A Compilation of Green Economy Policies, Programs, and Initiatives from Around the World

The Green Economy in Practice: Prepared for Interactive Workshop 1
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The purpose of this compilation is to highlight examples of "Green Economy" policies, programs, and initiatives taking place around the world.

In recent years, the concept of the Green Economy has emerged as a potential remedy to some of the key market and institutional failures that characterize the conventional development model, and as a more effective pathway to advancing economic, social, and environmental goals. Green Economy in the context of poverty eradication and sustainable development will be one of two specific themes discussed at the Earth Summit 2012 (Rio+20), the other being the institutional framework for sustainable development. While broad consensus on how to define the Green Economy is still emerging, it is nonetheless possible to survey the rapidly proliferating international landscape of case studies under the Green Economy banner and identify their contribution to sustainable development.

There are various ways to categorize these case studies – by geography, by broad sector of the economy, by policy approach (e.g., taxation, expenditure, regulation), or by type of sponsoring institution. This compilation provides information on each, but is organized primarily by sector and geography in order to illustrate the diversity of actors and approaches across the globe. Each example is categorized into one dominant economic sector, although it is recognized that many of these case studies promote Green Economy objectives in more than one sector.

In this compilation, not every Green Economy sector is equally represented. Nor is the list exhaustive or comprehensive. The case examples presented here were selected to reflect geographic diversity, and are limited to those examples with demonstrable benefits in each of the three sustainability domains – economic, social, and environmental – and those with clear links to public policy.

The case examples in this compilation are organized first by sector and then by geographic location. Each example provides a brief description of the case study and identifies specific policy changes that made it possible. The compilation also discusses major economic, social, and environmental outcomes. At the end, the compilation provides important links for more information about each case example. The compilation is a "work in progress" that will be supplemented as new Green Economy initiatives unfold in the years ahead.

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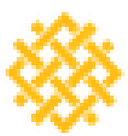

WORLD RESOURCES INSTITUTE

#	Location	Policy/ Program/ Initiative	Description	Policy Approach	Triple Bottom Line Benefits
			AGRICULTURE		
1	Africa	Water Efficient Maize for Africa (WEMA)	The African Agricultural Technology Foundation is leading a public-private partnership called WEMA to develop drought-tolerant African maize using conventional breeding, marker-assisted breeding, and biotechnology. The long-term goal is to make drought-tolerant maize available royalty-free to small-scale farmers in Africa through African seed companies to mitigate drought risk, stabilize crop yields, and encourage small-scale farmers to adopt best management practices. Efforts are being undertaken in Kenya, Mozambique, South Africa, Tanzania, and Uganda. Biotech trials began in 2010 and will continue through 2011.	Public-private partnership supporting investment in drought-tolerant maize.	• Improved food security: new varieties of maize are expected to increase yields by 24% to 35% compared to current varieties without this form of drought tolerance. • Improved income security due to agricultural yield increases. • Reduced need for pesticides and chemicals and associated human health benefits. • Reduced soil erosion. • Improved soil health.
2	China	Loess Plateau revitalization	Home to more than 50 million people, the Loess Plateau in China's Northwest has been subject to centuries of overuse and overgrazing, leading to the highest erosion rates in the world and widespread poverty. Two large-scale public works projects set out to restore China's heavily degraded Loess Plateau and promote sustainable agricultural production to improve livelihoods through the implementation of one of the world's largest erosion control programs. These projects sought to rehabilitate damaged and degraded ecosystems using tree planting, terracing, restrictions on grazing, construction of reservoirs, and soil enhancement and conservation techniques.	Large-scale public works project funded by the World Bank and a government counterpart.	• More than 2.5 million people in four of China's poorest provinces have been lifted out of poverty. • People in project households saw their incomes grow from about US$70 per year per person to about US$200 through agricultural productivity enhancement and diversification. • The project encouraged natural regeneration of grasslands, tree and shrub cover on previously cultivated slope-lands, thus creating conditions for sustainable soil and water conservation. • Sedimentation of waterways has been dramatically reduced from the Plateau into the Yellow River by more than 100 million tons each year. • The project significantly contributed to the restructuring of the agricultural sector and the adjustment to a market-oriented economic environment.
3	Ethiopia	Revival of Ethiopian coffee cooperatives	Coffee exports account for a third of Ethiopia's total export income. In 2001, the Ethiopian government modified its coffee marketing regulations, permitting coffee grower cooperatives to sell directly to export markets. Prior to that time, all coffee had to be sold through the national exchange, a requirement that resulted in mixing high- and low-quality beans, yielding a uniformly low price. Coffee cooperative unions have been able to negotiate fairtrade agreements with developed countries.	Ethiopia's Federal Cooperative Commission opened its coffee export market to direct participation of producer communities. Financial support is being provided by the International Labour Office for research and comprehensive training and education for Ethiopian cooperative leaders, particularly women and youths.	• Producers have improved their product quality and learned to differentiate the finest quality beans allowing them to enter the specialty coffee market and command prices that are often several times higher than under the previous system. • Improved economic benefits for small producers, who grow 94% of all Ethiopian coffee beans. • Promotion of fairtrade and organic coffee through coffee union encourages environmentally-sound production techniques. • Many cooperatives have used their earnings to invest in local infrastructure projects such as roads, power lines, healthcare facilities, and schools.
4	Kenya	Agriculture carbon finance	The World Bank's BioCarbon Fund is purchasing carbon credits from agricultural projects in Kenya. One project involves mixed cropping systems across 86,000 hectares, using a registered farmers association as the aggregator. The second project is the Kenyan Smallholder Coffee Carbon Project which covers an initial 7,200 hectares, and is aggregated by a farmer cooperative. Carbon sequestration activities include reduced tillage, cover crops, residue management, mulching, composting, green manure, targeted application of fertilizers, reduced biomass burning, and agroforestry.	Pilot carbon sequestration projects administered by the World Bank and developed by the private sector.	• Soil carbon sequestration contributes to restoring agricultural production and fertilizer absorption capacity. • Carbon sequestration activities provide carbon market access and upscaling potential. • Enhanced soil carbon stocks reduce vulnerability to extreme weather events. • Improved income security due to improved agricultural yields. • Prevention of greenhouse gas emissions due to soil management techniques including reduced tillage and residue management.
5	Indonesia	Ngata Toro community	In 2000, the indigenous Masyarakat Adat of the village of Ngata Toro were granted resource rights within the Lore Lindu National Park, their ancestral home, by the Government of Indonesia. They subsequently established an ecotourism enterprise and complementary organic agricultural (duck, pigs, fish farms) and handicraft enterprises (using rattan, bamboo, and tree bark). Two villages are now attempting to replicate the Ngata Toro model.	Government-granted resource rights to indigenous communities (use rights within Lore Lindu National Park).	• Participatory land-use mapping and spatial planning have defined sustainable land-use patterns and support natural resource conservation. • Training in the production and use of organic fertilizer has reduced farmer dependence on chemical fertilizers. • Improved income security and diversification of income. • Green job creation in ecotourism, ethnotourism, and traditional medicinal plant industries. • Enhanced gender equality in resource-use decisions: the initiative led to the development of the Organization for the Indigenous Women of Ngata Toro Village.

