

“Greening in China”

--Construction and Agriculture as Examples

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Social Theme Through World Athletics Championships 2015, Beijing



深圳職業技術學院
SHENZHEN POLYTECHNIC



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梦飞翔 乘着梦飞翔

空前来袭，体验全新观影模式



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Theme: Green and Greening



Up-to-date news

- Premier Li Keqiang declared while visiting France last June: Chinese Government has made its self-action target for 2030, i.e.
 - to have CO_2 emission reach the peak by 2030 and try to achieve it as early as possible,
 - CO_2 emission per unit of GDP decrease 60-65% based on 2005,
 - non-fossil energy takes about 20% in energy consumption
 - forest reserve areas increase about 450 million M^3 .

Up-to-date news

- China National Committee for Development and Reform has announced to establish 8 **Experimental Districts/Towns for International Low Carbon Districts/Town**. And Pingdi of Longgang District, Shenzhen is among them. (Zhuhai, Qingdao, Zhenjiang, Wuxi, Kunming, Wuhan and Sanming)
- In 2014, 57 **Eco-culture Experimental Exemplar Districts** have been established

Up-to-date news

- Law for Protection of Air Pollution is under the 3rd deliberation for the revision
- CCCPC and State Council issued on May 5th the Comment on Accelerating the Construction of Eco-culture
-

Outline

1. Situation in China

- Government's Efforts
- In Construction
- In Agriculture
- Training Bodies and Training Policies

2. TVET Actions

- Campus management
- Activities among teachers & students
- Curriculum development

3. Conclusion

Situation in China



Government's Efforts

Situation in China

National Peoples' Congress

State Council/Ministries

Provincial Congress & Govs.

National Peoples' Congress

Sector Committee/Association

Industries/Basic Institutions

Laws

Regulations

Standards

Strategic Plans

Action Plans

Actions

Government's Efforts

- Environment protection, a national basic strategy since 1980s
 - ✓ National Committee of Environment Protection (1984)
 - ✓ the 1st Environment Protection Law(1989)
 - ✓ one of the countries firstly made and implemented strategy for sustainable development after the 1992 UNESCO Conference on Environment and Development
 - ✓ Committee of Environment and Resources of Standing Committee of the China National People' s Congress (1993)



Government's Efforts

- Laws & regulations for protecting environment and natural resources (in the past 3 decades)
 - ✓ Central Government and Provincial government levels
 - ✓ Laws and regulations in system for the protection of environment, natural resources and sustainable growth
 - ✓ Several strategic development plans
 - ✓ "National Action Program for Environmental Publicity and Education (2011-2015)" for resource reservation construction, energy saving, environment-friendly society, ecological civilization and more favorable atmosphere



Government's Efforts—in construction

- Laws and regulations by the China National People's Congress and Central government , such as
 - ✓ Construction Law (1997, 2011 revised)
 - ✓ Law of Urban and Rural Planning (2007,2015 revised)
 - ✓ Law of Energy (1997)
 - ✓ Energy Conservation Law (1997)
 - ✓ Medium and Long-term Planning for Energy Saving (2004) etc. Renewable Energy Law (2005) etc.
 - ✓ Points on Accelerating the Development of Circular Economy (2005)
 - ✓ Announcement on Recent Work for Building a Resource-saving Society (2005)

Government's Efforts—in construction

- Rating and labeling system of green buildings
 - ✓ Announcement on Constructing Energy & Land-saving Residences and Public Buildings (2005)
 - ✓ "Green Building Rating and Labeling Management Method" and "Technical Details for Green Building Assessment" by China Ministry of Construction (2007)

