



United Nations

**United Nations Nagoya  
Training Course on Capacity Building  
for Sustainable Urbanization in Asian  
Countries  
“Economic Transformation”**

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# Background: Why are we here?



- **Why sustainability training for Asian Mayors and City Executive Leaders?**
- **Sponsors:** UN Centre for Regional Development (UNCRD) and UN Department of Economic and Social Affairs (DESA)
- **Genesis:** “UN Shanghai Manual for Sustainable Cities”
- **Session Focus:** “Economic Transformation”
- **Other UNCRD Nagoya Sessions:** ICT for Smart Cities, Green Buildings, Waste Management, Transportation, Urban Management, Science and Technology, Culture

# Who am I?



- Co-author UN “Shanghai Manual for Sustainable Cities”
- President, Common Current
- Author: *How Green is Your City? The SustainLane US City Rankings; Blueprint for Greening Affordable Housing*
- Clients: United Nations; European Union; South Korea; Asian Institute for Energy, Environment + Sustainability; US Department of State; US EPA; cities (Guangzhou, China; Los Angeles, US); states (California); Chevron, General Electric

# Our process today



- Review material from The UN “**Shanghai Manual for Sustainable Cities**,” including most recent international updates
- I will answer and respond to your questions at times during presentation as questions arise.
- For the answers I may not have, I will look to other experts in the room: **yourselves**.
- You know your cities and their histories. You know the people and their needs: this knowledge is invaluable to your constituents and colleagues.

# Our process: introductions



Since your expertise and input are valued, please introduce yourself to the group:

- Your Name, City and Position or Title
- Interest regarding the issue of sustainable cities OR
- Interest in the area of economic transformation
- In a few words, what would you would like to get out of today's session?

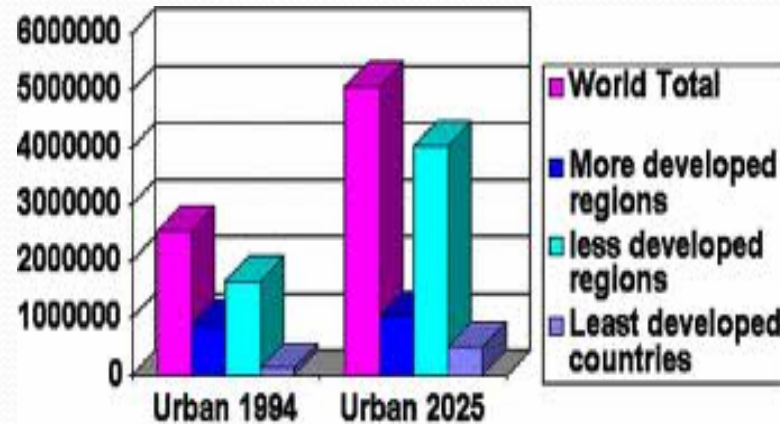
# Overarching Strategies



Strategies and goals of city leaders should include:

- engaging stakeholders;
- envisioning a sustainable, harmonious city;
- establishing goals and measuring progress;
- back-casting to identify action plan;
- establishing an integrated approach across all departments of local government.

# The Big Picture



- By 2030, **60%** of global population will live in cities, up from 50% in 2008
- The world can expect the urban population to increase by 3.1 billion persons by 2050, when **66%** of the earth's inhabitants will live in cities
- Cities of **China and India**: to account for **40%** of global urban population growth 2005-2025

# Cities: strong economic engines

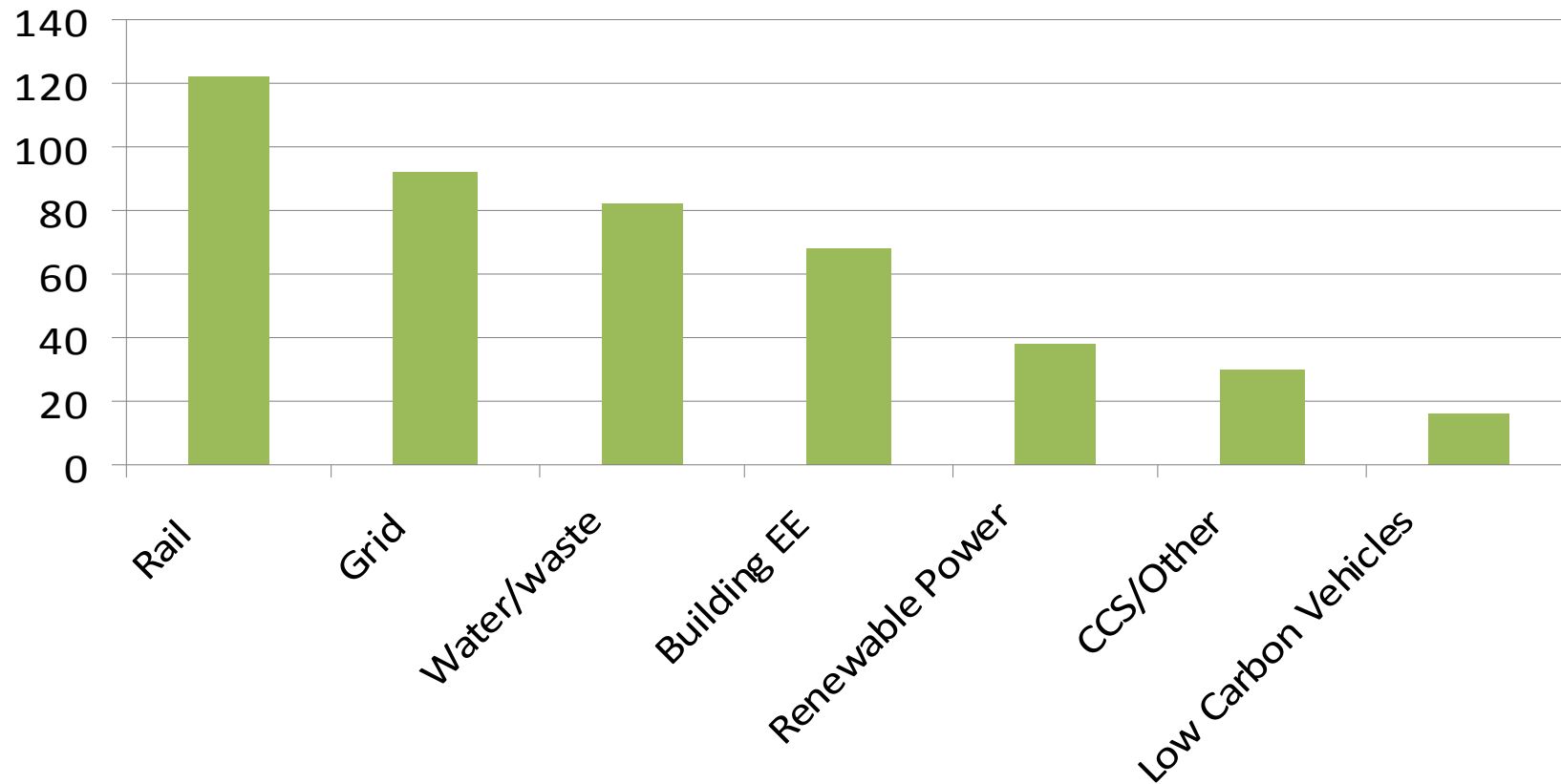
The sustainable economic transformation of cities is critical to the 21<sup>st</sup> century global situation. Cities are the most **powerful economic engines** for:

- advances in information and communications technologies
- design and construction
- professional and financial services
- health care
- education
- energy systems



# Global green stimulus by category

**G20 Green Stimulus Spending Per Sector  
(US\$ Billion)**



Source: HSBC Global Research, UNEP

# Urban areas lead national GDP



The international average of **GDP generated in urban areas** as of 2010 reached **80 percent** (with only 50% urban population). The role of urban economies compared to national economies is likely to continue increasing over the next decades.

# Global city-centric funding



Local authorities and business leaders are at the center of urban economic transformation, **reflected by new city-centric funding, convening or technical assistance strategies of:**

- The World Bank
- The Asian Development Bank
- The United Nations

# Globalization influence

## Trends and Drivers:

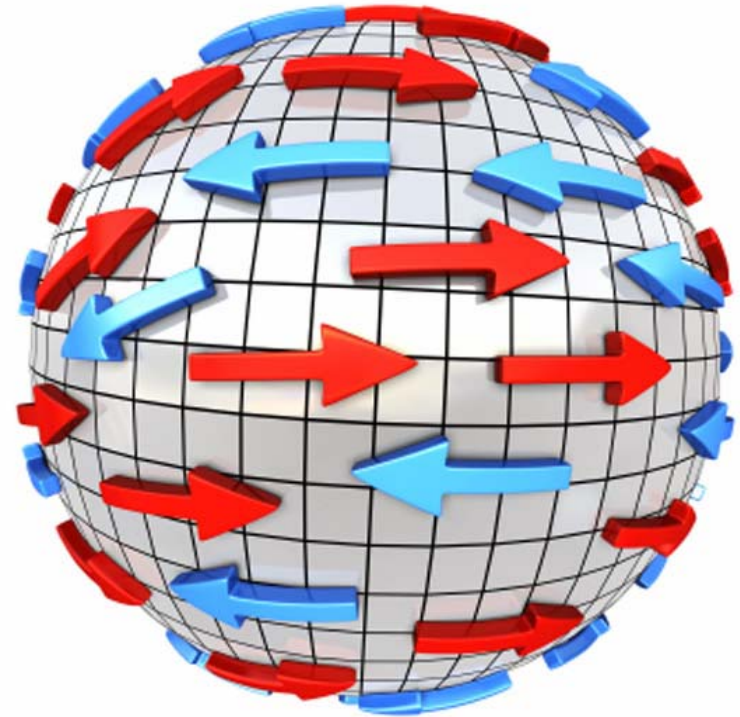
- The growing influence of **globalization**, with its innovative business models and stronger environmental standards and certifications
- Importance of attracting/developing **new industrial clusters**



# Capital and idea flows

## Trends and Drivers:

- Key to urban transformation is growing **flow of public and private capital**, people and goods between urban-rural areas
- The exchange of **ideas and information** + the diffusion of **innovation** within cities, remain key aspects of global competitive advantage.



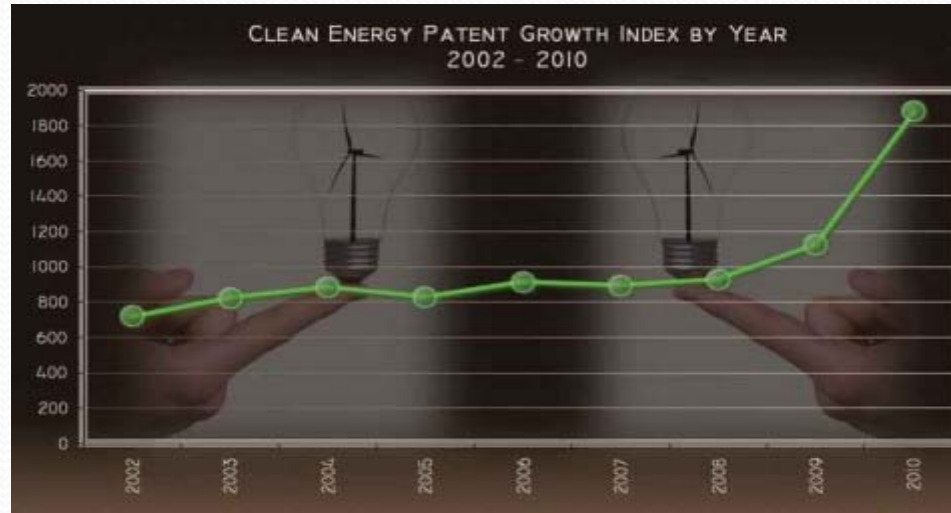
# Era of green urban economies



## Trends and Drivers

Emerging data indicate that the green urban economy has the potential to shape the 21<sup>st</sup> century as much or more than earlier advances in transportation, communications, energy, design + industrialization.

