

WGEO EXECUTIVE TRAINING COURSE
ON SCALING UP TRANSITION TO
A GREEN ECONOMY ON A PATH TOWARDS
IMPLEMENTING THE UNITED NATIONS
2030 SUSTAINABLE DEVELOPMENT AGENDA





FOUNDATIONS FOR POLICY AND REGULATORY FRAMEWORKS FOR GREEN ECONOMY

MODULE "LE"

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By the end of this module you will:





Understand

- Which international resources are available for GE development
- Which documents constitute the basis for GE development on the international level
- What are the international institutions able to assist in GE development



Know

- The variety of instruments to be used as tools for GE implementation on the national level
- Examples of successful GE implementation by the states
- The algorithm for development of the policy & regulatory framework for GE

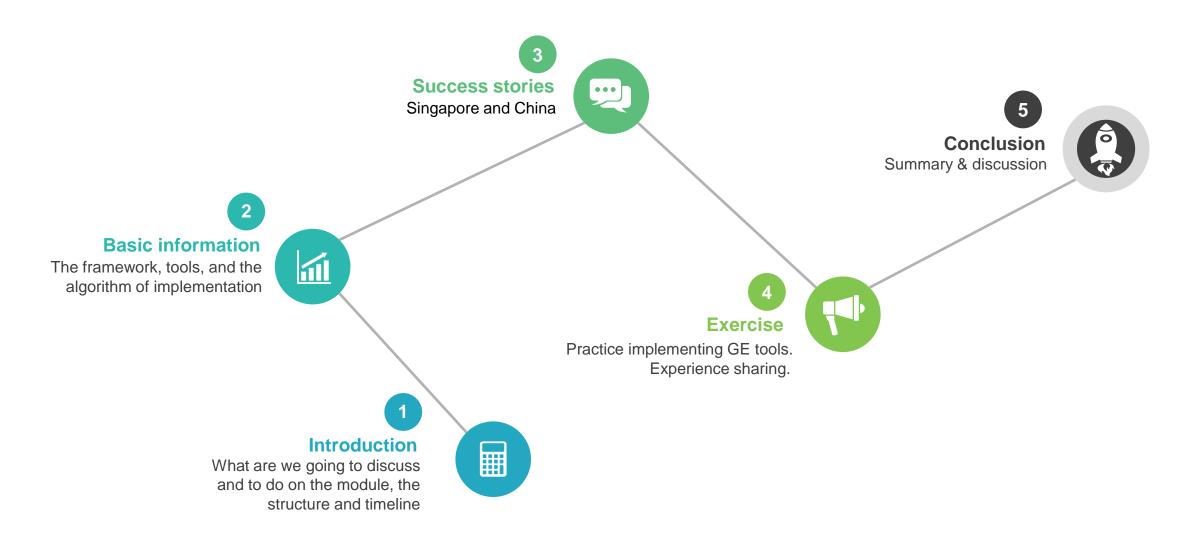


Be able to

- Plan GE implementation and development
- Develop unique set of tools to be applied for GE development

Module Structure









Synopsis

01 Framework

The international framework for GE development.

02 Toolbox

Available policy & regulatory toolbox for use on national level.

03 Success stories

Examples of successful implementation of the GE instruments (Singapore and China).

04 Actions

The algorithm for development of the policy & regulatory framework for GE.



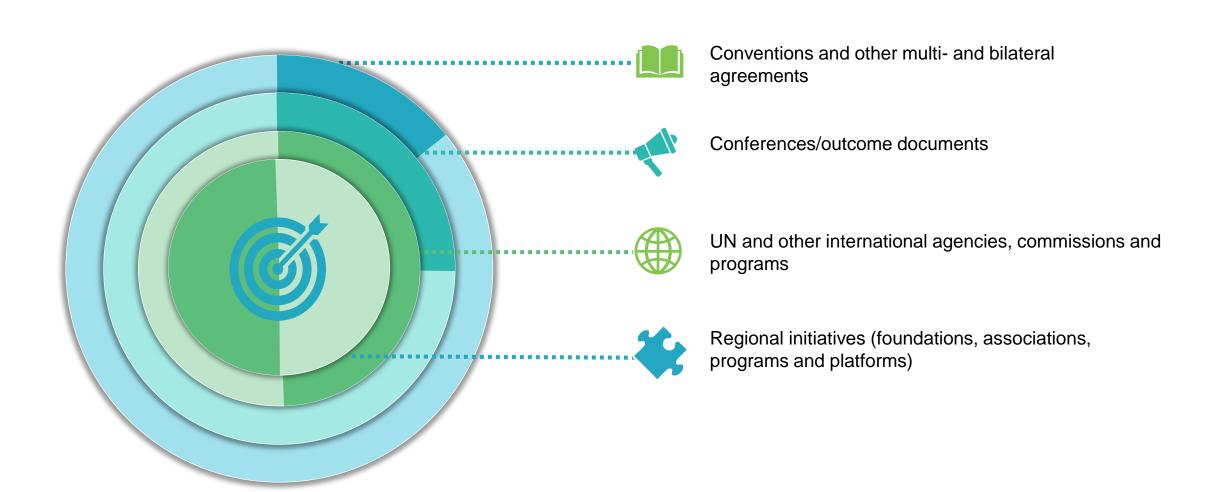
01.Framework

The international framework for GE development.



The International Framework





The International Framework



Conventions and other multilateral agreements

These UN documents set main rules and principles to be applied on international level and imply implementation of many instruments on national levels. Among others:

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

1992

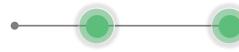
The United Nations
Framework Convention
on Climate Change
(UNFCCC)
1994

The Stockholm Convention on Persistent Organic Pollutants

2004

The Paris Climate Change Agreement

2016



1993

The Convention on Biological Diversity (CBD)

1996

The United Nations Convention to Combat Desertification (UNCCD) 2004

The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade





Since 1990, the international community has convened 12 major conferences which have committed Governments to address urgently some of the most pressing problems facing the world today. The outcome documents fixed the shared values and principles, intentions and commitments.

- a. The United Nations Conference on Sustainable Development 2012 (RIO+20)
- b. Transforming our world: the 2030 Agenda for Sustainable Development (2015)
- c. Agenda 21, a 300 page plan for achieving sustainable development in the 21st century
- d. The Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024
- e. Our ocean, our future: call for action (2017), declaration
- f. The Istanbul Declaration and Programme of Action
- g. The Forest Principles (1992)
- h. The Barbados Declaration and the BPOA (plan of actions)
- i. The Mauritius Strategy of Implementation (MSI)

- j. The Johannesburg Plan of Implementation (2002)
- k. The Rio Declaration on Environment and Development(+the 27 Rio Principles)
- I. The Millennium Development Goals (MDG)
- m. The Monterrey Consensus on Financing for Development (2003)
- n. Small Island Developing States Accelerated Modalities of Action (Samoa Pathway)
- o. Sendai Framework for Disaster Risk Reduction 2015-2030
- p. Addis Ababa Action Agenda of the Third International Conference on Financing for Development
- q. The African Union's Agenda 2063
- r. The programme of the New Partnership for Africa's Development (NEPAD)

The United Nations Conference on Sustainable Development 2012 (RIO+20):

Outcomes:

- Future We Want the outcome document: contains clear and practical measures for implementing sustainable development.
- Adopted **guidelines** on green economy policies (Green economy in the context of sustainable development and poverty eradication: (i.58) **general requirements** to green economy policies + **specific suggestions** for different fields).
- Participants agreed to strengthen the United Nations Environment Programme (**UNEP**)
- Participants also adopted the **10-year framework of programs** on sustainable consumption and production patterns.



RIO +20

Transforming our world: the 2030 Agenda for Sustainable Development (2015)

The Agenda, including its **17 Sustainable Development Goals** (SDGs) and **169 targets,** was adopted on 25 September 2015 by Heads of State and Government at a special UN summit:

- The Agenda is a commitment to eradicate poverty and achieve sustainable development by **2030** worldwide, ensuring that no one is left behind.
- The adoption of the 2030 Agenda was a landmark achievement, providing for a **shared global vision** towards sustainable development for all.



THE 2030 AGENDA

Some of UN and other international agencies, commissions and programs relevant to GE

















renewable energy & energy efficiency partnership















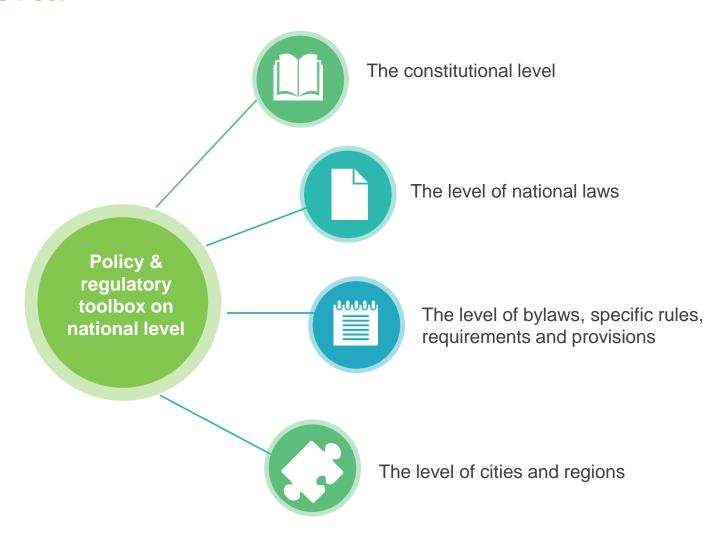
02. Toolbox

Available policy & regulatory toolbox for use on national level



II. Available policy & regulatory toolbox for usage on national level:





Available policy & regulatory toolbox: the constitutional level (1)

In order to ensure sustainable development and shift to green economy, national constitutions include such provisions:

- Embracing sustainable development as one of the governance principles and including it as a policy objective (general trend throughout the world).
- Recognition of the tight relationship between social and economic development and environmental protection (Constitutions of Bhutan, East Timor, Cuba, Brazil, Colombia).
- Obligation to follow the objectives of lasting development in its social, economic and environmental aspects, taking into account the <u>solidarity between the generations</u> (Constitutions of Belgium and Angola).
- Requirement for the state, the municipalities and the inhabitants of the national territory to foster social, economic and technological development so as to prevent environmental pollution and maintain ecological equilibrium (Constitution of Guatemala).
- ▶ Laing down certain rules on the relationship between the economy and the environment, eschewing liberal criteria, according to which the autonomy of the market should prevail at any cost, in favour of the possibility of state regulation when warranted by environmental factors, even to the detriment of those economic freedoms (Constitution of Colombia).



