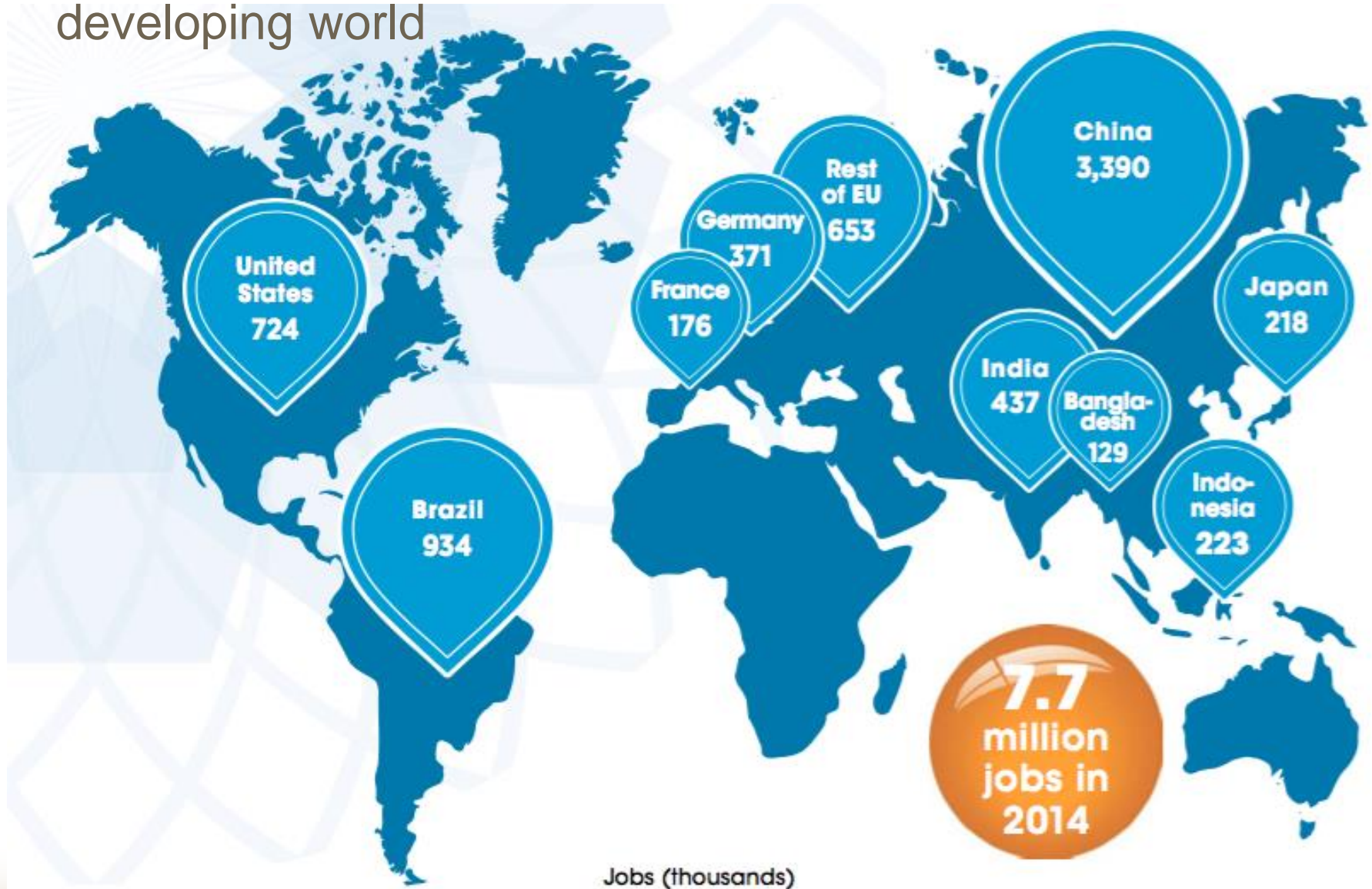


# Analysis of Good Practice Countries

## Framework and Findings

# RE employment worldwide: majority of jobs in the developing world



Jobs (thousands)

