



**Asia-Pacific
Economic Cooperation**

2014/SOM1/HRDWG/EDNET/012

Agenda item: 4.12

Project Concept Note: Green Skills Development in TVET Systematic Design

Purpose: Consideration
Submitted by: China



**Human Resources Development Working Group
Education Network Meeting
Ningbo, China
19-20 February 2014**

Systematic Design of Green Skills Development in TVET

Concept	Note
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I. Connotation of 'Green skills'

Green skills are also known as sustainable development skills. It refers to skills, knowledge, and attitudes needed by labor to support and promote sustainable social and economic development and to improve environment development friendly in business and communities. 'Green skills' is generic skills, which include minimizing the use of resources, reducing of greenhouse gas emissions, recycling, using environmentally friendly products, protection of natural environment, and so on. 'Green skills' is also specialized skills which include skills, knowledge, and attitudes people who engaged in green jobs must master.

II. Significance of the development of 'green skills'

i) Development of 'green skills' is an urgent need for the development of our society

Since the reform and opening up, China's economic development has made remarkable achievements. However, due to the overall technical level is not high, the economic development mode is extensive, China has paid a heavy cost on environmental pollution and sharp resource consumption in the economic development process.

In recent years, serious environmental pollution problems in China have had greater negative impact on people's lives and work. Promulgated by the Ministry of Environmental Protection in China, the report of 'National Environmental Quality Status in First Half Year of 2013' points out that, in the first half year of 2013, among the 74 cities which include Beijing, Tianjin, Hebei, Yangtze River Delta, the Pearl River Delta region, etc, the percentage of the days that the air quality reach the standards is just about 54.8%, and the days that exceed the standard is about 45.2%. During the same time, the quality of national surface water is generally mild pollution. The percentage of class I surface water is only 3.2%, class II and class III of which are respectively 30.7% and 29.8%. In China more than 1/3 of surface water belongs to IV, V, and inferior class V.

Water quality problems exist widely all over the world. UNEP points out in 'Global Environment Outlook 5' that 'Today, 80 per cent of the world's population lives in areas with high levels of threat to water security, with the most severe threat category affecting 3.4 billion people.

Due to technical level is not high, to produce same GDP products, compared with developed countries, China's energy efficiency is low in general. In 2012 the State Council issued the 'Twelfth Five Year Plan for Energy Saving and Emission Reduction', which pointed out that 'the efficiency of energy utilization is low in general', 'China's GDP accounted for about 8.6% of the world, but the energy consumption accounted for 19.3% of the world'. One of the main reason is that 'China's 'energy consumption per unit of GDP is more than 2 times of the world's average level'.

ii) The development of 'green skills' is national or regional development strategy

In 1996, 'The Ninth Five Year Plan of National Economic and Social Development and the Long Term Goals for 2010 in P. R. China' put forward clearly that 'China will implement the strategy of sustainable development'. In 2013, Chinese government put forward the goal which is to made significant progress in the aspect of building a resource conserving, environment-friendly society.' To achieve this goal, it is important to cultivate a large number of labor force with sustainable development ability, namely 'green skills' labor. TVET links with the development of economy and society closely and directly, TVET providers need to pay urgent attention and take action to develop 'green skills'.

The international community is very concerned about the 'green skills' development, which is regarded as effective way to protect environment and resources, and implement the strategy of sustainable development.

The third UNESCO TVET conference was held in May, 2012 in Shanghai, P.R. China. "Green skills" is one of the topics. EU '2020 strategies' put forward the following target: by

2020, members of the EU will reduce greenhouse gas emissions at least 20% less than in 1990, and increase 20% of renewable energy consumption. To achieve this goal, EU put forward green skills initiative, proposed TVET to develop 'green skills' and cultivate the green consciousness.

iii) The development of 'green skills' is international experience in the process of promoting sustainable development

Some countries, such as Australia, Canada, Germany, USA, combine 'green skills' development with national development strategies. They analyzed deeply the green economy, green occupations or jobs, and put forward the specific requirements for the development of 'green skills'. On this basis, TVET provided related specialties and revised curriculum content.