Available policy & regulatory toolbox: the constitutional level (2)

- Guarantees of the freedom of enterprise so long as it operates within the limits of the public interest, public order and the environment (Article 41 of the Constitution of Madagascar).
- Including sustainable development as one of the national values (Constitution of Kenya).
- Provision that the law may establish specific restrictions to the exercise of certain rights or liberties in order to protect the environment (Article 19 of the Constitution of Chile).
- Securing sustainable development by instituting concrete constitutional rights for citizens:
 - Right to a healthy and ecologically balanced environment free of pollution (Constitution of Chile and Costa Rica);
 - Right to human dignity that requires the state to guarantee economic, social and cultural rights, including the right to the protection of a healthy environment (Constitution of Belgium);
 - Right to access to information on the state of the natural environment and on the effects of any encroachment on nature that is planned or carried out (Constitution of Norway);
 - Rights to food, clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of environment, an adequate standard of living, and a dignified life (Constitution of the US State of Massachusetts and Constitution of South Africa).



Available policy & regulatory toolbox: the constitutional level (3)

- In order to fulfill the mentioned rights, national constitutions provide duties and other measures:
 - General duty to conserve the environment (General trend);
 - Obligation of state with the active participation of society to **guarantee** that the population develops in a contamination-free environment, where the air, water, soil, coasts, climate, ozone layer, and live species are especially protected (Constitution of the Bolivarian Republic of Venezuela);
 - Obligation of state and society to **reconcile** the protection and enhancement of the environment **with economic development** and social progress (Article 6 of the Charter for the Environment (which is mentioned in the Preamble to the French Constitution and is of constitutional value));
 - Entitlement for all citizens to judicially **enforce their right** to clean and healthy environment for claimed violations (Constitution of the US State of Hawaii);



Available policy & regulatory toolbox: the constitutional level (4)

- Fundamental duty of every citizen to contribute to the protection of the natural environment (Constitution of Bhutan);
- Ability of the state to confiscate property that is associated with the breach of duty of citizens to prevent environmental damage (Constitution of Madagascar);
- Duty of the state to promote actions aimed at protecting the environment and safeguarding the sustainable development of the economy while promoting justifiable economic and social development (Constitution of East Timor);
- Requirements that the exercise of the environmental right must allow individuals and community groups of present and future generations, as well as other living beings, to develop in a normal and on-going manner (Constitution of Bolivia).



Available policy & regulatory toolbox: the constitutional level (5)

- In order to protect natural resources, national constitutions provide:
 - Duty of the state to preserve the environment and protect, conserve, develop, and rationally exploit the natural resources" (Constitution of Nicaragua);
 - Duties of citizens to protect and conserve the state's environment and natural resources (general trend);
 - Provision that natural resources, which are essential to the economy, **shall be owned by the state** and shall be used in a fair and equitable manner in accordance with national interests (Constitution of East Timor);
 - Provision that natural resources should be used rationally avoiding their depredation and ensuring their conservation, replenishment and permanence (Article 120 of the Constitution of Panama);
 - Statement that natural resources should be used in a manner that avoids harming society, the economy and the environment (Article 121 of the Constitution of Panama);



Available policy & regulatory toolbox: the constitutional level (6)

- Declaration of protection, conservation, rational use, restoration or substitution of the natural resources as a social interest (Constitution of the Republic of El Salvador);
- Ability of the parliament to enact environmental legislation to ensure sustainable use of natural resources and maintain intergenerational equity and reaffirm the sovereign rights of the state over its own biological resources (Constitution of Bhutan);
- **Obligation of the state** to regulate, supervise, and apply, at the proper time, the measures necessary to guarantee rational use of, and benefit from, land, river and sea life, as well as forests, lands and waters, to avoid their misuse, and to ensure their preservation, renewal, and permanence (Constitution of Panama);
- Indicating the minimum percentage of forest cover that should be maintained by a country (Constitution of Bhutan);
- © Government's duty to ensure a **minimum percentage of forest** in its territory (Article 69 of the Constitution of Kenya).



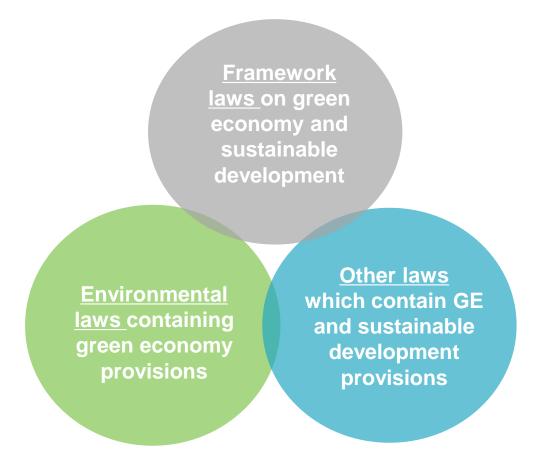
Available policy & regulatory toolbox: the constitutional level (7)

- Special protection for vegetation on the banks of rivers and lakes and within the vicinity of drinking water sources;
- Duty of **owners of agricultural land** to appropriately use it according to its ecological classification to avoid underuse and reduction of the productive potential;
- Regulating by law the benefits gained from non-renewable natural resources, to avoid social, economic and environmental abuses;
- © Obligation for people to refrain from any act that causes degradation, destruction or serious environmental pollution;
- © Creating oversight bodies and boards that handle the potential use or conservation of natural resources throughout the state.



Available policy & regulatory toolbox: national laws level (1)

In order to put into effect constitutional provisions for green economy and sustainable development, national parliaments adopted different kinds of laws, in particular:



Provisions of these laws usually broaden and deepen prescriptions of constitutions.





Provisions of framework laws on green economy and sustainable development:

- Provisions in the field of policymaking and government activities:
 - Provide a **general framework for policymaking** and guidance on the issue of green economy. For example, French framework laws set **guiding principles and commitments for 13 designated sectors** to ensure sustainable growth without compromising the needs of future generations;
 - Stipulate the country's **targets and policy prescriptions** needed to achieve a paradigm shift towards greater environmentally sustainable economic growth. *For example*, in the Republic of Korea, the Framework Act on Low Carbon Green Growth established **the National Strategy for Low Carbon Green Growth** which should include:
 - Matters concerning the realization of the green economy system, green technology and green industries and green lifestyle;
 - ☑ Policies for coping with climate change, policies on energy, and sustainable development;
 - ☑ Other matters necessary for green growth such as obtaining financial resources, taxation, financing, training of human resources, education, and public relations activities (South Korea: Framework Act on Low Carbon Green Growth, 2010. Art. 9 National Strategy; Presidential Decree on the Establishment and Operation of the Presidential Committee on Green Growth).



Available policy & regulatory toolbox: national laws level (3)

Provisions in the field of policymaking and government activities:

Require authorities to take the following sustainable development principles into account for all actions (The Sustainable Development Act of the Canadian province of Quebec (2006)):

health and quality of life;

☑ prevention;

environmental protection;

protection of cultural heritage;

economic efficiency;

participation and commitment;

respect for ecosystem support capacity;

access to knowledge;

▼ responsible production and consumption;

✓ subsidiary;

polluter pays; and

internalization of costs.





Provisions in the field of policymaking and government activities:

- Aim to mainstream sustainable development across the government's activity (for example, in Malta in order to achieve this goal, **every Ministry** is obliged to have a **Sustainable Development Coordinator** (Sustainable Development Act (2012) of Malta);
- Set out reporting provisions in order to ensure that the government is acting in accordance with the established requirements for sustainable development (The Sustainable Development Act of the Canadian province of Quebec (2006)).
- Require the central **sectoral administrative agencies and local governments** to establish and implement **central and local action plans** under their jurisdiction for green growth. These action plans are required to be **revised every certain period of time** (South Korea: Framework Act on Low Carbon Green Growth, 2010. Article 10 Central Action Plans and Article 11 Local Action Planss).





2. Provisions in the field of energy efficiency:

- **Declare** that the Government is committed to fostering the growth of renewable energy projects, which use of cleaner sources of energy, and to removing barriers to and promoting opportunities for renewable energy projects and to promoting a green economy (e.g.: the Green Energy and Green Economy Act of the Canadian province of Ontario);
- Aim to ensure energy efficiency in both the public and private sectors (e.g.: the Green Energy and Green Economy Act of the Canadian province of Ontario contains **guiding principles** for government in the area of energy efficiency and at the same time contains provisions concerning **efficiency** standards for appliances and products which are sold by private actors);
- Contain **extensive licensing** and other requirements for those entities seeking to become involved with energy and water use, regardless whether they are public or private actors (e.g.:, such requirements are contained in the Energy and Green Economy Act of the Canadian province of Ontario). Setting such requirements allows the state to restrict access to energy and water for those entities which are likely to overuse these resources or to cause damage to the environment.



