, > 1 answer possible)

Figure 17, Figure 18 and Figure 19 show the fact that many researchers knew each other before submitting a research proposal not only holds at the PI level. The majority of other researchers involved – within China, within the Netherlands and between China and the Netherlands – also knew each other before submitting the proposal. Again: JSTP will mainly result in intensification of relations, not so much in completely new relations.

These findings are in line with expectations: to draw up a successful application, prior cooperation is of course very helpful. NWO expects the balance between new and sustained collaboration to shift to new, as JSTP matures. The first themes, *integrated water management* especially, have been topics where there is traditionally some collaboration between China and the Netherlands, meaning sustained collaboration was more likely. For the later themes, this is less so.



Figure 17. To what extent did the researchers from the Netherlands involved in the proposal know each other already before the proposal was submitted? (data from survey, n=53, based on answers from all survey participants)

Figure 18. To what extent did the researchers from China involved in the proposal know each other already before the proposal was submitted? (data from survey, n=53, based on answers from all survey participants)

Figure 19. To what extent did the researchers involved from China and the researchers involved from the Netherlands know each other already? (data from survey, n=53, based on answers from all survey participants)

The figure below shows that JSTP is well balanced when it comes to the initiators of joint research plans. In most instances, this was a joint initiative.



Figure 20. Whose initiative was it to jointly draw up a JSTP research proposal? (data from survey, n=54, based on answers from all survey participants)

Sino-Dutch cooperation:

To promote knowledge transfer and collaboration between Dutch and Chinese researchers, and thus stimulate sustainable research collaboration, the researcher applicants mention different activities. The activity that is mentioned most is the exchange of staff, varying from MSc and PhD students to (associate) professors, followed by regular visits of the foreign counterpart. This provides the possibility to do joint fieldwork, joint modelling and joint laboratory work. Also, workshops are mentioned 9 times as an important activity to transfer knowledge, just as writing publications together (also mentioned 9 times). Moreover, professors from the foreign research group are invited to give lectures (mentioned 3 times).

Another indicator for Sino-Dutch cooperation, is the extent to which the research counterparts are dependent on each other for execution of the research project. Respondents indicate that almost half of the research projects could not be conducted

without collaboration. Nearly 40 per cent could not be conducted without adjustments. Only a few researchers mentioned the project could be conducted unchanged. This again emphasises that it can be quite problematic if only the Chinese researchers involved in a certain research plan, receive funding.

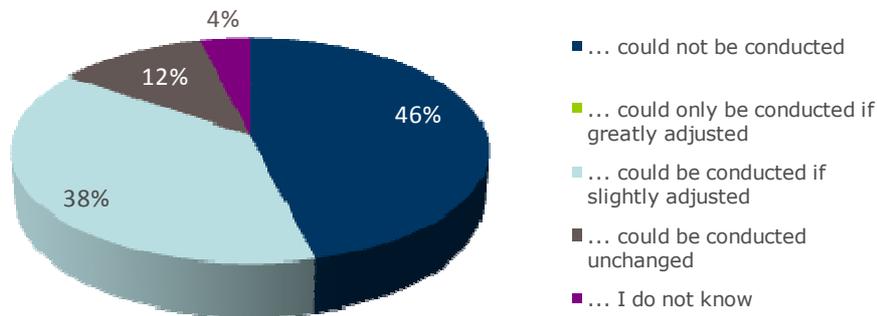


Figure 21. To what extent were the research groups in the Netherlands and China dependent on each other to carry out the research proposal? Without collaboration, the research in [own country]... (data from survey, n=26, based on answers from all survey participants)

4.2 Visibility of JSTP

Based on the sufficiently high interest in both the 2009 and 2010 JSTP calls, it seems fair to conclude that the visibility of JSTP among the program's target group is fine. However, as explained in section 3.1.2, the visibility of the Thematic Dialogue Seminars could be improved. Changes in the Calls for Proposals are said to be underway.

Activities to increase the visibility of project results outside this inner circle have up until now been limited (with one exception, see below). This can be expected: given the recent start of the research projects, there are still few scientific results or other milestones to focus on.

