

GREEN economy

Why a Green Economy Matters for the Least Developed Countries



THE GREEN ECONOMY:

HOW ARE WE PREPARING OUR WORKFORCE



Dr. Didacus Jules
Caribbean Examinations Council
May 2012

- Characteristics of the Green Economy
- The educational requirements of the Green Economy
- How can we prepare our workforce
- CXC's contribution to this effort



CHARACTERISTICS OF THE GREEN ECONOMY

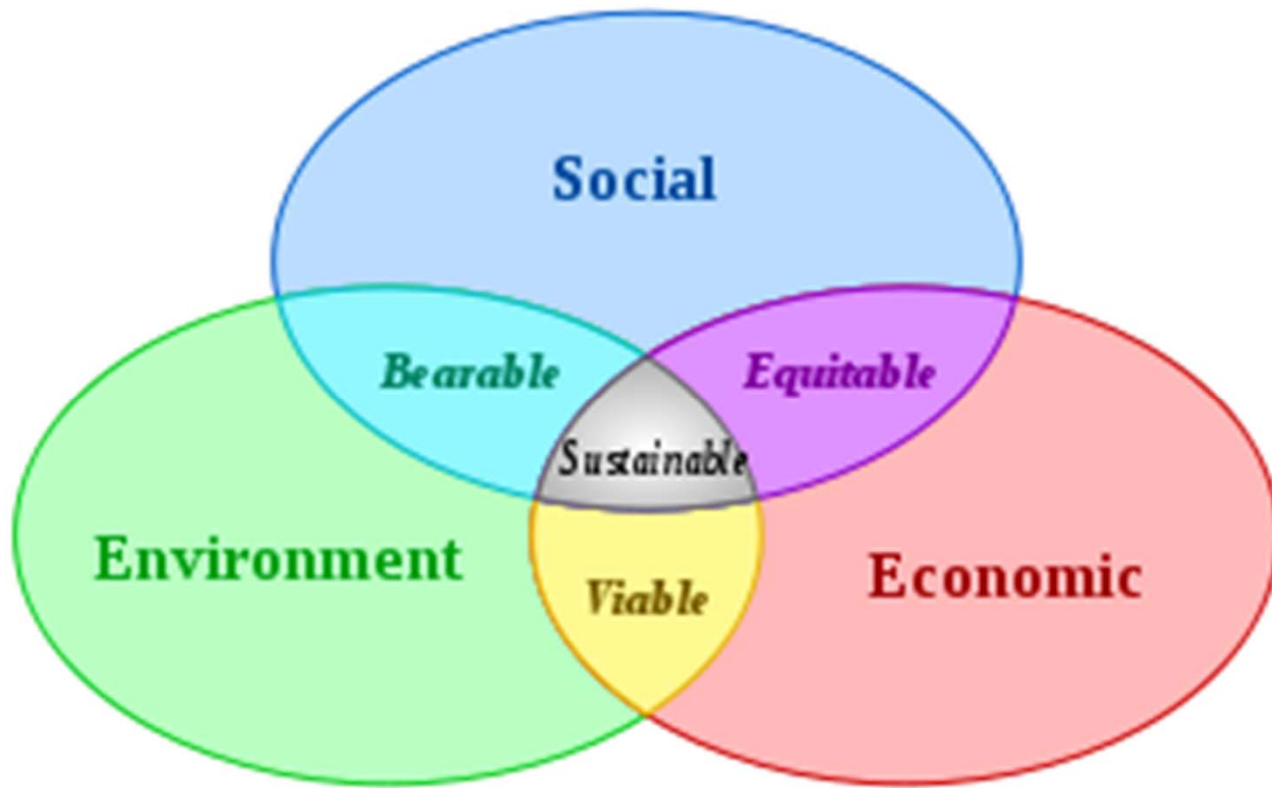


a **green economy** can be described as one that is **low carbon**, **resource efficient** and **socially inclusive**...

UNEP, UNCTAD, UN-OHRLLS

A **green economy** is one that results in **improved human well-being** and **social equity**, while significantly **reducing environmental risks**.

Model of economic development based on sustainable development paradigm and a knowledge of ecological economics



What does all of this essentially mean?

Are we finding the balance between the excesses of capitalism and the rigidities of communism?

A different way of working and living – a more communitarian world



TIME THE 2012 TIME 100

IVE FOR GREATNESS
E COSMOGRAPH DAYTONA

The 100 Most Influential People in the World

They are the people who inspire us, entertain us, challenge us and change our world. The breakouts, pioneers, moguls, leaders and icons who make up this year's TIME 100.