Available policy & regulatory toolbox: national laws level (6)

Provisions in the field of prevention environmental pollution:

- Enact regulations for reporting and verifying that the **standards used for greenhouse gas emissions** are being met and also set targets for emissions reductions (such measures are provided in Climate Protection and Green Economy Act adopted in the US State of Massachusetts);
- Set the **polluter pays principle** which requires that those causing adverse effects be required to **pay the full social and environmental costs** of avoiding, mitigating and/or remedying those adverse effects (for example, this principle is provided in Swaziland in the Environment Management Act).





Provisions in other fields:

- Set the legal framework for the move toward a **sound material-cycle society** (sound material-cycle society is a society in which natural resources will be conserved and the environmental load will be reduced to the greatest extent possible, by preventing or reducing the generation of wastes from products, and by promoting proper cyclical use of products), which includes:
 - Requirements to the government to formulate a **fundamental plan to implement measures** for establishing a sound material cycle society in a comprehensive and systematic manner;
 - ☑ Creating a sustainable society in line with approaches toward a low-carbon society and ecofriendly society;
 - Setting out **enhanced numerical targets for material flow indicators** of material productivity, usage rate of recycled goods, and amount of final disposal that are designed to keep track of progress toward a sound material-cycle society;
 - ✓ Setting numerical targets as well as monitoring indicators (for example, 20% reduction in per capita/day waste from households);
 - Obligation of the national government to implement measures to promote **3Rs-related national campaigns** (3Rs means reduce, reuse, recycle), 3Rs-level's technology, 3R sound business and system (Japans Basic Act on Establishing a Sound Material-Cycle Society, 2000).
- © Create **the framework for business** and environmental practices (Environmental Goals and Sustainable Prosperity Act of the Canadian province of Nova Scotia).



Available policy & regulatory toolbox: national laws level (8)

2. Provisions of framework environmental laws containing green economy provisions and of other laws which contain green economy and sustainable development provisions:

In the field of policymaking and government activities:

- Give the basic provisions on which state's environmental policies concerning different sectors of economy are formed;
- Establish that domestic environmental policy is to seek to reconcile socioeconomic development with conserving the quality of the environment and ecological equilibrium;
- Set that national development planning must incorporate environmental policy and management;
- State that environmental management is the process composed by **a set of actions or measures** to diagnose, inventory, reestablish, restore, improve, preserve, protect, control, supervise, and use the ecosystems, biological diversity, and other natural resources and elements of the environment, to guarantee sustainable development.



Available policy & regulatory toolbox: national laws level (9)

- State principles of environmental management:
- assure every person with the fundamental right to a clean and healthy environment;
- ensure that sustainable development is achieved through the sound management of the environment;
- encourage participation of civil society in the development of policies, plans and processes for the management of the environment;
- require prior environmental impact assessment (EIA) of proposed projects or activities that are likely to have adverse effects on the environment or natural resources;
- ensure that environmental awareness is treated as an integral part of education at all levels;
- ensure that the costs of environmental abuse or impairment are borne by the polluter;

- promote cooperation with other governments and relevant national, international and regional organizations and other bodies concerned with the protection of the environment;
- the polluter pays principle, which requires that those causing adverse effects be required to pay the full social and environmental costs of avoiding, mitigating and/or remedying those adverse effects;
- the environment is the common heritage of present and future generations;
- waste should, in order of priority, be reused, recycled, recovered and disposed of safely in a manner that avoids creating adverse effects or, if this is not practicable, is least likely to cause adverse effects;
- disturbance of landscapes and sites that constitute the nation's cultural heritage must be avoided or minimized and remedied



Available policy & regulatory toolbox: national laws level (10)

- Require to undertake strategic environmental assessment and take into account the results of such assessment while formulating the applicable strategy and long-term or short-term plans, and while preparing bills.
- Require the incorporation of the environmental dimension into the development plans and territorial management.
- Require intergovernmental coordination and harmonization of policies, legislation and actions relating to the environment.



Available policy & regulatory toolbox: national laws level (11)

- Connected to forming low consuming and environmentally friendly society:
 - State that the environmental rights prevail over the social and economic rights, limiting them in the terms provided by constitution and special laws (Organic Law of the Environment (Law No. 5833, 2006) of Venezuela. Paragraph 7 of Article 4);
 - Require the state to promote a **gradual change** towards the establishment of **sustainable consumption habits** among people (The Framework Law on Mother Earth and Comprehensive Development for Living Well of Bolivia (No. 300, 2012);
 - Guarantee persons' participation, based on shared responsibility, in the preservation and restoration of ecological equilibrium and environmental protection (Mexico's General Law on Ecological Equilibrium and Environmental Protection (1988);
 - © Create the conditions to allow **the distribution of the wealth** generated by the strategic sectors of the economy, based on the use and transformation of renewable and non-renewable natural resources, to have a direct impact on the **construction of a fairer, more equitable and more solidarity-based society** without material, social or spiritual poverty (The Framework Law on Mother Earth and Comprehensive Development for Living Well of Bolivia (No. 300, 2012);



Available policy & regulatory toolbox: national laws level (12)

- Through economic tools promote a **change in the behavior** of persons who carry out industrial, commercial and services activities, in order for their **interests to be consistent with collective interests** related to environmental protection and sustainable development (Mexico's General Law on Ecological Equilibrium and Environmental Protection (1988);
- Set that it is **the responsibility of society in general**, of the state and every natural and legal person, **to replace or compensate the natural resources** they use to ensure their existence, satisfy their basic needs of growth and development, as well as frame their actions to lessen or mitigate the impact on the environment. Consequently, the patterns of non-sustainable production and consumption will try to be eliminated (The Environmental Law (No. 223, 1998) of El Salvador);
- Set the right for workers to refuse to do work that may be harmful to human or environmental health (South Africa's National Environment Management Act (NEMA) (No. 107, 1998).





Connected to management of natural resources and waste:

- Ensure the sustainable use, availability, and quality of the natural resources and consider them as the basis for sustainable development and as the way of improvement of the quality of life of the population (The Environmental Law (No. 223, 1998) of El Salvador);
- Require rational exploitation of the natural resources with a national plan based on sustainable development, equality and social justice and taking into account the country's cultural diversity (Nicaragua's General Environmental and Natural Resources Law (No. 217, 1996));
- Provide the sustainable use of the natural resources, recognizing their real value (The Nicaraguan General Environmental and Natural Resources Law No. 64-00);



Available policy & regulatory toolbox: national laws level (14)

- Require that **non-renewable natural resources** need to be exploited in a way that **prevents their depletion** and generation of negative effects on the environment (The Honduras General Environmental Law No. 104/93);
- © Encourage the continuous development of technologies which generate energy from all types of renewable sources (EU Renewable Energy Directive);
- State limitations on the emissions or discharge of pollutants into the environment, including reporting and remediation requirements and specific requirements for the release of waste at the commercial, industrial and residential levels (The Environmental Protection Act of the Canadian provinces of Newfoundland and Labrador (2002));
- Oblige waste producers and waste holders to carry out **the treatment of waste** (either on their own or through a contractor that carries out waste treatment operations) (Loi relative à la gestion des déchets (Luxembourg));
- © Encourage **ecological land-use planning** (Mexico's General Law on Ecological Equilibrium and Environmental Protection (1988)).





In other areas:

- Give the definitions of important concepts, such as the protection, preservation and conservation of the environment, the promotion of quality of life, and the use of natural resources (The Angola Environment Framework Law (No. 5/98, 1998));
- State that any activities that are not aimed at necessary environmental and social mitigation, and from which environmental damage is observed, are subject to environmental auditing (The Angola Environment Framework Law (No. 5/98, 1998)).
- © Contain provisions regarding air quality management that focus on creating pollution restrictions in order to further environmental protections, including testing requirements, standards for wood burning stoves and associated household uses, air quality management programs (The Environmental Protection Act of the Canadian provinces of Newfoundland and Labrador (2002));
- Establish <u>environmental certificates</u>, <u>labeling programs</u>, and <u>voluntary environmental audit</u> <u>programs</u> (Incentive programs in Trinidad and Tobago);
- Bar the sale or transportation of ozone depleting substances (The Canadian State of Ontario's Environmental Protection Act (2010));
- Promote and encourage **procurement of eco-friendly goods** and services (Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Japan), Clean Production Promotion Law (China)).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (1)

Provisions of framework laws on green economy and sustainable development:

I. Strategic planning

- Establishing strategies or action plans in which:
 - ☑ Specify goals and quantitative targets are set for the promotion of green economy;
 - Basic principles, policies, measures and **concrete guidelines** for materializing resources efficiency, green growth and sustainable consumption and production are specified.
- Most strategies and action plans are adopted on the level of bylaws.
- The strategies and action plans usually **have to be reviewed** every certain period of time after they were formulated (for example, every five years in Japan).
- Many national action plans focus on creating targets for each sector of the economy and emphasize on the importance of the "3Rs": Reduce – Reuse - Recycle.



BYLAWS,
RULES,
REQUIREMENTS
AND
PROVISIONS

Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (2)

II. Institutional Arrangements

- Using of administrative agencies and entities to implement the terms of framework legislation.
- These administrative entities may be:
 - Pre-existing entities that are given a new charge;
 - ✓ Newly created entities geared toward the particular purpose of the framework law.
- There is an increasing focus on **adding members of the private sector** to the administrative entity to serve also with public actors.
- These administrative entities have also increasingly been given the charge of **including and** assisting small businesses that are or may be impacted by the decisions of the administrative entity.