When the visibility of project results, later on in the project, does become an issue, activities will most likely have to be initiated by the Dutch. Indeed, NWO indicates it plans to use press releases later on, but there are no concrete plans yet, that is to say there is not yet a specific set-up in place for the dissemination of future project results. Several Chinese interviewees indicate visibility is not of special importance to them. The linkages for dissemination of results (for example to local governments or ministries) are in place. There is no need for researchers to legitimise their activities to the outside community. Visibility can thus be indirect.

In May 2010, KNAW and NWO organized a workshop on 'water research' at the World EXPO in Shanghai. The event was hosted by OCW. The state-of-the-art of Dutch, Chinese and Sino-Dutch water-related research was presented, including projects funded under JSTP but also including projects resulting from the PSA program and the cooperation between NWO and NSFC. The workshop was followed by a high-level reception with the Chinese counterpart organisations.

4.3 Researcher friendliness of JSTP

As described in chapter 1 (section 3.2.2), researchers are positive about the administrative burden of JSTP. This does not seem to be thanks to any additional actions to lower the administrative burden or simplify procedures as the demands and procedures are in line with those of other NWO programs. Dutch researchers characterise the burden: "as low as always with NWO". Nevertheless, when comparing JSTP to other joint research programs, for instance on a European level, JSTP requires less paperwork and is more flexible. This is

felt even stronger on the Chinese side, where researchers are used to a somewhat higher administrative burden.

As described before, contact with the JSTP secretariat / the JSTP partners is evaluated positively. They are thought to be friendly, approachable, sufficiently aware of content and flexible. JSTP is less researcher friendly when it comes to the timeline and assessment process. There is a high number of complaints about these issues. These complaints are from 2009 and 2010 Dutch and Chinese, and granted and not granted applicants, indicating there are real issues at stake. Especially as the program scores well on other researcher friendliness indicators, improving on the timeline and assessment process seems well worth the effort.

Of course, a full evaluation of the JSTP administrative burden can only be made once researchers have had experience with mid-term and final feedback reports. Up until now this has not been the case.

Capacity to adapt to emerging science trends

A final question regarding the objectives of JSTP, is whether the program has the capacity to adapt to emerging science trends. With the NWO divisions delivering important input for possible future themes, the program seems to be able to do this. These divisions have close linkages with Dutch researchers, meaning these researchers are able to influence future topics of the program. However, their influence is quite indirect. Moreover, the Chinese researchers seem to have less influence. At least one of the Chinese project partners agrees to this, stating the researchers should, in his opinion, be more involved in the choice of themes.

5 JSTP vs. other Sino-European research programs

This chapter answers the research question under the final research objective: What position does JSTP hold in the context of other bilateral and multilateral programs between China and the Netherlands (section 5.1) and between China and Europe (section 5.2)?

The table below once more shows which work packages have contributed to answering the questions.

Research Objective C: JSTP vs. other programs	I	II	III
What position does JSTP take in the context of other bilateral and multilateral programs between China and the Netherlands and between China and other European countries? I.e. what is the distinctive added value of JSTP?	X	X	X

(I = Desk Research; II = Interviews; III = Online Survey)

5.1 The Netherlands

JSTP is only one of several instruments in the bilateral research cooperation between China and the Netherlands. Others include:²