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6	Mozambique	The N'hambita Community Carbon Project	Initiated in 2003, the project pays 1000 smallholder farmers in the buffer zone of the Gorongosa National Park in Sofala Province for sequestering carbon through the adoption of agroforestry practices and for reduced emissions from deforestation and degradation (REDD) of miombo woodlands. Farmers are contracted to sequester carbon on their farmlands through adoption of agroforestry practices from a 'menu' that includes horticultural tree species, woodlots, intercropping food crops with *Faidherbia albida* , planting native hardwoods around the boundary of the machambas, and planting fruit trees within the homestead. The N'hambita Community Carbon Project is serving as a demonstration model which will be replicated in other areas both within and outside of Mozambique.	The European Union provided core funding for the project from 2003-2008. Technical assistance was provided by Envirotrade, the Edinburgh Centre for Carbon Management, and the University of Edinburgh School of GeoSciences.	• A minimum of two-thirds of carbon credit sales revenues are to be returned to the local community in the form of contracted payments to farmers and community activities and payment for in-country services. • Engagement of over 1,000 community members. • Prevention of the release or sequestered more than 250,000 tons of carbon dioxide. • Restoration and protection of more than 10,000 hectares. • Increased project opportunities for carbon buyers.
7	Multiple	Fairtrade Labeling Organizations International	The Fairtrade Labeling Organizations International is a network of 19 Fairtrade Labeling Initiatives currently covering 23 countries in Europe, North America, Japan, Australia and New Zealand. The Fairtrade label guarantees that the farmer, acting through a Fairtrade farmer cooperative, has been paid a Fairtrade price based on the average cost of sustainable production rather than volatile global commodity market prices. Furthermore, the label ensures that farm workers are protected by appropriate labor standards and that a Fairtrade 'premium' (in addition to the Fairtrade price) has been paid to contribute to community projects.	Institutional reform through the encouragement of farmer cooperatives embracing sustainable labor and environmental practices. Development of an international umbrella organization to market Fairtrade products and establish uniform Fairtrade standards.	• 827 Fairtrade certified producer organizations in 58 developing countries, representing more than 1.2 million farmers and workers, now benefit from global Fairtrade sales. • Fairtrade cooperatives encourage members to raise shade-grown coffee, which provides songbird habitat and other environmental benefits compared to coffee planted where the forest canopy has been removed; Fairtrade cooperatives also encourage organic production, which reduces pesticide pollution. • With growing consumer support, Fairtrade has achieved significant market share in many product categories in the 70 countries where Fairtrade products are sold. In some national markets Fairtrade accounts for 20-50% of market share in certain products. • In 2008, Fairtrade certified sales amounted to approximately US$4 billion worldwide, benefiting an estimated 6 million people.
8	Niger	Farmer-Managed Natural Regeneration (FMNR)	During the 1950s and 1960s, rapid deforestation of land in Niger for agricultural purposes resulted in severe desertification. Conventional tree planting to combat desertification had only limited success. Beginning in the 1980s, a new method of reforestation, FMNR, became an increasingly popular solution to the problem. FMNR is based on the regeneration of native trees and shrubs from mature root systems of previously cleared desert shrubs and trees. Regeneration techniques are used in agricultural cropland and to manage trees as part of a farm enterprise. FMNR in the savannas of southern Niger adapts centuries-old methods of woodland management to produce continuous harvests of trees for fuel, building materials, and food and fodder without the need for frequent, costly replanting. Trees are trimmed and pruned to maximize harvests while promoting optimal growing conditions (such as access to water and sunlight).	Government decentralization policies supporting land tenure and tree growth reforms. Nonprofit organizations, donor governments, and international aid agencies encouraged and assisted farmers in adopting low-cost techniques for managing the natural regeneration of trees and shrubs.	• Improved food security as at least 250,000 hectares of degraded land reclaimed for crop production. • Expanded cultivation of cereals and vegetables, with harvests doubling in some areas. • Many rural producers have doubled or tripled their incomes through the sale of wood, seed pods, and edible leaves. • Improved stocks of fuelwood and fodder. • Average time spent by women collecting firewood has fallen from 2.5 hours to half an hour. • An increase of 10- to 20-fold in tree and shrub cover on about 5 million hectares of land, with approximately 200 million trees protected and managed. • Soil fertility improved as higher tree densities act as windbreaks to counter erosion, provide enriching mulch and fix nitrogen in root systems. • Increased population of wild fauna, including hares, wild guinea fowls, squirrels and jackals. • New food export markets created, primarily to Nigeria. • Creation of specialized local markets in buying, rehabilitating, and reselling degraded lands, with land values rising by 75–140% in some areas.
9	Uganda	Organic agriculture standards and policies	The Ugandan government has taken several important steps in transforming conventional agricultural production into an organic farming system which prohibits the use of synthetic inputs, such as drugs, fertilizers and pesticides. Organic exports are an important part of Uganda's economy. Sustainable agriculture is seen as a means of improving people's livelihoods as it could provide significant benefits for its economy, society and the environment.	Uganda's government adopted several organic farming standards and policies to promote sustainable agricultural growth. In 2004, Uganda adopted the Uganda Organic Standard. In 2007, Uganda adopted the regional standard, the East African Organic Products Standards developed by a UNEP-UNCTAD initiative. In July 2009, the government released a Draft Uganda Organic Agriculture Policy.	• Between 2002-2007, the number of certified organic farmers increased 359% and acreage under organic agricultural production increased 60%. • Improved income and food security. • Reduced greenhouse gas emissions (conventional farms, on average, emit 64% more emissions per hectare). • Reduced agricultural chemical runoff into local water bodies. • Certified organic exports increased from US$3.7 million in 2003/4 to US$22.8 million in 2007/8. • In 2006, the farm-gate prices of organic pineapple, ginger, and vanilla were 300%, 185%, and 150% higher, respectively, than conventional products.

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			ENERGY		
10	Africa	Feed-in Tariffs	Six African countries currently use Feed-In Tariffs (FITs) to promote investment and growth in the renewable energy sector, including hydro, wind, solar, bagasse, and biomass power. Feed-in tariffs are government-instituted policies that assure economically attractive prices for generation of energy from renewable sources.	Feed-in tariffs for renewable energy.	• Improved access to energy. • Green job creation. • Improved environmental integrity. • Reduced greenhouse gas emissions. • Reduced dependence on imported fuels.
11	Africa	Lighting Africa Initiative	Lighting Africa is a joint International Finance Corporation and World Bank program that supports the global lighting industry in developing affordable, clean, and efficient modern lighting and energy solutions for millions of Sub-Saharan Africans who currently live without access to the electricity grid. Lighting Africa aims to leverage global expenditures on fuel-based lighting to develop, accelerate, and sustain the market for modern off-grid lighting alternatives including the latest light-emitting diode, fluorescent, human-cranking, and solar technologies.	Private and public investment for renewable energy by a variety of partners including the multilateral development agencies, private companies, government agencies, and non-profits.	• Skills training/education of energy sources and availability via consumer outreach campaign. • Improved access to energy. • Reduced kerosene use. • Reduced greenhouse gas emissions. • Increased market opportunities for renewable energy: an estimated 100,000 lanterns and task lights were sold in Ghana, Kenya and elsewhere in 2009 by 22 manufacturers. • Reduced barriers between the global lighting industry and local service providers.
12	Bangladesh	Grameen Shakti Renewable Energy Scheme	Grameen Shakti is a nonprofit village renewable energy system, linked to the microcredit lender Grameen Bank, pioneering solar systems for homes in Bangladesh. Grameen Shakti operates a small loans system that enables poor households to buy a solar energy system. The systems cost about $135, but villagers usually pay in installments. Solar energy systems are often used to replace kerosene-fired lanterns. The system also helps enable conditions for job creation and improved income security as businesses can operate for longer hours and have reduced energy costs.	Nonprofit company established under the umbrella of the Grameen Bank that promotes and supplies renewable energy technology at affordable rates to rural households.	• Over 65,000 solar energy systems have been installed in rural Bangladesh. • Improved gender equity as women are main users of solar energy systems for work and at home. • 2.5 million people are benefiting from solar energy systems, and Grameen Shakti has plans to reach 10 million people by 2012. • Grameen Shakti is aiming to create 100,000 jobs in the renewable energy and related businesses. • Kerosene lamps are being replaced with solar energy systems, which are cleaner and less dangerous. • Prevention of greenhouse gas emissions due to decreased reliance on kerosene lamps and wood for fuel. • Avoided deforestation due to decreased reliance on biomass for energy and cooking. • Increased market opportunities for renewable energy and related businesses.
13	Benin	Solar drip irrigation	The Solar Electric Light Fund (SELF) organization partnered with the International Crops Research Institute for Semi-Arid Tropics and devised a combination of solar-powered water pumps with drip irrigation tubes. By doing this, water and fertilizers can be supplied to plants even throughout the six-month dry season, allowing large plots of vegetables to be grown year-round. Solar energy systems are purchased by villagers through microcredit financing. Each family pays for its own system and participates in the ownership of community systems, spreading development funds further to help more people.	Nonprofit venture that provides microcredit lending for solar drip irrigation systems and skills training for installation and maintenance of systems.	• Improved food security. • Improved nutrition: In villages irrigated with solar-powered systems, vegetable intake increased to three to five servings per day. • Improved income security: women are earning an extra $7.50 per week from the sale of fresh produce at the local market. • Reduced time spent collecting water for women. • Prevention of greenhouse gas emissions from reduction in inefficient agricultural practices. • Increased market opportunities for solar energy.
14	Brazil	Sao Paulo climate change policy	In 2009, the Sao Paulo city council unanimously approved a law establishing the Municipal Policy for Climate Change. The policy aims to reduce Sao Paulo's citywide greenhouse gas emissions by 30% of 2005 levels by 2012 through several measures comprehensively focused on transportation, renewable energy, energy efficiency, waste management, construction and land use. Sao Paulo is the first city in Brazil to pass such legislation.	Municipal government law specifying greenhouse gas reduction target for 2012.	• Expected improvements in indoor and outdoor air quality from increased green space and construction material quality regulations. • Expected reductions in greenhouse gas emissions. • Expected improvements to public transportation access and use. • Expected landfill waste reduction. • Expected reductions in deforestation due to requirements for certified wood for use in construction. • Expected improvements to market share for renewable fuels.