III. Strategic Environmental Assessment

- Strategic environmental assessment (SEA) is a systematic process for evaluating the environmental consequences of proposed policy, plan or program initiatives in order to ensure they are fully included and appropriately addressed at the earliest appropriate stage of decision making on par with economic and social considerations.
- SEA is different from the traditional instrument Environmental Impact Assessment (EIA), which is to evaluate the environmental impact at a project level.
- In this context, SEA may be understood as:
 - A structured, rigorous, participative, open and transparent environmental impact assessment (EIA) based process, applied particularly to plans and programs, prepared by public planning authorities and at times private bodies;
 - A participative, open and transparent, possibly non-EIA-based process, applied in a **more flexible manner to** policies, prepared by public planning authorities and at times private bodies; or
 - A flexible non-EIA based process, applied to **legislative proposals** and other policies, plans and programmes in political executive decision-making.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (4)

IV. Environmental-labeling

- Environmental labeling is a set of voluntary tools aimed at stimulating the demand for products and services with lower environmental burdens by providing relevant information on their life cycle to address purchasers' demands on environmental information. The development and marketing of environmentally preferable products (EPPs) is a **key tool to support** the shift towards sustainable consumption and production patterns.
- Example: the African eco-labeling mechanism and its Eco-mark Africa eco-label. It is a market-based instrument and consumer information tool to enhance access for African products to regional and international markets. The majority are international eco-labels which African products/services have been awarded and are used for gaining increased market access on the international market, specifically Europe and USA.
- Eco-labels are currently in use for African products and services in the following sectors:



BYLAWS, SPECIFIC RELES, REQUIREMENTS AND PROVISIONS

Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (5)

V. Environmental Audit

- In general terms, an environmental audit is a systematic, periodic **review** of management systems, policies, and practices of corporations, institutions and governments with respect to how they affect the environment and consumption of resources, **followed by adjustments and corrections** where appropriate. The environmental audit was first introduced in **Canada**.
- Environmental audit (EA) can be:
 - ✓ Voluntary (for example, in Peru, Trinidad and Tobago, Costa Rica, Argentina, Panama, and the Dominican Republic);
 - Mandatory (Article 68 of East-Timor's Basic Law of Environment provides that all programs, plans and projects developed by public or private without the application of environmental protection measures, resulting in damage, harm or imminent threat of a very significant danger to the environment irreparably, are subject to EAs);
 - ☑ Audit which is to be started by an indication of the appropriate government agency (East-Timor).
- The audit is usually conducted by an **independent entity** which identifies measures to rehabilitate the damage and develops a plan for long-term management.





VI. Feed-in-Tariffs (1)

- A feed-in tariff is an **economic policy** created to promote active investment in and production of renewable energy sources. Feed-in tariffs (FITs) are fixed electricity prices that are paid to renewable energy producers for each unit of energy produced and injected into the electricity grid.
- Policy makers may choose different routes to developing FIT laws:
 - ✓ Legal pathways such as a detailed FIT law, or a combination of high level mandate law with a regulatory body in charge of policy details; or
- Establishing a FIT through detailed legislation may provide greater investor certainty because the law may be viewed as more difficult to change than a policy enacted as a result of an executive branch or regulatory agency initiative (Malaysia runs an FIT scheme under the Renewable Energy Act of 2011 which included competitive feed-in tariff rates and fixed tenure for those rates in order to provide certainty to investors).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (7)

VI. Feed-in-Tariffs (2)

- On the other hand, developing and passing FIT legislation may be a lengthier and more challenging process than if a government agency develops and promulgates FIT regulations.
- FITs consist of at least three design options:
 - ☑ A purchase obligation (obligations for electricity grid operators, energy supply companies or electricity consumers to purchase the power generated from renewable energy sources);
 - A predefined (fixed) tariff level; and
 - A long duration of tariff payment (usually 15-20 years).
- Tariff levels may be differentiated according to the variable costs of generating electricity from different renewable energy (RE) technologies. By assessing costs, expected generation performance and estimated lifetime of the plant, an appropriate level can be determined.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (8)

VII. Fiscal Incentives

- A wide variety of fiscal incentives are used to stimulate sustainable production and consumption and development of green business. Such fiscal incentives include:
 - Rebates which are used to refund the initial investment costs for renewable power equipment (the legislator pays a certain share of the total cost of each installed unit of electricity generation capacity);
 - **Tax incentives** (can be offered in the form of tax reductions or tax credits);
 - ✓ Soft loans (loans offering reduced interest rates);
 - Reduction of environmentally harmful subsidies by abolishing subsidies which favour pollution for example fossil fuel subsidies;
 - ☑ Creating special funds to support green technology;
 - The polluter pays principle (requires that those causing adverse effects be required to pay the full social and environmental costs of avoiding, mitigating and/or remedying those adverse effects).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (9)

VIII. Public-Private Partnership (1)

- Public-private partnership (PPP) is partnership between an agency of the government and the private sector in the delivery of goods or services to the public. In its most basic sense, a partnership is any business or institutional association within which joint activity takes place. A PPP exists from the moment one or more public organizations agree to act in concert with one or more private organizations.
- The components of PPPs generally are:
 - ✓ long-term contracts/agreements
 - ☑ a private funding component;
 - ✓ provision of services or infrastructure through the private sector;
 - significant **transfer of risk** to the private sector, such as investment, design, construction, or operational risks;
- complex contractual responsibilities and deliverables that vary over the contract period as the project moves through its phases, such as from finance to construction and operation;
- the return of infrastructure/services to the control of the State at the end or;
- the provision of services by the private sector on behalf of the State following the fulfilment of design and build responsibilities.



World Green Economy Organization (WGEO)





Innovative multitool

Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (10)

- VIII. Public-Private Partnership (2)
- ✓ Potential Benefits:
 - Increased efficiency, expertise, and innovation from the private sector contribute to better infrastructure and greater cost and time savings across the construction and operation phases, increasing the value for money equation of a project;
 - Projects risks (e.g. finance, timeframe, planning permits, community consultations) are distributed between the public and private sectors according to the party best equipped to deal with it, both in terms of expertise and costs;
 - Access to **private sector financing** allows **increased investment** in public infrastructure, as governments are able to implement projects without the need to raise or budget additional funds, as is the case in standard procurement;
 - PPPs provide the private sector with access to reduced risk, secure, **long-term investment opportunities** that are underwritten by government contracts. Such agreements ensure private capital flows, provide investment opportunities, and stimulate local industry and job markets.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (11)

☑ VIII. Public-Private Partnership (3)

Potential Disadvantages:

- PPP projects can prove to be **more expensive in the long-term** than standard procurement, due mainly to the higher costs of private sector borrowing when compared to government rates. Additionally, it is possible for prescribed government payments to the private sector over the length of the project term to exceed the costs of a comparative public sector provision;
- Accountability and transparency issues are distorted under PPP models of financing and agreements, as private sector funding components fail to appear on public spending records. Similarly, evaluation is made more difficult as private sector data on profits, costs, or lessons learnt can be considered issues of commercial confidentiality;
- PPPs typically involve **high tendering and transaction costs**, while associated contracts are also complex and long-term. Together, these factors reduce the pool of private sector companies that have the capacity to undertake PPPs, raising issues of competitiveness;
- The inclusion of exclusivity agreements within PPP contracts can have the effect of awarding monopoly markets to private partners, further extending **anticompetition issues**;
- It is necessary for both the public and private sectors to possess **PPP-specific capacity for an agreement** to be signed and administered successfully. Such capacity is absent from many jurisdictions, both at a national and regional level, and it takes both time and experience to establish it, making it difficult to scale up PPP procurement.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (12)

Instruments in key sectors relevant to sustainable development and green economy

1. Agriculture

- Many of laws in the area of agriculture make the direct connection between the green economy and agricultural practices and encourage the switch to organic farming and production and use of organic techniques. In particular:
 - States allow organic farming entities to benefit from financial incentives such as:
 - Banking support to the activity;
 - Resources for financing small and medium term enterprises;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (13)

Tax exemptions:

- Tax reductions for all investment income and benefits during the certain period of time;
- Tax reductions on income and benefits reinvested as part of **the initial capital investment** in an organic agriculture company or as an increase in such investment, including invested benefits to the company;
- Exemption from **custom duties** and **suspension of value added tax** (VAT) for imported equipment that does not have a locally manufactured equivalent;
- Suspension of VAT for locally produced equipment;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (14)

Support during transitional stages:

- Reimbursement of contract fees incurred as a result of investing in agricultural land;
- Investment subsidies which cover certain percentage of the value of equipment and tools specific to organic projects;
- Annual subsidies for certain period of time to cover fees connected to organic projects;
- Annual prizes for the best organic farm;
- Grants to farmers who engage in practices such as experimentation with key crops or modernizations of their facilities in order to ensure clean, green production at these facilities;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (15)

- © Create **specialized agricultural research**, **development and training programs** at local universities to assist in the goals of developing sustainable agriculture (general trend in North America);
- Establish guidelines for regulating the production, processing and marketing of organic agricultural products;
- Define the rules for the different stages of the production process and certification of organic agricultural products. For example, the Regulation of Organic Agriculture #29782-MAG passed by Costa Rica states that that **genetically modified organisms** and those obtained through genetic engineering and products from such organisms are not compatible with the principles of organic production and **their use is not permitted in organic agriculture** that is governed by this regulation;
- Provide that both the fertility and biological activity of the soil should be maintained or improved through a program for soil management and conservation;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (16)

- State the necessity of clear identification of ecological, biological and organic products by consumers;
- Emphasize on the importance of revitalization of family farming;
- Promote women's and elderly farmers' participation;
- Declare that rural areas play an important role as the base for sustainable agricultural development;
- Declare the necessity of developing agricultural activities around urban areas, which can meet the demand of urban residents, making use of advantages of proximity to the consumers;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (17)

2. Forests

- In order to ensure that forests are kept intact and safe from pollution and to protect forests and the biodiversity within them, many states have incorporated into their legislation provisions the following:
 - © Create a competitive funds through which bonuses are awarded to help settle the costs of conservation, restoration and sustainable management of the native forest (Chile's Law 20283);
 - © Create research funds, with the objective of promoting and increasing knowledge in matters related to forests and contribute to these funds from the state's budget (Chile');
 - Establish committees on forest resource accounting, with effort to include this accounting in official forest statistics (Kenya);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (18)

