



**IN-SHP**

International Network on  
Small Hydro Power



# Annual Work Report

2008

International Network on Small Hydro Power  
(IN-SHP)

Hangzhou China

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## Message from the Director General of IN-SHP

Small Hydro Power (SHP) is a proven, clean, environmentally sound form of energy with a great potential to solve rural electrification problems and promote poverty-alleviation in remote rural areas. According to the policy of “self-construction, self-management and self-consumption”, a rural population of over 30 million in China has benefited from electrification through SHP. China’s small hydro power practice has also set a model for the sustainable development of one third of the world’s population, namely the 2 billion people who currently have no access to electricity.

Co-sponsored by UNDP and UNIDO, and the Chinese government, the International Network on Small Hydro Power was created in 1994 as a result of multilateral negotiation among member organizations. The headquarters building for IN-SHP was constructed within a record time of 10 months with funding from the Chinese government and inaugurated in 1998. With the approval of the State Council of China, the hosting country of IN-SHP in 1999, IN-SHP became the first international institution to ever be established in China. The following year, the legal status of the International Center on Small Hydro Power (IC-SHP) was established under the auspices of UNIDO and with an official Trust Fund agreement between the government of China and UNIDO.

In 2008, IN-SHP organized and attended international conferences and training workshops, we applied for and

implemented multilateral programs, and

promoted bilateral cooperative activities. We strengthened collaboration and communication with international organizations while serving our host country China.

The success of IN-SHP in all these activities has created a unique form of international “triangular” cooperation between developing countries, developed countries and international organizations. IN-SHP has developed a spirit among its members and staff, which is characterized by ‘strong enthusiasm, hard work and commitment, irrespective of the obstacles ahead’. It is a splendid result of all the Chinese people’s participation in SHP building, inspired by the Chinese government, under the leadership of late Mr. Deng Xiaoping. This also signals a new landmark for SHP development worldwide. For the past twelve years, people around the world have devoted themselves to their beloved SHP career and helped promote SHP. On behalf of IN-SHP, I wish SHP in the world a prosperous future.



*Prof. Liu Heng  
Director General of IN-SHP*

## **2008 Events in Brief**

INSHP has initiated, organized and promoted cooperation activities among the members in the areas of Training, Consultation & Technical Advice and Exchange of Visits, etc.

### **International Conferences and Training Workshops**

#### 1) April 21-May 5, 2008 Hangzhou, China

The Seminar on Small Hydro Power and Sustainable Development of Rural Communities for officials of developing countries was successfully held under joint sponsorship of the Ministry of Commerce (MoC) of China and International Center on Small Hydro Power (IC-SHP) with 46 officials from departments of energy and water conservancy of 25 Asian and African developing countries. Aimed to promote global development of hydro power, representatives discussed the contribution that small hydro power made for promotion of sustainable development in rural communities and the successful experiences that China achieved in the field. In addition, representatives also exchanged opinions on how to take advantages of small

hydro power by every possible means to promote local socioeconomic development in developing countries.

#### 2) May 18-21, 2008 Brazil

The Global Renewable Energy Forum was held under joint sponsorship of United Nations Industrial Development Organization (UNIDO), Ministry of Mines and Energy of Mexico and ITAIPU Power Company in Brazil. Totally 1500 participants attended the forum and discussed development of renewable energy including small hydro power. IC-SHP delegation attended the forum and made special speech. Besides, IC-SHP representatives communicated extensively with participants and paved the way for future cooperation on related projects.