Government's Efforts—in construction

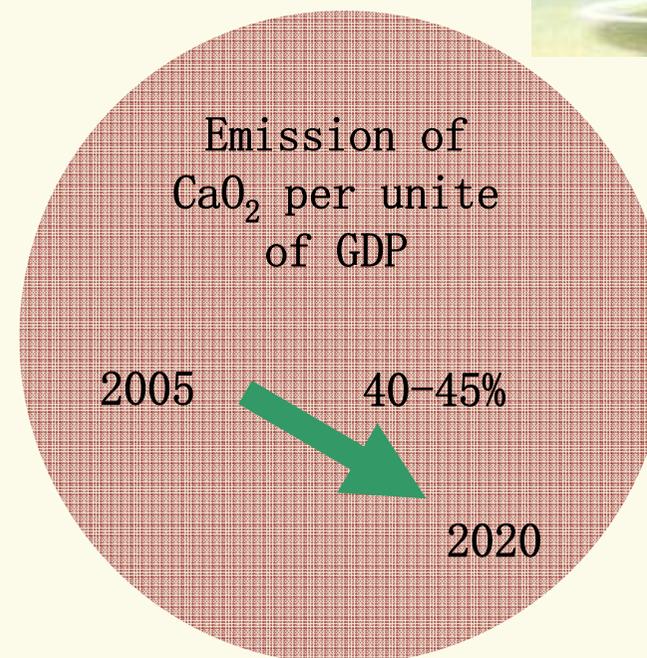
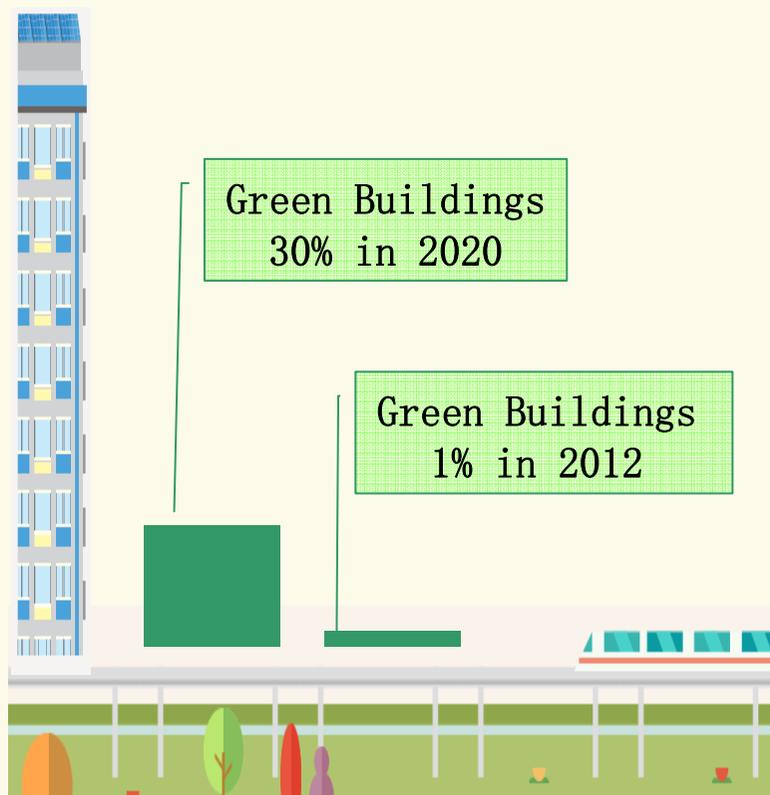
- Rating and labeling system of green buildings
 - ✓ "Technical Guidelines for Building Energy Efficiency Evaluation and Labeling" and "Management Method for Building Energy Efficiency Evaluation and Labeling" by Ministry of Housing and Urban-Rural Development (MOHURD) (2008)
 - ✓ Action Plan for Green Buildings by MOHURD (2013)
 - ✓ National Criteria for Assessing Green Buildings (GB 50378) (2006)
 - ✓ National Certificate for Green Building Consulting Engineer (2012)

Government's Efforts—in construction

- Targets (Central Government Decision)



Situation in China



Data: China Government

Government's Efforts —in agriculture

- Aim: sustainable development of agriculture by 2020
- China National Development Plan for Modern Agriculture by China State Council (2012)
 - 1) Guarantee the safe supply of grain and other major agricultural products
 - 2) By 2020, achieve breakthrough results in development of modern agriculture.

Government's Efforts —in agriculture

- "National Plan for Sustainable Agricultural Development" by China State Council Executive Meeting (March, 2015)
 - 1) Achieve more than 60% of better agricultural technological contribution rate by 2020
 - 2) No less than 533 million hectares of high-standard farmland
 - 3) Achieve 0.55 ratio of effective utilization of irrigation water and realize efficient water-saving irrigation to an area of 19.2 million hectares by 2020.



Government's Efforts —in agriculture

- "National Plan for Sustainable Agricultural Development" by China State Council Executive Meeting (March, 2015)
 - 4) Achieve in main agricultural areas zero growth of chemical fertilizers and pesticides application by 2020, fundamental and comprehensive utilization of cultivation wastes, basic recollection and recycling of agricultural plastic sheeting and pesticide packaging waste, overall utilization of crops straws by 2030

Government's Efforts —in agriculture

- "National Plan for Sustainable Agricultural Development" by China State Council Executive Meeting (March, 2015)
 - 5) Realize over 23% of forest coverage rate and 56% of national comprehensive vegetation coverage of grassland by 2020

Government's Efforts —in agriculture

● Practices:

- ✓ Has established international standard recognition system for organic agricultural products, having issued over 6000 certificates to 6391 production units for 16748 products by 2010
- ✓ Has set up over 2000 different types of Experimental Stands for Eco-agriculture on various levels

Resource: China Country Report on Sustainable Development (2012),
http://www.cusdn.org.cn/news_detail.php?id=218030

Government's Efforts —in agriculture

- Practices:

- ✓ Has started green label and environment label system for some consuming and food products since 1998
- ✓