# Urban growth and clean tech



## Trends and Drivers

- Eighty percent of global energy use is consumed by cities. The next ten years, 90% of urban population growth will occur in developing countries
- Clean technologies are largest venture funded sector globally: rich opportunity for developing cities

# Low carbon tech growth: How much?



## Trends and Drivers

- Low carbon technologies can offer up to 11% of GHG abatement potential to 2030 and up to **27% by 2050**.
- The World Bank: trade in 40 key climate-friendly technologies **almost doubled** (from US\$67 billion to US\$119 billion) between 2002 and 2008. By **2010**, this figure reached **\$242 billion USD**.
- Renewable energy in China alone in 2010 contributed **\$54 billion and one million jobs**.



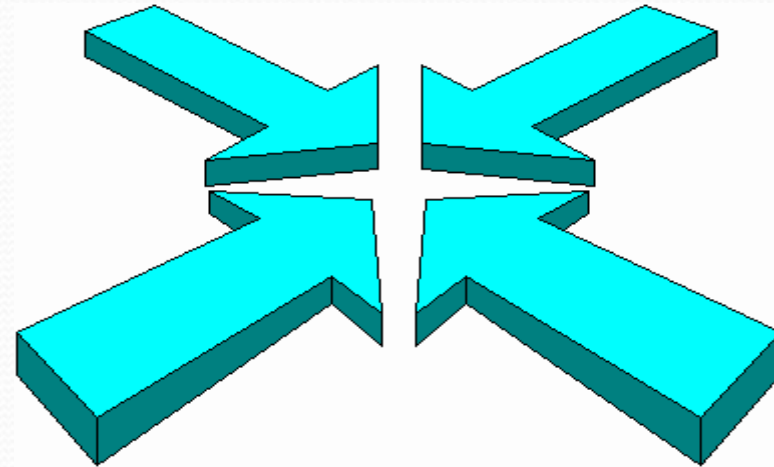
# Developing nations + clean tech

## Trends and Drivers

Developing world has leading clean tech companies:

- China in 2010 became the world's leading producer of **wind turbines and PV solar technologies**.
- Suzlon Energy, an Indian company founded in 1995, is world's 5th-largest **wind turbine** manufacturer.
- Developing nations foresee a global comparative advantage in biofuels. Brazil has been developing **bioethanol** industry for 30 years, it's pursuing a strategy to promote it worldwide.

# Four vital forces



## Catalyzing Change

The key difference between the emergence of the green economy and prior economic advances is that sustainable economic development will only occur by drawing upon diverse industry sectors through the active participation of **civil sector**, the **private sector**, **academia** and **government**.

# Government critical convener



## Catalyzing Change

Government, from international, to national, to local will be critical convener bringing together collaboration and expertise from civil and private sectors and academia.

# A \$350 Trillion opportunity



## Catalyzing Change

Global urban infrastructure and usage expenditures in **dwelling and transportation** for the next 30 years will exceed **\$350 trillion** (mostly developing nations):

Opportunity to cost effectively drive down carbon emissions and expenditures in the rapidly growing urban centers of developing nations.

# Policy Transformation

## **Catalyzing Change: Policy**

Governments will play a key role in economic transformation of cities through:

- Ending obsolete **subsidies**: \$550B USD fossil fuels
- Reforming policies, providing new **incentives**
- Building **market infrastructure + mechanisms**
- Redirecting **public investment**
- Greening **public procurement**
- Greening energy **production and supply**

# Market Transformation

## **Catalyzing Change: Markets**

Creation of economic/ market development strategies as a result of urban growth and innovation:

- green building
- renewable energy
- alternative fuels
- information and communications technologies
- advanced material production
- sustainability services
- carbon trading + Clean Development Mechanism

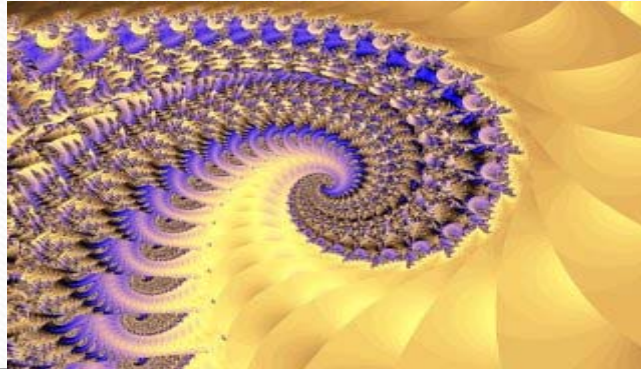
# ICT critical operational capability

## **Catalyzing Change: Management + Operational**

On the management level and across operational systems, cities are using ICTs to control resources, capabilities and responses:

- urban planning
- buildings
- transit systems
- energy
- ecosystems/ natural disasters
- infrastructure

# Success Factors



## Menu of Options

Enabling conditions for economic transformation:

- Recognition of the complexity of the inter-relationships within the unit of the city: **multiple systems, causalities and effects**
- **Integrated policy approaches**; identification of key actions required over the next 20 years



# Success Factors (continued)

## Menu of Options

Enabling conditions for economic transformation:

- **Planning:** Guidelines for an integrated approach, long-term and multi-scalar approach to city planning
- **Governance:** Decentralization, transparency and accountability
- **Finance:** Public-private partnerships, incentives for industry and users: fiscal + financial incentives.