- China Exchange Program (CEP), which aims at stimulating scientific cooperation through the exchange of senior researchers. It targets all fields of research. CEP is a program OCW and KNAW³; on the Chinese side MoE, MoST, CAS and CASS participate. The annual budget is €540,000.
- Joint PhD Training Program, by OCW, KNAW and CAS, offers outstanding PhD candidates from China and the Netherlands the opportunity to conduct PhD research in their respective countries. In five consecutive rounds, taking place in 2005, 2006, 2007, 2008, and 2009, a total of 29 PhD projects were selected. The program is now closed.
- Aim of the Program Strategic Scientific Alliances (PSA), a program by OCW, KNAW and MoST, is to establish a new form of structural, long-term, scientific cooperation in a limited number of priority research fields: material sciences, biotechnology/drug research, and environmental science. The program will run for a total of 15 years and consists of a number of phases. After a preparatory phase, a total of 15 projects were admitted to the Project Phase, which took place from 2004 – 2007. During the current Program Phase, 6 of these projects are allowed to continue. In 2014, only two of these projects will be allowed to enter the Strategic Alliance Phase. OCW contributes €1.36 million annually. The Chinese contribution (by MoST) amounts to 10 million Yuan (about €1.1 million).
- Within Talent & Training China – Netherlands (T&T), NWO and KNAW cooperate with the China Scholarship Council. The program's aim is to increase the quality and quantity of PhD research in the Netherlands and to strengthen scientific

² Source: <http://www.knaw.nl/Pages/DEF/27/257.bGFuZz1FTkc.html>

³ This program is largely funded by OCW and executed by KNAW. The same holds for the Joint PhD Training Program and the Program Strategic Scientific Alliances.

cooperation with China, by inviting highly talented Chinese PhD candidates to conduct research at selected Dutch graduate schools.

- Finally, NWO cooperates with the National Natural Science Foundation of China (NSFC). This program, called Joint Research Projects, was set up in 2009 and is an extension of an existing agreement between NWO and NSFC. Where the initial agreement only allowed for the exchange of researchers, the current agreement additionally makes an annual amount of €1.5 million available (on the Dutch side, matched on the Chinese side) for thematic joint research projects with a focus on natural and life sciences. The program resembles JSTP, which is no coincidence, as NWO would have liked to include NSFC in JSTP. NSFC was included in the exploratory talks on JSTP but finally not able to participate in the program.

JSTP's position

According to the project partners, the added value of JSTP compared to other Sino-Dutch programs, is threefold:

- The program is less fragmented, including more partners than existing programs. It thus allows for the inclusion of both university and institute researchers, and both the sciences and social sciences (multidisciplinary). The advantage is that the program thereby allows for more focus on quality. When running separate programs, with separate budgets, the quality of the proposals for program A cannot be compared to the quality of the proposals for program B. This could result in the situation where a high quality proposal for program A is not selected because of a lack of budget, while a low quality proposal for program B is selected.

As mentioned, the Dutch partners (mainly NWO) would have liked to have NSFC in the program as well. While expanding its China activities, NWO also wanted to strengthen and expand the collaboration with this long-term partner in China. Since NSFC could not participate in JSTP, NWO has set up a program similar to JSTP with only NSFC, called Joint Research Projects.

- Most programs that were in place when JSTP was set up focused on mobility and exchange of researchers, for instance CEP and the Joint PhD Training Program. What JSTP adds to these programs, is that it offers the possibility of long-term joint research.
- PSA, of course, was the exception to the above, offering funding for up to 15 years of joint research. But JSTP adds to this program in that it offers more flexibility, both in terms of participants (only the 15 research teams that were admitted to PSA in 2004 can benefit from this program) and subjects (JSTP has yearly changing themes).

Regarding the second point, researcher applicants perceive JSTP to be a valuable addition in that it enables, compared to the various possibilities for student exchange and the like, actual long-term joint research with the potential to invest in sustainable relationships.

5.2 Europe

Also on a European scale, the JSTP program is conducted in the context of a great variety of bilateral and European agreements and programs. From the Chinese side this is not always easy, as Europe is seen as fragmented. To manage cooperation with each country, the Chinese project partners employ various people, each responsible for coordinating cooperation with various European countries.

FP7

The main programmatic activity between Europe and China is certainly the European Framework Program for Research and Development (FP7). The FP7 is in fact the world's largest research program open to anyone eligible, which means that researchers, public or private, from any country may participate. China is among the top 3 countries in participations, with major interest devoted to energy, ICT, health and materials research. Chinese researchers participate through involvement in European networks, and the broad scope of participation is also stimulated by the S&T Agreement between the two. This agreement stipulates a broad range of common areas of interest, and is managed by a joint committee that meets once a year, and is also supported by other processes such as summits.