- Create specialized administrative entities which:
 - Oversee forestry practices in order to ensure the use of sustainable forestry practices as required through laws and regulations;
 - ☑ Control the process required to obtain a permit for legal forestry and logging practices;
 - ✓ Oversee the industrial practices of the entities which are granted permits.
- Require to approve conservation and sustainable management plans in the area of forestry;
- Require to develop programs on reducing emissions from deforestation and forest degradation (REDD);
- Set specific quantitative targets on achieving the minimum percentage of forest cover within the country;
- Adopted voluntary certification for timber products in order to certify that they are produced from legal timber (France);
- Established penalties for illegally harvesting resources of any nature from the forests (the Canadian province of Ontario).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (19)

3. Biodiversity

- In order to protect biodiversity, many countries have enriched their legislation with provisions which:
 - Allocates the responsibilities among state government, local governments, business entities, citizens, and other private parties to ensure the performance of the conservation and sustainable use of biodiversity (Japan);
 - Require to state and local governments to establish and implement policies for conservation and sustainable use of biodiversity;
 - Require the state to set a basic and comprehensive plan for conservation and sustainable use of biodiversity on national level. At the same time, local governments are responsible for setting basic plans on conservation and sustainable use of biodiversity within their areas;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (20)

- Require Environmental Impact Assessment at an early stage if a project has a potential impact on biodiversity;
- Declare that the activities geared toward conservation, improvement, and if possible to the recovery of biological diversity in the national territory are of public interest;
- Require the state to create and administer a system of wildlife protection areas with the aim of ensuring biological diversity, guaranteeing the preservation and conservation of the environmental heritage;
- Require the states to promote and encourage the creation of protected areas on private property;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (21)

- Require the executive branch to issue guidelines in relation to the following:

 - the promotion of the development and use of **conservation methods** and enhancement of the flora and fauna of the country;
 - the establishment of a system of conservation areas with the aim of safeguarding the national genetic heritage, protecting and conserving special geomorphological phenomena, landscape, flora and fauna;
 - ★ In the trade of illicit species considered in danger of extinction; and
 - ★ In the compliance with international conventions relating to the conservation of the natural heritage;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (22)

- Provide special protection to species, which are endangered or are on the verge of extinction. This special protection includes the establishment of rigorous regulation mechanisms, control, and management that guarantee conservation of such species and their rational use;
- Prohibit exploitation, hunting, capture, commercialization or destruction of protected flora and fauna;
- Provide that forest resources should be used and managed under the principle of biodiversity protection, sustainable yield, and multiple use concept of the resource, meeting their economic, ecological and social functions (Honduras);
- Provide that no circumstance or consideration can justify or excuse actions that could threaten or create a risk of extinction of any species, subspecies or the variety of flora or fauna;
- State that certain areas of the national territory can be declared ecosystems of strategic importance for the purpose of scientific research relating to the sustainable use of components of biological diversity;
- © Create specific funds to assist in wildlife management and provide assistance for wildlife research and education.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (23)

4. Fisheries/Marine/Coastal

- In the area of fishery many countries have implemented into their legislation provisions which:
 - Require any person, who is going to undertake a discretionary activity in the exclusive economic zone and continental shelf, to receive special permit from appropriate authority (New Zealand);
 - Require obtaining license (or permit) for fishing, including fishing in rivers and streams;
 - Provide limitations on the number of available fishing permits to protect the environment and fish resources;
 - Require states` governments to ensure the integrated management of marine coast and marine water resources as the basis for the conservation, protection and sustainable use of marine ecosystems and marine species;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (24)

- Require governments to establish integrated management plans of the sea coast that include:
 - ☑ Control and prevention of pollution and the discharge of waste from sources on land or sea;
 - Regulation of fisheries and aquaculture;
 - Measures in response to natural disasters;
 - Measures to promote ecotourism;
- Require to establish **oversight bodies** which will implement the mentioned plans;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (25)

- Empower executive branch to prescribe measures for the protection, conservation and management of fisheries and marine resources including:
 - The prohibition of fishing by certain means, in certain areas and or during certain periods;

 - ☑ Conditions to be attached to possession, manufacture, purchase of any gear;
 - Schemes for setting and allocating quotas and for limiting entry into all or specified fisheries;
 - ☑ The prohibition of an activity likely to disturb the marine ecosystems and habitats.
- Include voluntary codes of corporate conduct for entities involved in fishing;
- Emphasize on necessity to conduct quantity control of fishing;
- Give power to the minister (or to other relevant executive) to issue order to persons involved in fishing to suspend their activities if the quantity control has been exceeded or is very likely to be exceeded (Japan);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (26)

5. Water Regulation

- In the area of water regulation many countries have implemented into their legislation provisions which:
 - Recognize the dual needs to exploit water resources for economic benefits while at the same time protecting and conserving these water resources;
 - Require governments to establish an aquatic **environment protection strategy** to protect the biodiversity that is associated with water;
 - Require governments to establish the use of water management plans;
 - ✓ Provide specialized licenses or permits for water use;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (28)

- ☑ Prescribe that while managing water resources, governments should take into account all aspects of water resources including:
 - The **lineages between** water resources and other components of the natural environment;
 - The **requirement for effective and sustainable water** usage by human beings, environment generally and other sectors;
- Require **sustainable management and adequate operation** and transparent regulation of water supply and sanitation.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (29)

6. Sustainable Tourism

- Sustainable tourism is the area of tourism conducted in a way that protects ecosystems and areas of cultural and historical heritage that could be vulnerable to damage through over-use as tourist sites;
- In the area of sustainable tourism many countries have implemented into their legislation provisions which:
 - ✓ Develop voluntary codes of conduct in the realm of sustainable tourism;
 - Require the states to create **special agencies** which foster a sustainable tourism industry within the countries and help increase the economic benefit from sustainable tourism (*Australia*);
 - ☑ Require the states to adopt tourism policies that both promote and preserve countries` natural resources;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (30)

- Charge the state (and local governments) with overseeing the creation of conditions favorable to, and to the protection of the rights and interests of individuals, and organizations within the country and abroad that invest in the development and promotion of tourism (Laos);
- Require preparing tourism development plans which are required to define:
 - The primary contents, purposes, objectives;
 - Development goals;
 - Assessments and analyses of potential resources;
 - Conditions of the tourism markets;
 - The outcomes, and impacts on the economy, society, culture, and environment;
 - Methods, regulations and measures for implementation of the plans;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (31)

- Require the state (and provinces, regions, municipalities, etc.) centrally and uniformly administer conservation, protection and development requirements for areas of cultural, historical, and nature tourism importance throughout the country in a sustainable manner and with the participation of the community (Laos);
- ☑ Obligates the state (and provinces, regions, municipalities, etc.) to guarantee that the resources used in the realm of tourism can contribute equal or superior benefits to future generations (Cuba);
- Declare that sustainable development of tourism is to be based on respect for national cultures and their territorial expressions and on the integration of the local populations in the development of their activities, in that way contributing to the improvement of the quality of human life (Cuba);
- ☑ Declare the touristic resources of the country as national interests (Honduras);
- Require that those proposing to operate tourism-related activities and businesses in designated wilderness areas obtain licenses from the state (or province) to do so and that these licenses can be revoked (the Canadian province of Yukon).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (32)

7. Energy

- Nowadays many developed and developing countries set their sights on transition to the use of green and renewable energy. In order to achieve these goals, they have incorporated into their legislation provisions which:
 - ☑ Declare the development of utilization of renewable energy as the preferential area for energy development and promote the construction and development of the renewable energy market (China);
 - ☑ Encourage economic entities to participate in the development and utilization of renewable energy (China);
 - ✓ Declare the use of renewable energy sources to generate electricity as a national interest;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (33)

- Set the **obligation** for authorities to **promote and approve** new construction-based investment projects for the production of electric energy through renewable sources, taking into account the following guidelines (Argentina's Act 26,190/12-2006):
 - Job creation;
 - Minimization of environmental impact;
 - Integration of work with domestic capital goods, and allowing for their integration with foreign capital goods, where it is ascertained that there is no competitive technology offer domestically;
- ✓ Propose the promotion, production, commercialization and utilization of agro-combustibles (Uruguay).
- ☑ Establish that biodiesel will have the same existing tax regime as diesel fuel with the taxation of gasoline (petrol);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (34)

- State that companies producing **biodiesel and alcohol fuel** that are integrated in the required register have access to **additional tax relief** and **exemptions** for significant periods of time (Uruguay);
- Create programs for the rational and efficient use of energy;
- Require states and private companies to design **strategies for education and promotion of rational and efficient use of energy** among citizens based on information campaigns (for example, public utility companies providing electricity and gas services should **print on the cover of the receipt** of invoice or payment slip motivating messages for the rational and efficient use of energy and its benefits to the preservation of the environment);
- Require **special permits (licenses)** for utilisation of geothermal energy (Iceland, the Canadian province of Yukon);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (35)

- ✓ Adopt laws which facilitate (The Trinidad and Tobago Finance Act):
 - The acquisition of machinery and equipment related to the provision of compressed natural gas;
 - The acquisition and installation of compressed natural gas systems in vehicles;
 - The acquisition of machinery and equipment for the production of solar water heaters;
 - The acquisition of equipment related to the production of wind energy (wind turbines);
 - The acquisition of photovoltaic solar energy systems and the acquisition of solar water heating systems;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (36)

- ☑ Provide exemptions from import duties on equipment, machinery and imported accessories by companies or individuals in case if these goods are necessary for the production of energy from renewable sources (Dominican Republic);
- Provide freeing entities which produce energy from renewable resources from certain taxes for certain period of time (Dominican Republic) or reduction of taxes (the US State of Tennessee);
- ☑ Create special funds (and oversight bodies) to provide state funding to public and private entities seeking to engage in green energy use and development (the US State of Delaware, the US State of North Carolina);
- ☑ Provide grants to entities seeking to engage in green energy use and development;
- Provide programs which include **benefits** for those who enter into green energy projects that generate jobs within defined geographical areas (the US State of Florida);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (37)

