

Skills Development Insights from RP Case Studies



*Dr. Rene E. Ofreneo &
Joy Hernandez*

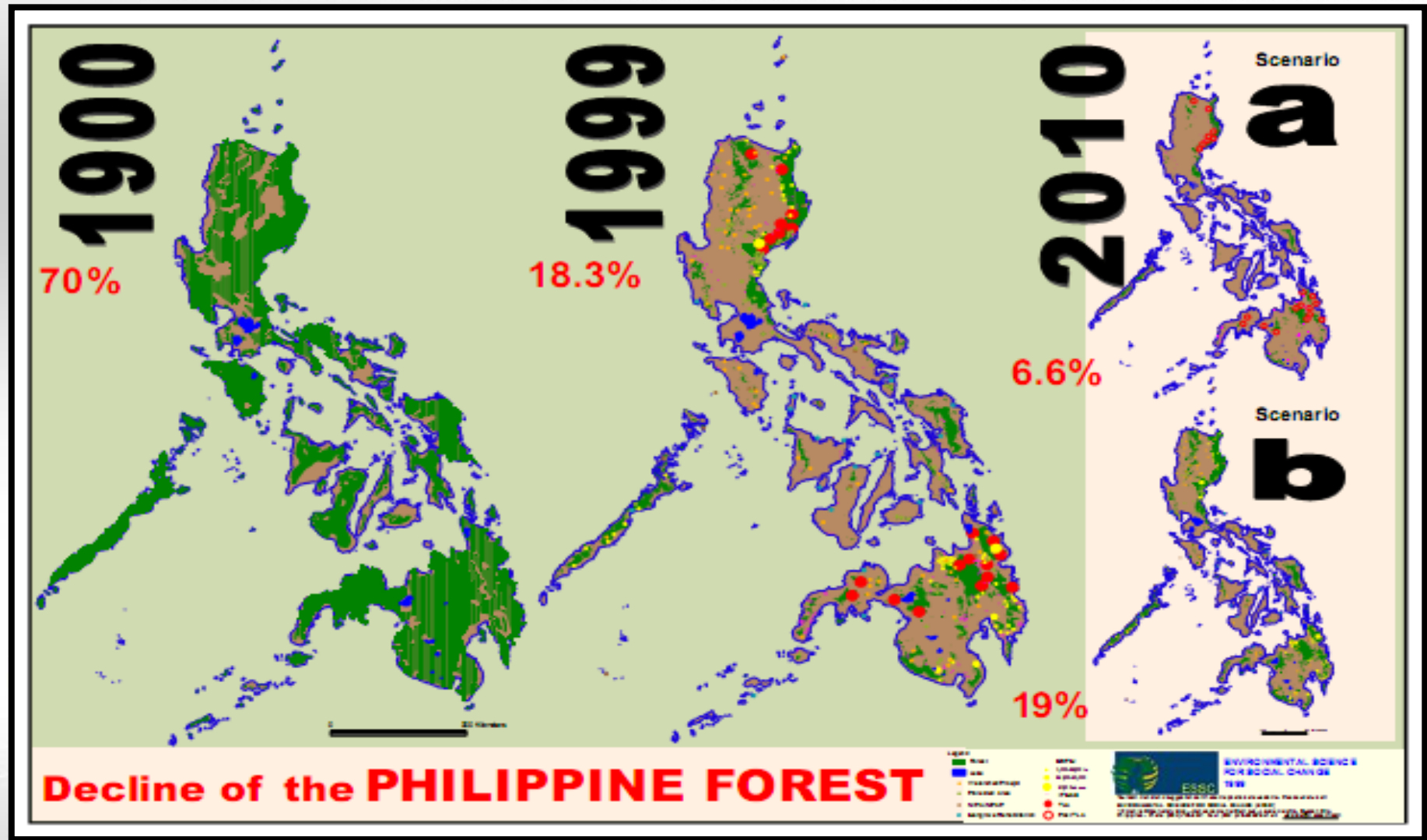
Philippine CC nightmare

RP – 4th most vulnerable based on global climate risk index.
22 tropical cyclones/yr. El Nino/La Nina alternating.

Yet, RP GHG emission is relatively small.

	Global Share (%)	Per Capita GHG Share
RP	0.3	1.0
Singapore	0.2	12.3
South Korea	1.3	9.7
Russia	5.3	10.6
China	17.3	3.8
United States	20.9	20.6

RP CC vulnerability compounded by its degraded environment (i.e., deforestation, loss of biodiversity, poor solid waste management, soil erosion & degradation, etc.).