III. Project objectives

TVET is employment oriented or career development oriented, which links closely with the development of economy. Through the cooperation with TVET agencies, professional associations, industrial associations, enterprises and experts among APEC economies, this project aims to achieve the following objectives:

- i) To put forward TVET new green specialties and related conditions on the basis of the analysis of green occupations or jobs.
- ii) To put forward basic contents of 'green skills' as essential part of teaching and learning objectives of TVET specialties.
- iii) To clear the relationship between new TVET green specialties and current TVET specialties, the relationship among different levels green TVET specialties, to make green TVET specialties become integral part of lifelong education system.
- iv) To establish international cooperation and exchange network of green skills development, to improve the international cooperation of green skills development.



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Systematic Design of Green Skills Development in TVET

Concept Note

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Outline

What: Connotation of 'Green skills'

Why: Significance of the development of 'green skills'

How: Project objectives

Connotation of 'Green skills'

Green skills are also known as sustainable development skills. It refers to skills, knowledge, and attitudes needed by labor to support and promote sustainable social and economic development and to improve environment development friendly in business and communities.

'Green skills' is generic skills, which include minimizing the use of resources, reducing of greenhouse gas emissions, recycling, using environmentally friendly products, protection of natural environment, and so on.

'Green skills' is also specialized skills which include skills, knowledge, and attitudes people who engaged in green jobs must master.

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Significance of the development of 'green skills'

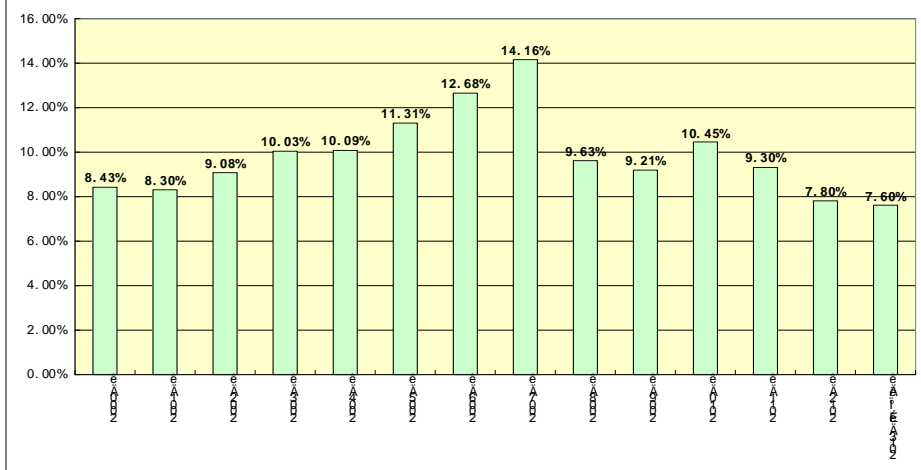


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China GDP Growth Rate



(Source: China Statistics Bureau)

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'National Environmental Quality Status in First Half Year of 2013' (MoEP,China)

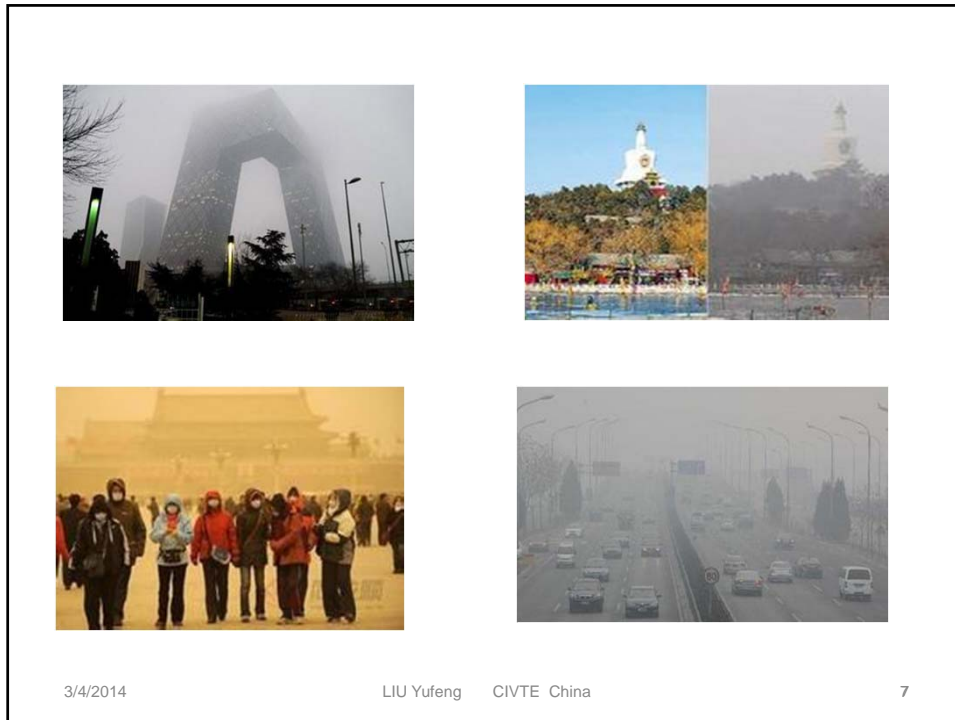
in the first half year of 2013, among the 74 cities which include Beijing, Tianjin, Hebei, Yangtze River Delta, the Pearl River Delta region, etc, the percentage of the days that the air quality reach the standards is just about 54.8%, and the days that exceed the standard is about 45.2%.