Resource: China Country Report on Sustainable Development (2012),
http://www.cusdn.org.cn/news_detail.php?id=218030

Government's Efforts —training bodies

- In construction (for example)
 - National Mayor Training Institute (Institute of Cadets, MOHURD)
 - China Civil Construction Training Center
 - China Design and Research Institute of Architecture Standards, Science and Technology Development Promotion Center of MOHURD
 - Human Resource Development Center of MOHURD
 - Qualification Registration Center of MOHURD
 - Research Institute of Standards and Norms of MOHURD

Government's Efforts —training bodies

Situation in China

- It is the sector, association or government bodies that delivers training programmes in “Controlling” the occupations. Take construction for example, qualification and certifications from them control the working posts.



Government's Efforts —training bodies

Situation in China

- In agriculture (for example)
 - Training Department of Central Agricultural Broadcasting and Television School
 - Institute of Management Cadres of Ministry of Agriculture
 - Education and Training Department of China Agricultural Society
 - Research Institute of Agricultural Information of Chinese Academy of Agricultural Sciences



Government's Efforts —training bodies

Situation in China

- In agriculture (for example)
 - Nanjing Research Institute of Mechanization of Ministry of Agriculture
 - Education and Training Department of Human Resources Development Center of Ministry of Agriculture
 - Fruit Tree Research Institute of Chinese Academy of Agricultural Sciences



Government Efforts—training policies

Situation in China

- Take training before get into work
- Work with certain certifications/qualifications
- Annual re-training requirements

