



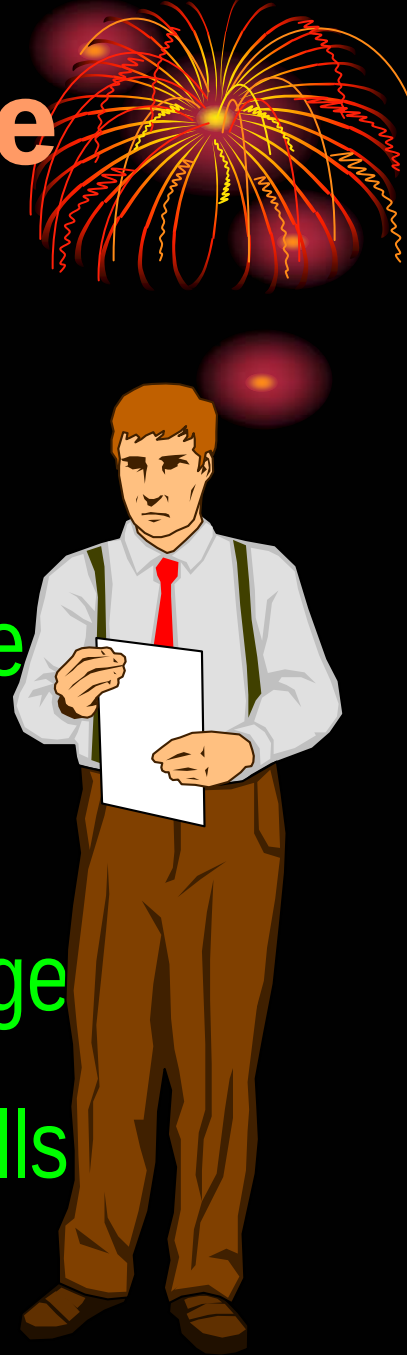
Skills for Green Jobs in Sri Lanka: Prospects and Challenges

N.G. Kularatne

Director General, National Institute of Labour Studies

Presentation Outline

- Introduction to green jobs
- Industries for creation of green jobs
- Countries where green jobs are available
- Skills required for green jobs
- Situation analysis – prospects & challenge
- Who should initiate action to develop skills required for green jobs



What are green jobs?



Jobs in industries that would:

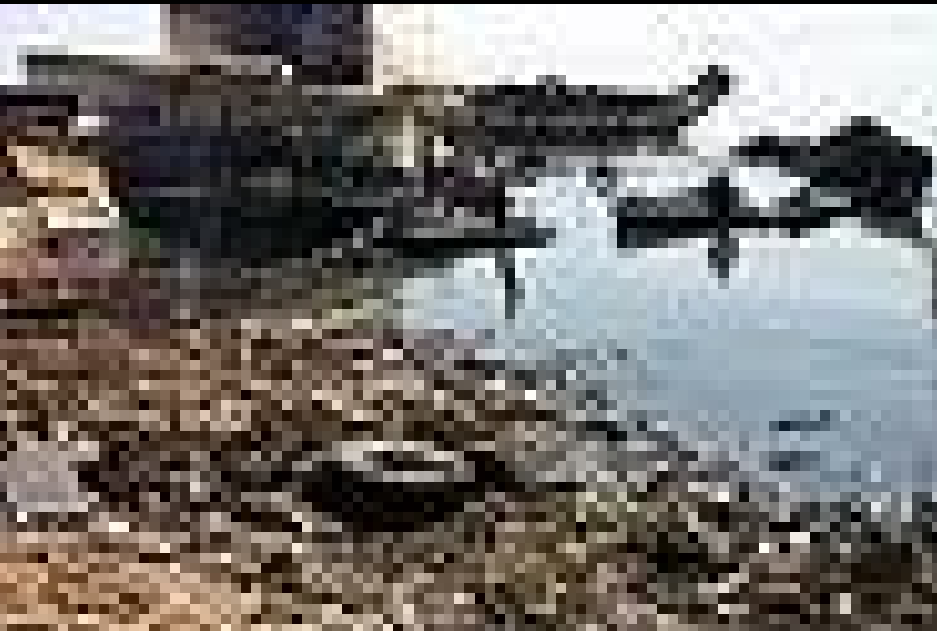
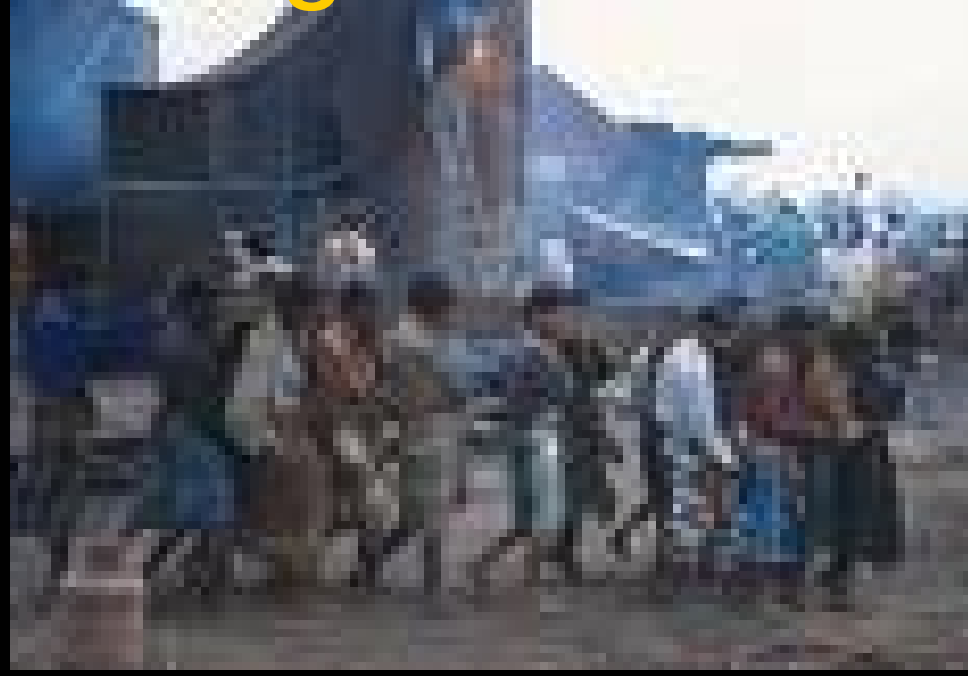
- ✓ Reduce consumption of energy and raw materials ('dematerialize economy')
- ✓ Avoid GHG emissions ('decarbonize economy')
- ✓ Protect and restore ecosystems
- ✓ Minimize waste and pollution (3Rs: Reduce, Reuse, Recycle)

Definitions of Green Jobs



- ❖ In principle, any job that contributes to reducing environmental impacts (through greater efficiency of energy & materials use) can be seen as a green job.
- ❖ 'Green jobs are decent work created in economic sectors and activities, which reduces their environmental impact, ultimately leading to environmentally, economically and socially sustainable enterprises and economies.'

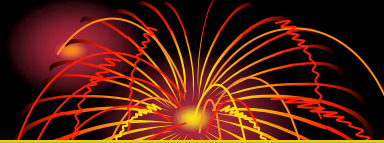
Shipbreaking



Recycling IT waste



“Shades of Green”



Energy Supply / Use

Low-sulfur fuels, etc.

Carbon sequestration

Renewable energy sources

Greater energy efficiency

Manufacturing

Pollution control (tailpipe)

Clean production (toxics avoidance)

Cradle-to-cradle (closed loop)

Transportation

Alternative-fuel vehicles

More fuel-efficient vehicles

Public transportation

Walking, biking; shorter distances

Materials Management

Recycling

Product take-back;
remanufacturing

De-materialization

Greater durability, repairability

Source: Renner, Sweeney and Kubit, *Green Jobs: Towards Sustainable Work in a Low-Carbon World*

Green Jobs Creation - Possible Industries



New Job Creation	Renewable energy sector; energy performance service companies; mobility services
Elimination	Mining; packaging (materials discouraged or banned) Net employment effects ?
Substitution	Shifting from fossil fuels to renewables, automobiles to mass transport, waste disposal to recycling, primary metals production to secondary production
Transformation	Existing jobs greened along with changed workplace practices and methods. Supply-chain effects (steel for wind turbines)
'Radiating Out'	Greening core areas (energy, transport) has potential to "radiate" across large sections of the economy

Source: Renner, Sweeney and Kubit, *Green Jobs: Towards Sustainable Work in a Low-Carbon World*

Where are Green Jobs?