# Public-Private Partnerships

## **Menu of Options: Public-Private Partnerships**

Public-private partnerships (PPPs) for sustainability related projects are growing in cities with new infrastructure investments.

In some cities of China, PPPs have been used to finance **wastewater infrastructure** (in Beijing and Guangzhou), **solid waste management projects** (in Shenzhen) and **smart grids** (in Tianjin Eco-city).



## **Menu of Options: Public-Private Partnerships**

A unique public-private partnership helped Mexico City plan and build dedicated Metrobus lanes, including a rapid transit-lane on one of Mexico City's most crowded avenues.



## **Menu of Options: Public-Private Partnerships**

The World Bank's International Finance Corporation (IFC) provides financing for private industry involved in public-private partnerships. Green infrastructure and renewable energy are areas of recent

# System Planning: Low Carbon



## **Menu of Options**

*System planning and management frameworks*

New system frameworks and tools are being tested and applied to mitigate or cope with the impacts of climate change, while aiding the green economy.

**Low-carbon city initiatives** being sponsored by foundations and other funders, non-governmental organizations, international organizations (World Bank) + academic and city alliances.



## Menu of Options

*System planning and management frameworks*

China announced in 2010 a low carbon cities pilot program. Under the low carbon cities program, 8 cities will plan for low carbon industry technology investment while reducing citizen energy consumption.

# Masdar City: financial ecosystem



## **Menu of Options:** *Financing Clean Technology*

New city-scale approaches to financing clean energy technologies are emerging worldwide. Masdar City, Abu Dhabi has created a “financial ecosystem” for clean technology incubation, establishing venture fund of USD \$245 million.

# World Bank financing



## **Menu of Options**

Financing of Green Economy and Clean Technology

The World Bank Group established Climate Investment Funds (CIFs) in 2008: includes Clean Technology Fund (CTF) and Strategic Climate Fund (SCF) in support of numerous urban programs.



# Credit guarantees, tax credits



**Menu of Options:** *Targeted public financial policies*

Clean energy technology adoption financing through technology-specific production incentives, government procurement offers, and long-term lines of credit using low-cost financing + credit guarantees.

*Example:* tax credits provided by the United States, where solar energy system implementation for homes and businesses receive a 30 percent tax credit.

# Low interest renewable loans



## **Menu of Options:** *Targeted public financial policies*

Financing can include low-interest loans, such as China's 2-3% loans for renewable energy system installation. Government procurement offers may be **technology based, district based, or both**. City districts in China support low-carbon technology projects by offering 50% financing for solar PV street lighting renovation.

# Green economy workforce



## Menu of Options

The **green economy** needs to attract and retain a skilled, knowledgeable workforce. This specialized labor pool requires access to high-quality education and training. Quality education and training are necessary not only for **those entering these job markets**, but also for **seasoned employees**.

# Green education



**Menu of Options:** *A skilled green economy workforce*  
**Local universities, colleges and training institutes** are important resources for younger students, mid-career employees, and disadvantaged workers interested in learning green economy professions, particularly renewable energy installation and building energy efficiency auditing/ improvements.

# Managing urban-rural networks



## **Menu of Options**

*Managing rural-urban networks, including migration*

Urban regions must prepare for and adapt to rural-urban migration, particularly in nations with high levels. Large cities need to focus on improving capacity to serve their region while managing growth and efficiently allocating resources.

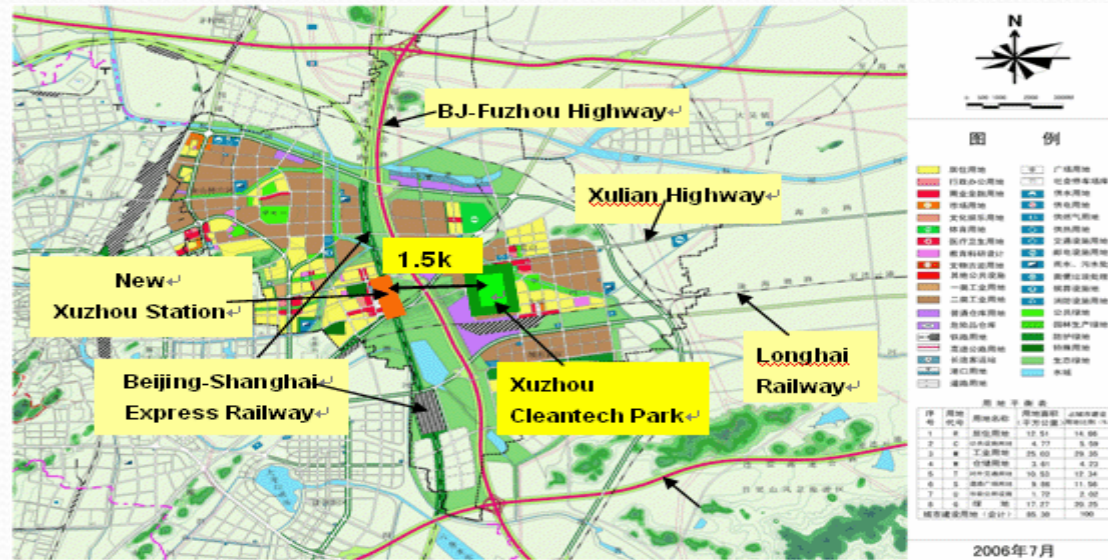
# Metro area planning



## **Menu of Options:** *Metro Area Planning*

Industrial and transportation planning in metros is a key element in anticipation of more successful rural-urban migration. To avoid **urban sprawl**, which has negative environmental impacts and limits mobility options, plan housing located with equitable access to transportation, utilities and city services.