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15	Cambodia	Biomass gasifiers	Rural areas of Cambodia lack access to reliable and affordable electricity because Cambodia's grid is a patchwork of inefficient regional grids. SME Renewable Energy Ltd. sells biomass gasifiers to industries in rural Cambodia that convert rice husks and other agricultural waste into gas for rice, brick, textile and ice businesses in Cambodia. SME's partner, E+Co, an American non-profit that invests in renewable energy companies, finances 80% of the capital required to install a gasifier through microcredit.	Private venture promoting biomass gasifiers and microloans.	• Improved access to energy. • The 32 gasifiers installed by SME RE eliminate the need for over 3 million liters of diesel fuel and reduce carbon emissions by over 9,000 tons each year. • Promotion of small business development.
16	China	Clean energy production	China has issued a series of regulations since 2005 to promote renewable energy consumption by encouraging investment in renewable energy production and creating policy incentives (both command-and-control and market-based mechanisms) to encourage research and development of both wind and solar power. Regulations include a feed-in tariff, a renewable energy surcharge, a national fund to support investment, tax preferences for renewable energy projects, requirements that a competitive pricing bidding model be used for the majority of wind power development, and discounted lending preferences.	Command-and-Control and market-based regulations aimed at increasing renewable energy production.	• An estimated 300,000 new jobs have been created. • Improved outdoor air quality and associated human health benefits. • Reduced greenhouse gas emissions. • Increased market opportunities for low-carbon industries.
17	China	Top 1000 Program	In 2005, the Chinese government announced an ambitious goal of reducing energy consumption per unit of GDP by 20% between 2005 and 2010. One of the key initiatives for meeting this goal was the Top-1000 Energy-Consuming Enterprises program, which set energy-saving targets for China's top 1000 highest energy-consuming enterprises. The industries included are large-scale, financially independent enterprises in nine major energy consuming industries: iron and steel, petroleum and petrochemicals, chemicals, electric power generation, non-ferrous metals, coal mining, construction materials, textiles, and pulp and paper. Activities to be undertaken include benchmarking, energy audits, development of energy saving action plans, information and training workshops, and annual reporting of energy consumption. The program employs the use of voluntary environmental agreements by which a company agrees to bind itself to a performance target in exchange for financial and technical assistance from the Chinese government.	Government-created voluntary energy-saving program and supporting policies, funding, and training (e.g., facility audits, assessments, monitoring).	• Reduced greenhouse gas emissions associated with decreased energy consumption: In 2006, energy consumption per unit GDP declined 1.23% compared with 2005. • Potential to contribute to somewhere between approximately 10% and 25% of the savings required to support China's efforts to meet a 20% reduction in energy use per unit of GDP by 2010. • Increased business competition to become more energy efficient.
18	European Union	European Union Emissions Trading System (EU ETS)	The EU ETS is a mandatory cap-and-trade system that serves as the cornerstone of the European Union's policy to combat climate change. Being the first and largest international system for the trading of greenhouse gas emission allowances, the EU ETS covers some 11,000 power stations and industrial plants in 30 countries. It covers CO_2 emissions from installations such as power stations, combustion plants, oil refineries and iron and steel works, as well as factories making cement, glass, lime, bricks, ceramics, pulp, paper and board. Airlines will join the system in 2012.	Mandatory cap-and-trade system adopted by EU governments to meet Kyoto Protocol obligations.	• The EU ETS has promoted the development of low-carbon projects worldwide by creating a framework that allows the utilization of assets generated through the Clean Development Mechanism and Joint Implementation. • Available data point to a 2–5% decline in emissions (40–100 Metrc tonnes of CO_2 equivalent annually) attributable to the ETS during the trial period of 2005–07. • The total value of European Union Allowance transactions in 2009 rose 18% to US$118.5 billion (€88.7 billion), due to a robust 105% increase in trading volume over 2008. • As a result of the ETS, European power companies have begun to fully integrate the cost of carbon into their investment decisions and include more low-carbon technologies (e.g., combined cycle gas turbines, high-efficiency coal and renewable energy) in their future plant mix.
19	Germany	Renewable energy legislation	Germany has issued a series of laws aimed at promoting renewable energy development and consumption. Efforts began with federal government research and development support for wind turbine development in 1974. A federal Electricity Feed Law (StrEG) was adopted in 1991 and became the most important instrument for the promotion of renewable energy in Germany during the 1990s. It obligated public utilities to purchase renewably-generated power from wind, solar, hydro, biomass and landfill gas sources, on a yearly fixed rate basis, based on utilities' average revenue per kWh. In 1999, Germany introduced the Market Incentive Program (MAP), which offered government grants totaling €203 million in 2003 for the commercialization and deployment of renewable energy systems. The Renewable Energy Law of 2000 (EEG) aimed to facilitate a doubling of renewable energy's 1997 share in the power generation fuel mix by 2010—to a minimum of 12.5%. The EEG's remuneration system is based on a fixed, regressive feed-in tariff for renewable sources. Finally, as a member of the European Union, Germany is also obliged to adopt a national target for the expansion of renewable energy's share in Europe's fuel mix.	Government research and development support for wind turbine development; feed-in tariff established by the EEG; government grants for commercialization and deployment of renewable energy systems; Electricity Feed Law requiring public utilities to purchase renewably-generated power; and National target for the expansion of renewable energy's share in Europe's fuel mix.	• Improvements to indoor and outdoor air quality and associated improvements to human health. • Green job creation. • Between 1990 and 2003, CO_2 emissions from electric power production declined by roughly 13%. • Between 1990 and 2003, renewable energy's share in Germany's electric power generation fuel mix grew from less than 3% to almost 9%. • Increase in domestic production and deployment of wind and solar systems - As of 2005, exports accounted for approximately 20% and 10% of wind and solar photovoltaic production.