Challenge: Transformation of RP into a 'Green & CC-resilient Economy'

There are huge possibilities in:

- Renewable energy and biofuels
- Solid waste management and recycling
- Urban-rural community renewal
- Watershed management
- Green organic agriculture
- Greening of services (e.g., eco tourism, green transport, etc.)
- Greening industrial sector through energy-saving, value-adding and environmentally-friendly approaches and processes



RP enterprise case studies provide glimmers of hope

- **San Carlos Bio-Energy Inc. (SCBI)**, first and only operational bio-ethanol plant in the Philippines & Southeast Asia. Trying to be pollution-free in all areas.
- **Energy Development Corporation (EDC)**, biggest geothermal project in RP generating 60% of country's geothermal total. Has well-developed reforestation program and Energy Academy.
- **Metal Wealth**, the country's biggest plastic recycling firm.
- **PASAR**, a government copper smelting firm privatized in 1999. But new owner invested on pollution abatement and initiated environmental projects in and around smelter site.
- **Halsangz Plating Cebu Corporation (HPCC)**, export-oriented (secondary, in support of primary exporters) but energy-intensive. Survived global financial crisis due to energy savings measures.



RP Case Studies...

- **Toyota** assembly plant. Blended Tokyo's global clean manufacturing processes w/ local environmental initiatives of Filipino partners (e.g., reforestation, solar, composting, etc.) within & around the facility.
- **Negros Institute for Sustainable Agriculture and Rural Development (NISARD)**, promoting island-wide organic agriculture by 2 provincial gov'ts in Negros (Occidental & Oriental). Also engaged in organic product certification.
- **Haribon**, RP's oldest & biggest environmental NGO now promoting "rainforestation" (planting old varieties and transforming host communities as forest keepers).
- **Jollibee**, RP's largest food chain, with over 3,000 employees and 600 + stores located nationwide. Went into green projects for cost saving & enviro compliance; projects now flagship programs.



Skills implications of the 'green shift': Learnings from RP case studies

- Skills development is a complicated, dynamic and non-linear process.
- Skills formation in a greening process could be a result of:
 - skilling (deepening knowledge)
 - up-skilling (raising skills to a higher level)
 - re-skilling (re-learning new ones)
 - side-skilling (acquiring additional skills)
 - multi-skilling (acquiring several skills ostensibly for multi-tasking and versatility)



Learnings from RP case studies

- Upskilling:
 - **At SCBI & PASAR:** Upskilling is necessitated by the upgrade in technology
 - Despite replacement of old technology, old skills are not displaced. Previously acquired technical skills and knowledge can still be applied in operating new, state-of-the art technology.
 - **At Toyota:** Key environmental personnel are required to participate in more specialized and technical trainings.