# Clean energy clustering



## Menu of Options

**Green industry clusters** result from many regional factors: local **knowledge and skills**; engaged **education and training institutions**; access to **venture capital** and affiliated talent networks + supportive government policy and funding.



## Menu of Options

Green Industry Clustering: VCs not essential?

The emergence of newer green industry clusters in places largely lacking the significant presence of venture capital investment demonstrates that early stage green industry clusters have been able to attract needed government/ private investment.



# Greening energy supply/ demand



## Menu of Options

To stimulate climate change mitigation and clean technology investment, nations have introduced or updated variations of **regulatory and fiscal incentives to increase renewable energy, alternative fuels and energy efficiency.**

# Smart Grids + other programs



## Menu of Options

**Smart grids** are being actively supported through strategic goals and research support in nations and their metro centers.

To increase price or demand certainty through **renewable portfolio standards and fiscal incentives**. Brazil has been cited as a leader through its combined regulatory and fiscal policy.



## **Menu of Options:** *Technology Innovation Centers*

Cities use these centers to boost regional clean technology research, development, and deployment. Incubators may operate with partners including national research laboratories, public energy utilities, state offices. Clean technology innovation centers provide office space for **start-ups, investor or public meetings and presentations.**

# Examples: innovation centers



## **Menu of Options:** *Technology Innovation Centers*

The Environmental Business Cluster, San Jose (US) is piloting new low-carbon advanced transportation technologies. Austin's Technology Incubator provides participant start-ups access to the local electric power grid--managed by the city-owned utility--for product **pilot testing and monitoring.**

# Case Studies

## **Economic Transformation:**

- Baoding, China. "Power Valley" clean energy center
- Bilbao, Spain. Low-Carbon Redevelopment
- South Korea. Smart Grid 2030 Roadmap
- San Jose, US. Clean tech strategy
- Germany. Renewable energy feed-in tariffs

# Case study: Baoding, China



# Baoding, China: Power Valley



## **Case Study**

*Background:* city's historic industries (automotive, textiles) were poorly managed and were responsible for severe air and water pollution in region.

The city's Mayor traveled to other countries (Spain, Germany) to explore clean technologies as potential alternative to problematic "dirtier

# National-Local Strategy



## **Case Study: Policy options and measures**

### *Baoding, China: Power Valley*

Baoding applied to national government to have a regional technology research become a national center for clean energy technology deployment:

- low interest (2-3%) loans for land/ business parks
- Low carbon demonstration districts (159) to encourage building solar and solar PV lighting



# Transformation



## Case Study: Results

### *Baoding, China: Power Valley*

Baoding is a national center for clean energy manufacturing and deployment, including building-integrated solar photovoltaic technologies.

- Chosen as 1 of 8 national low carbon pilot cities 2010
- 7 billion US in revenues in 2010

# Baoding, China: Power Valley



## Case Study: Lessons Learned

- Integrated strategy can have quick results if combining national and local policies, including tax incentives, local showcases and export strategy.
- Cities need to work closely with companies, organizing job fairs, providing training and helping to recruit employees through local schools.
- Carbon intensity has increased locally because of increased exports. Solution: balance export/ economic development with local improvements.

# Case study: Bilbao, Spain



# Bilbao, Spain:

## Low-Carbon Redevelopment



### **Case Study: Background**

City's heavy industries such as steel and shipyards were in decline and the area suffered severe environmental degradation from industry air and water pollution and household water pollution

# Bilbao, Spain:

## Low-Carbon Redevelopment

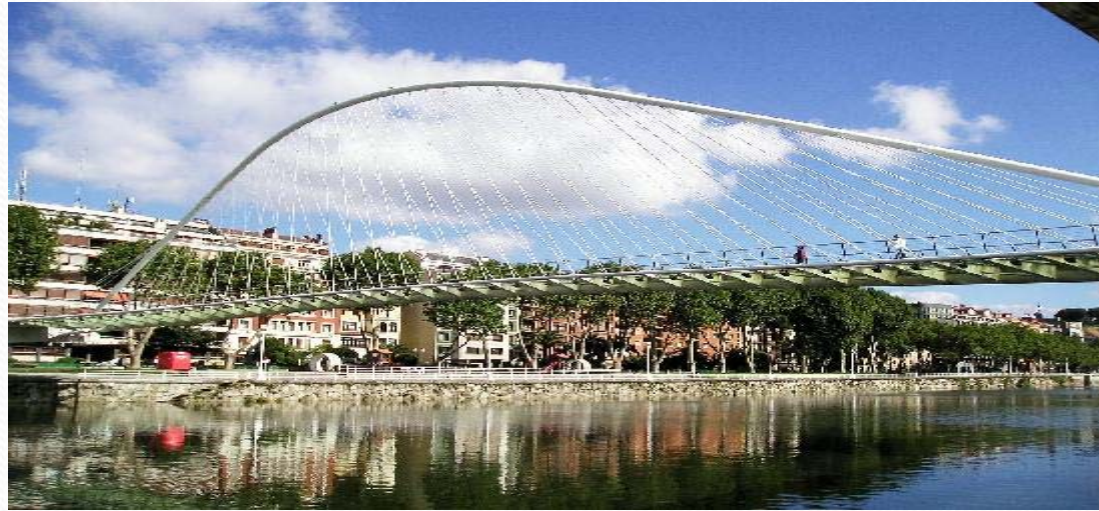


### **Case Study: Policy Options and Measures**

Bilbao Revitalization Plan adopted in 1991. Four areas for action: knowledge-based **high tech sector**, **inner city renewal**, **environmental improvements** (especially brownfield clean-ups), strengthen culture through **urban regeneration**.

# Bilbao, Spain:

## Low-Carbon Redevelopment



### **Case Study: Results**

Contaminated soil removed from brownfield industrial sites while a new water sanitation system was developed, restoring river water quality.