Source: IRENA

# Employment factors for RE



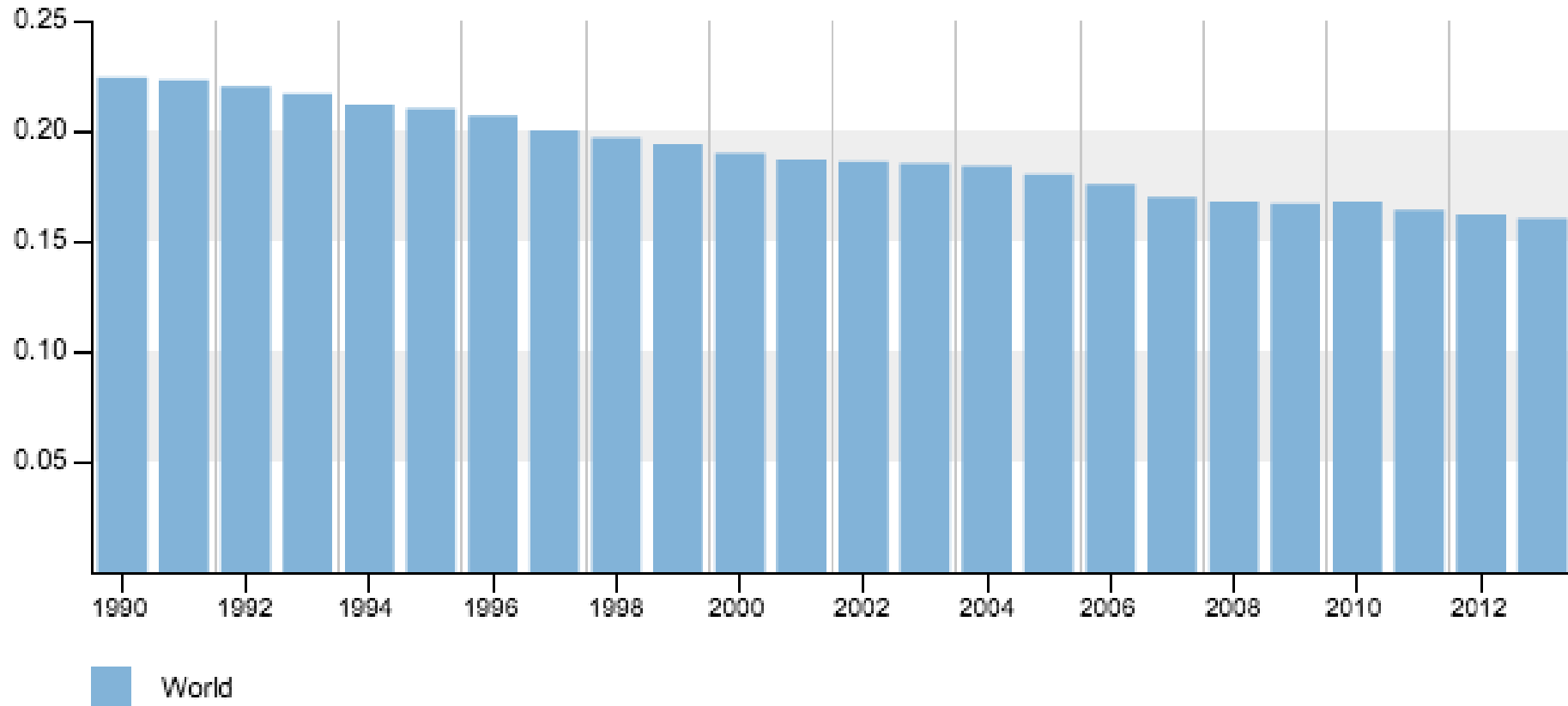
Technology	Jobs per newly installed MW	Jobs per MW (operation & maintenance)	Region & Year
Wind, onshore	6.0 – 27.0	0.5 – 0.7	South Africa 2007
	8.6	0.2	OECD average
Wind, offshore	18.1	0.2	OECD 2010
Solar PV	25.8 – 69.1	0.7	South Africa 2007
	17.9	0.3	OECD average
Solar CSP	18.0 – 36.0	0.5 – 1.3	South Africa 2007
	7.0 – 19.0	0.6 – 0.9	Spain 2010
Hydro, small	20.3	0.04	South Africa 2009
	20.5	2.4	OECD average
Geothermal	5.9	1.3	South Africa 2004
Biomass	7.7	5.5	South Africa 2000