Industries for Green Jobs

- Building energy efficiency
- Wind power
- Solar power
- Biomass
- Geothermal
- Waste management/recycling
- Sustainable agriculture
- Eco-tourism

Countries/No. of Green Jobs

- Europe: 4,400,000
- Germany: 1,800,000
- Japan: 1,400,000
- United Kingdom: 800,000
- United States: 750,000
- China: 734,200
- Brazil: 500,000
- Denmark: 70,660
- Spain: 21,000

Sources: "Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World," United Nations Environment Programme; U.S. Conference of Mayors; government statistics; news reports

Requires green industry-specific skills (four-year university degree or above)



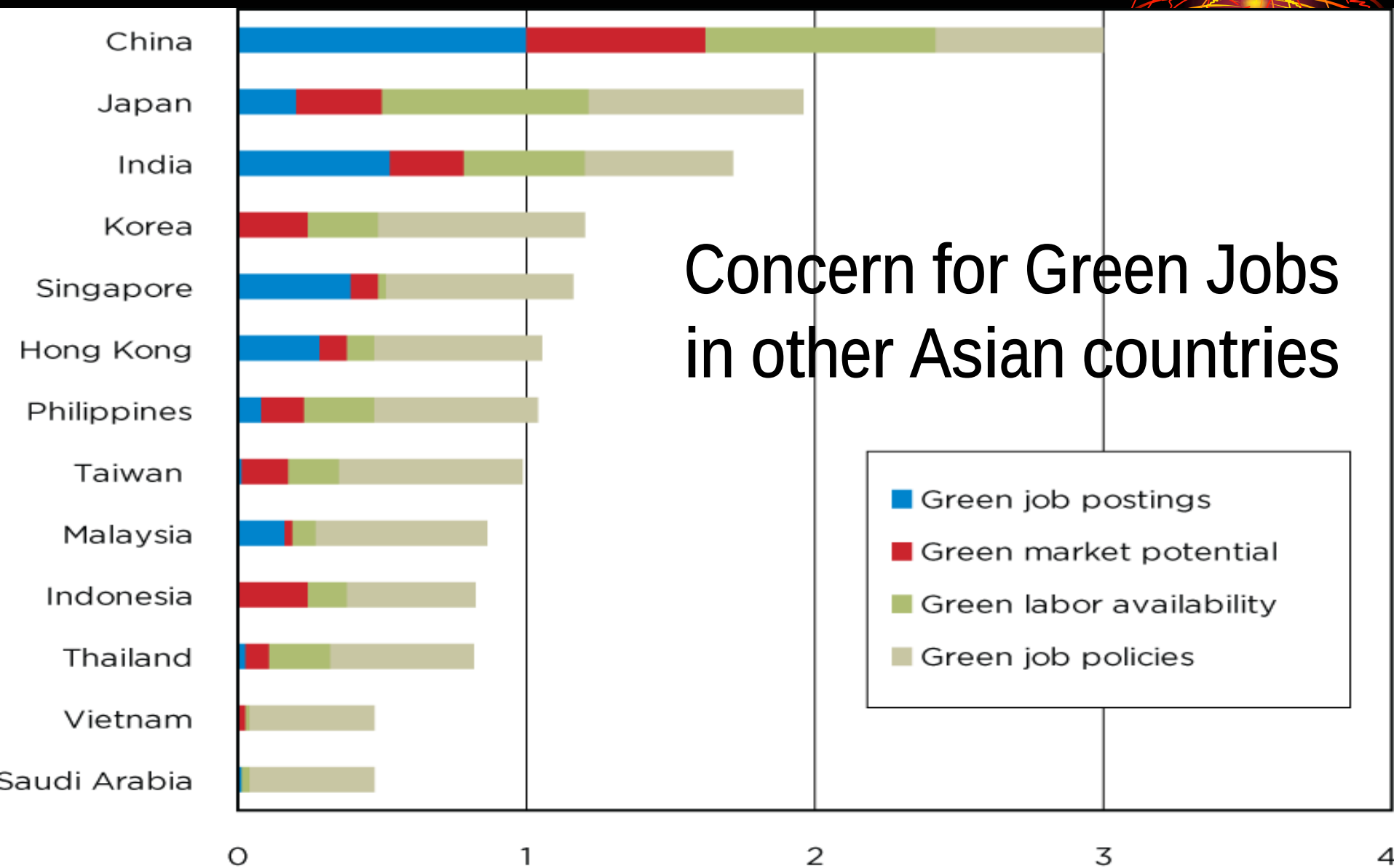
- Environmental architects
- Photovoltaic engineers
- Geotechnical engineers
- Agronomists
- Water and waste treatment engineers
- Marine biologists
- Compliance managers
- Power grid integration managers
- Energy efficiency inspectors
- Carbon auditors