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			ENERGY		
20	Japan	Green stimulus package	In 2009, Japan announced a $154 billion package to foster environmentally friendly technologies, including plans to provide solar power more cheaply to homes. Consumers would receive tax breaks worth as much as $2,500 on purchases of "green" cars, as well as subsidies of 5% on energy efficient televisions and other appliances.	Nationwide environmentally-friendly economic stimulus package including subsidies and tax breaks.	• Japan wants to create 4 million new jobs. • By 2020, Japan wants to increase its solar-generating capacities twentyfold, and raise the domestic sales of eco-friendly vehicles to one million vehicles a year. • Japan wants to increase market opportunities for green products.
21	Japan	Top Runner program	Japan's Top Runner program sets efficiency standards for 21 products (e.g., vending machines, air conditioners, TVs) sold in Japan. On a regular basis, officials test all the products currently available in a category, determine the most efficient model, and make that model's level of efficiency the new baseline. Manufacturers have the obligation to make efforts to achieve the new baseline within four to eight years. If a manufacturer does not meet the target or fails to make a good faith effort, this fact is publicized. Products which meet the energy efficiency standard receive a Top Runner label; products that do not meet the baseline are labeled differently. This drives other companies to try to make even more efficient models to compete, which in turn means the next time officials set standards, the best available products will be even more efficient.	Government program establishing energy efficiency standards for 21 products.	• Cost savings from reduced energy consumption. • Rates of energy efficiency required for 21 products have all been met or exceeded. • Reduced greenhouse gas emissions due to decreased energy use. • Increased market opportunities for energy-efficient products. • Penetration rate of program-compatible vehicles into the new-vehicle market increased from 11% in 1997 to over 90% in 2008 due partly to the program.
22	Republic of Korea	Low Carbon and Green Growth Bill	In 2008, a new national policy vision of "Low Carbon, Green Growth" was adopted that includes a long-term National Strategy for Green Growth (2009–2050), a Five-Year Plan for Green Growth ("Five-Year Plan"), and a Framework Act for Low Carbon Green Growth. This first Five-Year Plan covers the period 2009–2013 and comprises a manifest of political commitments and a blueprint for government action. The Plan also contains budgetary earmarks and tasks delegated to relevant ROK ministries, and targets spending of 2% of the nation's GDP on green growth. Investment will be initially weighted toward infrastructure projects to help combat the sagging economy, with spending shifting toward export-focused green-tech research and development over time.	The Republic of Korea arranged a US$30.7 billion stimulus package to support the government's efforts to various environmental projects including development of renewable energy resources, energy efficient buildings, low carbon vehicles, expansion of railways, and water and waste management. The government has also established mandatory reporting of carbon emissions by all carbon and energy-intensive industries; cap on greenhouse gas emissions.	• Projected increase in employment in greening sectors. • Expected improvements in energy and income security. • Korea aims to reduce greenhouse gas emissions by 30% below the nation's business-as-usual levels by 2020. • Improved market opportunities for green products. • Reduced reliance on imported fuel.
23	Tunisia	Tunisian Solar Programme (PROSOL)	In 2005, the Tunisian government initiated its Solar Programme, PROSOL. The program aims to promote the development of the solar thermal market through financial and fiscal support. PROSOL is a joint initiative of the Tunisian National Agency for Energy Conservation (ANME), the state utility Société Tunisienne de l'Electricité et de Gaz (STEG), the United Nations Environment Programme and the Italian Ministry for the Environment, Land and Sea. PROSOL includes a loan mechanism for domestic customers to purchase Solar Water Heaters (SWHs) and a capital cost subsidy provided by the Tunisian government of 20% of system costs.	Joint initiative of the United Nations Environment Programme, the Tunisian National Agency for Energy Conservation and the Société Tunisienne de l'Electricité et de Gaz (STEG). The initiative established a loan facility to subsidize the cost of purchasing a SWH.	• Over 50,000 Tunisian families now get their hot water from the sun based on loans amounting to more than $5 million in 2005 and $7.8 million in 2006. • Supported job creation as 42 technology suppliers have officially registered and at least 1000 companies have installed the systems. • Prevention of 240,000 tonnes of cumulative CO2 emissions. • Reduced reliance on imported fuel.
24	United Kingdom	Climate Change Act	The Climate Change Act 2008 provides a legal framework for ensuring that Government meets its commitments to tackle climate change. The Act sets legally binding emission reduction targets for 2020 (reduction of 34% in greenhouse gas (GHG) emissions relative to 1990 levels) and for 2050 (reduction of at least 80% in GHG emissions). Other key provisions of the Act include: (1) a carbon budgeting system which caps emissions over five-year periods, with three budgets set at a time; (2) the creation of the Committee on Climate Change - a new independent, expert body to advise the Government on the level of carbon budgets and on where cost-effective savings can be made; (3) a requirement that the Government have regard for to need for UK domestic action on climate change (e.g., set limits on International credits); and (4) a requirement for the Government to report at least every five years on the risks to the UK of climate change.	Legal framework committing the UK Government to meet climate change obligations.	• Expected reduction in greenhouse gas emissions and associated air quality improvement benefits. • Increased market opportunities for renewable energy suppliers.
25	United States of America	Assembly Bill 32 (AB32): State climate change legislation	AB32, or the Global Warming Solutions Act of 2006, mandates that California reduce its greenhouse gas (GHG) emissions to 1990 levels by 2020. AB32 also directs the California Air Resources Board to begin developing discrete early actions to reduce GHG emissions while also preparing a scoping plan to identify how best to reach the 2020 limit. Other key requirements of AB32 include: adoption of a regulation requiring GHG reporting for industry; identification and adoption of regulations for discrete early actions that could be enforceable; adoption of a low carbon fuel standard; requirement that early voluntary reductions receive appropriate credit; and the establishment of an Environmental Justice Advisory and an Economic and Technology Advancement Advisory Committee.	State legislation establishing a greenhouse gas emissions target for 2020.	• Expected improvements in energy efficiency and increased cost savings for California households. • Expected creation of green jobs. • Reduced greenhouse gas emissions. • Increased investment in cleantech.

