China’s Practice on Inclusive Innovation

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Outline

China’s Practice on Inclusive Innovation
Poverty alleviation by S&T
Agriculture and rural economy
Social development
Ecology protection

Challenges of developing inclusive innovation in China
China’s practice on poverty alleviation by science and technology started from 1980’s and had been much updated and improved after three decades of development. This can be divided into five stages:
How does this program operate?

**Policy and Plans**
- The 10th and 11th Five-Year National Development Plan on poverty alleviation
- Poverty alleviation policy made by the local governments

**Initiatives**
- MOST: poverty alleviation demonstration, S&T in promoting special industries, S&T information in poverty alleviation, S&T training and so on.
- Local: S&T correspondents in rural areas, expert courtyard and other modes; Plans such as Spark Training, Green Certificates, Agricultural technology training projects and so on.

**Input**
- Joined by Chinese government, kinds of associations, foreign organizations and enterprises
Assignments of this program

Environment Construction
- Poverty alleviation capacity-building of the information communication technology
- “12396 service” in the Spark Plan by MOST
- Information service station in rural area by Ningxia Province

Demonstration and Promotion
- Science and technology Demonstrations in the rural villages
- Promoting technology application through S&T correspondents

S&T in improving people’s livelihood
- Introducing the "Golden Sun Demonstration Project" into rural areas
- Promoting the National Data Platform for Population Health
- Developing the environmental project of clean water and other environmentally friendly technologies

S&T popularization and training
- Hubei Province: Practice base of talents
- Shaanxi Province: Green Certificates Project
- MOST: S&T on-line classroom
New Strategy of poverty alleviation by S&T

Background: At the end of 2011, a new poverty alleviation strategy was formulated by Chinese government and poverty alleviation by S&T through centralized continuous areas become an new important method.

- Poverty alleviation by development
- Attaches great importance to S&T

- 14 typical centralized continuous areas become the new key point
- Regional development and poverty alleviation grow together
14 centralized continuous impoverished areas of China
The effect of this new strategy: broaden target group

The scope of the program

- National-level
  - 592 poverty counties of the state
  - 680 poverty counties of the continuous impoverished areas

- Local-level
  - 831 at the national level
  - the 4 centralized continuous impoverished areas in Yunnan province cover 80% of the impoverished population
  - the 3 centralized continuous impoverished areas in Guizhou province cover 85% of the impoverished population and villages
• The experience of this program

New strategy and new cooperation

- Ministry--Local: Interact in making plan and implement
  - continue to use and promote the mature modes
  - poverty alleviation by governments’ programs, enterprise and society collectively
  - transform from impoverished counties and villages to centralized continuous areas
2 Inclusive Innovation Practice on agriculture and rural economy

- **Spark Program** (1986)
- **The Innovation Fund for SME of S&T** (1999)
- **S&T correspondent action for rural areas** (2001)
- **National S&T Park of Agricultural** (2002)
- **Transformation Fund for Agricultural S&T Outcomes** (2005)
- **Program of Rural County Enrichment by S&T** (2007)
Background and Objectives of the Spark Program

• The rural industry and agricultural economy was developing rapidly in 1980's throughout China. During that time, farmers became increasingly aware of the importance of S&T in specialization and commercialization of agriculture.

• Particularly, it is important for China to solving the problems of agriculture, rural areas and farmers to realize modernization. In order to meet the needs of rural productivity development and economic system reforms, Chinese government has begun to implement the “Spark Plan" since 1986.

• Objectives: to promote the technology progress of township enterprises, improve the rural industrial structure, and encourage the transformation of rural economic growth mode and finally speed up the process of rural industrialization, modernization and urbanization.
Main content of Spark Program
Achievements of Spark Plan
3 Inclusive Innovation Practice on Social Development

- Improving people’s livelihood is basic principle and priority of all work of government. Application and promotion of S&T in social areas is an important way of improving public welfare and quality of life. Ministry of S&T and Ministry of Finance launched and implemented **S&T Program for Public Wellbeing** (STPPW) in June 2012.

- The program focuses on technological promotion in social area, and through the program, people could enjoy the benefit of S&T innovation and progress.

- Grass-root Oriented:
  - Support commercialization and application of advanced technology in grass-roots;
  - Support technology integration and demonstration in key areas of broad masses, especially in public services.
Key Areas of this program
Primary work and achievements

• Build information and service platform for S&T supplier and user. For example, published ‘STPPW advanced S&T guidance and directory’ which collected 3800 S&T achievements in three key areas.