Select a Section Story

TIME 100: The List
Elinor Ostrom
Economist
By ROBERT JOHNSON Wednesday, Apr. 18, 2012



Elinor Ostrom was the recipient of the Nobel Prize in Economics in 2009 — the first woman to achieve the distinction — for her analysis of economic governance, especially the governance of common property like air, water and public spaces. Virtually all the world's most urgent problems require collective action. Be it environmental protection, the international financial system or the dimensions of inequality, Ostrom's work sheds light on the direction society must follow to avoid misuse of shared resources, "the tragedy of the commons."

Ostrom, 78, has done field studies of

Elinor Ostrom

- Nobel Prize in Economics in 2009 (the first woman to achieve this)

Analysis of economic governance, especially the governance of common property like air, water and public spaces.

Virtually all the world's most urgent problems require collective action. Be it environmental protection, the international financial system or the dimensions of inequality, Ostrom's work sheds light on the direction society must follow.

**OUR
COMMON
FUTURE**

THE WORLD COMMISSION
ON ENVIRONMENT
AND DEVELOPMENT

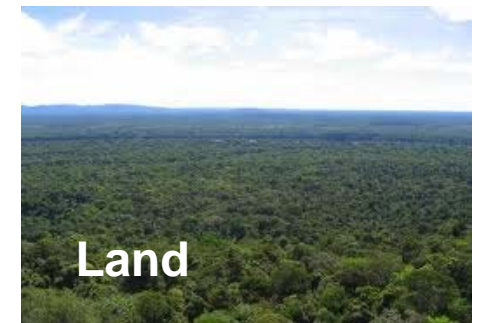
**small
is
beautiful**
a study of economics
as if people mattered
EF Schumacher

The new political economy has been evolving for some time...

... but its all about economics as if **people** and **the environment** matter!

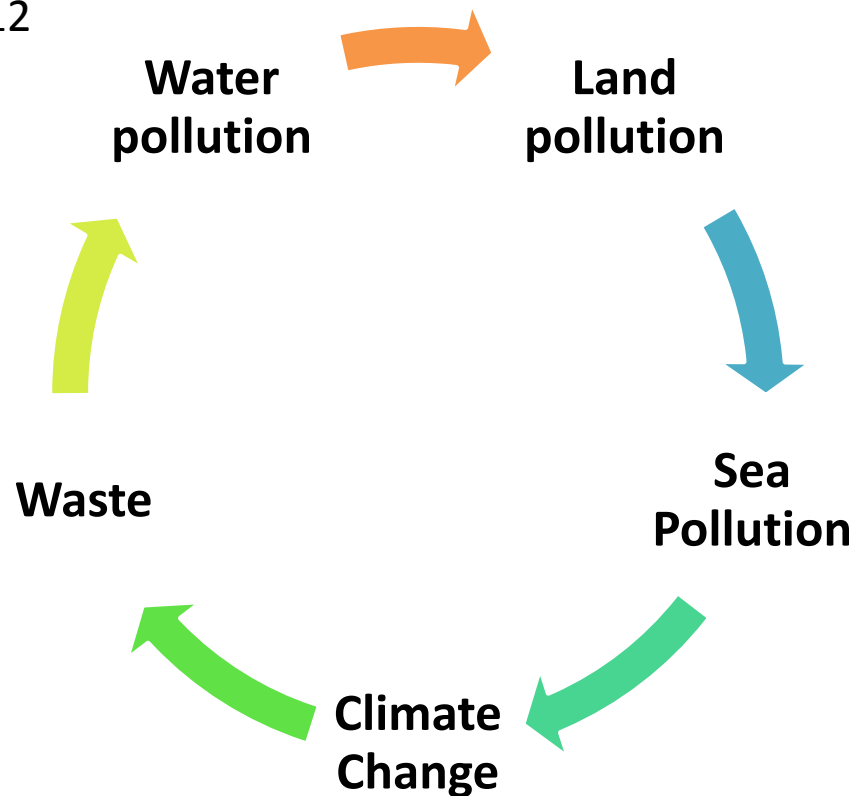


Interconnectedness
of the problems
necessitate multi-
sectoral, multi-
dimensional
solutions



Management of pollution is segregated from that of fisheries, which in turn are rarely considered in the same place as shipping, or climate change. This means that **impacts are discussed in isolation and by different people**. But **a view of the whole is far more alarming than the sum of its parts**.

