

# Summary of the Mid-Term Report by ETHZ on the Sino-Swiss Science and Technology Programme (SSSTC) <http://www.global.ethz.ch/stc/china/>

## Goals

**Pilot Phase 2004-2007:** The Sino-Swiss Science and Technology Cooperation program (SSSTC) started in 2004 as a pilot program. During this phase the “Leading House” (LH) concept was tested, in order to be then officially launched by the State Secretariat for Education and Research (SER) in 2008. Selected as the LH for the SSSTC, ETH Zurich received a budget of CHF 1 million to try out potential modes of cooperation with China. In this pilot phase, three instruments were employed: annual Sino-Swiss Cooperation Symposia (3 were held covering research areas of biotechnology, environment/sustainability and materials science), Research Fellowship Program (three calls for proposals were launched; 23 fellowships were granted in total), and Workshop Program (9 workshops in biotechnology and environment/sustainability were funded).

**Action Phase 2008-2011:** Based on the positive feedback, a substantial increase of resource for the period 2008-2011 (Swiss budget: CHF 8.8 mio) has allowed SSSTC to support a higher number of projects and a wider range of activities. In addition to retaining ETH Zurich as the LH, the University of Zurich (UZH) was appointed as the Associated Leading House (ALH). The goals for the action phase SSSTC are:

- To strengthen the academic ties between Switzerland and China through research and education collaborations,
- To increase the contact between Swiss and Chinese universities/research institutions through faculty and student exchanges, and
- To encourage long-term institutional cooperation between Swiss and Chinese universities.

The instruments are Joint Research Projects (JRP), Institutional Partnerships (IP), and Exchange Grants (EG). Priority areas for the period 2008-2010 are life sciences/biotechnology, environment/urban development and sustainability, materials science, and medicinal sciences. JRP is restricted to the priority areas while all other instruments are open to all disciplines.

## Achievements

In a nutshell, despite the initial skepticism, the SSSTC has become a success story. Politically, both governments consider the program beneficial and have diligently promoted the program. Many high-level visits between China and Switzerland have confirmed the program as a governmental framework program and ensured the funding of the program. Scientifically, the earmarked funding provided the resource needed for expanding the contact between Swiss and Chinese researchers. This in turn, strengthened the ties between scientists in the two countries. In conclusion, the visibility of the SSSTC has increased significantly over the past two years, and the SSSTC program has been an effective promotion tool for Switzerland and a door opener for Swiss S&T.

### The SSSTC Has Broadly Involved Swiss Universities and Research Institutions

Although the ETH-domain institutes had initially dominated the playing field, by the end of 2009 this is no longer true. Many universities (including universities of applied sciences, UAS) actively took part in the program. --- The distribution of projects awarded (Table 1) attests to this claim:

Table 1 - Distribution of SSSTC Awards among Swiss institutions (as of Jan. 2010)

	EPFL	ETHZ	BS	BE	FR	GE	LA	LU	NE	ZH	SG	TI	Research Institutes	UAS	Others	Total
No. Received	7	15	3	3	4	6	4	1		23		1	5	4	4	80

## Increased Visibility of the SSSTC

A record number of applications were received in March 2010. It is assumed that this is a result of an increased awareness and visibility of the program. It is noticeable that there is a jump in the number (20 in total) of applications in social sciences. As a result of this large number of applications, the funding allocated for the Exchange Grants was depleted unexpectedly early, and a redistribution of the funds allocated for different instruments had to be made.

## Participation in China

In China, 24 universities, 11 academy of sciences branches, and 5 hospitals had participated by the end of 2009. Although there is a concentration of participation in the Beijing and Shanghai area, the geographical locations of the participants are distributed throughout the country.

Between 2008 and 2010, there is an increase in contacts between Chinese and Swiss universities. This is partly demonstrated by the number of inter-institutional agreements signed (see the appendix) during this period. It is assumed that some of the new cooperation occurred due to the promotion of the SSSTC, which is one of the major goals of the program.

## Industrial Involvement in the Program

Although desired, the participation of industry did not materialize. A new instrument has therefore been designed to encourage the enterprises in joining the program. Namely, the LH is now setting up a program providing internship positions for Swiss students in China. Workshops in autumn 2010 are also planned in Switzerland and China to bring scientists and potential industrial partners together. The intention of the LH is to involve the private sector from bottom-up and work out together suitable instruments for public-private partnerships in the coming years.

Finally, although not reflected on paper, many Swiss universities and research institutes have invested a good amount of “in-kind” support.

## Outlook

Although the program goal has largely been achieved (i.e., to encourage scientific collaboration between Swiss and Chinese researchers), we consider the program potential not yet optimally exploited.

In order to build on what the SSSTC has achieved between 2008 and 2010, it is important that a strategic decision be made concerning the future goals of the program. The current phase has generated an invaluable asset: a list of scientists who are interested in an engagement in China. Consequently, one can gain an insight in where synergy may be created through Sino-Swiss research cooperation. Beyond the traditional JRP and Exchange Grants, the LH and the ALH suggest making use of the knowledge gained to encourage targeted scientists to build up larger research consortia. Such consortia would be more likely to attract industrial attention and be better positioned to accomplish multi-disciplinary projects.

## Appendix

### Agreements Signed Between 2008-2010

ETH Zurich:

- South East University Nanjing, School of Architecture renewed in 2009
- Chinese Academy of Sciences, renewed in 2009
- Tsinghua University, student exchange started in 2009
- Wuhan University, 2008

UZH:

- Fudan University, Economy, 2008
- Fudan University, university wide, 2008
- Tsinghua University, Economy, 2008
- Tsinghua University, Law, 2009
- Tsinghua University, Arts, 2008
- University of Hong Kong, Law, 2008
- University of Hong Kong, Medicine, Deanary, 2009
- University of Hong Kong, Medicine, Psychiatry, 2008
- Central Nationalities University (Minzu University of China), Arts, 2008
- Shanghai Second Medical University, Medicine, 2009
- Beijing Normal University, 2009
- Chinese Academy of Social Sciences, 2009
- Peking University, 2009

UGe:

- Beijing Foreign Studies University
- East China Normal University (ECNU): new program for doctoral students funded by the Project 985.

UniL:

- Peking University : Renewal of the MoU, 2009
- Hong Kong University : Renewal of the MoU, 2010

Uni Bern:

- Wuhan University
- Delegation Vizebildungsministerin China
- Shanghai Urban Construction Engineering School
- Hubei University
- Harbin Engineering University
- Xi'an University of Technology

Uni Luzern:

- Nanchang University (MoU/Exchange Agreement)
- Heilongjiang University, Harbin (MoU)
- Central University of Finance and Economics (CUFE), Beijing

EPFL:

- Xi'an Jiaotong University
- Tongji University

Launching of New Programs Between 2008-2010

UZH:

- Double Degree Master Programme of the Faculty of Law of the University of Zurich / Faculty of Law of the University of Hong Kong
- Fudan University: collaboration in executive MBA program

EPFL:

- Shanghai Jiaotong University.-lab of Tunnelling EPFL (2008), Cooperation for the MAS in Tunnelling
- Executive MBA - MoT program in Shanghai (2009)
- Executive Master in e-Governance in Beijing (2009-2010)
- Titular professors : Prof. Hubert Girault(Fudan) and Prof Florian Wurm(Jinan)