



International Centre for Trade
and Sustainable Development

Trade in Environmental Goods: Issues, Challenges and Opportunities for Sustainable Energy Access in Arica

WTO Public Forum

-02 October 2014. Geneva, Switzerland

Global Platform on Climate Change, Trade and Sustainable Energy

Electricity Access in Key Developing Countries

Reporter	People without access to electricity (million)	Share of population with access
Angola	13.7	26.2%
Bangladesh	88.0	46.0%
Benin	6.7	24.8%
Burkina Faso	12.6	14.6%
Cambodia	11.3	24.0%
Cameroon	10.0	48.7%
Côte d'Ivoire	10	47.3%
DR Congo	58	15.0%
Ghana	9.4	70.0%
Haiti	6.2	34.0%
India	293	75.0%
Indonesia	63	73.0%
Kenya	33	18.0%
Madagascar	15.9	19.0%
Malawi	12.7	<9%
Mali	13	18.0%
Mozambique	20.2	12.0%
Myanmar	43.5	13.0%
Nepal	16.5	10.0%
Niger	14	8.0%
Nigeria	79	50.0%
Pakistan	56	67.0%
Philippines	16	83.0%
Senegal	7.3	42.0%
South Africa	12.3	75.0%
Tanzania	38.0	15.0%
Togo	5.3	22.0%
Uganda	29.0	8.0%
Zambia	10.5	20.3%
Zimbabwe	7.3	41.5%

Source: REN21, Renewables 2013 Global Status Report

**Global Platform on Climate Change,
Trade and Sustainable Energy**



MFN Applied Tariffs on Solar Energy Products in Key Developing Countries

Reporter	Key clean-energy products (HS codes), import duties (%) Most recent tariff information					
	854140	940540	940550	850440	850780	853710
Angola	2	10	10	2	5	2
Bangladesh	2.5	5-25	25	3-12	25	3
Benin	0	20	20	5	20	5
Burkina Faso	0	20	20	5	20	5
Cambodia	7	0-15	15	7	35	15
Cameroon	10	30	10-30	10	20	10
Côte d'Ivoire	0	20	20	5	20	5
DR Congo	10	20	10	5	10	10
Ghana	5	20	10	3.3	10	10
Haiti	0	5	5	8.3	5	0
India	0	10	5-10	7.5-10	10	7.5
Indonesia	0	5-10	5-12.5	5-10	10	5
Kenya	0	25	25	0	25	10
Madagascar	5	20	20	5	0-10	5
Malawi	0	0-25	25	0-5	25	5
Mali	0.0	20	20	5	20	5
Mozambique	7.5	20	20	5	25	7.5
Myanmar	7.5	1	7.5	1	20	1
Nepal	0	15	5	15	7.5	10
Niger	0	20	20	5	15	5
Nigeria	0	20	20	5	20	20
Pakistan	5	5-30	30	10-20	20	25-35
Philippines	0	1-7	3-7	4.7	10	5
Senegal	0	20	20	5	20	5
South Africa	0	0-20	0	0	0	5-15
Tanzania	0	25	25	0	25	10
Togo	0	20	20	5	20	5
Uganda	0	25	25	5	25	10
Zambia	0	25	25	0	25	15
Zimbabwe	0	5-40	10-40	0	20	20

HS Codes:

854140: Solar PV cells and modules

940540: Other electrical lamps

940550: Non-electrical electrical lamps

850440: Static convertors

850780: Other Accumulators

853710: Switchboards/c onsoles

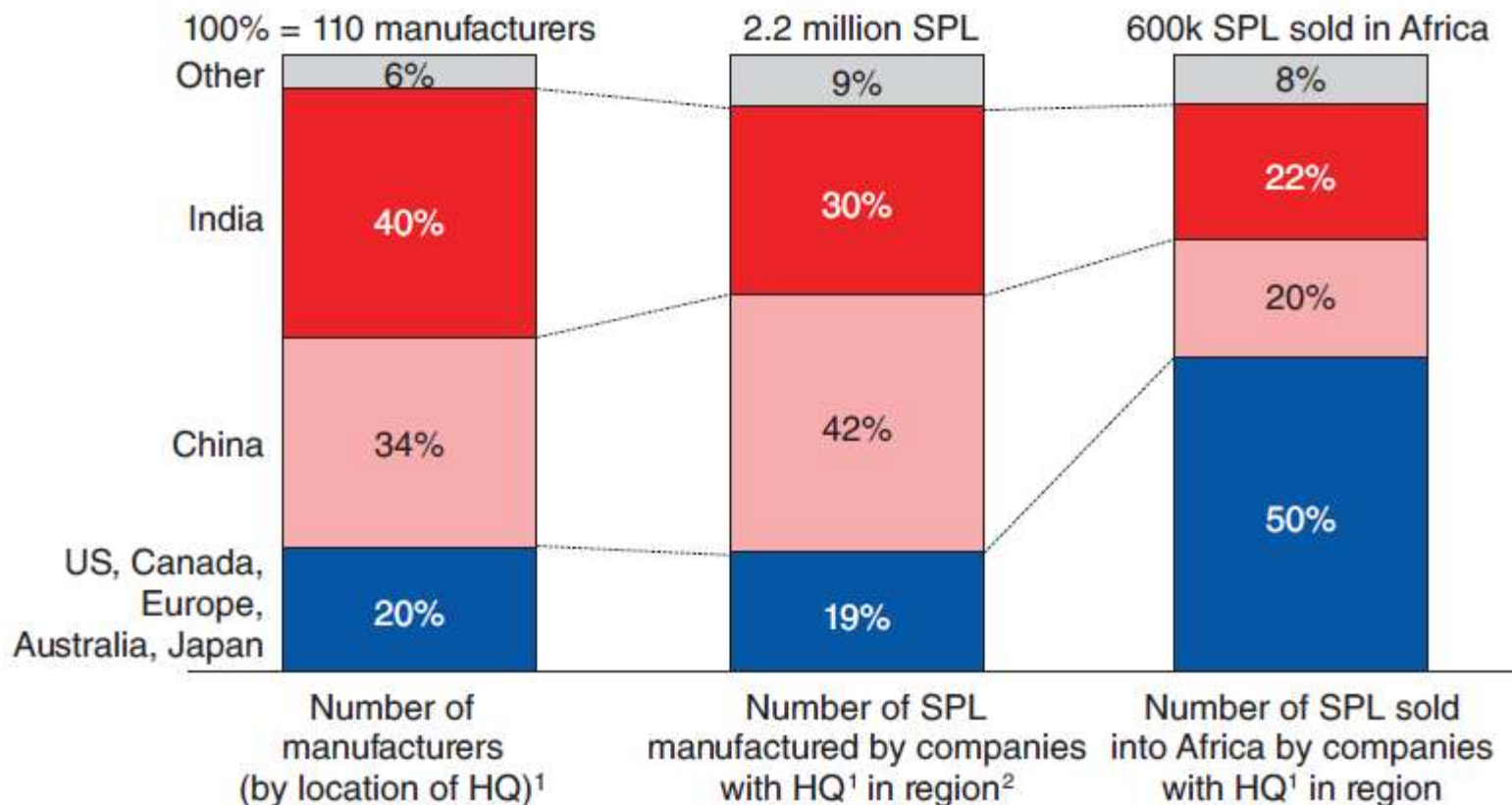
Source: WTO Tariff Download Facility



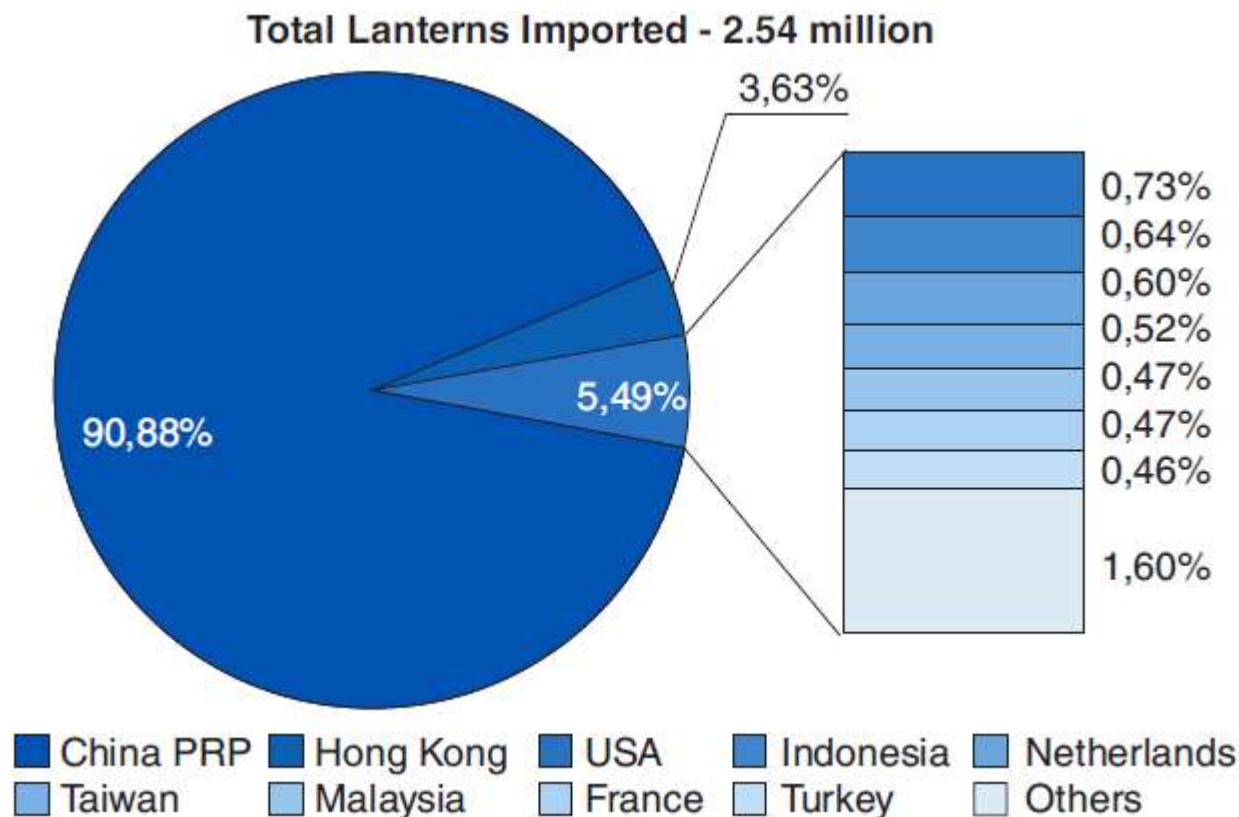