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			ENERGY		
26	United States of America	California electricity efficiency standards	California's Energy Efficiency Standards for Residential and Nonresidential buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards form an energy efficiency threshold that buildings must meet and are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. California adopted new, ambitious standards in 2008. California also adopted energy efficiency standards for televisions in 2009.	Energy efficiency standards set by the California government for residential and nonresidential buildings and televisions	• Improved energy and cost savings for California residents. • Reduced greenhouse gas emissions. • Savings of $56 billion in electricity and natural gas costs since 1978, with an additional $23 billion expected savings by 2013. • Increased market competition for energy efficient products.
27	United States of America	California Green Building Standards Code (CalGreen)	California recently approved CalGreen, the most stringent, environmentally-friendly building code in the United States that will apply to new commercial buildings, hospitals, schools, shopping malls and homes. CalGreen requires that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant emitting finish materials. CALGreen's mandatory measures establish a minimum for green construction practices, and incorporate environmentally responsible buildings into the everyday fabric of California cities without significantly driving up construction costs in a slow economy. CALGreen has approximately 52 nonresidential mandatory and an additional 130 provisions for optional use. Example key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20% reduction of potable water use within buildings, a 50% construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.	Mandatory requirements as well as two sets of voluntary measures tailored to residential and non-residential building classifications.	• Expected reductions in greenhouse gas emissions, water consumption, and energy consumption. • Expected reductions in landfill waste. • Enhanced competition to become green amongst businesses.
			FISHERIES		
28	Bangladesh	Management of Aquatic Ecosystems through Community Husbandry (MACH) program	The Management of Aquatic Ecosystems through Community Husbandry (MACH) program was initiated in 1998 to reverse the trends of wetlands degradation and a concentration of income among a handful of leaseholders in Bangladesh. MACH advocates a multi-disciplinary, multi-sector and participatory process of planning, implementation and monitoring for sustainable wetland resource management. One of the key building blocks to the MACH approach for sustainable wetland management was establishing Resource Management Organizations (RMOs), each of which represents all the stakeholder groups for a particular part of the wetland system. The RMOs have worked to protect water bodies, to address problems identified by the communities in these areas, which have involved setting rules and limits on use, and restoring wetland habitat including tree planting. To offset the hardships caused by fishing restrictions, poor households also receive skills training and micro-loans to start new enterprises. The MACH program's success is rooted in community self-interest and ownership. MACH programs are being implemented by four non-government organizations including Winrock International, the Bangladesh Centre for Advanced Studies, the Center for Natural Resources Studies and CARITAS- Bangladesh.	Reform of leasing policies and formal recognition of Resource Management Organizations with the Social Welfare Department. Establishment of microloan program to support new enterprises and skills training.	• Average daily household incomes increased by 33 percent between 1999 and 2006. • Sixty-three sanctuaries established, covering 178 hectares, 57 ha of beel wetland and 31 km of water channels excavated. • Over 2 million days of local employment created. • Average daily household incomes rose by a third to US$1.31 between 1999 and 2006. • Wetlands were restocked with 1.2 million fish from 15 native species, including 8 threatened fish species and two locally extinct species. • Members of 5,202 wetland-dependent households received training and credit to start new livelihoods. • Between 1999 and 2006, fish catches in project villages rose by 140% and fish consumption rose by 52%. • Improved participation of women in workforce and local decision-making processes.
29	Fiji	Locally Managed Marine Areas (LMMAs)	Local communities in Fiji are reclaiming their marine-based livelihoods by implementing LMMAs. LMMAs are a combination of traditional local conservation practices blended with modern methods of monitoring, and energized by the full participation of members of the community, who design and implement the marine management plans. The goal is to bolster local incomes and traditions by replenishing local waters and restoring populations of agricultural crops and marine resources such as clams and octopus. Villagers began receiving training in community planning and environmental education from the University of the South Pacific in the 1990s. The LMMA Network was launched in August 2000 as a learning network after a series of workshops to provide guidance on community-based management of marine areas. Promoting models of adaptive governance and knowledge-sharing networks, the network now has members in Indonesia, Palau, Papua New Guinea, the Philippines, Micronesia, and the Solomon Islands.	Local adaptive management supported by government agencies or ministries, nongovernmental organizations (NGOs), and educational institutions.	• Enhanced disaster risk management and reduced risk of loss of marine resources. • Enhanced income security for local residents due to improvements in fishery resources (e.g., clams). • Improvement in marine ecosystem health and species population growth. • Increase in fishery resources.

#	Location	Policy/ Program/ Initiative	Description	Policy Approach	Triple Bottom Line Benefits
			FORESTRY		
30	Guatemala	Community forestry enterprises	Under the supervision of NGOs, donors, and government agencies, community-owned forest enterprises steward over 420,000 hectares in Guatemala's Maya Biosphere Reserve. Each enterprise is responsible for one distinct parcel of land or "concession" that is leased to them by the Guatemalan government. Already, communities in Honduras are replicating the concession model, while government agencies from Nicaragua, Panama, and Peru have hired members of Petén's community-owned enterprises as consultants in sustainable forest management	Government decentralization policies for land-use management combined with assistance from nonprofit organizations.	• More than 10,000 people directly benefit from forest concessions and 60,000 receive indirect benefits. Concession employees receive more than double the regional minimum wage. • Between October 2006 and September 2007, the concessions produced some US$4.75 million in certified timber sales and close to US$150,000 in sales of xate (palm leaves used for flower arrangements) and other non-timber forest products. • A share of the revenue from forest products was used for community projects such as installing water supply systems and paying school fees. • Communities received legal rights to manage and harvest forests and security of tenure via 25-year management leases. • By 2006, a total of 6,839 members of community enterprises had received intensive training in forestry and business management and in technical skills. • Diversity of birds, animals, and insects has been maintained or enhanced. • Environmental services payments to communities for avoided deforestation and carbon sequestration are under negotiation. • Reductions in forest fires, illegal logging, and hunting.
31	Namibia	Community Based Natural Resource Management Programme (CBNRM)	Namibia's establishment of conservancies – legally gazetted areas within the state's communal lands – is among the most successful efforts by developing nations to decentralize natural resource management and simultaneously combat poverty. It is one of the largest-scale demonstrations of CBNRM and the state-sanctioned empowerment of local communities. Conservancies are run by elected committees of local people, to whom the government devolves user rights over wildlife within the conservancy boundaries. This has provided the incentive to sustainably manage wildlife populations to attract tourists and big game hunters. Technical assistance in managing the conservancy is provided by government officials and local and international NGOs.	Combination of policy and legal reforms including the granting of resource rights to local members of communal conservancies (use rights to wildlife and other natural resources within conservancy boundaries) through the Nature Conservation Act of 1996. Institutional collaboration and procedures enabling communities to form Conservancies to acquire resource rights and to enter into joint ventures for lodges, tented camps, and game sales.	• Over 95,000 Namibians have received benefits of some kind since 1998 including jobs, training, game meat, cash dividends, and social benefits such as school improvements or water supply maintenance funded by conservancy revenue. • 547 full-time and 3,250 part-time locals employed via tourist lodges, camps, guide services, and related businesses such as handicraft production. • Women's livelihoods and status have improved within the conservancies. Women fill more than half of the full and part-time jobs generated by conservancy businesses. • Conservancies represent 14% of total land area as of 2007. • Increased populations of elephant, zebra, oryx, springbok, and black rhino due to reduced poaching on conservancy lands. • Managing land primarily for wildlife has reduced cattle overgrazing in many areas.
32	Nepal	Community Forestry	In Nepal, the main forest management strategy is community forestry, a strategy that encourages active participation of local people in managing production and distribution of forest products. Local people are organized into Community Forest User Groups (CFUGs). In this approach, local users develop their own operation plans, set harvesting rules, set rates and prices for products, and determine how surplus income is spent. The government facilitates efforts and provides support. Since 1980, about 14,000 CFUGs have been formed in Nepal.	Granting of local resource rights to community forest user groups through a series of policies including the Master Plan for the Forestry Sector prepared in 1989, the Forest Act of 1993, the Forest Regulations of 1995, and the Forestry Sector Policy of 2000. The Forest Act and Forest Rules accelerated the transfer of forests to forest user groups; they provide the legal basis for the implementation of community forestry and recognize CFUGs as "self-governing autonomous corporate bodies for managing and using community forests".	• Increased employment and income generation from forest protection, tree felling and log extraction, as well as non-timber forest products. • Improved access to sustained forest fuel sources. • Improved access to microcredit. • Improved access to local decision-making processes. • Improved forest management and cover contribute to nature conservation. • Enhanced soil and water management.
33	Vietnam	Planting mangroves for disaster mitigation	The mudflats of the Red River delta were claimed for agriculture over several centuries by building dykes. Local communities traditionally left a band of natural saltwater tolerant mangrove forest between the dykes and the sea to protect against waves, wind and typhoon damage. During the 1970s, the mangroves were cut for fuel and were sprayed with defoliants, destroying most of this natural band and leaving the area more vulnerable to natural disaster. The government and several NGOs campaigned to reforest the coastline and with the support of the International Federation, the Japanese Red Cross Society and the Danish Red Cross, the Vietnamese Red Cross planted more than 175 km² of mangrove forest along almost 200 km of coastline. Local communities carried out the planting and were granted the right to harvest marine products such as crabs and mussels in the areas they had planted for a number of years.	Government and nonprofit investment for dyke maintenance. Harvest rights for marine products granted to local communities.	• 12,000 hectares of mangroves planted. • Red Cross estimates that 7,750 families have improved livelihoods through decreased vulnerability to natural disasters and through the selling of crabs, shrimps, and mollusks. • Dyke maintenance cost reduction.