- Require the establishment of energy efficiency plans (the Canadian province of Manitoba);
- ☑ Set that energy saving lamps will be sold for subsidized price (Cuba);
- ☑ Establish programs for the collection of fluorescent tubes for their treatment and storage in a safe place to prevent the release of mercury in the environment (Cuba);
- ✓ Include financial and taxation incentives for assisting businesses with defraying the costs of switching from coal-based energy to cleaner forms of energy (general trend in US states);
- ✓ Impose additional taxes on entities that purchase more than X ton of coal per year;
- ☑ Establish vehicle emissions standards (the US State of California established some of the lowest and most stringent vehicle emissions standards in the world);
- Provide financial and technical assistance to small businesses in implementation of new emissions standards (the US State of Utah);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (38)

- Place the **bonus** for establishing and implementing air pollution measures on the state as well as on smaller political sub-divisions (the US State of Hawaii);
- Require that owners/operators of power and other air pollutant emitting facilities in sensitive environmental areas produce **yearly reports** on their emissions for neighboring communities (the US State of Hawaii);
- Establish **citizen suit rights** connected to air pollution and other environmental issues (the US State of Hawaii, the US State of Arizona);
- Set specific **goals for reduction in greenhouse gas emissions** (the Canadian Province of British Columbia);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (39)

- Requirement that all public sector institutions issue **carbon neutral action reports** discussing the ways in which these institutions both have attempted to reach their target goals in reduction of emissions and also have established benchmarks for the future (the Canadian Province of British Columbia);
- ☑ Prohibit potentially damaging energy-generating activities (the Canadian Province of British Columbia);
- Limit certain types of corporate acquisitions that could threaten potential emissions reductions (the Canadian Province of British Columbia);
- ☑ Require nondiscrimination in access to renewable energy (the Canadian province of Ontario);
- Recognize that energy issues pose an **increasing threat to national security** and independence (the US federal Energy Independence and Security Act);
- ✓ Include labeling requirements for vehicles so that consumers can better understand the energy efficiency of vehicles (the US federal Energy Independence and Security Act).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (40)

8. Climate Change

- In order to counteract climate change many countries have adopted pieces of legislation which include provisions that:
 - Establish funds, which are geared toward assisting in the development and implementation of adaptive measures to counter climate change (the Canadian province of Alberta);
 - ☑ Establish methods for calculating emissions offsets;
 - ✓ Implement green building requirements and vehicle emissions standards for the public and private sectors;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (41)

- Establish special bodies which have obligations to (the Philippines):
 - To **formulate framework strategies** on climate change which serve as the basis of programs for climate change planning, research and development, and the monitoring of activities to protect vulnerable communities from the adverse effects of climate change. These strategies are **to be renewed every certain period of time** and include such components:
 - National priorities;
 - Impact, vulnerability and adaptation assessments;
 - Policy formulation;
 - Compliance with international commitments;
 - Research and development;

- Database development and management;
- Academic programs, capability building and mainstreaming;
- Advocacy and information dissemination;
- Monitoring and evaluation;
- · Gender mainstreaming.



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (42)

- Formulate national climate change action plans (based on framework strategies mentioned above) which must include (The Philippines' Climate Change Act):
 - The assessment of the national impact of climate change;

 - ▼ The assessment and management of risk and vulnerability;
 - ▼ The identification of greenhouse gas mitigation potentials;
 - ▼ The identification of options, prioritization of appropriate adaptation measures for joint projects of national and local governments;



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (43)

- Obligation of local governments to adopt and implement local climate change action plans (based on the provisions of framework strategies and national climate change action plans);
- State that when developing and implementing national and local climate change action plans the appropriate government bodies must **coordinate with the NGOs** and other concerned stakeholder groups (the Philippines);
- Set obligation for national and local governments to **prevent human settlements** in areas where populations are exposed to disaster risks due to the adverse impact of climate change (Mexico).



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (44)

9. Transportation

- In the realm of transportation many countries have incorporated into their legislation provisions that:
 - Provide financial support (by the state) of the supply and use of ultralow emission vehicles (UK);
 - ✓ Provide investment in transport projects aimed at the promotion of economic growth and the reduction of carbon emissions, and the purchasing of low carbon emission buses (UK);
 - Require **certification** of motor vehicles relating to fuel economy, fuel consumption and carbon dioxide emission (for example, in Singapore certificate relating to fuel economy, fuel consumption and carbon dioxide emission must be submitted by any authorized dealer, manufacturer or importer of motor vehicles intending to sell any motor vehicle of a class that is declared by order of Transport Ministry to be subject to the fuel economy requirements in Singapore on or after the Fuel Economy Labeling (FEL) effective date);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (45)

- ☑ Prohibit transactions concerning motor vehicles on which fuel economy labels are not displayed (Singapore);
- Establish vehicular emissions standards (Nigeria);
- ☑ Prohibit highly polluting engines (for example, in Nigeria highly polluting 2-stroke engines are banned);
- ☑ Establish **plans** that are focused on **zero-emissions standards** for vehicles throughout the states (Executive Order of the Governor of the US State of California);
- Develop policies for non-motorized transport (NMT) in which are intended:
 - To raise the profile of NMT within planning and programming for transport in general;
 - To provide guidelines for the inclusion of NMT needs within transport projects; and
 - To provide over-arching advocacy documents for the governments both to consider and approve (Uganda).





10. Waste Management and Waste-minimization

- In the realm of waste management and waste-minimization many countries have incorporated into their legislation provisions which:
 - ☑ Encourage or require relevant stakeholder to take responsibility for products in order to reduce the environmental and other impact of these products (for example, in Australia regulations of product stewardship for televisions and computers are provided. These regulations support product stewardship for recycling televisions, computers, printers and computer products);
 - Apply **co-regulatory approaches to reducing** the environmental and other impact of products (for example, in Australia government makes regulations that set the **outcomes to be met**, while industry funds and implements the scheme and has flexibility in determining how those outcomes are achieved);
 - ☑ Establish national policies on waste and special bodies which are responsible for instituting such policies (Brazil);
 - ☑ State that manufacturers, importers, distributors, traders, consumers, service providers for urban cleaning and solid waste management are responsible for the life cycle of their products (Brazil);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (47)

- Declare that solid waste that is a product of daily work of the society can be reused, and forming part of the raw materials that some productive systems are in need of (Paraguay);
- ☑ Promote recycling of solid waste, including exploitation during its use or reincorporation in the productive process as secondary material (Paraguay);
- ☑ Establish **normative frameworks for the regulation** of the activities of **recycling workers**. These frameworks are aimed at protecting, training and promoting social and professional development, promoting their formalization, association and contributing to the improved eco-efficient management of solid waste in the countries (*Peru*);
- ✓ Promote 3Rs principle (reduce, reuse, recycle) in the field of waste management (Japan, some countries throughout Africa);
- Require manufacturers of containers, home appliance, food, construction materials, and end-to-life vehicles to take necessary measures to reduce, reuse, and recycle the products (*Japan*);
- ✓ Provide guidance for national governments to take initiative in promoting procurement of recycled products (Japan);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (48)

- Require the state **to establish a fund** for the **disposal of waste electric and electronic products** to be used as allowance for the recovery and disposal of electric and electronic products (manufacturers of these products and other relevant business **should contribute to the fund**) (China);
- ✓ Include basic recycling requirements for different types of waste;
- **Set rules** and restrictions regarding **transportation** of all forms of waste;
- Established assistance programs to help businesses and others that are subject to waste remediation requirements at the state level (the US State of Kentucky);
- Establish **special bodies** which are **to assist** in the creation and implementation of laws and rules regarding solid waste (the US State of Indiana);



Available policy & regulatory toolbox: bylaws, specific rules, requirements and provisions (49)

- ☑ Contain permitting requirements for the generation of hazardous waste and also punitive requirements in the event that the terms of these permits are violated by a private sector entity (the US State of Washington);
- ☑ Created several forms of funds to assist in the event of various forms of contamination and remediation (the US State of Oklahoma, the US State of Michigan);
- ☑ Create environmental assistance grants (the US State of Minnesota);
- ✓ Provide for **public education** on waste management issue in order to create an informed public (the US State of Minnesota);
- ☑ Enforce establishing solid waste management plans and regulations on the level of state and localities (due to their unique knowledge of individual communities) (the US State of Vermont);
- Establish dispute settlement methods for industries that are involved in the handling of waste (the Canadian province of Ontario).





03. Success stories

Examples of successful implementation of the GE instruments (Singapore and China)



Singapore

Legislation:

- Environmental Protection and Management Act
- Energy Conservation Act



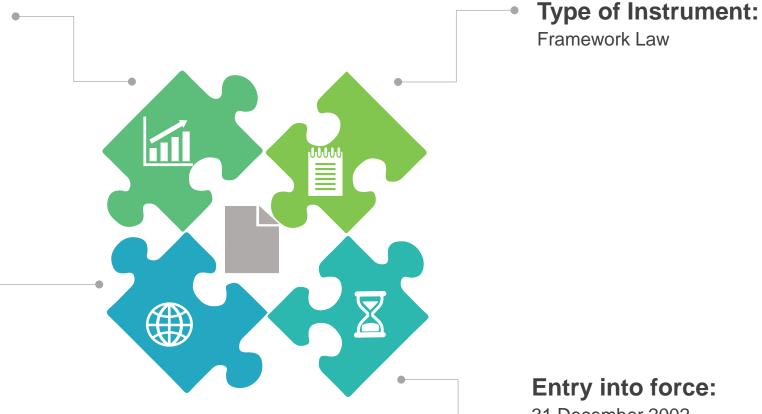
Environmental Protection and Management Act (Singapore)



Objective:

Scope: **National**

This is an Act to consolidate the laws relating to environmental pollution control, to provide for the protection and management of the environment and resource conservation, and for purposes connected therewith.