- Callum Roberts, Newsweek 21st May 2012





Active lifestyles
Organic food and nutrition



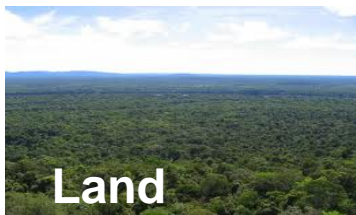
Health and sanitation
Food production



Green (waste-free) production
Recyclable waste



Sustainable utilization
Impact on positive lifestyles



Food production
Habitat, waste and lifestyles
Human well-being



CHALLENGES

our unplanned experiment with greenhouse gases is gradually infiltrating the deep sea, changing ocean chemistry, impacting temperatures and oxygen levels, and shifting patterns of underwater currents with dramatic consequences. **The path we are on today is pushing ocean ecosystems to the edge of their viability**

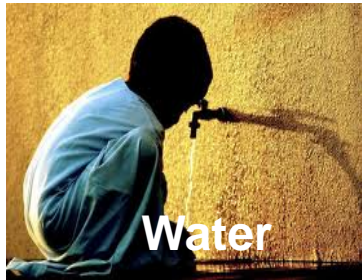


CHALLENGES

- Callum Roberts, Newsweek 21st May 2012



Active lifestyles
Production of organic food
Nutrition & health



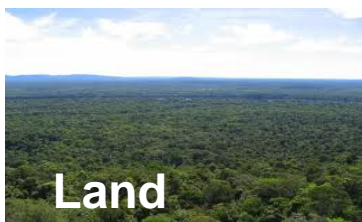
Access to safe water
Irrigation
Flood/drought management
Water & human sanitation



Green (waste-free) production
Recycling programs
Waste to energy



Sustainable industries – tourism, agriculture, etc
Natural resource management



Localized, organic food production/import substitution
Balanced urban-rural development
Land use regulation



SOLUTIONS
1



Climate change

Coastal protection for islands
Training for re-location/
migration (Fiji)



Rural electrification
Sustainable energy sources
Carbon-free energy
New industries powered by
sustainable energy



SOLUTIONS
2



EDUCATIONAL REQUIREMENTS OF THE GREEN ECONOMY



“The **Green Jobs Initiative** (UNEP, ILO, ITUC and IOE) highlighted the dual challenge of green jobs:

to make economic growth and development compatible with climate stabilisation and a sustainable environmental footprint.

The shift towards **greening the economy** will require **the second greatest economic transformation** after the industrial revolution”

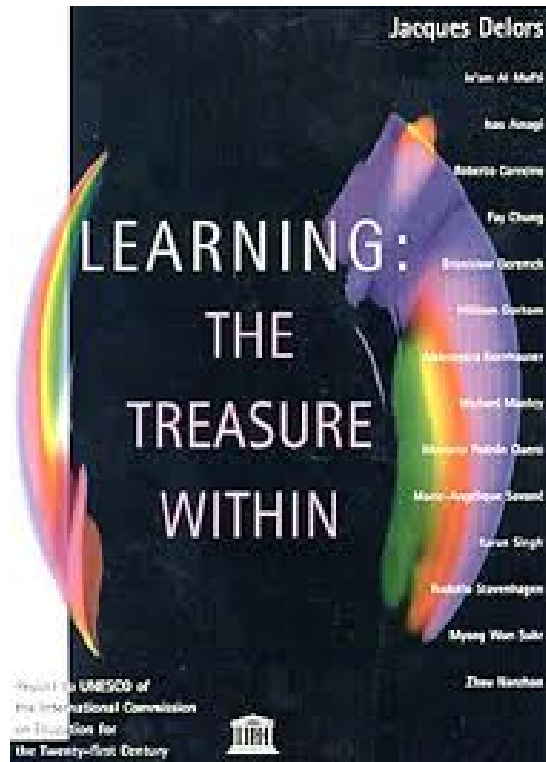
Environmental challenges raise serious concerns for the welfare of current and future generations.

Responses should be driven by ~~independent but commonly reinforcing policies~~ for environment, energy, transportation, employment, and training

EU 2009



Responses should be driven by **convergent and multi-sectorally reinforcing policies**



“Education must simultaneously provide maps of a complex world in constant turmoil and the compass that will enable people to find their way in it”

Delors Report



Rio-20's essential lexicon

C21 competencies:

- Critical thinking
- Design thinking
- Collaboration

C21 skill sets:

- ICT
- Transdisciplinary TVET

the mating of **knowledge**, **tradition** and



Some key conclusions:

Education transformation – towards seamless system

National Qualifications Framework – vertical and horizontal career progression

Converging TVET and CBETA in education

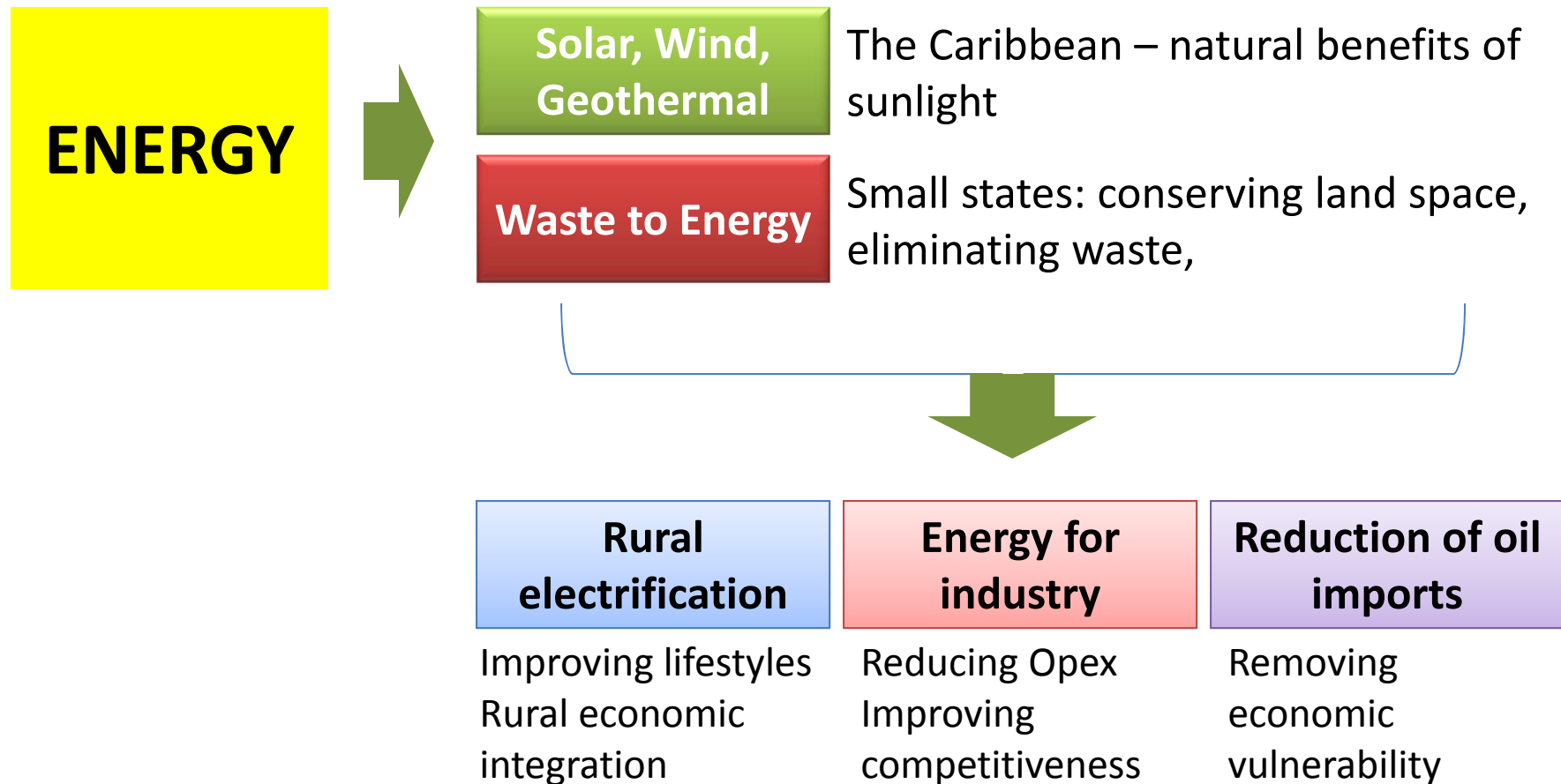


HOW CAN WE PREPARE OUR WORKFORCE

1. Identification of the **strategic opportunities** for green business
2. Reevaluation of **traditional and indigenous knowledge** on sustainable lifestyles and creating new business models in work and community
3. Determination of the **skill requirements** to support investment in these areas
4. Putting in place the architecture for **vertical and horizontal career progression** in these areas
5. Policies on **workforce training** must prioritize this as a central investment by Public-Private partnership in growing the new economy