# Energy intensity worldwide (1990-2013)



## World

koe/\$05p



# Selection of good practice countries



## Criteria:

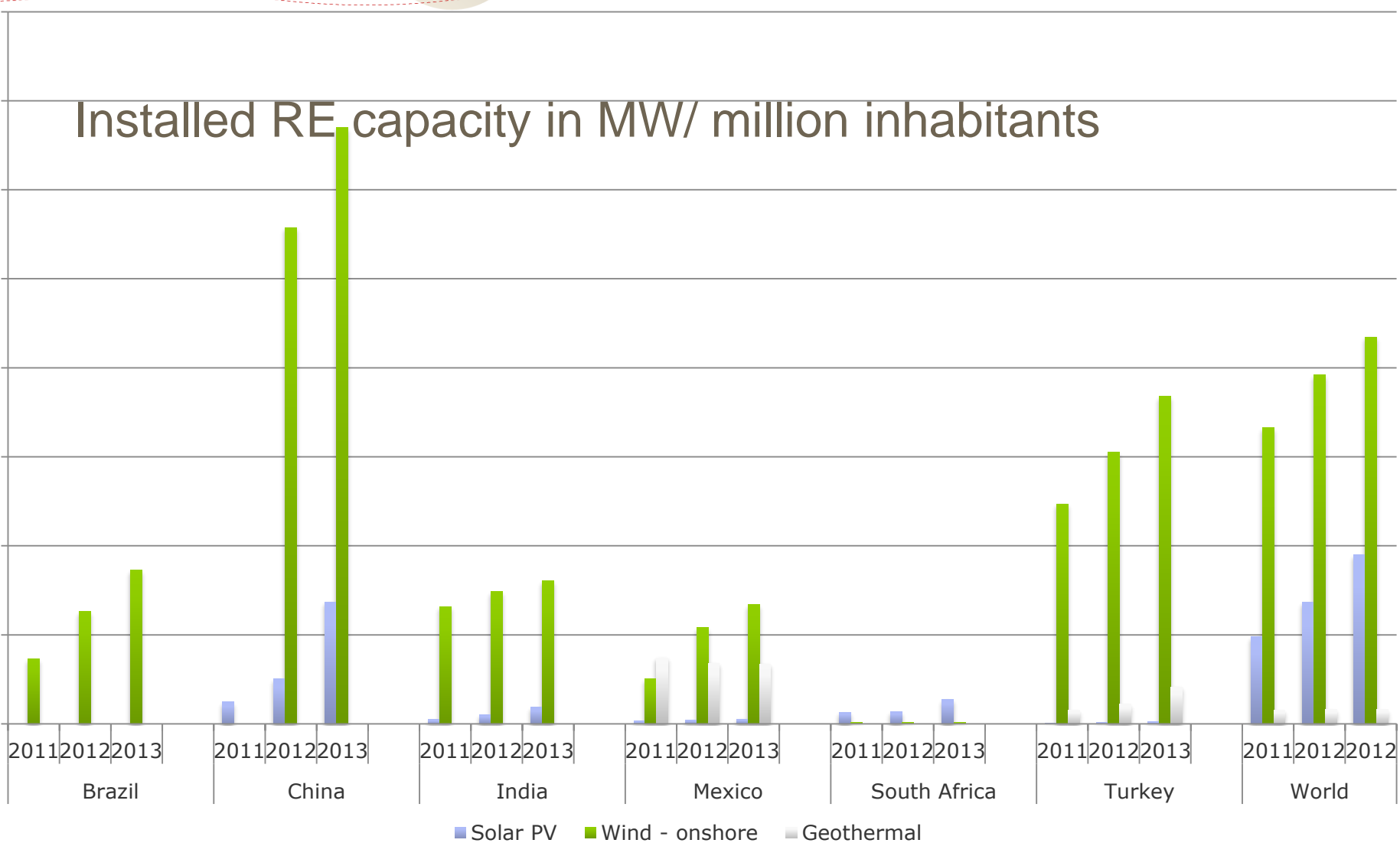
- Emerging economy
- Relative market size of RE or EE technologies
  - Installed capacity of RE technologies and capacity under construction
  - pace of market growth in these markets & project pipelines
  - Energy intensity of industry
- Or: Employment in RE / EE
  - However: Lack and often poor quality of data

## ■ Or: Strategies in place

⇒ Turkey, India, China, Mexico, South Africa, Brazil



## Installed RE capacity in MW/ million inhabitants





<b>Country</b>	<b>Energy intensity in 2011 (EU=100)</b>	<b>Annual improvement of industrial energy intensity (2000-2011)</b>
<b>Turkey</b>	<b>67</b>	<b>2,5</b>
<b>Mexico</b>	<b>65</b>	<b>2,5</b>
<b>Brazil</b>	<b>213</b>	<b>0,0</b>
<b>India</b>	<b>192</b>	<b>1,6</b>
<b>China</b>	<b>234</b>	<b>1,9</b>
<b>South Africa</b>	<b>215</b>	<b>1,0</b>



## Selection of Cases: Employment

- China: 350.000 Jobs in wind energy, 1.6 Mio jobs in PV,
  - Turkey: 81.000 Jobs in wind energy
  - Brazil: 32.000 Jobs in wind energy, 30.000 in PV, 12.000 in hydropower
  - India: 110.000 jobs in PV
  - South Africa: 15.000 jobs in PV, 3600 jobs in wind energy
- ⇒ Lack of data in Energy efficiency and for many countries





- What is the outcome?
  - E.g. development of RE capacities and employment over time
- What are the systemic conditions?
  - E.g. Natural conditions, political system, financial system, socio-demographic situation
- What strategies are in place?
  - E.g. Goals, horizontal and vertical coordination, participation, work program, capacities, evaluation and monitoring
- What policy instruments have been adopted?
  - Supply, demand and market mechanisms including framework conditions
- What is the outlook?
  - Expected development of markets & local employment



## Good practice analysis key findings: No silver bullet

- Some countries are more successful in creating RE/EE employment – Why?
  - Markets and employment depend on a range of conditions to develop (and create domestic value added)
  - A broad coalition of actors are involved in these processes
  - There is no “silver bullet” – but certain recurring **issues** that need to be considered
  - We find different **options** on how these issues are being tackled: There is no one fits all solution. They need to fit with the overall context.
  - **Key elements are: Strategy, Commitment, Implementation and Capacities**



# SE4Jobs Toolbox