While FP7 mainly facilitates cooperative research and the bulk of the participation is conducted through the Cooperation program with its thematic focus, there are strong links with mobility in the context of the Marie Curie program, as well as a number of other areas, e.g. in research infrastructures, institutional cooperation in renewable energy research, and nuclear research under the Euratom Agreement.

A main concern in the European-China relationship in S&T has been the lack of reciprocity. As perceived by the European side, there is a great number of Chinese scientists participating in FP7, also partly supported financially by these funds, while European researchers' participation in Chinese programs is miniscule. Some initiatives have been launched to alleviate this, such as coordinated calls between EU and China where both parties commit the same funding, as well as the SFT Fellowship Program to stimulate European researchers on longer stays in China, including 6 months language training before 18 months additional stay.

Bilateral cooperation

EU member states have for a long time been involved in cooperation with China. Most countries have S&T agreements or other arrangements, and have programs in place to conduct cooperative research. This is in addition to the general trend of globalization of research through which the Chinese market expansion and growth in S&T activities lead Western enterprises to establish R&D centres in China. Public activities have also been drawn in the same direction, with the result that many EU member states now have set up labs or research centres in China, some also jointly with Chinese institutions. Countries such as Germany, France and Italy, but also others, have been the primary agents of this development, as they have seen that a more institutional approach to cooperation may ensure greater sustainability. The table below shows some of the highlights of other European countries' research cooperation with China.

However, the vast number of agreements, memoranda of understanding, and programs between China and EU has also been a reference point for better European cooperation. The re-launch of ERA⁴ in 2008, in which international cooperation was a priority, implied an attempt to better coordinate European activities. Two developments are key in this regard:

- Firstly, there have been the ERA-NETs: projects to stimulate coordination of national programs and resources at a European level. One of these is the "CO-REACH" project, coordinated by KNAW. CO-REACH (Co-ordination of Research between Europe and China) is a network of European S&T policy and funding

⁴ The European Research Area, which is composed of all research and development activities, programs and policies in Europe that involve a transnational perspective.

organisations in 6 countries: Austria, Finland, France, Germany, the Netherlands, Norway and the United Kingdom. CO-REACH has completed its first phase (5 years), the next phase is under negotiation.

Country	Short description
Belgium	Belgium-China cooperation is largely decentralized, not falling under any federal-level framework. The Flemish Region focuses on biotech, agriculture and multimedia design, the French-speaking Community focuses on microelectronics and biotech.
Denmark	There are three forms of collaboration between Denmark and China. Firstly, the Danish Ministry of Science, Technology and Innovation facilitates the interaction between researchers in Denmark and China. Secondly, Sino-Danish knowledge-based collaboration between companies and research institutions is stimulated by the Innovation Centre Denmark. Finally, the Danish Ministry of Science, Technology and Innovation aims to establish a Sino-Danish Centre for Advanced Education and Research in China to enhance the visibility of Danish research based advanced education in China.
Finland	The Chinese Ministry of Science and Technology and the Finnish Ministry of Employment and the Economy meet biannually, discussing S&T co-operation mainly in the field of applied research and technology. In 2010 a new MoU to stimulate basic research collaboration was signed with the Chinese Ministry of Education and the Finnish Ministry of Education and Culture to complement the existing applied science cooperation.
Germany	S&T collaboration between Germany and China has been in place for more than 30 years. There are different programs, e.g. PhD programs with Fraunhofer and CAS, and joint institutes, e.g. the Sino-German Centre for the Promotion of Sciences (DFG/NSFC).
Italy	In 2009 China and Italy celebrated the 30 th anniversary of the first agreement of co-operation in S&T. Their current collaborative activities focus on six areas: Agriculture and Food Safety, Aerospace Activities and Physics, Energy and Environment, Medicine and Traditional Chinese Medicine, Natural Risk Prevention, and Technologies for Cultural Heritage Preservation.
Spain	The first agreement of S&T cooperation between China and Spain was signed in 1985. New declarations have been signed in the past decade for promoting further S&T cooperation. Both Spain and China are especially interested in cooperation related to renewable energy.
United Kingdom	The first formal S&T agreement dates from 1978. But after the China-UK Joint Statement of 2004, co-operation between China and the UK had expanded rapidly. The UK and China agreed on goals announced during the China-UK Summit in 2008, such as 100 new R&D partnerships and doubling of the UK's output of joint papers with China in 2013.