New technology park employs 6,000 at 350 businesses in the complex.

# Bilbao, Spain:

## Low-Carbon Redevelopment



### **Case Study: Results**

Guggenheim Museum is most famous product of Bilbao regeneration.

Management entity, Bilbao Ria 2000, is now self-financing in its activities: 560 million Euros invested between 1997 and 2006.

# Bilbao, Spain:

## Low-Carbon Redevelopment

### **Case Study: Lessons Learned**

City leveraged interaction from all levels of government, which led to clear consensus (though process lacked public participation).

Despite strained public budget, revaluation of land as a result of rezoning led to revenue generation through sales to developers. Profits must be re-invested in urban regeneration.

New city social services agency was created to link displaced “old industry” labor force with new industry job opportunities.



# Case study: San Jose, USA



# Case study: San Jose, USA



## **Case Study: *San Jose, US: Clean Tech Strategy***

*Background* After a severe economic downturn in the region, San Jose devised a clean tech economic growth strategy as attempt to leverage Silicon Valley's existing venture funding, engineering talent and universities.

# Case study: San Jose, US



## Case Study: Policy Options and Measures

- San Jose set a target of creating 25,000 jobs in clean technology by 2022, from 4,000 jobs in 2010.
- The city partnered with the **Environmental Business Cluster** supported by US Department of Energy's National Renewable Energy Lab. The city provided cluster start ups access to city sustainability projects.

# Case study: San Jose, US



## **Case Study: Results**

About 150 companies “graduated” from the city Environmental Business Cluster since 1994, including GreenVolts and Optony.

The city has worked with major employers in the city (Adobe, Cisco) to cut their energy costs while providing start-ups access to such companies.

# Case study:

## South Korea Smart Grid 2030



### Case Study: Background

South Korea exports as percentage of GDP rose sharply last decade. South Korea developed a Smart Grid Roadmap 2030 to reduce carbon footprint while providing export potential. Global smart grid market to grow from **\$77 billion in 2010 to \$171 billion in 2014**

# Case study: South Korea



## **Case Study: Policy Measures and Options**

Strategic areas of focus include: Smart Power Grid, Smart Consumer, Smart Transportation. Smart Renewables and Smart Electricity

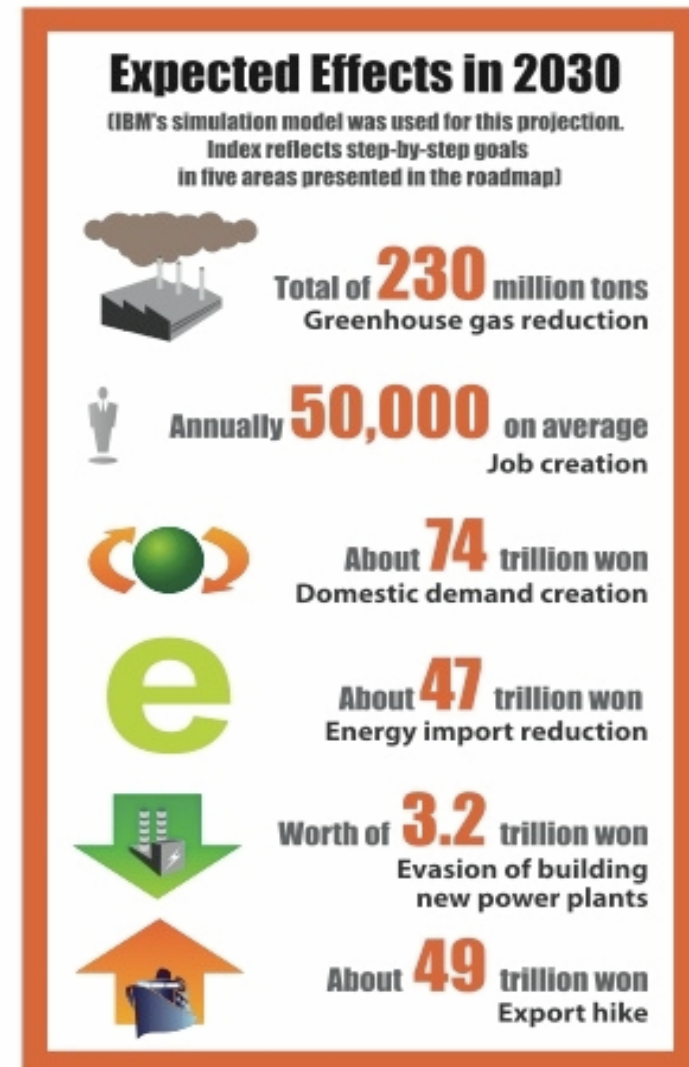
Features test bed and urban research and construction, particularly in cities

# Case study: South Korea

## Case Study: Policy Goals

Goal of Smart Grid 2030 is to complete smart grid across metro areas by 2020, largely through private financing (68% for technology development; 98% private for infrastructure development)

Should create **50,000 jobs annually**, or **1 million jobs by 2030**



# Case study: South Korea



## Case Study: Results

- 2,000 homes (Jeju City) hooked to smart grid: Consumers receive real-time information on the price of energy, program their household devices
- By the end of 2013 three or four South Korean cities will be part of pilot project
- Nation providing loan to Ghana (\$67 million USD), to provide export growth opportunity



# Case study: South Korea



## **Case Study: Lessons Learned**

South Korea assessed its strengths (global-leading 95% broadband access) to determine how to leverage with clean tech deployment and export opportunities: smart grid economic development.

A detailed blueprint by sector, activity and geographic region, with its largest city Seoul, benefitting from test bed and IP development.

# Case study: German feed-in tariffs



**Freiberg, Germany**

# Case study: German feed-in tariffs



PowerLight Corp.