Framework Law

Entry into force:

31 December 2002

Environmental Protection and Management Act

Main provisions:

- Prohibition of dark smoke from chimney (an offence).
- Provisions on pollution of land (**specialized agency** to control the pollution of land).
- General prohibition for importation, manufacture and sale of hazardous substances.
- Provisions on energy conservation (regulation of the **labelling** of registrable goods).
- Restriction on supply of goods in Singapore unless they are registered, labeled and meet minimum energy efficiency standards.

Relevant innovative instruments:

The Act regulates registrable goods as a method for energy conservation.



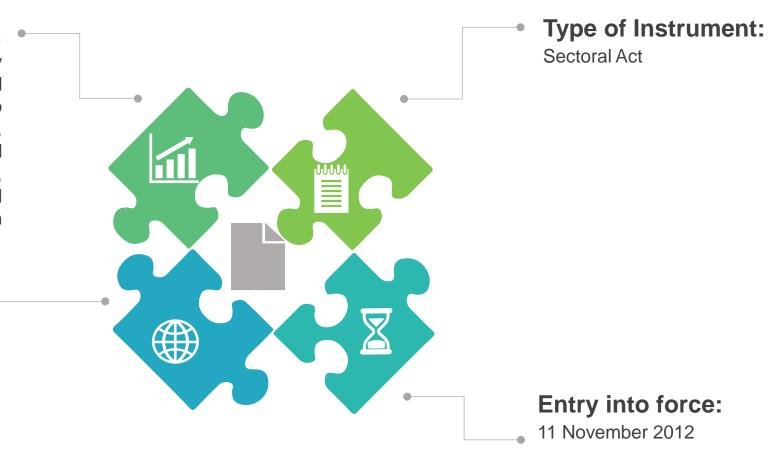
Energy Conservation Act (Singapore)



Objective:

Scope: National

This is an Act to mandate energy efficiency requirements and energy management practices to promote energy conservation, improve energy efficiency and reduce environmental impact, and to make consequential and related amendments to certain other written laws.



Energy Conservation Act

Main provisions:

- Energy labelling and minimum performance standards for registrable goods (fines in case of offence).
- Energy management practices for corporations. Any corporation which qualifies as a registrable corporation (by the reason of a particular industry in which it practices, a type of business activity or type of premises over which a corporation has operational control or by the reason of an energy use threshold attained by a business activity, or by premises, over which a corporation has operational control) shall be registered. Otherwise a fine of \$5,000.
- Energy efficiency improvement plans. A registered corporation must submit to the Director-General an energy efficiency improvement plan for each prescribed period in respect of each prescribed business activity or premises, or any part of each prescribed business activity or premises, under the operational control of the registered corporation.



Energy Conservation Act

- Fuel economy labeling, etc., of motor vehicles: The Transport Minister may, after consultation with the Land Transport Authority, by order published in the Gazette, declare any class, description or type of motor vehicle to be subject to the fuel economy requirements in this Division from the date specified in the order.
- Energy and environment impact surveys: The Director-General may, from time to time, undertake investigations or surveys of the levels of energy consumption, energy production or greenhouse gas emissions for the purposes of:
 - ☑ Assessing the impact on the environment of certain industries or activities; or
 - ☑ Advising the Minister or other public bodies concerning energy or environmental policies.

Relevant innovative instruments:

Energy labeling and minimum performance standards for registrable goods; energy efficiency improvement plans and energy and environment impact surveys.



2. Other measures:

- Singapore has established plans in different areas. These plans set out sustainable development goals and are reviewed every certain period.
- in order to achieve these goals, authorities of Singapore develop policies, regulations and different kinds of incentives in such areas as:
 - ☑ Air quality regulatory measures for stationary and mobile sources of pollutants;
 - ▼ Transport electronic road pricing (a form of congestion charging in central city areas), cycling networks and pathways, vehicle quota system (i.e. the auctioning of certificates of entitlement for vehicle ownership);
 - ✓ Climate change demonstration projects on renewable energy (e.g. testing of various solar technologies in public housing precincts), research and development investments and establishment of research institutes dedicated to energy research, climate studies and research;
 - ☑ Energy efficiency promotion of energy efficiency, setting minimum standards, 80 percent of buildings in Singapore to achieve Green Mark certification by 2030;



2. Other measures:

- Water sourcing water from local catchments; recycling and desalination of water; improvement of water efficiency through water efficient homes program; mandatory submission of water efficiency management plans for large water users; application of international water standards; provision of education for those living in water catchment areas; and long run marginal pricing to encourage water conservation, reflecting the scarcity value of water.
- Waste incineration; encouragement of participation in recycling; promotion of innovative technologies to recycle and reduce waste; infrastructure support for recycling; and voluntary Singapore Packaging Agreement;
- ✓ Nature conservation reforestation and outreach program for students; nature recreational master plan; and 10 percent of land area committed as green space, of which half is gazetted nature reserves;
- ☑ **Green and blue spaces** enhancement of Singapore's physical environment through the provision of greenery and green spaces as well as cleaning and opening up water bodies for recreational activities;
- **Public health** − improvement of the cleanliness and hygiene of public places; control of vector-borne diseases; prohibition of smoking in public places; public education; monitoring and improving indoor air quality; and researching healthy indoor environment.



Outcomes:

The result of establishment and implementation of mentioned plans policies and incentives are:

- The 2005 review of the 1992 Green Plan found that **targets** on air and water quality, waste, recycling, and conservation **had been met**;
- Mass **public transit system** was developed, which encourages commuters to take public transport instead of turning to private cars. This reduces congestion on roads, improves air quality, and maximizes land use by minimizing the need for roads;
- © Energy efficiency, carbon intensity, and waste management are also improving, substantially improving the quality of life in Singapore.



Success factors:

- One feature that has enabled Singapore's success is the use of a <u>comprehensive mix</u> of regulations, financial incentives, demonstration programs, capacity building, and consumer education and awareness.
- Singapore has been <u>effective in applying</u> a rigorous approach to developing tailored solutions for each environmental goal.
- Singapore's **clean and green image** has been a critical **marketing tool** in attracting international investment.



China

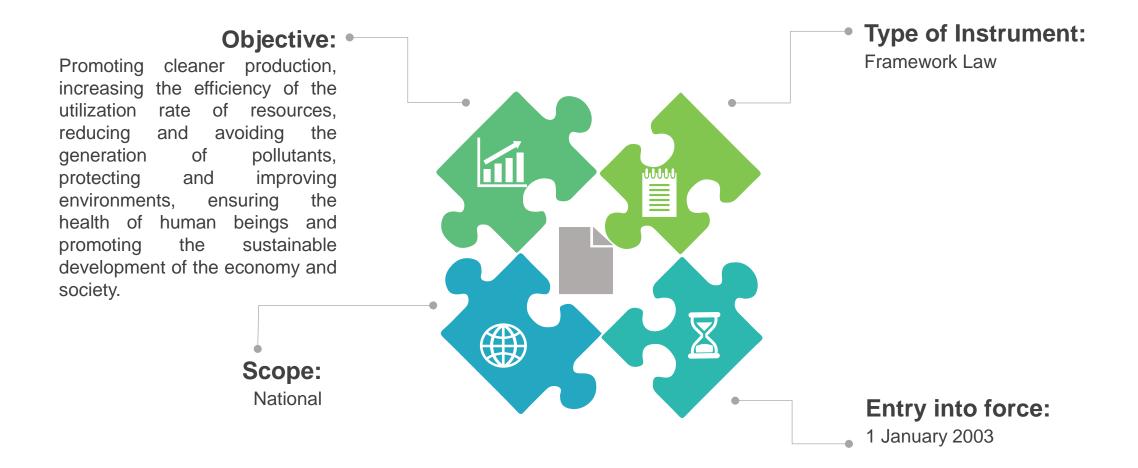
Legislation:

- Clean Production Promotion Law (Amended in 2012)
- Circular Economic Promotion Law
- Energy Conservation Law
- Renewable Energy Law



Clean Production Promotion Law (Amended in 2012) (China)





Clean Production Promotion Law (Amended in 2012)

Main provisions:

The law primarily regulated the national and corporate obligations and responsibilities in the promotion of clean production:

- The State Council and local governments should integrate the promotion of clean production into the national economic and social development plans;
- The **finance and taxation policies** in favor of cleaner production should be developed;
- The Nation shall establish a system of **Inducement Measures for cleaner production**. For example, expenses for cleaner production auditing and training may be booked as **operating costs**;
- Enterprises should package the products in a reasonable manner;
- Agricultural producers shall use chemical fertilizers, pesticides, agricultural films and feed additive compounds in accordance with scientific principles;
- © Enterprises shall adopt measures for energy and water conservation and other environmentally-friendly technologies.