**Global Platform on Climate Change,
Trade and Sustainable Energy**

Solar Portable Light Manufacture (2007-Q1 2010) and Sale by Geography

China and India dominate SPL manufacturing worldwide, but Western companies still account for 50% of Africa sales to date



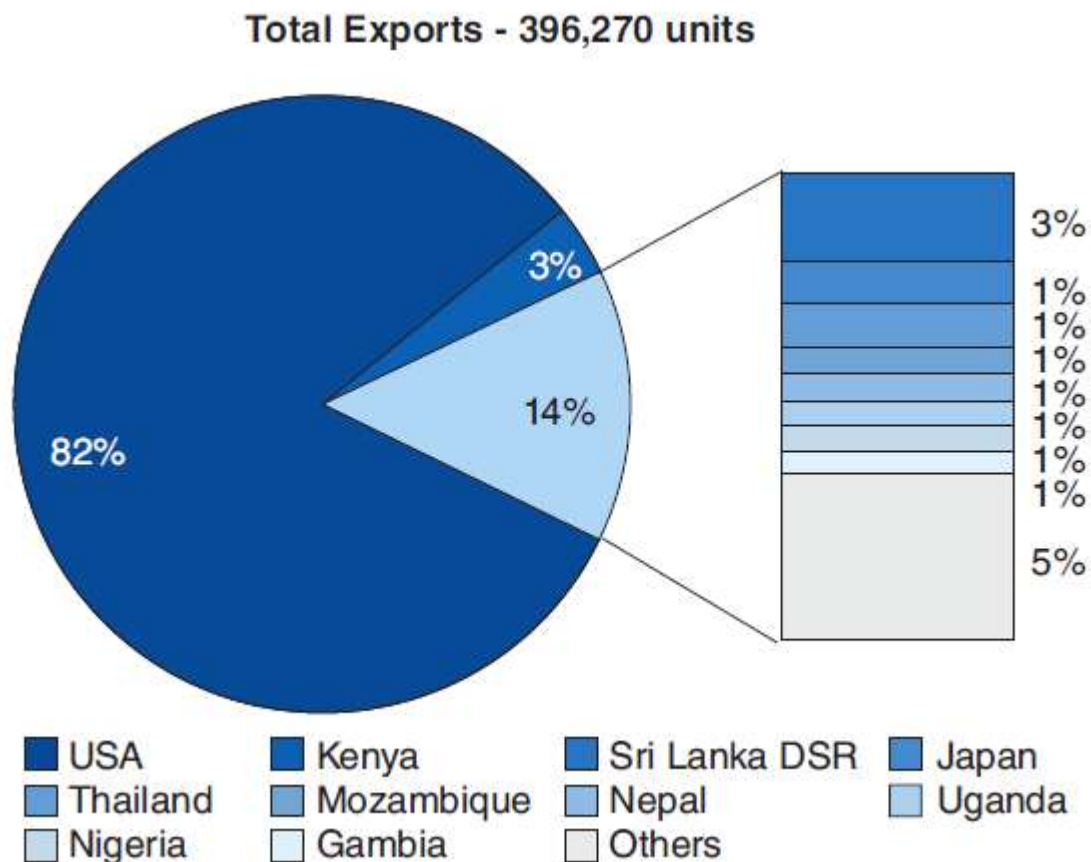
Solar Lantern Imports into India (2008-2012)