#### 3) September 16 – 19, 2008 Abuja, Nigeria

The 4<sup>th</sup> Hydro Power for Today Forum was held in conference hall of the Economic Community of West African States (ECOWAS) in Abuja, Nigeria. This forum was jointly sponsored by the Ministry of Water Resources of China (MWR), Nigeria Government, African Union, Economic Community of West African States (ECOWAS), UNIDO and IC-SHP, co-sponsored by IC-SHP and Nigeria Sub-center of IC-SHP. 13

Chinese representatives from MWR, IC-SHP as well as IC-SHP Chenzhou and Jinhua Bases attended the forum. Besides, more than 120 representatives from over 20 countries including Nigeria, Cote d'ivoire, D.R.Congo, Ghana, Kenya, Liberia, Madagascar, Mali, Niger, Tanzania, Nepal, India and Tunisia participated the forum. This forum was focused on opportunities and challenges for SHP development of African countries. SHP development is affirmatively appreciated for its unique role on economic promotion, social development and environment protection. Participants communicated and exchanged experiences in SHP strategy, policy support, technical popularization and potential cooperation. Furthermore, on the basis of poverty alleviation and environment protection, participants reached agreement on cooperation for African and International SHP promotion.

4) October 3 – November 3, 2008  
Stockholm, Sweden

The Training Workshop of Hydro Power Development and Management was held by Sweden Vattenfall Power Consulting Co., Ltd with sponsorship of Sweden International Cooperation and Development Agency in Stockholm, Sweden from October 3 to November 3,

2008, IN-SHP sent representative for participation.

5) November 10 – 12, 2008  
Soul, Korea

The First Regional Workshop on Eco Efficient Water Infrastructure in Asia was held under joint sponsorship of United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and Construction and Technology Center of the Ministry of Environment of Korea in Soul on November 10-12. The workshop aimed to call together the experts and policy-makers from related agencies as well as research institutions of water infrastructure to discuss and share experiences, knowledge and achievements in the field of water infrastructure construction, promoting improvement of policy and strategy in Asia-Pacific region as well as inter-government cooperation on eco efficient water infrastructure. More than 40 government officials from over 20 Asian-Pacific countries attended the workshop. IC-SHP sent expert to participate the workshop and made a speech titled Carbon Finance and Water Infrastructure: Status and Potentials.

## **Multilateral Program Application & Implementation**

### **G77 PGTF Project Implementation**

1. Implementation of the G77 project Building National Clean Development Mechanism (CDM) Capacity of Developing Countries to Effectively Harness Small Hydro Power which is under final evaluation at present.

2. The project proposal on Fee-for-Service Pico Hydro: Model for Providing Power to Remote, Low-income Households submitted by IC-SHP has been proved and will come into force by signature in 2009. All activities are under preparation at present.

3. In 2008, IC-SHP submitted new project proposal on Poverty Alleviation through SHP Promotion in African Countries: Field Visit, Sites Identification, Feasibility Studies and Workshops.

### **Lighting up Rural Africa Program**

Lighting up Rural Africa Program (LURA) will be implemented by applying new model of combination of multilateral and bilateral cooperation. On the basis of cooperation with African

governments, IC-SHP experts have already completed the site selection and reconnaissance with collaboration of Ministry of Commerce of China and UNIDO. The LURA program plans to construct 100 pico in rural areas in 10 African countries including Cameroon, Ethiopia, Kenya, Liberia, Mali, Nigeria, Uganda and Zimbabwe. Besides, two SHP stations with installed capacity of 1 MW for each will be constructed for demonstration in Zambia and Sierra Leone respectively. The LURA program is supported by the Ministry of Commerce of China and UNIDO, IC-SHP will provide technical assistance. In September 2008, Chinese premier Wen Jiabao delivered a keynote speech at the U. N. High-Level Meeting on the Millennium Development Goals (MDGs) at the United Nations headquarters in New York, committing that in the coming five years, China will develop 100 small-scale clean energy projects for developing countries, including small hydropower, solar power and bio-gas projects. That's the continuation and extension of the LURA program. The implementation of the LURA program will bring about long-lasting and far-reaching influence among African people, symbolizing the positive role that Chinese water conservancy industry plays for global SHP development,

which is of dramatic significance in political, economic and diplomatic fields. Furthermore, the LURA program will deepen Sino-Africa cooperation and build up harmonious world, explore further the African market and benefit African people as well as extend Chinese political influence internationally.