Clean Production Promotion Law (Amended in 2012)

Relevant innovative instruments:

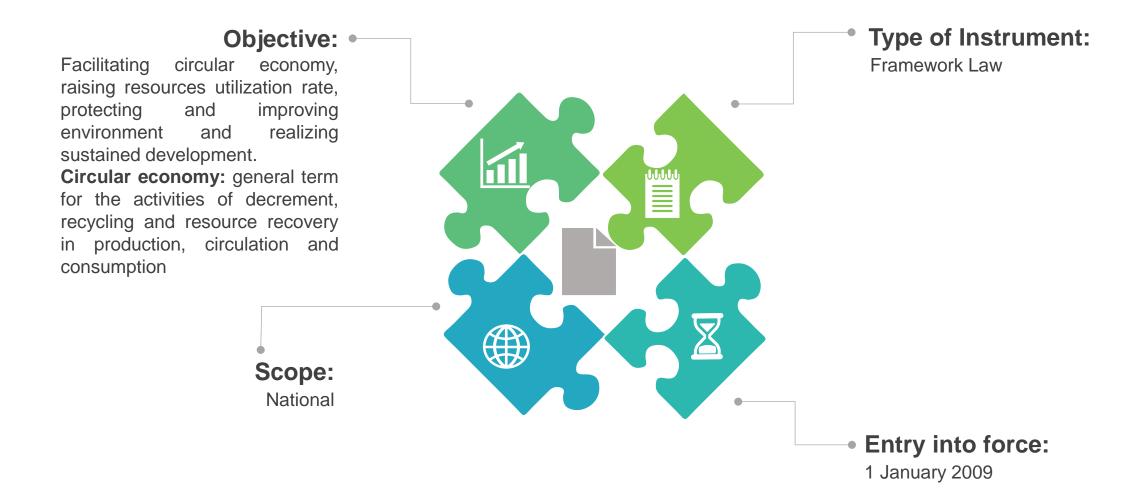
Incentives:

- ☑ The Nation establishes a system of commendation and reward for cleaner production (the government shall give commendations and rewards to those units and individuals that have made achievements in realizing cleaner production);
- ✓ Funding to support cleaner production for small- and medium-sized enterprises in accordance with their needs;
- ☑ Reduce or exempt from VAT for products produced from wastes and materials reclaimed from wastes;
- ☑ Expenses incurred for cleaner production auditing and training may be booked as enterprise operating costs.
- Financial support. The central budget for capital investment in promoting cleaner production shall be strengthened, including special funds for cleaner production in the central budget and other funds for cleaner production in Central budgetary arrangements.
- © Compulsory cleaning production audit system. Enterprises should implement a mandatory audit of clean production in number of cases.



Circular Economic Promotion Law (China)





Circular Economic Promotion Law

Main provisions:

- Mainstreaming circular economy into national policies.
- Private Sector: enterprises and institutions shall take measures to reduce resource consumption and the generation and discharge of wastes, and improve their recycling and resource recovery level.
- © Education, access to Information and public participation:
 - ☑ The State encourages and guides citizens to use products and recycle products featured by energy saving, water saving, material saving and environmental protection, and reduce the generation and discharge of wastes.
 - ☑ The State encourages entities, intermediary institutions, academies and other social organizations to conduct the publicity, technical promotion and consulting services concerning circular economy, so as to facilitate circular economy.



Circular Economic Promotion Law

- Mandatory recovery: an enterprise which produces products or packing materials under the catalogue of mandatory recovery shall recover its waste products or packing materials, recycle those waste articles if possible, or make bio-safety disposals if those waste articles cannot be reused due to economic or technical restrictions.
- Monitoring: the State shall establish a sound circular economy statistics system, strengthen statistical administration of resource consumption, comprehensive utilization and waste generation.
- Decrement: equipment product and packing material shall be chosen of materials that are easy to recovery, nontoxic and harmless or with low toxic or harm, and shall be complaint with the mandatory requirements of relevant national standards.
- Recycling and Resource Recovery: plan of the regional economic layout. Enterprises shall use advanced technologies, processes and equipment to recycle waste water generated in production.
- Tax preferences: where any enterprise uses or produce any technology, process, equipment or product under the catalogue in which the clean production and resource comprehensive utilization are encouraged by the State, it may share tax preferences in accordance with relevant provisions of the State.



Circular Economic Promotion Law

Relevant innovative instruments

Incentives:

- ▼ The Government shall set up relevant special funds for developing circular economy to support scientific and technological research and development;
- Any entity that uses fiscal capital to introduce main technologies and equipment relevant to circular economy shall make a plan for digestion, absorption and innovation, submit the plan to competent departments. The departments shall establish a coordination system according to actual needs and give a financial support;
- ▼ Tax preferences for industrial activities conductive to promoting circular economy, and encourage the import of technologies, equipment and products that may save energy, water and materials through, and restrict export of products with high energy consumption;
- ☑ Credit support such as preferential loans and relevant financial services;
- ☑ The state shall implement a government **procurement policy** where any procurement uses fiscal capital, products and reproduced products that may save energy, water and materials and be conductive to **environment protection shall be purchased preferentially**.



Energy Conservation Law (China)





Energy Conservation Law

Relevant innovative instruments

Obligation of public institutions to formulate its annual energy conservation targets and implementing schemes, strengthen energy consumption measuring and monitoring management, and submit energy consumption reports for the previous year.

Incentives:

- ☑ Special energy conservation funds to support the research and development of energy conservation technologies;
- ☑ Preferential taxes and other supportive policies to the energy conservation technologies and products that need support and are listed into the popularization catalogue;
- ☑ Credit support to energy conservation projects, and offer preferential loans to qualified projects for research and development of energy conservation technologies, etc.;
- ▼ The State encourages and guides relevant social sectors to increase monetary investment into energy conservation.
- ▼ The State implements the pricing policy good for energy conservation, and guides energy consuming entities and individuals to conserve energy.



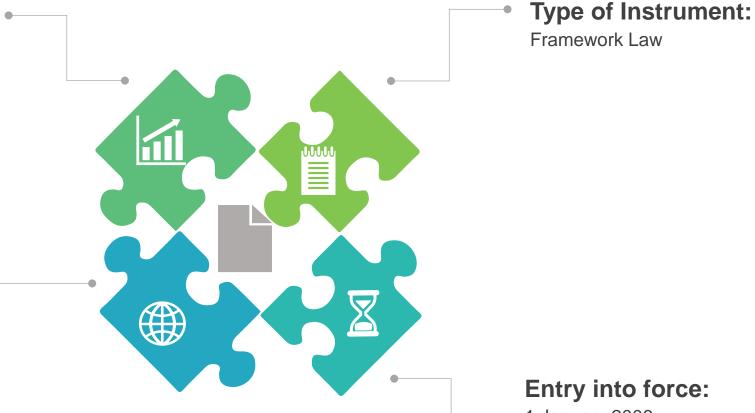
Renewable Energy Law (China)



Objective: •

Scope: National

the order to promote development and utilization of renewable energy, improve the energy structure, diversify energy supplies, safeguard energy security, protect the environment, and realize the sustainable development of the economy and society, this Law is hereby prepared.



1 January 2006

Renewable Energy Law

Main provisions:

- The Government lists the development of utilization of renewable energy as the preferential area for energy development and promotes the construction and development of the renewable energy market by establishing total volume for the development of renewable energy and taking corresponding measures.
- Set Basic Administrative System:
 - ☑ Energy authorities of the State Council who implement management for the development and utilization of renewable energy at the national level;
 - ☑ Energy authorities of local people's governments at local level are responsible for the management of the development and utilization of renewable energy within their own jurisdiction.
- Energy authorities of the State Council are responsible for organizing and coordinating **national surveys**, **set middle and long-term target** of the total volume for the development and utilization of renewable energy at the national level.
- Energy authorities in the State Council shall prepare and promulgate development guidance catalogs for renewable energy industries.
- Grid power price of renewable energy power generation projects shall be determined by the price authorities of the State Council. The price for grid-connected power shall be publicized.

Incentives:

special fund, subsidized loans and favorable tax policies.



Outcomes:

- China is not considered to have a coherent set of green economy policies. Instead, policies are embedded in the larger development planning and environmental governance directives at the macro-level and spread across various sectors through environmental regulations and incentives.
- In the area of environmental protection and green economy China has **central-local planning model** with often implementation gaps.
- The additional generating capacity from wind power has exhibited **an annual growth rate** of **more** than 100 per cent from 2005 to 2009.
- © China is now the world's largest market for solar hot water, with nearly two-thirds of global capacity. More than 10 per cent of Chinese households rely on the sun to heat their water with more than 160 million square meters as total collector area.
- The energy sector as a whole generates output worth US\$17 billion and employed an estimated 1.5 million at the end of 2009, of which 600,000 were in the solar thermal industry, 266,000 in biomass generation, 55,000 in solar photovoltaics and 22,200 in wind power.





04. Actions

The algorithm for development of the policy & regulatory framework for GE



Possible algorithm for development of policy & regulatory framework for GE on the national level (1):

1. Vision formulation

(ambitious and challenging, however realistic and feasible).

2. Goals setting and challenges (problems) identification.

- Focus on 3 5 top priorities (industries, issues, regions...)
- Synchronize SDGs achievement
- Concreate and quantifiable goals

3. Audit of the policy & regulatory framework status quo:

- 1) Recognition on a high level (declarations)
- 2) Principles and policies
- 3) Laws and bylaws
- 4) Institutions and programs



ACTIONS

Possible algorithm for development of policy & regulatory framework for GE on the national level (1):

4. National program elaboration, adoption and implementation:

- ☑ Different levels (structure)
- ✓ Various legal & regulatory tools
- ☑ Political context
- Resources (financial, human, organizational, and knowledge)

5. Monitoring, audit and reassessment.



ACTIONS

Algorithm

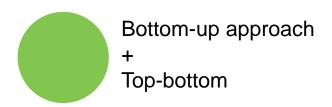






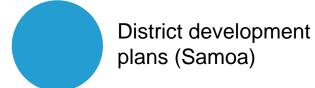




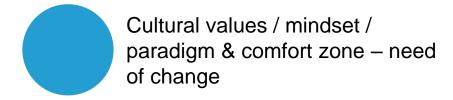












EXERCISE (5 min)



- 1. Which of the mentioned tools are <u>already implemented</u> (or are <u>planned for implementation</u>) on different levels in Your country? Laws/bylaws, agencies, incentives, requirements etc... Please specify the most efficient.
- 2. What are the specific instruments of GE which are being successfully used in Your country, however <u>were not mentioned so far during the training?</u> Please share your experience.
- 3. Which instruments /ideas/practical actions would, in your opinion, be worth to consider for implementation in your country? Please specify.

Please specify your Name and your Country! Thank you!

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