Figure 22. Research cooperation between China and several European countries (source: Overview of bilateral collaboration in science and technology (S&T) between EU Member States and China. Compilation by the S&T Section of the EU Delegation in China. January 2011)

- Secondly, there has been the ERA initiative on international cooperation, which became institutionalised in the Strategic Forum for International Cooperation in Science and Technology (SFIC), an advisory body to the Council and the Commission. SFIC has been in operation for two years, and seeks a coherent, strategic approach to international cooperation. A special focus will be on better coordination between the great number of bilateral programs. SFIC has launched a dedicated process for cooperation with China, with a view to defining a strategic approach by the end of 2011. According to the EU delegation in Beijing, the new SFIC approach makes future twinning of European programs more likely, whereby

national bilateral programs are pooled or bundled to share workloads and create critical mass.

JSTP's position

Interestingly enough, however, the Chinese JSTP project partners are somewhat hesitant about this approach. They feel the bilateral programs are more flexible and less bureaucratic than the multilateral approach advocated by Europe. In fact, one project partner states he is very sceptical about ERA: he does not see the added value of bundling bilateral programs, and feels coordination takes too much effort. They especially favour the JSTP approach: several Chinese project partners mention that they consider JSTP to be the model program for research cooperation with small and mid-sized countries (Norway, Switzerland, and even the UK).

This preference for bilateral programs is – at least regarding certain aspects – also expressed by researchers. The majority (74%) of the survey respondents indicates having submitted a project proposal at home or abroad for a program in which – just like JSTP – international collaboration was an important condition. These respondents are therefore in a good position to compare. Especially the lower administrative burden of JSTP, compared to mainly EU programs, is mentioned as positive. Of course, the higher administrative burden of EU projects is related to the higher research budgets available (which in turn is mentioned as a relative disadvantage of JSTP). Finally, the more direct communication with program officers and the closer cooperation with fellow researchers are praised.

6 Conclusions

Our final chapter summarizes the main findings of this evaluation study (section 6.1) and presents a number of recommendations to improve JSTP's future execution (section 6.2).

6.1 Main findings

The overall view on JSTP, of both project partners and researcher applicants, is a quite positive one. Project partners praise the friendly, flexible and non-bureaucratic cooperation and view the program as a joint learning process and an example for bilateral research cooperation with other European countries. JSTP is seen by researcher applicants as a welcome addition to existing programs, enabling real research collaboration compared to several exchange-focused programs (e.g. CEP), and more flexible and less bureaucratic compared to other research-focused programs (e.g. PSA and EU). That being said, there are widespread complaints from researcher applicants on the assessment process and, partly related to that, the timeline of the project.

Below we will elaborate on the various evaluation objectives (see paragraph 1.2).

JSTP process

Research questions A1 + A2:

The JSTP process is largely implemented as was envisioned in the 2009 implementation plan, relevant differences being:

- Additional yearly networking workshop, replacing one of three yearly seminars. The workshop is seen as a useful addition, whereby interest in the seminars seems somewhat lower than expected.
- Considerable additional grants in the 2009 call provided by NWO and matched on the Chinese side, enabling the funding of 5 additional research projects.
- Rebuttal of the peer review via the Dutch researcher applicant.
- All meetings taking place at the Dutch Embassy in Beijing, China.

The budget realisation seems to be mostly in line with the original planning, any deviations being the result of the differences mentioned above:

- There is less money spent on seminars, more on workshops and research projects;
- Due to travel costs, management expenses are somewhat higher than expected, overhead being around 7.5% of the total budget.