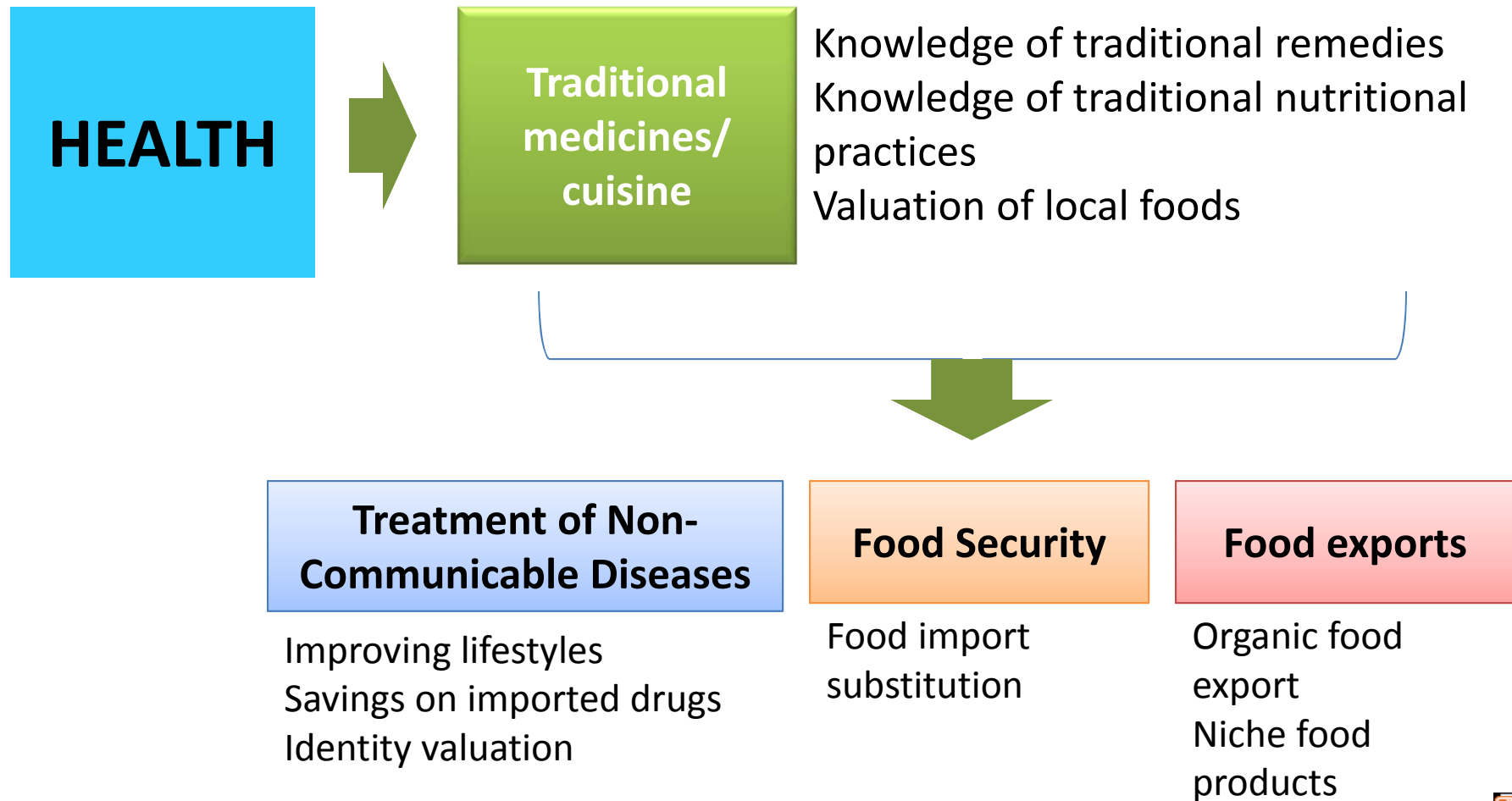


1. Identification of the strategic opportunities for green business





2. Revaluation of traditional and indigenous knowledge on sustainable lifestyles and creating new business models in work and community