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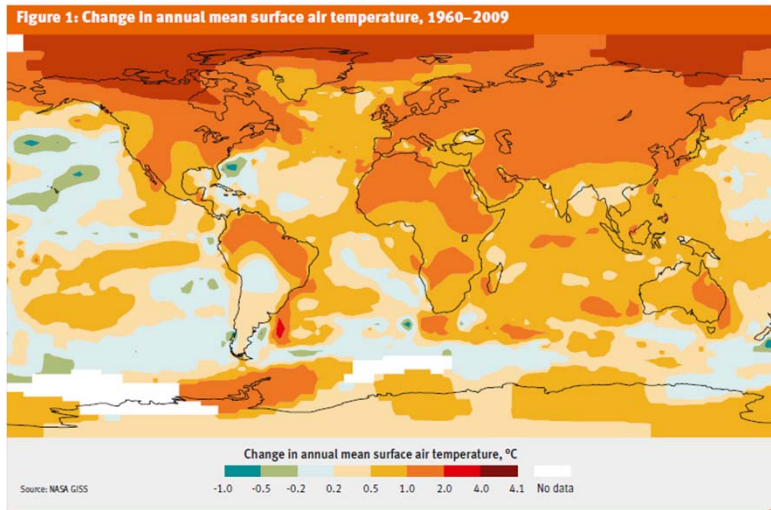
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Environment pollution problems exist widely all over the world

- UNEP points out that 'Today, 80 per cent of the world's population lives in areas with high levels of threat to water security, with the most severe threat category affecting 3.4 billion people.'
 - 'Global Environment Outlook 5'

'Global Environment Outlook 5'



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'Twelfth Five Year Plan for Energy Saving and Emission Reduction' in China (2012)

'the efficiency of energy utilization is low in general',

'China's 'energy consumption per unit of GDP is more than 2 times of the world's average level'.

'China's GDP accounted for about 8.6% of the world, but the energy consumption accounted for 19.3% of the world'

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National or regional development strategy

- China:
 - ‘The Ninth Five Year Plan of National Economic and Social Development and the Long Term Goals for 2010 in P. R. China’ : ‘China will implement the strategy of sustainable development’(1996)
 - Chinese government put forward the goal which is to made significant progress in the aspect of building a resource conserving, environment-friendly society.’(2013)
- UNESCO :
 - third UNESCO TVET conference (2012):"Green skills" is one of the topics.
- EU ‘2020 strategies’:
 - by 2020, members of the EU will reduce greenhouse gas emissions at least 20% less than in 1990, and increase 20% of renewable energy consumption.

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The development of ‘green skills’: international experiences

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| <ul style="list-style-type: none"> • Australia <ul style="list-style-type: none"> – Green skills agreement – Green skills action plan – Revise training packages, – Etc. • USA <ul style="list-style-type: none"> – Development green skill qualification – Train green worker | <ul style="list-style-type: none"> • Canada: <ul style="list-style-type: none"> – analyzed the green occupations or jobs – Offer green specialties – revised curriculum content. • Germany <ul style="list-style-type: none"> – Revised training category, attach more importance to environmental protection. |
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Project objectives

To put forward TVET new green specialties and related conditions on the basis of the analysis of green occupations or jobs.

To put forward basic contents of 'green skills' as essential part of teaching and learning objectives of TVET specialties.

To clear the relationship between new TVET green specialties and current TVET specialties, the relationship among different levels green TVET specialties, to make green TVET specialties become integral part of lifelong education system.

To establish international cooperation and exchange network of green skills development, to improve the international cooperation of green skills development.

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We sincerely wish to get your strong support, to build a greener, more beautiful world together!

Thank You!

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