## Case Study: Challenge

Germany wanted to commit to solar energy as a renewable energy source, while providing utilities, business and residents with a guarantee that they could sell excess renewable electricity they produced

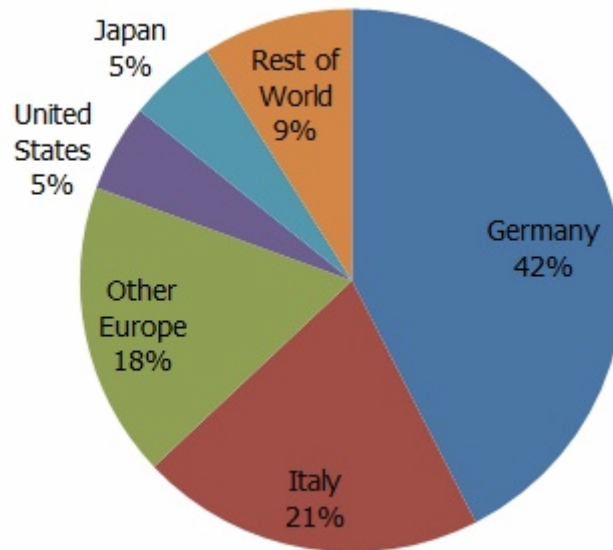
# Case study: German feed-in tariffs



## **Case Study: Policy Measures and Options**

Germany launched its national feed-in Tariffs (FITs) in 2004 to increase renewable energy generation. FITs guarantee a favorable price per unit over a period of time: 20 years

# Case study: German feed-in tariffs



## Case Study: Results

Renewables: 10% total power in 2005 to 17% by 2010

Germany is largest solar heating producer in the world: 47% of global share in 2009.

Renewables industry employed 370,000 in 2010, and will employ 500,000+ by 2020.

# Case study: German feed-in tariffs

## **Case Study: Lessons Learned**

- Need to impose a priority purchase obligation for renewables (for utilities, business or residences)
- Must determine which technologies and plants will be covered by law
- Need to determine fair tariff rate: rate for electricity from renewables must be set at a level ensuring profitability (including rate adjustment mechanism)
- Establish tariff rate over a period of time: ensures security of investment for producers, manufacturers

# Program Updates: Asian Development Bank



## Urban Operational Plan

- Holds Urban Forums on Financing Future Cities: mechanisms for financing green, competitive and inclusive cities
- Includes representatives from ministries of finance and urban development, mayors, financing agencies, infrastructure companies and donors

# Program Updates:



## United Nations and the Clean Development Mechanism

### **Clean Development Mechanism (CDM)**

- Projects in developing nations are eligible before December 2012 expiration (and maybe after) of current Kyoto Protocol and associated CDM
- Because of lengthy application process and resources required, cities over 1 million are typical candidates
- CDM categories: transit, waste and wastewater management, infrastructure, building energy efficiency, renewable energy



# Program Updates:



## United Nations and the Clean Development Mechanism



### **Clean Development Mechanism (CDM)**

- For cities, major funding for projects include Bus Rapid Transit (BRT) systems in Bogota, Colombia and Guangzhou, China (above)

# Program Updates: C40 Climate Leadership Group



**C40CITIES**  
CLIMATE LEADERSHIP GROUP

- C40 LARGE CITY
- C40 AFFILIATE CITY



<http://www.c40cities.org/>

# Program Updates: C40



## Program Updates: *C40 Climate Leadership Program*

C40 program (now with 59 cities worldwide) recently merged with the Clinton Climate Initiative. C40 is providing cities with technical assistance in **building and energy system retrofitting and waste management**

C40 is partnering with ICLEI for greenhouse gas emissions inventorying and climate action planning

# C40 and World Bank

**C40**  
**CITIES**  
CLIMATE LEADERSHIP GROUP



**Program Updates: C40 and World Bank Group**  
*Climate Leadership Program:* Establishes common metrics for greenhouse gas reporting and standardizes plans for mitigation. Metrics will facilitate cities' (C40 and others) access to private finance for carbon mitigation or climate adaptation.

# C40 and World Bank

**C40**  
**CITIES**  
CLIMATE LEADERSHIP GROUP



**Program Updates:** *C40 and World Bank Group Climate Leadership Program:* Underpinning partnership will be “single-window” access for cities to World Bank funding.

To be announced 1 December, 2011. cities need sign-off from their national government to participate

# Program Updates: World Bank Institute's Carbon Finance Capacity Building



## **Program Updates:** *World Bank Institute's CFCB*

The World Bank's Carbon Finance Capacity Building program focuses on helping cities improve knowledge on UN Clean Development Mechanism projects

- Projects include low carbon and greenhouse gas mitigation in Jakarta and Quezon City: urban greening, waste management, streetlight energy efficiency