3. Determination of the skill requirements to support investment in the Green Economy



Knowledge: scientific, technical, traditional

Skills: TVET, Traditional,

Attitudes: Collaborative, inquisitive, inventive

RESEARCH

TECHNOLOGY

INNOVATION



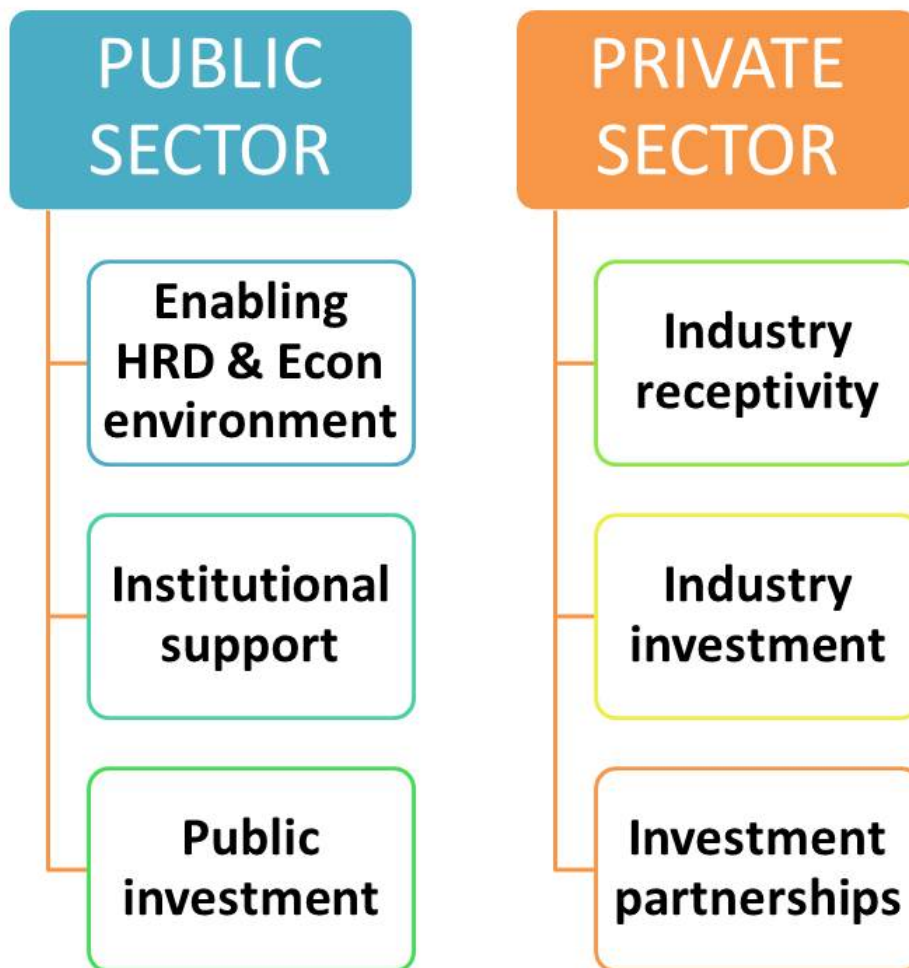
4. Putting in place the architecture for vertical and horizontal career progression in these areas

QUALIFICATION	QUALIFICATIONS FRAMEWORK			OCCUPATIONAL LEVEL
	LEVELS	CREDITS	DESCRIPTORS	
Second Degree	V	480 (=120 level 5 + 60 level 4 + 60 level 3 +120 level 2 +120 level 1)	Recognition of high professional knowledge, expert work and study competencies and the performance of these at the senior manager and professional levels	Advanced professional Chartered professional (Senior Manager)
First Degree	IV	360 (= 60 level 4 + 60 level 3 +120 level 2 +120 level 1)	Recognition of high specialized and expert work and study competencies and skills and the performance of these in a wide range of contexts. This includes at managerial, master craftsman, entrepreneurs, and technologists	Manager Master Craftsman Technologist (Para Professional)
Associate Degree/ Diploma	III	300 (= 60 level 3 +120 level 2 +120 level 1)	Recognition of the ability to achieve detailed work and study competencies and skills and the performance of these with autonomy. Can perform supervisory work. Equivalence: CVQ 3, CAPE Units, GCE A Level, City & Guilds 3	Technician (Supervisor)
Certificate	II	240 (= 120 level 2 +120 level 1)	Recognition of the ability to achieve a very good comprehension of work and study competencies and skills and the performance of these under minimal supervision or guidance. Equivalence: CVQ 2, NVQ 2, CSEC 1 - 3, GCE A - D, CCSLC 5 subjects – Competent /Mastery, City & Guilds 2	Skilled worker (Unsupervised)
Certificate	I	120	Entry level qualification that recognizes preparatory competencies and skills, and the application of these in everyday situations under direct supervision. Equivalence: CVQ 1, NVQ 1, CSEC 4 – 5, CCSLC (individual subjects), City & Guilds 1	Entry-level worker (supervised)

- Enable progression from any level to another
- Design of competency based education, training and assessment
- Tertiary level opportunities in TVET areas
- Incentivize business to invest Green and to grow human capacity



5. Policies on workforce training must prioritize this as a central investment by Public-Private partnership in growing the new economy



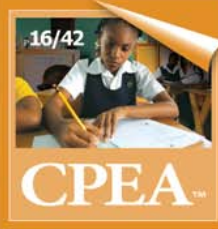


CXC'S CONTRIBUTION TO THIS PROCESS

THE CARIBBEAN EXAMINER

A PUBLICATION OF THE CARIBBEAN EXAMINATIONS COUNCIL

VOLUME 10 • NO.1 • MAY 2012



CXC QUALIFICATIONS:
RECOGNISED WORLDWIDE

Deepening CXC's internationalization

- Recognition by Accreditation bodies
- Articulation with universities
- Awards to top performers