On November 6, 2008, Mr. Chen Deming, Minister of Commerce, on behalf of Chinese government and Mr. Yumkella, visiting Director-General of UNIDO, signed agreement on cooperation of Sierra Leone Port Loko SHP project. This event symbolized official kick-off of the LURA program and great support that Chinese government contributed. UNIDO places dramatic emphasis on SHP cooperation with China, as the experiences and practice China achieved in the field will contribute significantly to development of clean renewable energy for other developing countries.

In the framework of LURA program, IC-SHP, at witness of UNIDO in September 2008, signed agreement with the Ministry of Energy of Zambia and ZESCO Limited on cooperation to construct SHP project with installed capacity of 1 MW in North Province in

Zambia.

### **Promotion of Bilateral Cooperative Activities**

1) In February 2008, IC-SHP sent delegation of experts to Zambia and Sierra Leone for site selection and reconnaissance. Besides, IC-SHP worked closely with project owners for feasibility study and discussed the implementation of the SHP projects.

2) On May 25-30, 2008, IC-SHP delegation visited Guatemala. The delegation visited and had talks with AGRE, the Ministry of Nature Resources and Environment, the Ministry of Electrification, the Ministry of Mine and Energy as well as National Electric Commission for future potential cooperation. This visit prepared and paved the way for exportation of Chinese SHP equipment to benefit the local SHP development in Central America.

3) In 2008, IC-SHP coordinated to export SHP equipments for four small hydro power stations in Nigeria and Brazil. Besides, IC-SHP assisted to provide planning for equipment installation of an Armenia station with capacity of 700 KW. The project is

under negotiation at present.

4) On July 1, 2008, the Kenya delegation headed by Mr. K. Murungi, Minister of Energy, Republic of Kenya visited and had meeting with IC-SHP on cooperation between Kenya SHP industry and IC-SHP. Mr. K. Murungi hoped IC-SHP organize Chinese SHP equipment manufacturers to participate the Kenya SHP/RE program in the future five years and invited Chinese investors to develop SHP as well as establish joint venture in Kenya. IC-SHP is keeping close contact with Kenya to finalize the cooperation at present.

5) On February 21 to March 12, 2008, IC-SHP organized experts for further survey of proposed sites in Zambia and Sierra Leone and conducted deep-going discussion with project owners to finalize the implementation. On September 21-27, 2008, the delegation of Ministry of Energy of Zambia and ZESCO Limited visited IC-SHP for finalization of details of project implementation and signed drafted agreement.

### **Strengthening collaboration and communication with international organizations**

#### **Strengthening communication with UNIDO**

1. On July 20, 2008, the visiting UNIDO delegation headed by Mr. Wilfried LUETKENHORST, Chief of Cabinet and Director of Organizational Strategy and Learning held a meeting with IC-SHP for cooperation between UNIDO and IC-SHP.

2. On July 31, 2008, Mr. Sajjad Ajmal, UNIDO Representative in China visited IN-SHP and had a meeting with Prof. LIU Heng, Director General of IC-SHP. Mr. Sajjad Ajmal and Prof. LIU hold a warm talk in harmonious atmosphere on future cooperation between UNIDO and IC-SHP.

3. On December 1-5, 2008, Prof. LIU Heng, Director General of IC-SHP visited UNIDO headquarter in Vienna Under the invitation of UNIDO. Through the visiting, IC-SHP implemented the follow-up activities after Minister Chen Lei's visiting to UNIDO and exchanged opinions on development strategy as well as project cooperation of SHP filed and LURA program at next stage. Furthermore, IC-SHP and UNIDO discussed the issues of strengthening capacity building of IC-SHP.