Requires green industry-specific skills (short-term competency based training)

- Mixing and blending machine operators
- Sustainable/organic farmers
- Farm product purchasers
- Recycling coordinators
- Carbon traders
- Eco tour guides
- Park rangers



Green Jobs Index – Asia Business Council



Source: <http://www.asiabusinesscouncil.org/docs/GreenJobs.pdf>

Wednesday, 26 January 2011

Where Green Job Opportunities are available?



Job Enablers	High		Korea	Japan
	Low	Malaysia	Hong Kong Philippines Singapore Taiwan Thailand	China India
	Low	Saudi Arabia Vietnam	Indonesia	
		Low	Green Job Market Demand	High

Industries to Create Green Jobs



- Wind – electricity production
- Solar – electricity production
- Biomass – electricity production
- Geothermal – electricity production
- Green buildings – energy efficiency
- Energy – fuel efficiency of cars
- Transportation – public transport
- Waste management – electricity generation/compost
- Sustainable agriculture – organic agriculture
- Green finance – special finance for eco-friendly production
- Eco-tourism – protected natural areas



Situation Analysis



Prospects

Evolving climate science and public awareness/pressure
Green productivity, Clean development mechanism

Rising oil prices

Consumer incentives (local & international/information (eco-labeling)

Government toolbox (incentives, mandates, tax & subsidy policies)

Business innovation

Challenges

Insufficient green R&D/Wrong kind of R&D (energy)
High cost of alternative sources of energy.

Insufficient green Investment

Continued fossil fuel subsidies / multilateral financing

Limited technology transfer
Greening considered as an additional cost in production