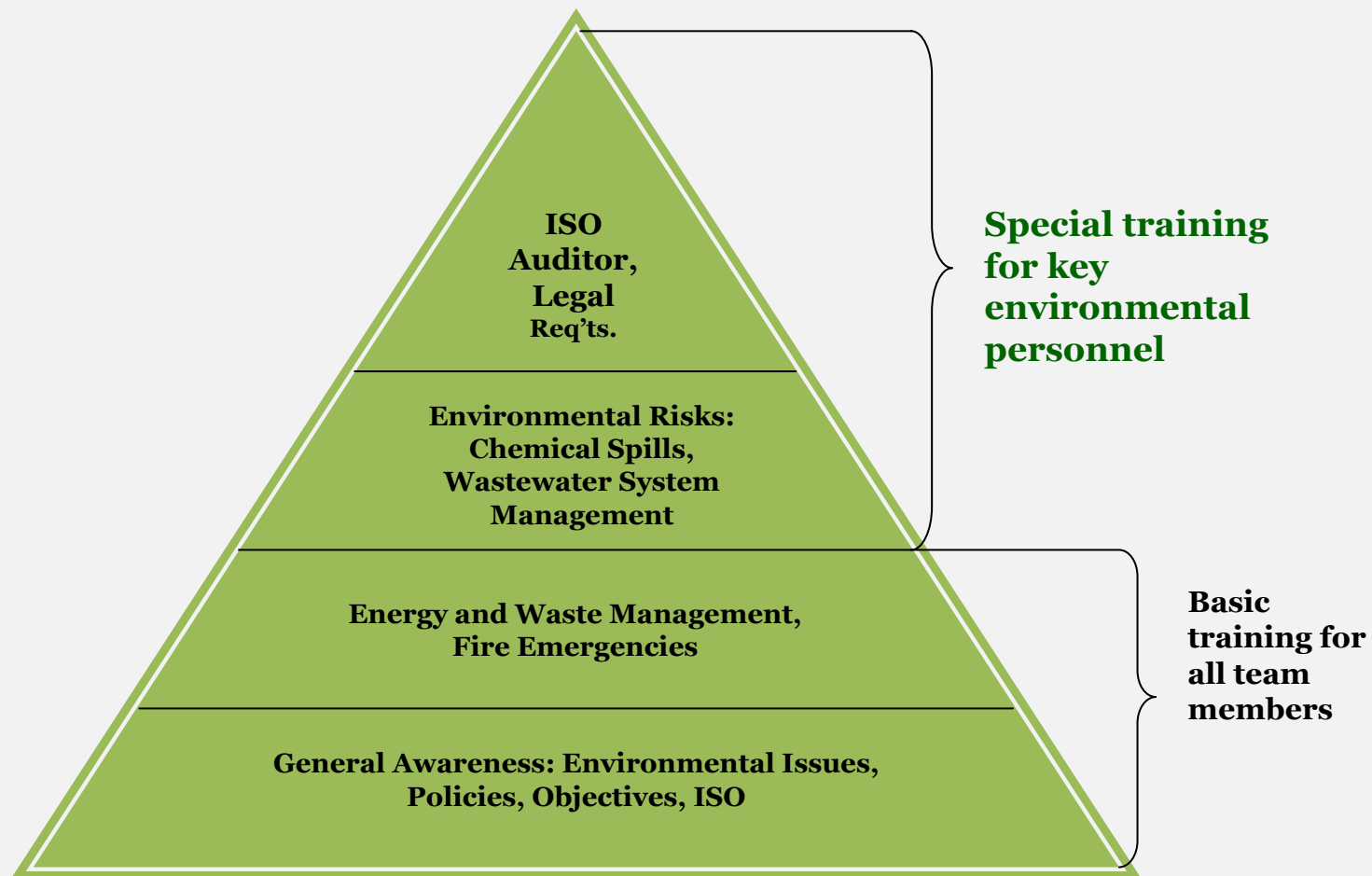




➤ **Fuel Ethanol Distillery
Plant (SCBI)**

**Co-generation Plant
(SCBI)** ➤





Environmental trainings at Toyota

Learnings from RP case studies

- Side-skilling:

- **At SCBI:** Aside from their original skills on milling and distillery, the technical people of SCBI are also able to acquire skills and knowledge on biomass production.

- Multi-skilling:

- **At EDC:** Competencies for technical people at the supervisory level include not only technical skills but also personnel management skills.

- **At Jollibee:** The store manager oversees day-to-day restaurant operations and also functions as the store's pollution control officer.



Learnings from RP case studies

- Multi-skilling & Multi-tasking:

- **HPCC Energy Management System Committee & TMPC's Enviro Management System Organization**

- Both are energy and environmental monitoring working groups with inter-departmental memberships.