#	Location	Policy/ Program/ Initiative	Description	Policy Approach	Triple Bottom Line Benefits
			GREEN WORKFORCE DEVELOPMENT		
34	Australia	Green Skills Agreement	The Green Skills Agreement seeks to build the capacity of the vocational education and training (VET) sector to deliver the skills for sustainability and required in the workplace and to enable individuals, businesses and communities to adjust to and prosper in a sustainable, low-carbon economy. This will be achieved by: embedding skills for sustainability practice and teaching in vocational education and training, within the requirements of the national regulatory framework; the upskilling of VET instructors and teachers to deliver skills for sustainability; the strategic review of Training Packages (sets of nationally endorsed standards and qualifications for recognizing and assessing people's skills) to embed sustainability knowledge, skills and principles; and implementing a transition strategy to re-skill vulnerable workers.	The Council of Australian Governments endorsed the Green Skills Agreement in 2009 that commits the Australian government and state and territory governments to working with training organizations and businesses for sustainability skills.	• More than 1.7 million Australians participate in VET each year through a national network of over 4000 public and private registered training providers. • Increased market entry opportunities for green industries. • Support for the reduction of greenhouse gas emissions through market transformation of construction, energy, mining, manufacturing, transport, agriculture, and administrative and service-related industries.
35	India	Natural Rural Employment Guarantee Act (NREGA)	NREGA promotes wage employment and natural resource management in over 615 rural districts. The Act aims to enhance livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. Its auxiliary objective is strengthening natural resource management through works that address causes of chronic poverty like drought, deforestation and soil erosion and so encourage sustainable development.	Guaranteed Wage Employment program implemented by the Ministry of Rural Development.	• In its first two-and-a-half years, NREGA generated more than 3.5 billion days of work reaching on average 30 million families per year. • Women represent roughly half the employed workforce. • NREGA has contributed to boosting the average wage of agricultural laborers by more than 25%. • Improved ecosystem health through financing of rural works that address causes of drought, deforestation, and soil erosion. • Crop and livestock production improved. • Encouragement of transparency and accountability in governance.
36	Multiple	Farmer field schools	The Farmer Field School is a form of adult education that evolved from the concept that farmers learn optimally from field observation and experimentation. It was developed to help farmers tailor their Integrated Pest Management (IPM) practices to diverse and dynamic ecological conditions. IPM Farmer Field Schools were started in 1989 in Indonesia to reduce farmer reliance on pesticides in rice. Policy-makers and donors were impressed with the results and the program rapidly expanded. Follow-up training activities were added to enhance community-based activities and local program ownership. Eventually, IPM Farmer Field School programs for rice were carried out in twelve Asian countries and gradually branched out to vegetables, cotton and other crops.	Integrated Pest Management training by government agencies and donors.	• Improved knowledge sharing among farmers. • Improved food and income security due to increased agricultural yields. • Improved public health associated with reduced agricultural chemical use. • Reduced water contamination from agricultural chemical runoff. • Improved biodiversity. • Improved marketability of produce.
			TRANSPORTATION		
37	France	Reward-Penalty scheme for personal cars	France introduced the Bonus-Malus (reward-penalty) system for personal cars in 2007 to remove older polluting vehicles from the road and encourage manufacturers to develop low-emission vehicles by guiding consumer choice. This system provides a subsidy to those who purchase a new car that emits less than 130 grams (g) of carbon dioxide (CO_2) per kilometer (km), while imposing a penalty on those who buy a new car that emits over 160 g CO_2/km. The amount of the reward and penalty depends on the amount of CO2 emitted by the car.	Reward/Penalty system for personal cars.	• Expected improvements in outdoor air quality and associated health benefits. • Financial benefit for purchasing a low-emitting car. • Average CO2 emissions of new vehicles registered in France has decreased from 149 g CO2/km in late 2007 to 130 g CO2/km in the first half of 2010. • For the first half of 2010, 49.5% of new cars registered were eligible for a Bonus (<125gCo2/km), whereas vehicles submitted to a Malus (>155gCO2/km) represented 9.8% of the new cars registered. • Expected increase in market opportunities for low-emission vehicles.
38	Mexico	Mexico City Bus Rapid Transit (BRT)	In 2005, Mexico City opened Metrobus, a BRT corridor along one of the city's busiest streets. Metrobus replaced about 350 standard buses with 97 new articulated BRT vehicles. Some of the BRT vehicle are owned by a private company, CISA, and some are owned by a public company, RTP. Vehicles have a maximum capacity of 160 passengers and run at extremely high frequencies, roughly 56 per peak hour along the northern half of the route. Currently, the BRT is carrying roughly 250,000 passengers per day. There is a trust fund that manages, invests, and distributes all fare revenues. The trust fund contracts directly with a fare collection contractor which, among other things, provides fare collection equipment, sells smartcards, collects the cash, and deposits the cash with the trust fund. Given the program's success, the new Mayor of Mexico City, Marcelo Ebrard, is actively considering building 10 more Metrobus corridors.	Mexico has issued a series of regulations that give legal certainty to granted and regulatory companies in consideration of the public transport planning. Mexico City Government supported the planning, coordination, rectory and management as well as the financing of the construction and maintenance of the corridor infrastructure. RTP and CISA formed a private trust that is responsible for the administration and distribution of total revenues from Metrobus. A private company was hired to finance, provide and operate the technology platform for the use of a smart card for toll collection.	• Reduced commute time from 1.5 hours to 1 hour for the route. • Reduced passenger exposure to CO, benzene, and PM 2.5 by up to 50 percent, as compared with previous bus service in the corridor. • Reduction of CO2 by 35,000 tons annually. • Increased market opportunities for rapid transit buslines.

