

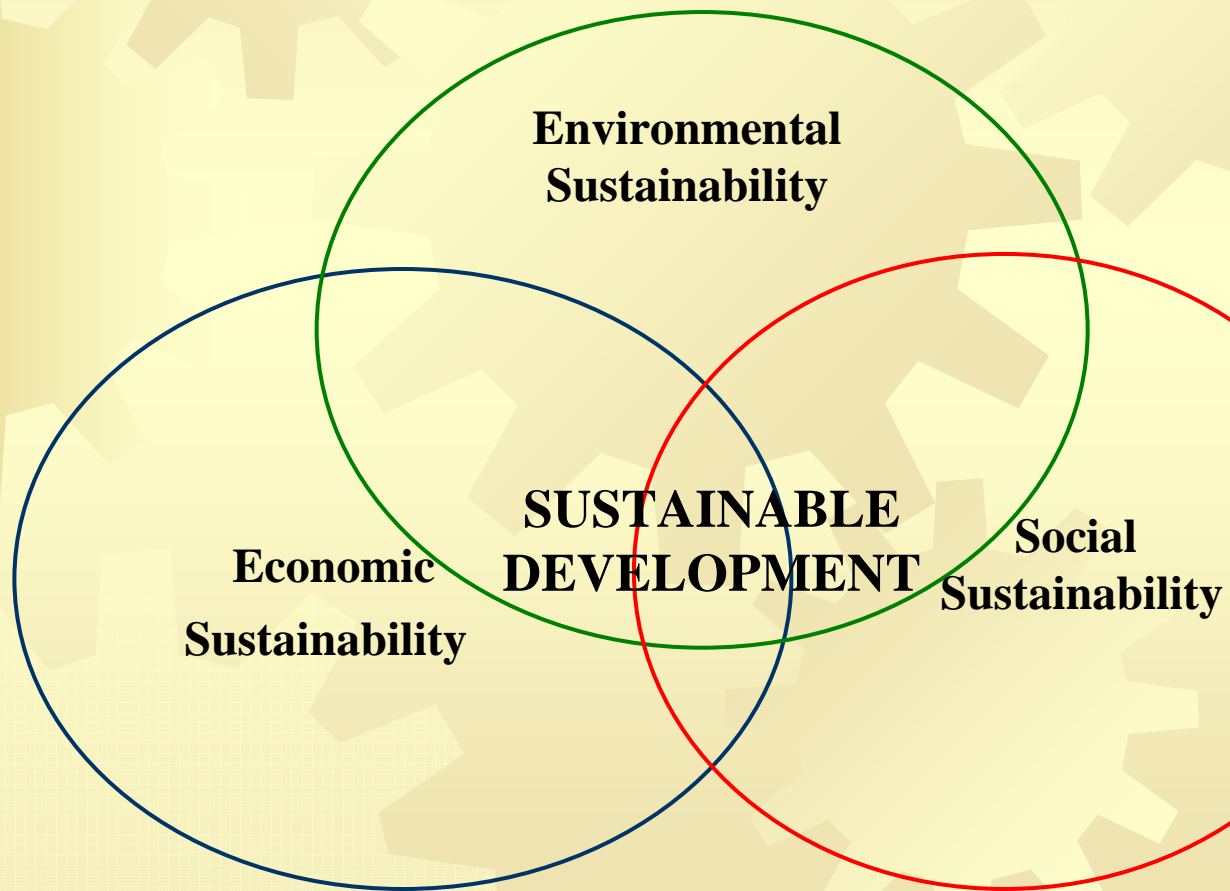
The Potential of Green Employment in the Construction Sector

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The three pillars model



Potential for green jobs

❖ Examples

- ❖ **Production and use of “green” building materials**
- ❖ **Efficiency in construction sites (e.g. reduction of waste)**
- ❖ **Energy efficiency in buildings, e.g.**
 - . Potential demand for LPG (liquefied petroleum gas) stoves or hot plates for 0.61 billion households in developing countries currently using open fire biomass
 - . 0.39 billion dwellings potentially requiring PV installations for direct lighting currently lacking access to electricity
 - . Retrofitting and solar installations for water pumping and heating, space heating
 - . Replacement of existing appliances with more efficient appliances, e.g., light bulbs
 - . Retrofitting for insulation



Examples of employment function of green refurbishment

- ❖ 20% savings of present energy consumption in the EU by 2020 can potentially create directly or indirectly up to one million new jobs in Europe
- ❖ Globally >100,000 workers are presently employed in solar photovoltaics
- ❖ In the solar thermal more than 600,000 workers are employed in China, the USA and Europe



Examples of construction projects and job creation

Project	Description	Country	No of jobs
¹ Building Restoration for Social Housing Purposes, Celso Garcia	Recycling of derelict building, installation of efficient lighting system and natural ventilation	Brazil	Created jobs but no figures
² Ekurhuleni, Municipal buildings retrofit project	Installation of efficient lighting systems	South Africa	Created jobs but no figures
³ Johannesburg Housing Company	Use of energy-efficient light bulbs and day-night sensors, solar energy system for heating water, and insulation of boilers.	South Africa	1,000 jobs
⁴ Watergy, Soweto	Rehabilitation of plumbing fixtures	South Africa	Over 1,500 temporal jobs
⁵ Energy retrofit of Khayelitsha housing	Installation of solar water heaters, compact fluorescent light bulbs or energy efficient lamps and insulated ceilings.	South Africa	7 person-years during the construction phase. Could potentially create up to 508 person years



Examples of refurbishment projects and job creation

Project	Description	Country	No of jobs
⁶ Botswana Renewable Energy Project	Installation of solar powered heating systems and lighting appliances in 88 off-grid villages, installation of domestic cooking gas system.	Botswana	Creating jobs but no figures
⁷ Solar Energy Support Programme	Install PV systems, and improved lighting thus reducing kerosene and pinewood use	Nepal	700 sales jobs, 700 people trained as technicians and 690 certified as qualified PV installers
⁸ Energy Efficiency-Housing Pilot Project	Upgrade, maintain and improvement of energy efficiency of crumbling apartment blocks inherited from the break-up Soviet Union	Lithuania	Created jobs but no figures
⁹ Azadjura Rural Housing Programme	Upgrade vernacular building systems using local materials	India	Created jobs but no figures



Policy considerations¹

- ❖ Information and awareness raising
- ❖ Targeted research
 - ⌘ capital, skills, technological and management requirements and employment effects of different sustainable construction activities
- ❖ Skills training for labour force
- ❖ Managerial training for enterprises
- ❖ Information on profitability for investors



Policy considerations2

❖ Institutional reform

- ⌘ Legislative
- ⌘ Financial framework

❖ Appropriate energy pricing

- ⌘ Dilemma of affordability V incentives to energy efficiency

Decent work

- ❖ Employment generation
- ❖ Social protection
- ❖ Workers rights
- ❖ Social dialogue





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