TVET Actions

-take SZPT as an example



TVET Actions –campus management

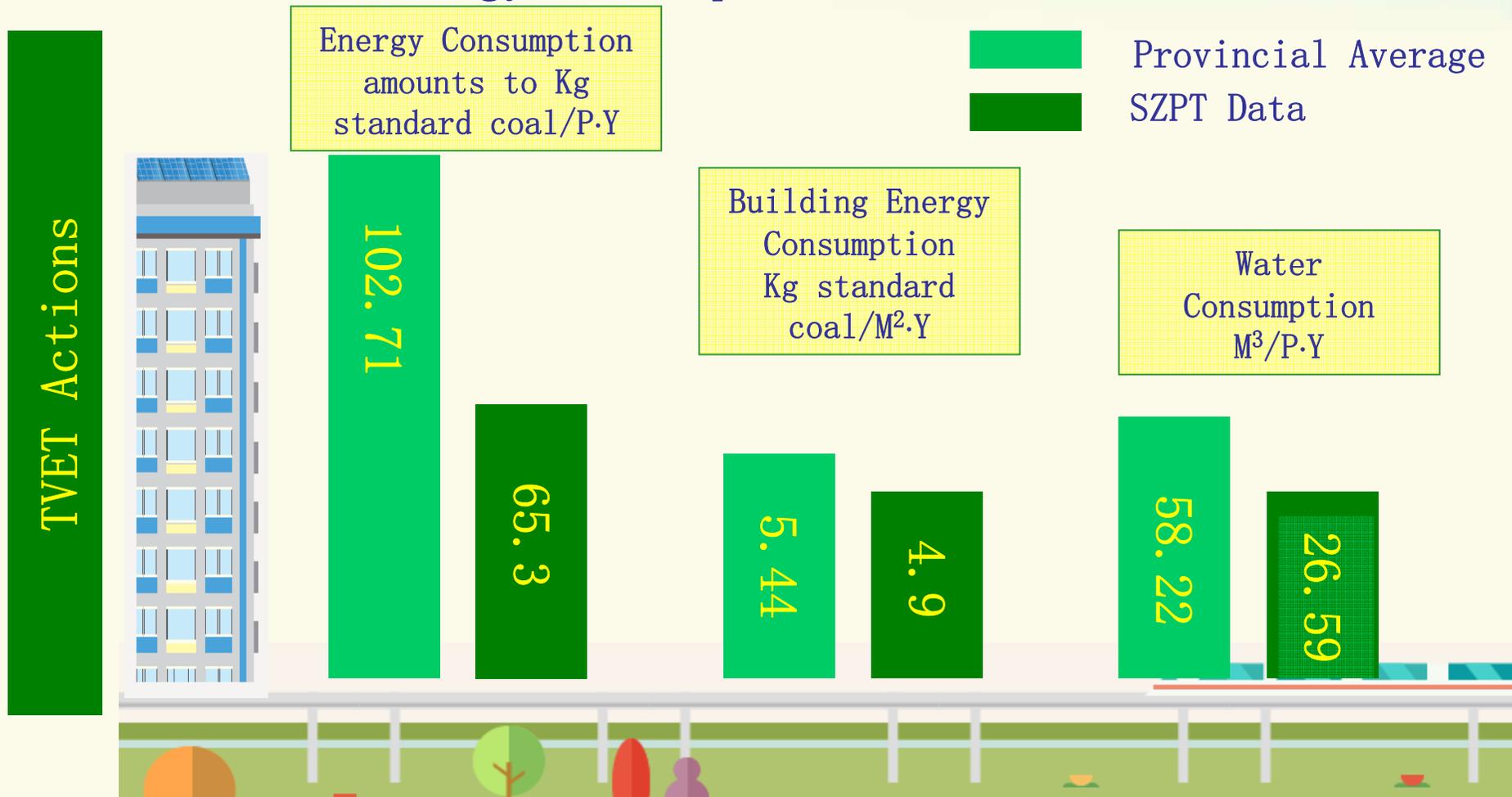
Take SZPT for example

TVET Actions

- Basis of Actions
 - ✓ State Council: Energy Conservation Regulation for Public Sector, Announcement on the Work of Constructing 2nd Group of Model Institutions of Energy Conservation (2014)
 - ✓ Concerned Guangdong Provincial Government announcement (2014)
 - ✓ Concerned Shenzhen Municipal Government document(2014)

TVET Actions –campus management

Energy Consumption of SZPT



TVET Actions –campus management

Take SZPT for example

TVET Actions

- Promotion among teachers and students, e.g. promotion week
- Deliver waste bags and handbook
- Q&A Competition
- Volunteer teams
- Energy Conservation Dormitory
- “Clear your plate“ campaign
- Fames of SZPT in this aspect

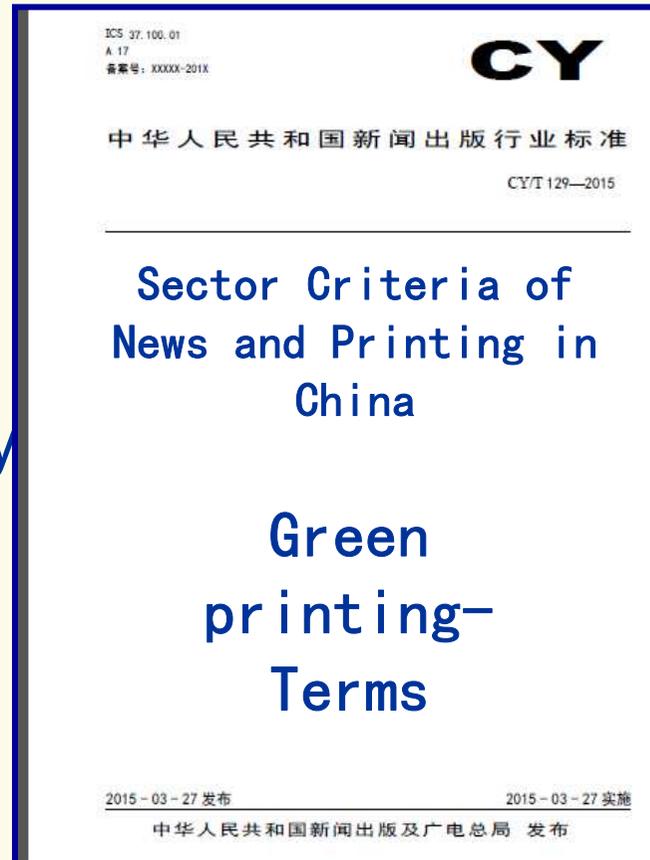


TVET Actions—criteria and curriculum

Take SZPT for example

TVET Actions

- TVET Teachers are in action personally or in groups.
- Example.



TVET Actions--Curriculum

TVET Actions

- A group of art teachers in SZPT has noticed the textbook titled **“Okala Ecological Design” (2004 Edition)**, which has been edited by a group of ecological art designers. The book has been recommended by USA Association for Industrial Design and more than a hundred art specialties in higher education institutions are applying it for their education of product design, construction interior design, graphic design and so on. In addition, the teachers also find another book titled **“Okala Practitioner, Integrating Ecological Design” (2013 Edition)**. They are translating them into Chinese and develop concerned Chinese teaching materials for their curriculum improvement.



Conclusion



SZPT Survey Report—Conclusion

- Chinese government has been making quite a lot of efforts in leading the whole country to greening economy and society through a top to bottom processing format
- Systematic legislation and regulations have established and all sectors have been following up with various actions, development plans and implementations
- Great achievement has been made with quite active actions in industries while quite a lot of problems still exist

SZPT Survey Report—Conclusion

- Comparatively, education needs to offer more efforts in greening development, especially systematic actions in including green contents in TVET curricula
- The most difficult things for greening is to carry out practical and efficient work for achieving the aims bit by bit steadily, change people's awareness of greening, involve massive people to offer their own contributions for greening development

SZPT Survey Report—Conclusion

- We still have a long way to go and more efforts should be offered jointly for we only have one earth.

Thank you for your attention!

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