# Program Updates: World Bank Eco2 Cities



## Eco2Cities



Ecological Cities as Economic Cities

### **Program Updates: *World Bank Eco2 Cities Program***

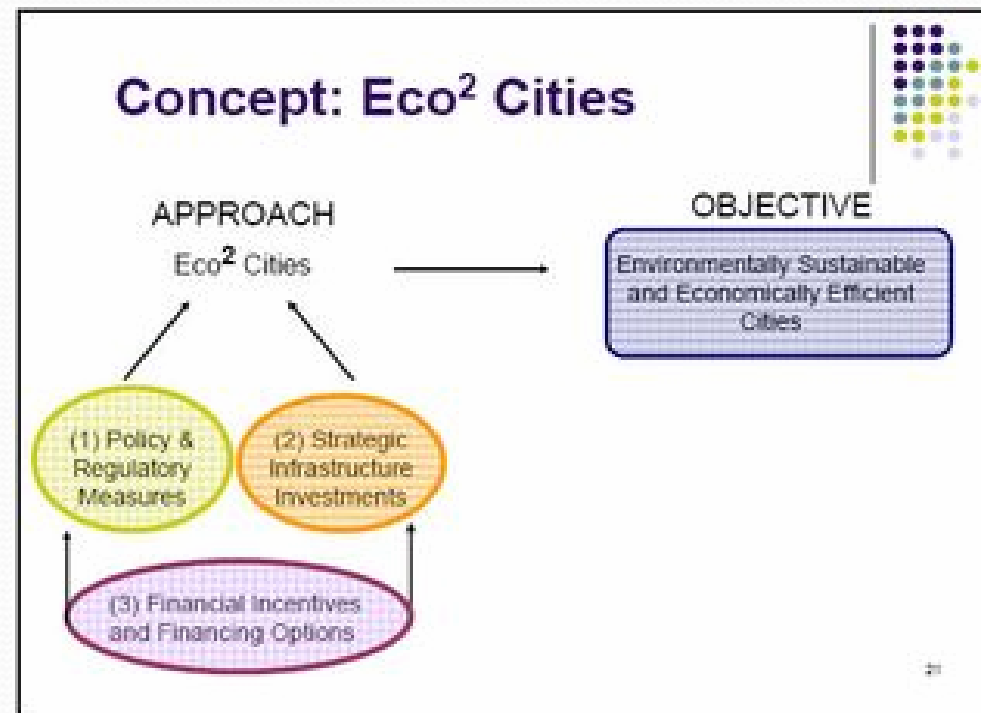
The World Bank launched its Eco2 Cities program in 2010.

Pilot operations in:

- Vietnam
- Philippines
- Indonesia

[www.worldbank.org/eco2](http://www.worldbank.org/eco2)

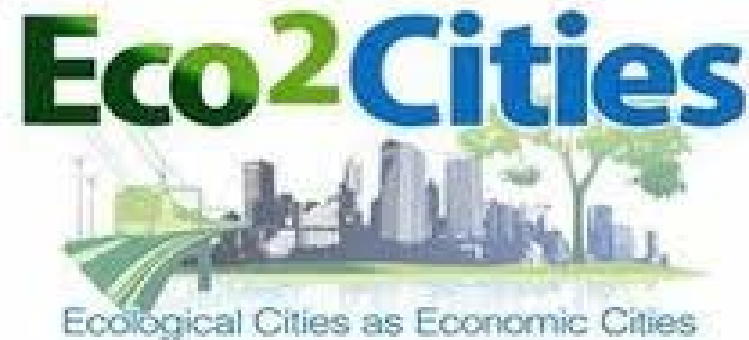
# World Bank Eco2 Cities



**Program Updates: *World Bank Eco2 Cities Program***  
Focuses on infrastructure investments, financing incentives and financing options



# Program Updates: World Bank Eco2 Cities



## **Program Updates: *World Bank Eco2 Cities Program***

Provides investment framework valuing sustainability and resilience, using infrastructure life-cycle cost analysis

- Sector Investment Loan/ Credit
- Carbon Finance
- Global Environmental Facility
- Climate Investment Funds

# Economic Transformation

## Related Links

<http://www.weforum.org/documents/gov/Environment/TF%20Low%20Carbon%20Prosperity%20Recommendations.pdf>

“Task Force on Low-Carbon Prosperity: Recommendations,”  
World Economic Forum, 2009

[http://www.oecd.org/document/42/0,3343,en\\_21571361\\_45068056\\_45068202\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/42/0,3343,en_21571361_45068056_45068202_1_1_1_1,00.html)

Organisation for Economic Co-operation and Development site, including report, “Cities and Green Growth: Issues Paper for the 3<sup>rd</sup> Annual Meeting of the OECD Urban Roundtable of Mayors and Ministers”, 25 May, 2010, OECD Conference Center, Paris.

# Economic Transformation

## Related Links

[http://www.globalurban.org/Issue1PIMago5/Weiss article.htm](http://www.globalurban.org/Issue1PIMago5/Weiss%20article.htm)

“Teamwork: Why metropolitan economic strategy is the key to generating sustainable prosperity and quality of life for the world,” Marc A. Weiss, Global Urban Development Magazine, Global Urban Economic Development Institute, Issue 1, volume 1, May 2005

<http://www.slideshare.net/itsgowri/wwf-low-carboncities>

“Reinventing the City: Three Prerequisites for Greening Urban Infrastructures”, WWF International (in conjunction with Booz & Company), Gland, Switzerland, 2010

# Economic Transformation

## Related Links

<http://www.pwc.com/us/en/cities-of-opportunity>

“Cities of Opportunity,” PricewaterHouse, 2010. Analyzes 21 global centers of economic activity, by financial, economic, environmental factors

<http://www.greengrowth.org/rethink.asp>

United Nations Economic and Social Council for Asia and the Pacific (ESCAP) site

[http://www.greengrowth.org/capacity\\_building/Download/GG\\_capacity\\_development/Green\\_Growth\\_Capacity\\_Development\\_Brochure-resized.pdf](http://www.greengrowth.org/capacity_building/Download/GG_capacity_development/Green_Growth_Capacity_Development_Brochure-resized.pdf)

United Nations Economic and Social Council for Asia and the Pacific (ESCAP) report on rethinking growth

# Economic Transformation

## Related Links

[http://www.nyc.gov/html/om/pdf/2009/pr465-09\\_plan.pdf](http://www.nyc.gov/html/om/pdf/2009/pr465-09_plan.pdf)

Site for New York City PlaNYC 2030

<http://www.nycedc.com/SupportingYourBusiness/Industries/Green/Pages/Green.aspx>

Site for New York City Green Economy Plan

<http://www.routledge.com/books/details/9780415953610/>

Description of book on squatter settlements and economic innovation, “Shadow Cities: A billion squatters, a new urban world” Robert Neuwirth, 2006 Routledge

# Questions, Follow-up



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