CARIBBEAN QUALIFICATIONS FRAMEWORK

Levels	Knowledge	Skills & application	Autonomy and responsibility
Notes	(Theoretical & factual)	(Cognitive, practical & communication skills and the context for their application)	(Including team role)
I	Basic general knowledge of a field of work or study	<p>Range of skills: Basic general, logical and practical skills</p> <p>Type of activity/ Context: Routine, repetitive situations</p> <p>Communication: Read and write limited types and lengths of materials; understand and follow simple instructions; identify and report facts.</p>	Needs direct supervision and detailed guidance to complete routine, repetitive tasks.
II	Foundational factual and operational knowledge of a field of work or study	<p>Range of skills: Foundational, logical and practical skills</p> <p>Type of activity/ Context: Defined, routine, structured</p> <p>Communication: Extract information from specified range of sources; produce simple written documents using templates; take part in discussion.</p>	Needs some supervision and clear instructions in order to perform on structured assignments and achieve set goals.

SAMPLE – work in progress

Articulation of certification

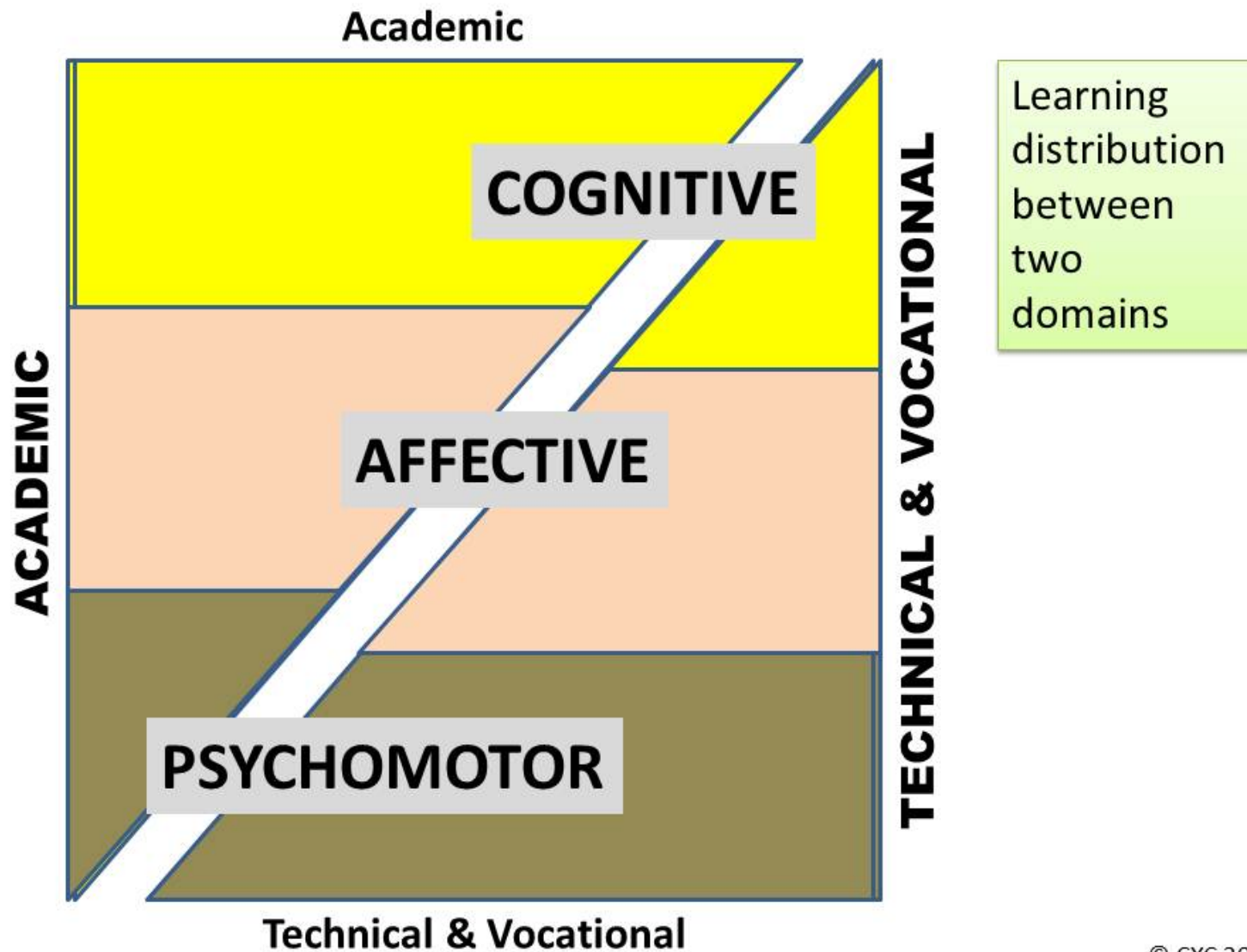
19
countries

ASSOCIATE DEGREE

- Facilitates advanced job placement or career focus
- Provides credits for degree level studies