Source: Nampoothiri, M. and Manoharan, H. (2013); *International Trade and Access to Sustainable Energy: Issues and Lessons from Country Experiences*, International Centre for Trade and Sustainable Development, Geneva, Switzerland.



Solar Lantern Exports from India (2011-12)



Source: Nampoothiri, M. and Manoharan, H. (2013); *International Trade and Access to Sustainable Energy: Issues and Lessons from Country Experiences*, International Centre for Trade and Sustainable Development, Geneva, Switzerland.



Top Traders: Non-electrical Lamps and Lighting Fittings (HS 940550) (2012)

Imports		Exports	
Reporter	USD thousands	Reporter	USD thousands
All reporters (excl. intra-EU)	969871	All reporters (excl. intra-EU)	1110368
EU27 (2011)	402840	China	968281
United States	384639	EU27 (2011)	69006
Canada	50837	United States	27235
Norway (2011)	27621	Chinese Taipei	18397
Australia	25807	India	13369
Switzerland	23934	Mexico	9915
Turkey	13807	Singapore	6550
Russian Federation	12121	Turkey	5847
India	10708	Israel	3164
Singapore	10444	Korea, Rep.	2910
Brazil	8437	Thailand	2574
Japan	8295	Switzerland	2179
Mexico	6339	Australia	1410
South Africa	5706	New Zealand	1243
Israel	5635	Malaysia	985
Korea, Rep.	5146	Canada	923
Chile	4423	South Africa	898
China	4153	Indonesia	825
Developing countries	100987	Developing countries	1032456
Africa (2012)	9170	Africa (2012)	1512
Africa (2011)	19454	Africa (2011)	1324

Source: COMTRADE using WITS



Importers of PV Cells and Modules (HS 854140): Descending Order of Accumulated of 2010-12 values.

	Import values (USD millions)					
	2004	2005	2006	2007	2008	2009
All reporters	11359	13567	16644	21217	33182	30877
EU27	2949	4093	5514	8411	17102	15160
China	1931	2362	2681	3289	3744	3607
United States	1251	1391	1848	2156	2760	2592
Hong Kong	1205	1335	1715	1818	1984	2109
Korea	858	865	979	1277	2144	1996
Japan	1002	1136	1207	1131	1412	1212
Chinese Taipei	473	462	525	544	660	697
Australia	55	52	59	84	171	400
Mexico	283	357	414	443	488	541
India	50	54	105	169	420	405
Singapore	339	328	432	504	559	478
Canada	165	216	215	202	267	269
Malaysia	251	256	225	306	354	299
Thailand	154	180	159	163	169	115
Developing cntrs	5762	6485	7611	8989	11080	10784
South-South	2341	2904	3775	4737	6082	6256
Africa	82	115	158	200	237	241
South Africa	58	86	119	141	161	118
Developing country imports as a portion of world imports (excl. Intra-EU trade) %						
Dvlpng cntrs	50.7	47.8	45.7	42.4	33.4	34.9
South-South trade as a portion of developing country imports and of world imports (excluding intra-EU trade), %						
Dvlpng cntrs	40.6	44.8	49.6	52.7	54.9	58.0
World	20.6	21.4	22.7	22.3	18.3	20.3



Importers of PV Cells and Modules (HS 854140): Descending Order of Accumulated of 2010-12 values. (CONTD)