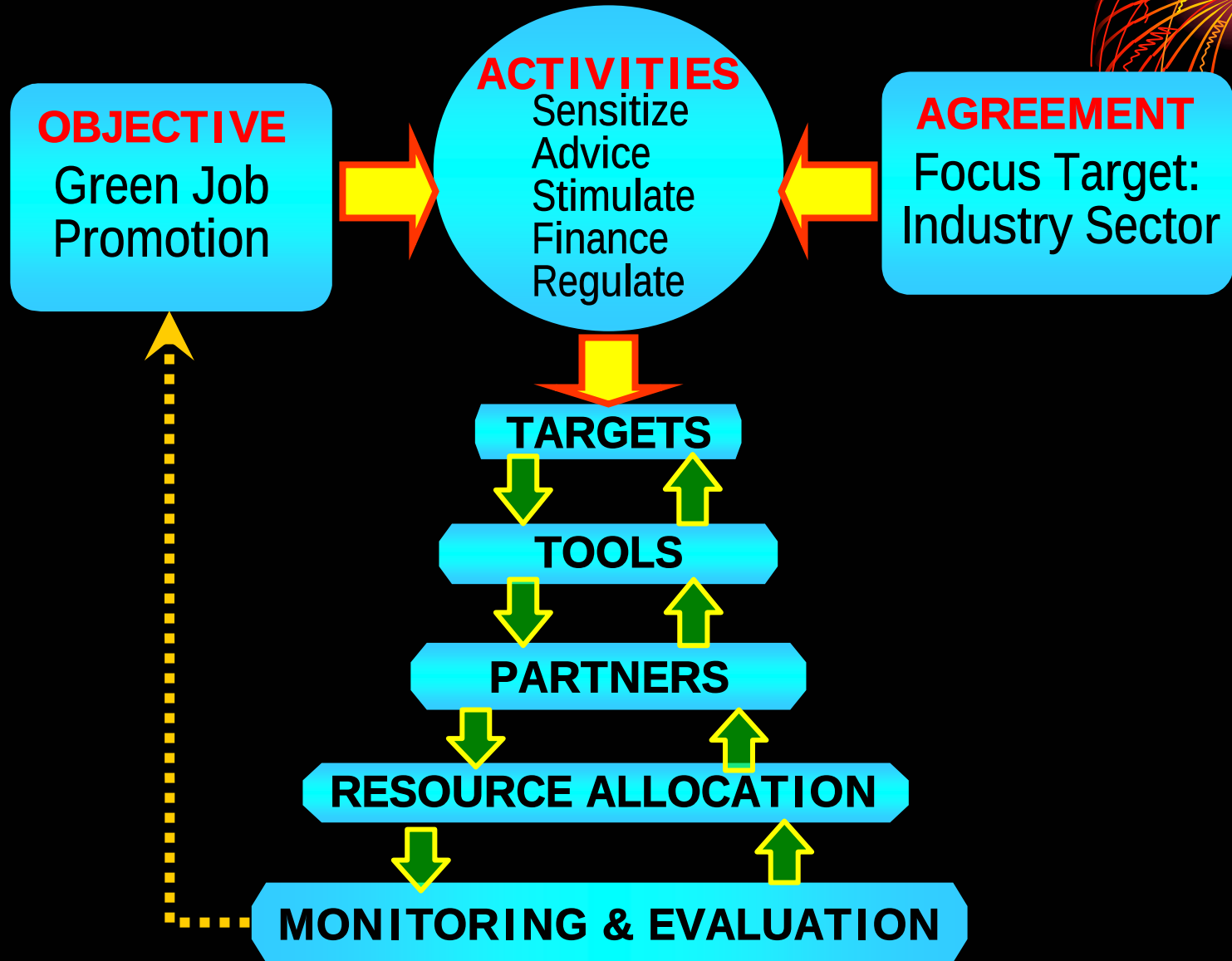
Lagging skills development

Who should initiate action on Green Jobs skill development?



- ✓ Government: policy instruments – command & control, taxes, incentives (production & consumption), investment promotion, R&D, competitions, exhibitions
- ✓ Local Governments: solid waste management, zoning & incentives
- ✓ Universities/Training Institutions: green industry specific courses (degree, diploma, short-term), modules, invest in R&D
- ✓ Education Ministry: integrate modules in formal curricula
- ✓ Business: recruitment & retention, eco-products branding
- ✓ Foreign Employment Bureau: value added jobs abroad

How to Promote Generation of Green Jobs?



Presentation Summary



- ✓ Introduction to green jobs
- ✓ Industries for creation of green jobs
- ✓ Countries where green jobs are available
- ✓ Skills required for green jobs
- ✓ Situation analysis – prospects & challenge
- ✓ Who should initiate action to develop skills required for green jobs



National Green Jobs conference – 24 Jan. 2011



Thank You !

Skills for Green Jobs in Sri Lanka: Prospects and Challenges

N.G. Kularatne

Director General, National Institute of Labour Studies

National Green Jobs conference – 24 Jan. 2011

Skills for Green Jobs in Sri Lanka : Prospects and Challenges

Thank You !



N.G. Kularatne

Director General, National Institute of Labour Studies