Articulation of certification



**articulate TVET offerings
and rationalize the sector**



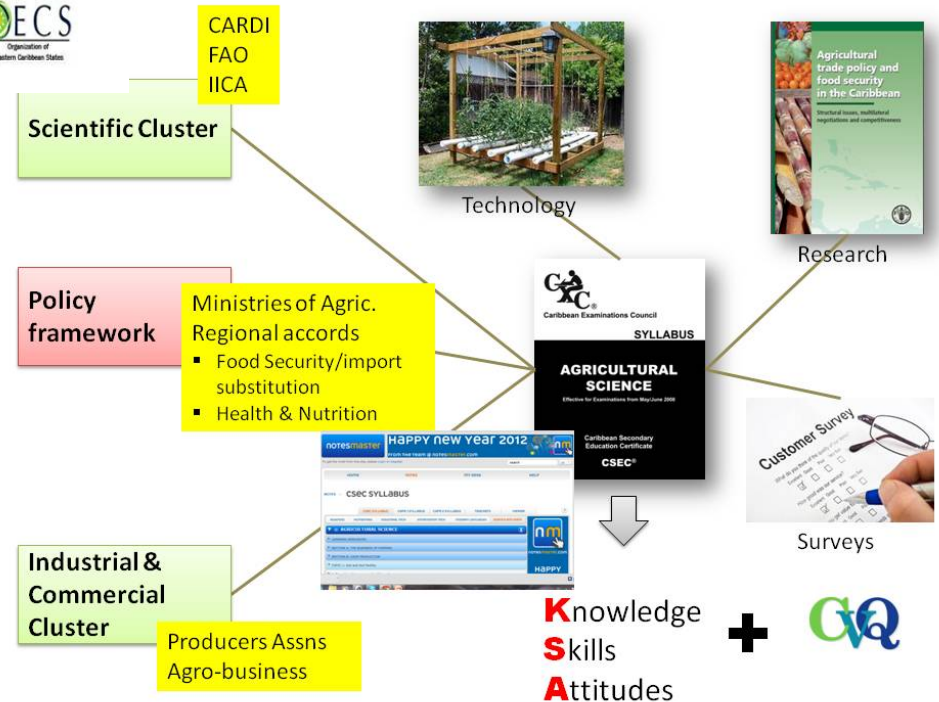


CXC partnerships

- Policy advocacy and education reform
- Mission synergies
- Articulation of certification
- Syllabus & Exam revitalization
- Improving learning & teaching
- Funding support



Creating mutually reinforcing synergies





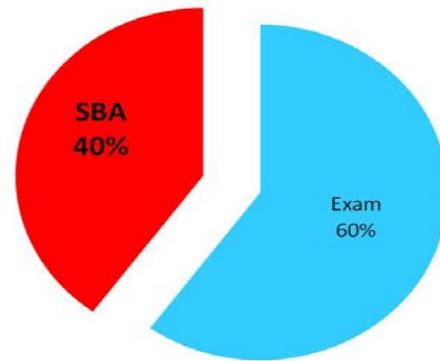
Systematic review of subjects in each level of certification: CVQ, CSEC, CAPE

Creation of **new subjects** corresponding to new **global opportunities or challenges**:

- CAPE Tourism & Recreation
- CAPE Entrepreneurship
- CAPE Agriculture
- CAPE Digital Media

SCHOOL BASED ASSESSMENT

Allocation of marks



projects



group work

OBJECTIVES:

- Demonstrate the application of knowledge
- Demonstrate civic responsibility
- Display entrepreneurship or innovation

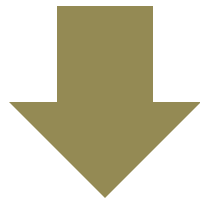


Trans-disciplinary approaches
Converging assessment with real world opportunity
Critical thinking; problem solving; design thinking; innovation contests

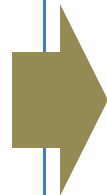
MODE OF INTERFACING WITH CXC

REGIONAL
ORGANIZATION

Core business



public
education
dimension



Core business

SYLLABI

- Infusion
- Strand development
- N-Master
- Support material

EXAMS

- standards
- competence
- Certification
- SBA projects

PUBLIC
SENSITIZATION

- knowledge valuation
- Social media dissemination

**the best way to
predict the
future is to
invent it**



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