	Import values (USD millions)				Change 2012/11 (%)
	2010	2011	2012	2010-2012	
All reporters	56765	60157	44458	161380	-26
EU27	30646	27416	12433	70495	-55
China	6145	6720	6433	19298	-4
United States	4412	7193	7260	18865	1
Hong Kong	3205	3637	3525	10367	-3
Korea	2794	2823	3031	8648	7
Japan	2189	2306	3100	7595	34
Chinese Taipei	1286	1153	1153	3592	0
Australia	1047	1510	1010	3567	-33
Mexico	876	1107	1208	3191	9
India	299	1333	872	2504	-35
Singapore	814	905	729	2448	-19
Canada	701	987	510	2198	-48
Malaysia	498	685	389	1572	-43
Thailand	229	644	673	1546	5
Developing cnts	17155	19964	18651	55770	-7
South-South	11161	13075	12111	36347	-7
Africa	472	295	165	932	-44
South Africa	157	125	54	336	-57
Developing country imports as a portion of world imports (excl. Intra-EU trade) %					
Dvlpng cnts	30.2	33.2	42.0	34.6	
South-South trade as a portion of developing country imports and of world imports (excluding intra-EU trade), %					
Dvlpng cnts	65.1	65.5	64.9	65.2	
World	19.7	21.7	27.2	22.5	



Africa PV Cells and Module Imports by Country (Based on data reported by exporters) . 2010-2012 (Top 20 in descending order of 3 year trade values). (USD Thousands).

Reporter	Period			
	2010	2011	2012	2010-2012
Africa	334978	297121	233390	865489
South Africa	148328	108785	60660	317773
Nigeria	22130	39331	12398	73859
Morocco	13080	14401	14271	41752
Kenya	11539	12787	15024	39350
Tunisia	12153	16102	10220	38475
Mali	5592	21406	5685	32684
Senegal	6053	11016	8299	25368
Tanzania	6495	8050	9931	24476
Cape Verde	18332	254	824	19410
Mauritania	876	3015	14738	18630
Egypt, Arab Rep.	7492	5953	3913	17358
Uganda	6244	4500	6549	17293
Angola	7191	2505	6685	16381
Algeria	9569	4237	1511	15317
Ghana	1233	3040	7648	11922
Botswana	525	7014	4048	11587
Mauritius	4346	1035	5373	10753
Madagascar	3598	2674	2520	8792
Djibouti	5397	1879	657	7932



Non-tariff Barriers: Taxes and Subsidies

- Taxes on components prevalent in many countries increases the final product price. Price of the component used in solar systems account for about 50 per cent of the final product price.
- In many African countries imports of pre-assembled lanterns attract a high VAT-in Rwanda (18%) and Ethiopia (16%). This is conducive to local manufacturing of components(as components can be imported tax-free) it may slow down diffusion especially if setting up local manufacturing units require capital investments that may not readily be available.
- In other countries like India imports are duty free but capital-subsidy of 30% available only to domestically manufactured or assembled units that can deter imports.
- Even if taxes are removed, in Africa often a 'communication gap' leading to customs officials continuing to impose such taxes.
- Anti-dumping duties on solar panels if imposed can also lead to rise in final system prices.



Looking Ahead

- Expanding access to energy will involve an important role for trade policy
- But this will need to go beyond addressing tariffs and taxes and address various other elements to create a conducive 'eco-system' for diffusion including subsidies to fossil-fuels such as kerosene.
- Addressing non-tariff measures such as cumbersome procedures and streamlining and proper implementation of standards-related requirements will be important.
- Need for clarity on product classifications useful also for trade liberalisation initiatives
- South-South trade dynamics will be important in expanding access to energy-this could also lead to domestic manufacturing and services jobs linked to production, assembly, installation and maintenance.
- Technical and financial assistance packages to support 'effective demand' will complement multilateral and regional trade-led initiatives.



For more information, please see ICTSD's recent trade and energy access publication:



Nampoothiri, M. and Manoharan, H. (2013); International Trade and Access to Sustainable Energy: Issues and Lessons from Country Experiences, International Centre for Trade and Sustainable Development, Geneva, Switzerland

http://www.ictsd.org/downloads/2013/12/set-a-ita_sust_energy.pdf



International Centre for Trade
and Sustainable Development

**Global Platform on Climate Change,
Trade and Sustainable Energy**



International Centre for Trade
and Sustainable Development

Thank You!

Questions? Please email me at: smahesh@ictsd.ch