Research questions A3a,b + A4 + A5:

Regarding the functioning of the different stages of JSTP:

- The preparation stage seems to be functioning properly, apart perhaps from the announcement of the Thematic Dialogue Seminars, which does not seem to sufficiently reach its audience.
- The submission stage seems to be functioning properly as well, although there could be improvement in the timeline. Applicants indicated insufficient time between the networking workshop and the deadline for submission, in the case of

the 2009 call. Interest in the joint research projects lives up to expectations, interest for the seminars less so.

- The assessment stage, again as stated before, is more problematic. The online survey reveals a high number of complaints. These complaints are widespread, i.e. they occur among Dutch and Chinese applicants, 2009 and 2010 applicants, and applicants granted and not granted. There are basically three problems with the current assessment process.

First of all, and the least of the issues, is that there have been a number of questions from Dutch researchers about the quality of the Chinese peer reviews.

Second, and much more important, the workings of the Assessment Committee are believed to be insufficiently transparent. To the researchers, it is unclear how their proposals are scored and how the Dutch and Chinese reviews are weighed. Given the elaborate and careful process in place, this seems largely due to communication problems. Two thirds of the applicants who did not receive funding, indicate it is unclear to them why they were turned down. But the feeling seems to be strengthened by the fact that MoST has decided to fund a number of projects (at least the Chinese researchers involved in these projects) that were not selected by the Assessment Committee. Again, this is something that requires clearer communication.

Third, and also important, there have been considerable delays between the decision of the Assessment Committee, and the funding by project partners, mainly MoST. According to MoST, the delay on their account has been the result of a temporary lack of personnel, a problem that has now been resolved.

- It is too early to properly tell how the project execution stage is functioning, with the first project having received funding only a year ago. Up until now, there have been no problems that we are aware of. For the near future, attention might be needed regarding the mid-term and final feedback reports, for which requirements seem to differ depending on the funding project partner. Not only could it raise questions among researchers when demands for one researcher are less strict than for their counterpart, large differences in these reports might hamper the analysis of JSTP's results.

Research question A3c,d

Cooperation among the project partners is, as stated before, seen as friendly, flexible, non-bureaucratic, and a joint learning process. With this in mind, one is likely to view the cooperation in the Program Committee and Virtual Secretariat as something very positive. Indeed, the partners have been able to easily deal with issues such as the rebuttal by Chinese researchers, or the question where to host meetings.

Nonetheless, the Program Committee might not be functioning properly when it comes to addressing some problems regarding the delays in funding and funding of projects that were not selected by the Program Committee. Although these problems have been acknowledged in any case by the Dutch partners, they are not dealt with effectively. On the basis of interviews, one gets the impression partners are not willing to really put their foot down on this, because they are afraid to damage their good relationships. Of course, these relationships are important: China and the Netherlands have been cooperating for decades and intend to continue doing so in the future. But there should be a better balance between the relationships among partners on the one hand, and the researcher applicants' interests (a timely and transparent assessment process) on the other.

JSTP objectives:

Research question B1:

It is too early to properly analyse the outcomes of JSTP. Nevertheless, JSTP seems well underway to meet its prime objective: to stimulate research collaboration between Chinese and Dutch researchers. Our findings are:

- There have been 47 research proposals submitted up till now. The initiative for the submission was usually joint. We find that most research groups already knew each other or worked together before submitting a proposal. That indicates JSTP mainly succeeds in strengthening existing research collaboration, rather than leading to new research collaboration.

In 2009, 10 out of 34 proposals ($\approx 30\%$) were granted. In 2010, 4 out of 13 proposals ($\approx 30\%$) were granted. The considerable difference in the number of research proposals seems to be the result of the breadth of the respective themes. Knowing there was less budget available in 2010, the project partners purposely defined the theme more narrowly.

Of the proposals that did not receive funding, the majority could not be continued.

- A total of 3 dialogues were funded; 1 in 2009, 2 in 2010. This is lower than expected.
- Sino-Dutch cooperation within the projects mainly takes the form of staff exchange.