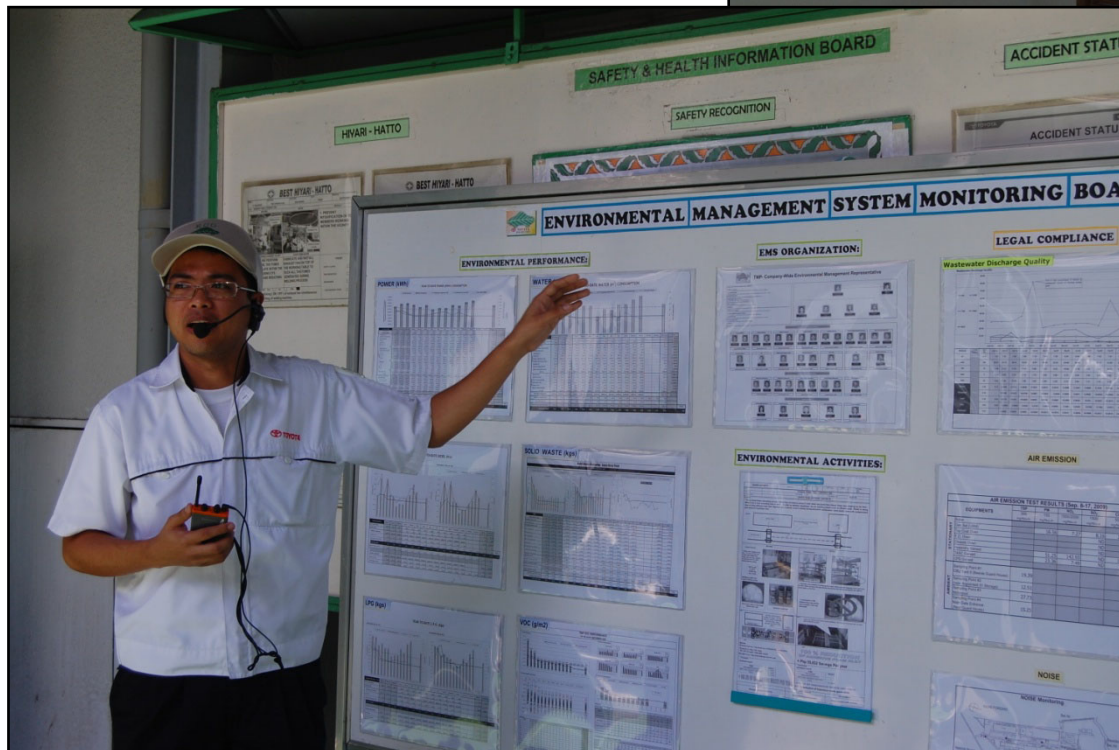
- In addition to skills required in their actual jobs, members also need to have added skills for their extra work in the committee (i.e., project development, planning, monitoring, & record-keeping).

- **Re-skilling:**

- **At NISARD:** Training of farmers on organic farming may make traditional, chemical-based farming skills obsolete should farmers shift completely to organic farming.



**Members of HPCC's
EMS Committee in a
meeting with the
Research Team**



**Engr. Mark Marcelo,
head of Toyota's EMS
Organization,
explaining to the
Research Team the
responsibilities of the
Organization**



Key Learnings from RP Case Studies

- ✓ **The crucial role of HRD/HRM:** HRD/HRM as the chief translator of the company's green vision and mission into green HRD programs.
 - **At HPCC:** HRD as the overall mobilizing and support staff for the EMS Committee
 - **At EDC:** HRD at the forefront of green competency development for green jobs (responsible for the establishment of Energy Academy at EDC)
 - **At Haribon:** HRD handles basic environmental training for Haribon employees
 - **At SCBI:** Green mission and vision are translated into HR programs.
 - **At PASAR:** Green HR orientation about company's Environmental Policy



Learnings from RP Case Studies

- ✓ Greening programs are job-creating and not job-displacing.
 - **At Metal Wealth:** Created more than 150 direct jobs and hundreds of indirect jobs
 - **At HPCC:** Energy-saving programs prevented massive labor displacement & insured firm survival at height of GFC.
 - **At EDC:** Integrated Social Forestry Program (rainforestation) provided employment opportunities to host communities.



- ✓ Green and greener industries require the guiding hand of green professionals/experts (i.e., environmental engineers, geologists, biodiversity scientists, foresters, etc.)

Plastic Classifiers at Metal Wealth



**PASAR Fish Sanctuary
maintained by the
engineers of the
Environmental
Protection Department**

Learnings from RP Case Studies

- ✓ Companies/organizations themselves need to become skills training providers (w/ some outside experts if needed).
 - **NISARD** trains farmers in organic farming; **Jollibee's Corporate Engineering Department** trains store managers to become pollution control officers; **Haribon** foresters trains communities in rainforestation.
- ✓ Greening of companies and HR require full support of CEOs and managers (in terms of investments/policies).
- ✓ Going green means greater or higher level of team work and productivity because it fosters oneness among the workers, and among the workers and managers.



Summary – Green skilling requires



- ✓ Green shift policy (hence, critical role of CEOs/managers)
 - ✓ Green HRD/HRM supplemented by services of
 - ✓ Green professionals &/or outside technology providers BUT
 - ✓ Enterprises have to develop their own specific skills dev programs (case to case) &
 - ✓ Give green orientation for all workers, w/c lead to multi-tasking but also to
- ONE green productive team**