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			TRANSPORTATION		
39	Multiple	Bike-sharing programs	Cities all over the world are instituting bike-sharing programs to promote low-carbon commuting. In general, bike stations are set up throughout a city and users are allowed to rent bikes with fees for late returns or lost bikes. Programs are initiated by local governments or private companies. Example programs include Velib in Paris, France, Capital BikeShare in Washington DC, USA, ByCyklen in Copenhagen, Denmark, and OYBike in London, United Kingdom.	Private or city government investment in implementing and managing bike-sharing programs.	• Improvements in outdoor air quality from reduced vehicle emissions and associated health benefits. • Reduced greenhouse gas emissions due to reduced car usage. • Increased market opportunities for low-carbon transportation. • Decreased inner-city traffic and reduced wear on road infrastructure.
40	South Africa	Carbon tax	On September 1, 2010, South Africa instituted an ad valorem CO2 emissions tax on new passenger vehicles. The emissions tax will initially apply to passenger cars, but will be extended to commercial vehicles once agreed CO2 standards for these vehicles have been set. The main objective of this emissions tax is to influence the composition of South Africa's vehicle fleet to become more energy efficient and environmentally friendly, while generating an estimated R1 billion in revenue.	Carbon emissions tax on new passenger vehicles.	• Expected improvements in outdoor air quality associated with reduced pollution. • Expected reductions in greenhouse gas emissions from new passenger vehicles. • Increased incentives for purchasing fuel-efficient passenger and commercial vehicles.
41	Switzerland	Car-sharing program	The Swiss car-sharing company, 'Mobility', was founded in Zurich in 1987, and now has over 2,200 vehicles at 1,100 stations throughout Switzerland. Mobility allows members to reserve a vehicle and pick it up from one of the given stations any time. The program aids in reducing car use and congestion in Zurich by discouraging the purchase of new vehicles.	Private venture - car-sharing business.	• Improvements to outdoor air quality associated with decreased vehicle emissions. • Expected reductions greenhouse gas emissions. • More than 2100 Swiss companies use 9,020 Mobility cards for organizing corporate mobility.
42	United Kingdom	London Congestion Charge	Initiated in 2003, London's congestion charge system aims to reduce inner-city traffic and prevent pollution. The system requires a daily charge for people driving within an eight-square-mile zone of central London. Revenues are used to support London's transport system. The zone was extended to parts of west London in 2007.	Daily congestion charge for central London to reduce traffic and auto emissions.	• Traffic delays inside the charging zone remain 30% lower than before charging was introduced. • Improved human health due to improved outdoor air quality. • Reduced greenhouse gas emissions: there are 65,000 fewer car trips into or through the charging zone each day. • Congestion charging contributes £50m to London's economy, mainly through quicker and more reliable journeys for road and bus users. • Reduced traffic 21% below pre-charge levels (70,000 fewer cars per day). • Improvements to public transportation system through charge collection.
43	United Kingdom	Source London Electric Vehicle Charging Network	In Spring 2011, Source London will begin a phased installation of 1,300 public charge points for electric vehicles on residential streets and off-street locations, such as supermarkets, public car parks and at shopping and leisure centers. Any vehicle that is licensed with the Driver and Vehicle Licensing Agency as a pure electric or a plug-in hybrid electric vehicle will be able to join the system. The network will be run by Transport for London, a consortium of public and private partners, with support from a leading sustainable technologies and engineering supplier who will sponsor Source London's entire back office function, saving hundreds of thousands in cost savings.	Transport for London is involved in the Government's Plugged-In Places (PiP) initiative, which provides match funding from the Department for Transport (up to 50%) for the installation of publicly-accessible electric vehicle charge points for partners in the consortium.	• Expected improvements in outdoor air quality and associated human health benefits. • Expected reductions in greenhouse gas emissions. • Increased market opportunities for electric vehicles.
			URBAN DEVELOPMENT		
44	Brazil	Sustainable urban planning	Curitiba, located in Parana State, Brazil, has implemented several innovative systems to create jobs, improve public transportation accessibility, promote housing development, and improve waste management. The city has integrated a "radial linear-branching pattern" to protect density by diverting traffic from the city center and protect green areas by encouraging industrial development along radial axes. Curitiba has initiated a Bus Rapid Transit System and established the Curitiba Industrial City (CIC) on the city's west side which has strict environmental regulations and does not allow "polluting" industries.	Environmental regulations to control polluting industries accompanied by financial support for city services including public transportation, waste management, local infrastructure improvements, and public education.	• Reduced transportation time: the per capita income loss due to severe congestion is ~11 and 7 times lower than in Sao Paulo and Rio de Janeiro, respectively. • The creation of the CIC has created about 50,000 direct jobs and 150,000 indirect jobs, and about 20% of the state's exports are from the CIC. • Curitiba's fuel usage is 3% lower than in Brazil's other major cities. • Improved outdoor air quality and associated health benefits. • 70% of the city's residents are actively recycling and 13% of solid waste is recycled. • Property values of neighboring areas has appreciated, and tax revenues have increased. • Reduced flood mitigation expenditures by promotion of park development in flood-prone areas (the cost of this strategy is estimated to be 5% lower than building concrete canals).

#	Location	Policy/ Program/ Initiative	Description	Policy Approach	Triple Bottom Line Benefits
URBAN DEVELOPMENT					
45	United Arab Emirates	Masdar City special economic development zone	Masdar City is an emerging global clean-technology cluster located in what aims to be one of the world's most sustainable urban development powered by renewable energy. This special economic zone located about 17 km from downtown Abu Dhabi will eventually be home to companies, a research institute, and an investment arm, creating an international hub for companies and organizations focused on renewable energy and clean technologies. The city will implement policies aimed at zero waste, sustainable transport, building energy efficiency standards, biodiversity strategy policies, and renewable energy requirements. Masdar City is being built to obtain 100% of its energy from renewable sources, including photovoltaics, concentrating solar power, wind, and waste to energy. Businesses and homes will connect to green data centers which use energy-saving servers.	Private investment for sustainable urban development. The city plans to institute policies aimed at zero waste, sustainable transport, building energy efficiency standards, biodiversity strategy policies, and renewable energy requirements. Proposed subsidies for renewable energy businesses.	• Expected improvements in indoor and outdoor air quality. • Expected green job creation. • Planned reductions in greenhouse gas emissions, water consumption, and landfill waste. • Creation of business opportunities for sustainable local businesses. • Creation of local Institute of Technology.
46	United States of America	City-wide sustainability plan: PlaNYC	On Earth Day, April 22, 2007, New York City released PlaNYC, its far-reaching sustainability plan including 127 policy initiatives to achieve ten overarching goals to improve the infrastructure, environment, and quality of life in the city. The plan aims to double the number of green jobs in 10 years, improve access to education, information, and coordination needed by workers and businesses to facilitate growth in the green economy, promote skill development to ensure New Yorkers meet requirements for green jobs, and increase demand for green products and services. Various portions of the plan involve cleaning up brownfields (heavily polluted former industrial sites), encouraging public transportation, ferries and bicycling; creating more parks and playgrounds; planting one million trees within the five boroughs; reducing emissions in public buildings; and retrofitting or replacing diesel trucks. Additionally, the plan also calls for enhancement of public transportation and water infrastructure security. Since the release of the plan, the City has made great strides towards implementing the plan – passing groundbreaking green buildings legislation, creating miles of bike lanes, opening acres of open space, cleaning the air, and reducing greenhouse gas emissions.	Public investment in city infrastructure; Adjustments to city planning and zoning codes; Establishment of congestion pricing; Establishment of efficiency standards for buildings.	• Project improvements in outdoor and indoor air quality and associated human health benefits. • Education and skills training for green jobs. • Expected reductions in greenhouse gas emissions from reduced vehicle traffic, support for biking and walking paths, improved buildings emissions standards, and creation of more green space. • Increased market opportunities for green industries.
47	United States of America	Evergreen Cooperative Initiative	The Evergreen Cooperative Initiative of Cleveland, Ohio, is an initiative launched to build capacity in Cleveland's low income areas. The Initiative is a partnership between the residents of six neighborhoods and some of Cleveland's most important "anchor institutions" – the Cleveland Foundation, the City of Cleveland, Case Western Reserve University, the Cleveland Clinic, University Hospitals, and many others. The Initiative aims to leverage the procurement and investment power of these local anchors to build a network of cooperatively-owned, community-based businesses that supply goods and services to the institutions. The mission of the Cooperatives is not only to create jobs in sustainable businesses, but also to generate wealth for low-income residents. The first Evergreen Cooperative businesses include Evergreen Cooperative Laundry, Ohio Cooperative Solar, and Green City Growers Cooperative.	Partnership between Cleveland residents and several local institutions to support local sustainable businesses.	• The Evergreen Cooperative Initiative businesses' employees are recruited from economically distressed neighborhoods surrounding Cleveland's University Circle; Evergreen Cooperative Laundry recruits its workers through a community nonprofit called Towards Employment. • The Initiative supports local businesses that promote sustainable development goals and create new jobs. • Ohio Cooperative Solar has weatherized 62 houses in low-income communities through Cleveland's Home Weatherization Assistance Program, and its first solar panel installation job is underway at the Cleveland Clinic. In May, it will install solar panels on the rooftops of the University Hospitals and Case Western Reserve, and it has been contracted to install panels on the city hall building and library in the nearby city of Euclid.
WATER SUPPLY AND SANITATION					
48	Ecuador	Fund for Protection of Water (FONAG)	FONAG was established in 2000 as a trust fund into which water users in Quito could contribute to support watershed conservation and management activities to protect and enhance the urban water supply. The Fund constitutes a Payment for Environmental Services scheme, in which local water users, including the water utility, and power company, contribute regularly under a self-taxing arrangement. Since the creation and success of FONAG, over ten other water funds have been or are being established in the region as well as in Peru and Mexico.	Self-imposed contributions by water users to fund activities to sustain their water supply in perpetuity.	• Improved access to water. • More than 1800 people are estimated to receive increased economic benefits associated with watershed management and conservation. • Over 65,000 hectares of watersheds are under improved management. • Increased market opportunities for water quality initiatives.