Research question B2:

Up until now, activities to increase the visibility outside of JSTP's inner circle have been limited to a workshop on water research organized during the recent EXPO in Shanghai. Given the recent start of the research projects, it is not surprising that few notable scientific results have emerged yet. The Dutch project partners should take the initiative to disseminate future results, as most Chinese interviewees indicate that visibility is not of special importance to them.

Research question B3:

Finally, apart from the problems with the timeline and assessment process, JSTP is perceived to be researcher friendly. This does not seem to be thanks to any special efforts. Dutch researchers say it is as user-friendly as any NWO program. For them, the program mainly stands out compared to, often larger, EU research programs. The researcher friendliness is especially felt on the Chinese side, where researchers are used to a somewhat higher administrative burden.

JSTP compared to other programs:

Research question C1:

As mentioned before, JSTP is seen as a useful addition to existing programs. Including several relevant partners, it is less fragmented than existing programs, allowing for the inclusion of both university and institute researchers, and both the sciences and social sciences. Moreover, it is praised for its flexibility (changing themes, changing research groups) and low burden when compared to other programs focused on collaborative research, and for enabling real and long-term joint research, compared to exchange-focused programs. Chinese project partners view the program as a model for bilateral research cooperation with small and medium-sized European countries. Among project

partners and researchers, there seem to be doubts about the EU idea to twin national bilateral programs. They would rather see a program like JSTP continued on a bilateral basis.

6.2 Recommendations

After a thorough evaluation of the JSTP process, the following points for further improvement of the program emerge:

- The assessment process should definitely be improved. Thereby more transparency is key: it should be clear both to researchers who were granted as well as those not granted, how their proposal scored on which criteria, and thus why they were or were not selected. This could also remove the feeling among researchers that there is an imbalance in the Chinese and Dutch contribution to the assessment process. Clearer communication of the criteria beforehand, including the relative importance of e.g. scientific quality and Sino-Dutch cooperation, will also enable researchers to better prepare applications. In addition, the situation where a project that is not selected by the Program Committee, is funded anyway, should be avoided.
- The timeline should be improved, focusing on two points. There should be a better balance between the time researcher applicants are allowed to write their research proposal and their rebuttal to the peer review, and the time project partners take to decide on which projects are funded. Secondly, there should be considerable effort to minimise delays in funding.
- The above issues (assessment process and timeline) call for better communication between project partners, and for better communication towards the researcher applicants. Regarding the latter: in the survey the suggestion of a 'track&trace' system is mentioned, an online portal where you can find the current status of your application and when future decisions will take place.
- We find that JSTP, up until now, has mainly succeeded in strengthening existing research collaboration, rather than leading to new research collaboration. Given that JSTP's primary objective seems to be both sustain existing as well as stimulate new research collaboration, the focus for the coming years should be on the latter. This could either be done by choosing themes in which Chinese and Dutch researchers do not cooperate traditionally, or by selecting new cooperation over existing cooperation during the assessment procedure.
- The call for Thematic Dialogue Seminars should be communicated separately from the Joint Research Proposals (which in any case is the project partners' intention for the upcoming call), and perhaps also among a broader audience (the social sciences) as the focus of the seminars is not restricted by the yearly theme. Might this result in more proposals for seminars, these should not be funded at the expense of the networking workshop, which seems a welcome addition and should be continued.
- With only one Thematic Dialogue organised, the added value of these seminars to JSTP can hardly be assessed. We find that the potential added value is mainly felt by CASS and not so much by the other project partners. From this perspective, it seems logical to evaluate the added value of the seminars once more in a few years. If the interest in, or the added value of (see also the next bullet) the dialogues is still low, partners should perhaps reconsider this modality as part of JSTP.