• Integrate and demonstrate appropriate technologies to improve people’s livelihood. For example, in year 2012, 23 projects have implemented which benefit 23 million masses.

• Play the role of central finance of guiding and attracting local government finance and social funds to invest in public livelihood area. In 2012, total government investment in STPPW was 1 billion Yuan.

• Explore new mechanism of S&T commercialization and promotion in social areas.
CASE: Membranes technology application in drinkable water for Hainan rural areas

◆ Hainan Province was surrounded by sea. Many villages locate on rocks, it’s difficult to get groundwater, and the contents of iron, manganese, fluoride exceed standards of drinkable water.

◆ Hainan LiSheng Water purification Technology Industrial Co., Ltd. developed “PVC alloy capillary ultrafiltration membrane technology” which could remove harmful substance in the water and persist minerals and microelements with low costs.

◆ Project began in 2012, central and local government have funded 337 million Yuan. 116 drinkable water systems have been installed in Hainan rural areas, and 169 thousand rural people get benefit from the project.
4 Inclusive Innovation Practice on Ecology and Environment Area

- **1986**: The S&T action to response to climate change
- **2000**: The action plan for energy saving and emission reduction
- **2006**: National sustainable development experimentation area
- **2008, 2013**: R&D and demonstration based on National S&T Plan

**Laws and Regulations**

- **Law of Forest Protection** 1985
- **Law of Environmental Protection** 1989
- **Law of Clean Production** 2003
- **Law of renewable energy** 2006
- **Law of Energy Saving** 2008
Case: National sustainable development experimentation area (NSDEA)

◆ Background:

• NSEDA was carried out by the former state science commission, the former State Planning Commission and local governments in 1986.

• The aim of NEDEA is to enhance the sustainable development ability in the experimentation area relying on scientific and technological progress.

• It includes mechanism innovation and system construction and explores the mechanism and mode of coordination of economic, social and environmental development, so as to provide models for different types of area to implement the strategy of sustainable development.
Methods

• Action for conservation-oriented society
  – To carry out conservation oriented government agencies, enterprises, organizations and families, to save energy, water, land use, materials in the production, construction, circulation, consumption areas relying on scientific and technological progress.

• Action for Environment friendly society
  – To control the toxic and harmful gas emissions, implement waste management, accelerate the resource utilization and harmless treatment of urban garbage reduction, to promote pollution control market-oriented industrialization.

• Action for harmonious society
  – To create a safe community, green community, harmonious community activities, improve the degree of organization in the rural area, strengthen the improvement of agricultural production technology service system, improve rural living environment In the experimentation area.
Effect of this program

Up to early 2012, there are 131 NSDEAs in China, including 13 National Sustainable Development Advanced Demonstration Zone. The establishment of provincial sustainable development experimentation areas are more than 180. NSDEAs combined with the local characteristics, have explored new models to reduce and eliminate unsustainable patterns of production and consumption.

• In industrial area, the cleaner production system has been established.
• In agricultural area, circular agriculture system has been established to improve the ecological environment.
• In the field of social undertakings, it focuses on strengthening the social service function, and the "minimal discharge community" has been implemented.
Capital Steel Group (CSG): Relocation

• CSG located in Beijing City, Shijingshan District with 90 years of history, is one of the world 500 strong enterprises. GSC have occupied a large proportion in the total economy in Beijing. Combined with the construction of Shijingshan District NSDEA, GSC has been a leading large-scale iron and steel enterprise in relation to the development of green high performance.

• In 2010, CSG stopped the production in Beijing’s factory area. After a year, it reduced the amount of 3264 thousand tons of coal combustion, and sulfur dioxide and nitrogen oxide emissions were reduced by 15461.9 tonnes and 11849.3 tons. CSG reorganized 5 steel enterprises in the other area full of nature resources and near to market. The new steel enterprises are completed established in 2010 with international top-ranking technology equipment.

• The original factory area in Beijing focus on the development of high-end metal materials, high-end equipment manufacturing, producer services, cultural and creative industries.
5 Challenges of developing inclusive innovation in China

- Coordinating with the current system
- Combining top-down and bottom-up modes
- Develop more adaptive policy and provide additional support
- Policies and methods must be suitable for local economic conditions
Thank you!