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WATER SUPPLY AND SANITATION					
49	India	Indo-German Watershed Development Program	In the 1980's, the Indian government shifted its approach to watershed management in drought-afflicted rural areas to focus more combining natural resource management with poverty alleviation. In 1992, the Indo-German Watershed Development Program was launched. The program funds village-based, participatory watershed development projects to promote soil and water conservation. To qualify, villages must agree to temporary bans on tree-cutting and grazing on land designated for regeneration. They must also contribute free labor—a common rural practice known as shramdan—to cover at least 15-20% of project costs.	Government-supported watershed development program implemented by the nonprofit organization, the Watershed Organization Trust, along with the Indian government's National Bank for Agriculture and Rural Development. Financial, technical, and organizational assistance is also provided by the German Technical Cooperation, the German Development Bank, India's Government, and Agricultural universities.	• Increased availability of agricultural work. • 245,000 people trained in watershed management. • Enhanced stabilization of wage levels. • Improved access to communication. • Improved access to skills training and education for villagers. • Improvements in water table level. • Reduced vulnerability to erosion and drought. • Improved supplies of livestock fodder and volume of land under irrigation.
50	Kenya	The Peepoo Project	Peepoople, a Swedish company founded in 2006, has developed a hygienic, single-use, odor-free, biodegradable toilet bag (the "Peepoo" bag), that can be knotted and buried. A layer of urea crystals breaks down the waste into fertilizer killing off disease-producing pathogens. The bag uses a minimum of material while providing maximum hygiene. The Peepoople initiative also enables collection and reuse systems to arise, thus providing service systems and employment opportunities. The Peepoo is now being sold in the Silanga Village, in Kibera, by local micro entrepreneur women, contributing to their daily income. A successful collection system has also been established with different, staffed drop points, where Peepoo users can drop off their used peepoos every day. As the Peepoos turns into valuable fertilizer, each Peepoo user receives a refund for every used Peepoo handed in at the drop point.	The Peepoople company sells its Peepoo bags to aid organizations to improve sanitation conditions.	• There will be some 1000 employment opportunities for distribution and collection services, with a focus on empowering women. • Improved sanitation and human health benefits. • Decreased risk of groundwater and drinking water contamination. • Creation of fertilizer through bag disposal.
51	Singapore	Sustainable water management	Historically, Singapore has been dependent on external sources of water because it has a limited amount of land area to store rainfall. In order to reduce its dependence on external sources of water, Singapore has developed and implemented extremely efficient demand and supply water management practices. Singapore's approach involve integrating a water demand management program that emphasizes the proper handling of the transmission and distribution network, with water conservation measures. his strategy is a combination of rainfall storage, desalination and very sophisticated technology for recycling used water.	Federal investment in desalinization, reuse of wastewater, catchment management, public education programs, water-related recreational activities. Supply and demand water management policies. Water conservation fees: Water conservation tax for domestic and non-domestic water users; Water-Borne Fee is levied to offset the cost of treating used water and finance the maintenance and extension of the public sewerage system; Sanitary Appliance Fee (SAF) is also levied per sanitary fitting per month.	• Improved water security. • Education/training in water conservation for Singapore's citizens. • Improved water quality. • Decreased reliance on foreign water supplies. • Increase in recreational water activities.
52	South Africa	Working for Water program (WfW)	WfW is an invasive species management program that was launched in 1995 and is administered through the Department of Water Affairs and Forestry of the South African government. WfW employs members of local communities to clear thirsty alien tree and plant species and as a result, increase water supplies. WfW partners with local communities, government, conservation and environmental organizations, and private companies. The program provides jobs and training to people from among the most marginalized sectors of society. WfW currently runs over 300 projects in all nine of South Africa's provinces.	Government-sponsored invasive species management and water supply improvement program.	• Jobs and training provided to approximately 20,000 people from among the most marginalized sectors of society per annum, 52% of which are women. • Short-term contract jobs created through the clearing activities are undertaken, with the emphasis on endeavoring to recruit women (the target is 60%), youth (20%) and disabled (5%). • About 1 million hectares of invasive alien plants were cleared over the past seven years, which has yielded an estimated release of 48 –56 million cubic meters of additional water per annum. • Support for creation of secondary industries in poor rural communities in the vicinity of the projects, including charcoal making and furniture manufacturing.

Web Links for more information about Green Economy case examples:

#	PDF/Web Link(s)
1	http://www.aatf-africa.org/userfiles/WEMA-brief.pdf
2	http://hopeinachangingclimate.org/the-film/index.html http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/IDA/0,,contentMDK:21258686~menuPK:3266877~pagePK:51236175~piPK:437394~theSitePK:73154,00.html
3	http://www.ilo.org/wow/Articles/lang--en/WCMS_081366/index.htm
4	http://siteresources.worldbank.org/INTWDR2010/Resources/5287678-1252586925350/Africa-WDR-2010-booklet.pdf http://siteresources.worldbank.org/INTARD/Resources/335807-1236361651968/Timm_RWsideevent.pdf
5	http://www.equatorinitiative.org/index.php?option=com_content&view=article&id=478%3Angatatoro&catid=105%3Aequator-prize-winners-2004&Itemid=541&lang=en
6	http://www.fao.org/docrep/013/i1881e/i1881e00.pdf http://www.tropicalforestgroup.org/project_pages/mozambique.html
7	http://www.fairtrade.net/
8	http://pdf.wri.org/world_resources_2008_roots_of_resilience_chapter3.pdf
9	http://www.unep.org/pdf/greeneconomy_successstories.pdf
10	http://www.unep.org/pdf/greeneconomy_successstories.pdf http://www.globalfeedintariffs.com/global-feed-in-tariffs/
11	http://siteresources.worldbank.org/INTAFRICA/Resources/FINAL_STORY_green-growth-lighting-africa.pdf
12	http://www.greeneconomycoalition.org/node/19
13	http://planetgreen.discovery.com/food-health/innovative-solar-powered-irrigation.html http://www.self.org/model1.shtml
14	http://www.c40cities.org/news/news-20090609.jsp
15	www.greeneconomycoalition.org/node/21
16	http://www.unep.org/pdf/greeneconomy_successstories.pdf
17	http://ies.lbl.gov/iespubs/LBNL-519E.pdf http://greenleapforward.com/2009/02/06/the-top-1000-energy-consuming-enterprises-program/
18	http://www.ecosystemmarketplace.com/pages/dynamic/web.page.php?section=carbon_market&page_name=euets_market http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/State_and_Trends_of_the_Carbon_Market_2010_low_res.pdf
19	http://www.globalchange.umd.edu/energytrends/germany/3/
20	http://www.guardian.co.uk/world/2009/apr/10/japan-recession-stimulus-green-economy http://www.nytimes.com/2009/04/09/business/global/09yen.html?_r=1
21	http://www.worldchanging.com/archives/011179.html http://criepi.denken.or.jp/en/serc/research_re/download/09035dp.pdf

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23	http://www.unep.org/pdf/greeneconomy_successstories.pdf
24	http://www.defra.gov.uk/environment/climate/legislation/
25	http://www.arb.ca.gov/cc/cleanenergy/clean_fs.htm
26	www.energy.ca.gov/title24/
27	http://www.bsc.ca.gov/CALGreen/default.htm
28	http://pdf.wri.org/world_resources_2008_roots_of_resilience_chapter3.pdf
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36	http://www.fao.org/DOCREP/006/AD487E/ad487e00.htm
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39	http://www.ecobusinesslinks.com/city-bike-sharing.htm
40	http://www.treasury.gov.za/comm_media/press/2010/2010082601.pdf
41	http://www.mobility.ch/en/pub/stations.cfm
42	http://news.bbc.co.uk/2/hi/uk_news/england/london/3494015.stm www.worldbank.org/eco2
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44	http://www.unep.org/pdf/greeneconomy_successstories.pdf
45	www.greeneconomycoalition.org/node/23 http://www.masdarcity.ae/en/index.aspx
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