#### **Cooperation with UNESCAP**

IC-SHP has been established for international coordination and

promotion for the global development of small hydropower. UNESCAP has been a mandate to support and promote sustainable development through regional cooperation. Aimed to further promoting sustainable development in the Asia-Pacific region, IC-SHP and UNESCAP had drafted MoU to work together to promote regional cooperation through enhanced utilization of small hydro power in Asian and the Pacific region. IC-SHP and UNESCAP shall cooperate for promotion of sustainable development through enhanced utilization of small hydro power as clean development mechanism (CDM) in Asian and the Pacific region.

### **Serving the Host Country**

ICSHP also serves the hosting country by promotion of technical and information exchange between China and other countries through:

1) Continuous application of CDM projects. Several SHP projects located in Shanxi, Hunan, Yunnan and Guangdong provinces are under process of CDM application, which make smoothly progress. The Laopokou and Qinan SHP projects which are under process of registration will be approved by National Development and Reform Commission, Ministry of

Technology and Ministry of Foreign Affairs. Apart from that, other SHP projects which apply for CDM are under evaluation of Project Approval Commission of National Clean Development Mechanism. Furthermore, IC-SHP is conducting study on emission reduction and exploring approaches to carry out cooperation with international organizations in order to constantly promote Chinese SHP's participation of CDM as well as SHP development by utilizing foreign funds.

2) Positive industrial management. On June 26-27, 2008, the 17<sup>th</sup> annual meeting of China National Association of Medium-Small Hydro Equipment Manufacturers was held in Changsha, Hunan Province. More than 60 representatives from over 40 membership organizations including water conservancy industry, equipment manufacturers and enterprises, scientific research institutions as well as universities and colleges attended the meeting. Mr. Liu Zhong, Deputy Director of Bureau of Rural Electrification of MWR and Mr. Li Xuehui, General Director of Bureau of Rural Electrification of Hunan Provincial

Bureau of Water Conservancy attended the meeting and delivered guidelines as well as speeches. The annual meeting summarized the work in 2007, stipulated enterprise evaluating standards and promoted

potential international cooperation for memberships.

The above activities greatly increased mutual understanding in this field, and opened up opportunities for cooperation and joint venture.

## IN-SHP Profiles

IN-SHP aims at the promotion of global SHP development through triangle technical and economic cooperation among developing countries, developed countries and international organizations, hence to supply rural areas in developing countries with environmentally sound, affordable and adequate energy, which will lead to poverty alleviation, economic development, the increase of employment opportunities, the improvement of local living standards, and improvements in the ecological environment.

Co-sponsored by United Nations Organizations (UNDP and UNIDO) and

the Chinese government in 1994, and as a result of the multilateral negotiations among member organizations, the International Network on Small Hydro Power was created. The headquarters building for IN-SHP was constructed and inaugurated for use in 1998, with funding from the Chinese government. The approval of State Council of China, the hosting country of IN-SHP in 1999, made IN-SHP as the first international institution to have ever been established in China. The following year, the legal status of the International Center on Small Hydropower was approved by the Central Institutional Commission and, with an official Trust Fund agreement between the government of China and UNIDO, a new part of IN-SHP, the International Center on Small Hydro Power (IC-SHP) came under the auspices of UNIDO.



## *Abbreviations:*

CC: *Coordinating Committee of IN-SHP*

CICETE: *China International Center for Economic and Technical Exchange*

CIM: *Center for International Migration and Development, Germany*

G77: *Group 77*

GO: *Governmental Organization*

HIC: *Hangzhou International Center of IN-SHP*

IC-SHP: *International Centre on Small Hydro Power*

IN-SHP: *International Network on Small Hydro Power*

MOFTEC: *Ministry of Foreign Technical & Economic Cooperation, China*

MWR: *Ministry of Water Resources, China*

NGO: *Non-Governmental Organization*

PGTF: *Perez-Guerrero Trust Fund for Economic and Technical Cooperation among  
Developing Countries of the Group 77*

SHP: *Small Hydro Power*

TCDC: *Technical Cooperation among Developing Countries*

UNIDO: *United Nations Industry Development Organization*

CDM: *Clean Development Mechanism*