- The input from researchers on future themes is quite indirect or even absent. At NWO, ideas for future themes are formulated bottom up, i.e. by the NWO divisions, which have strong ties with researchers. On the Chinese side, researchers seem to have hardly any influence on the choice of themes. If the project partners want to strengthen this, it could be an option to organise a yearly foresighting workshop for researchers, with the specific aim to come up with possible future themes, or bring more focus within predefined themes (water, health care). If the interest in the thematic dialogues remains lower than expected, such a workshop could be a replacement.
- The demands for mid-term and final feedback reports by the researchers to the project partners, should be better coordinated and be made more comparable among project partners - not only to prevent questions among researchers, but also from an evaluation point of view. To find out whether the program has lived up to its main objective, namely to stimulate (sustainable) research collaboration between the Netherlands and China, one should at least keep a close watch on the Sino-Dutch cooperation activities taking place.

Focus should for instance be on:

- The type of cooperation activities that are undertaken, preferably using predefined categories, making the research projects comparable.
- The intensity of collaboration, based on the number of researchers participating and the time they spend on this.
- The (expected) continuation of research collaboration after finishing JSTP.
- On the Dutch side, there should be sufficient focus on dissemination of the program's future result.

6.3 In conclusion

JSTP is seen as a next step in the research cooperation between China and the Netherlands, making this cooperation less fragmented (more partners involved) and more focused on joint research. Given the positive feedback received from partners as well as researchers, the continuation of JSTP seems a logical choice. Taking into account the above points for improvement, the program seems to be the right way to further intensify relations between Chinese and Dutch scientists.

Annex 1 - Literature

<ul style="list-style-type: none">• <i>Convenant inzake wetenschappelijke samenwerking Nederland en China</i>
<ul style="list-style-type: none">• JSTP Call for Proposals 2009
<ul style="list-style-type: none">• JSTP Call for Proposals 2010
<ul style="list-style-type: none">• JSTP Implementation Plan 2009
<ul style="list-style-type: none">• JSTP Preliminary Progress Report 2009-2010
<ul style="list-style-type: none">• Minutes of the Assessment Committee meetings:<ul style="list-style-type: none">○ 1st meeting, August 17th 2009 (incl. proposal scores 2009)○ 2nd meeting, August 13th 2010 (incl. proposal scores 2010)
<ul style="list-style-type: none">• Minutes of the Program Committee meetings:<ul style="list-style-type: none">○ 1st meeting, February 24th 2009○ 2nd meeting, May 14th 2009○ 3rd meeting, August 20th 2009○ 4th meeting, September 13th 2010
<ul style="list-style-type: none">• Overview of bilateral collaboration in science and technology (S&T) between EU Member States and China. Compilation by the S&T Section, EU Delegation in China. January 2011.

Annex 2 – Interviewees

For this research project, a total of 12 interviews were conducted, involving 18 persons. Six interviews took place in China, six took place in the Netherlands.

Name	Organisation
<i>Interviews in China</i>	
• Fang Qiang	Chinese Academy of Sciences
• Wang Lei, Shi Xuehua & Liu Yingxiang	Chinese Academy of Social Sciences
• David Pho & Ma Qing	Dutch Embassy
• Philippe Vialatte	EU Delegation in Beijing
• He-Qing Huang	Institute of Geographical Sciences and Natural Resources
• Xing Jijun & Dai Qian	Ministry of Science & Technology
<i>Interviews in The Netherlands</i>	
• Bibiane Etty	Ministry of Education, Culture & Science
• Jan Karel Koppen & Saskia Matheussen	Netherlands Organisation for Scientific Research
• Mark Schmets & Maarten de Zwart	Netherlands Organisation for Scientific Research
• Annemarie Montulet	Royal Netherlands Academy of Arts and Sciences
• Ed Noort	Royal Netherlands Academy of Arts and Sciences
• Coen Ritsema	Wageningen University & Research Centre

Annex 3 – Survey

The survey was distributed among 88 PIs (Principal Investigators) whose work e-mail address was known. After sending out two reminders, the response to this survey came to 64%, see also the table below.

	Population (#)	Response (#)	Response (%)
Chinese	41	27	66%
Dutch	47	29	62%
Total	88	56	64%



Contact:

Dialogic
Hooghiemstraplein 33-36
3514 AX Utrecht
The Netherlands
Tel. +31 (0)30 215 05 60
Fax +31 (0)30 215 05 95
www.dialogic.nl

