

Solar Powered Lighting: A Solution to an Important Problem

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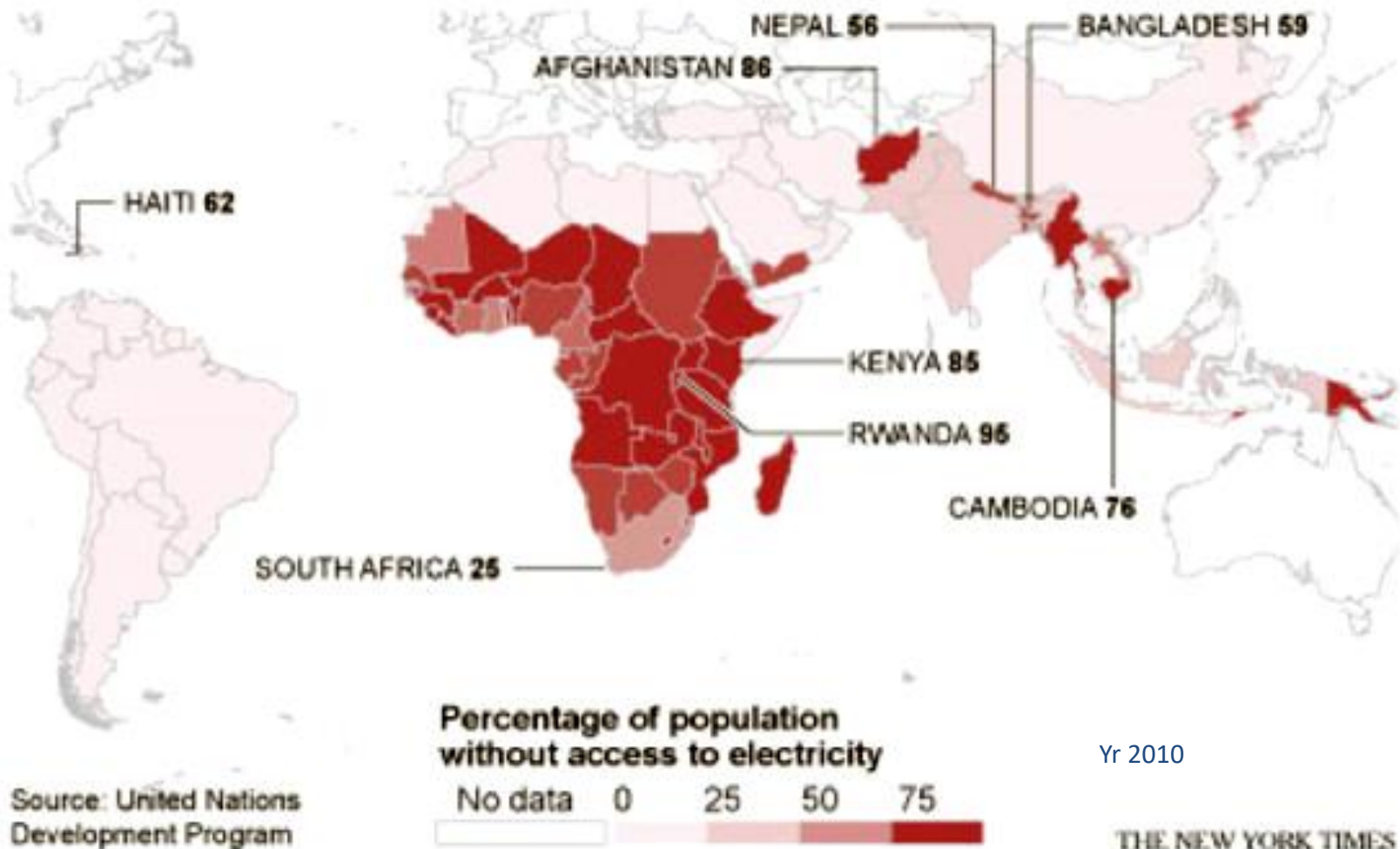
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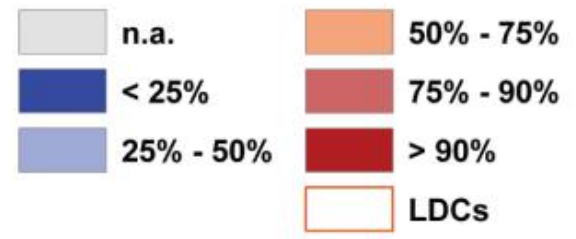
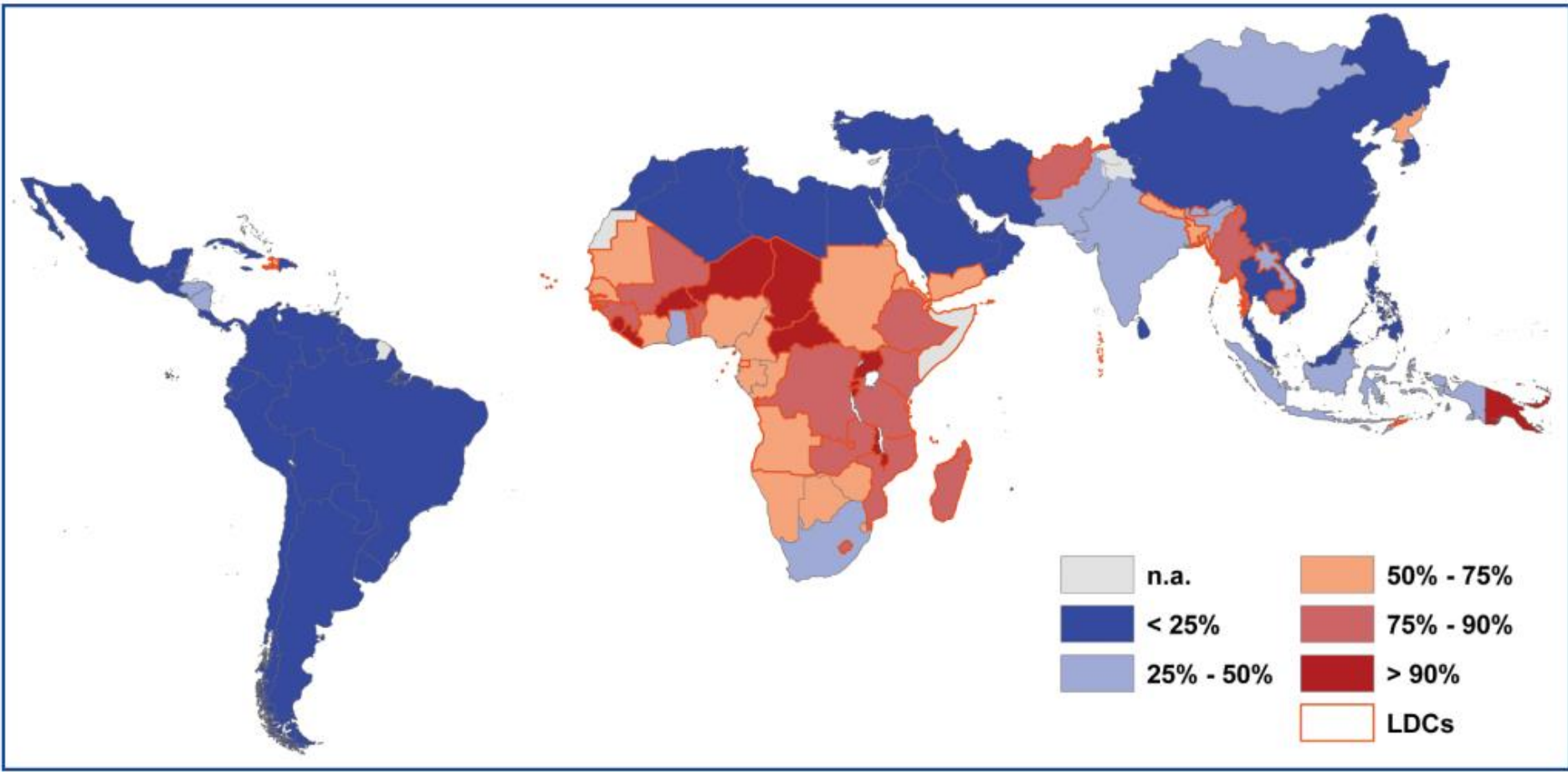
Living Without Electricity

1.4 Billion People

One in five people on the planet live without electricity, generally because they are not connected to a grid. Poverty and politics both can influence the way countries shape their grid infrastructure.



Share of people without electricity access for developing countries, 2008



Source: UN
Development
Programme

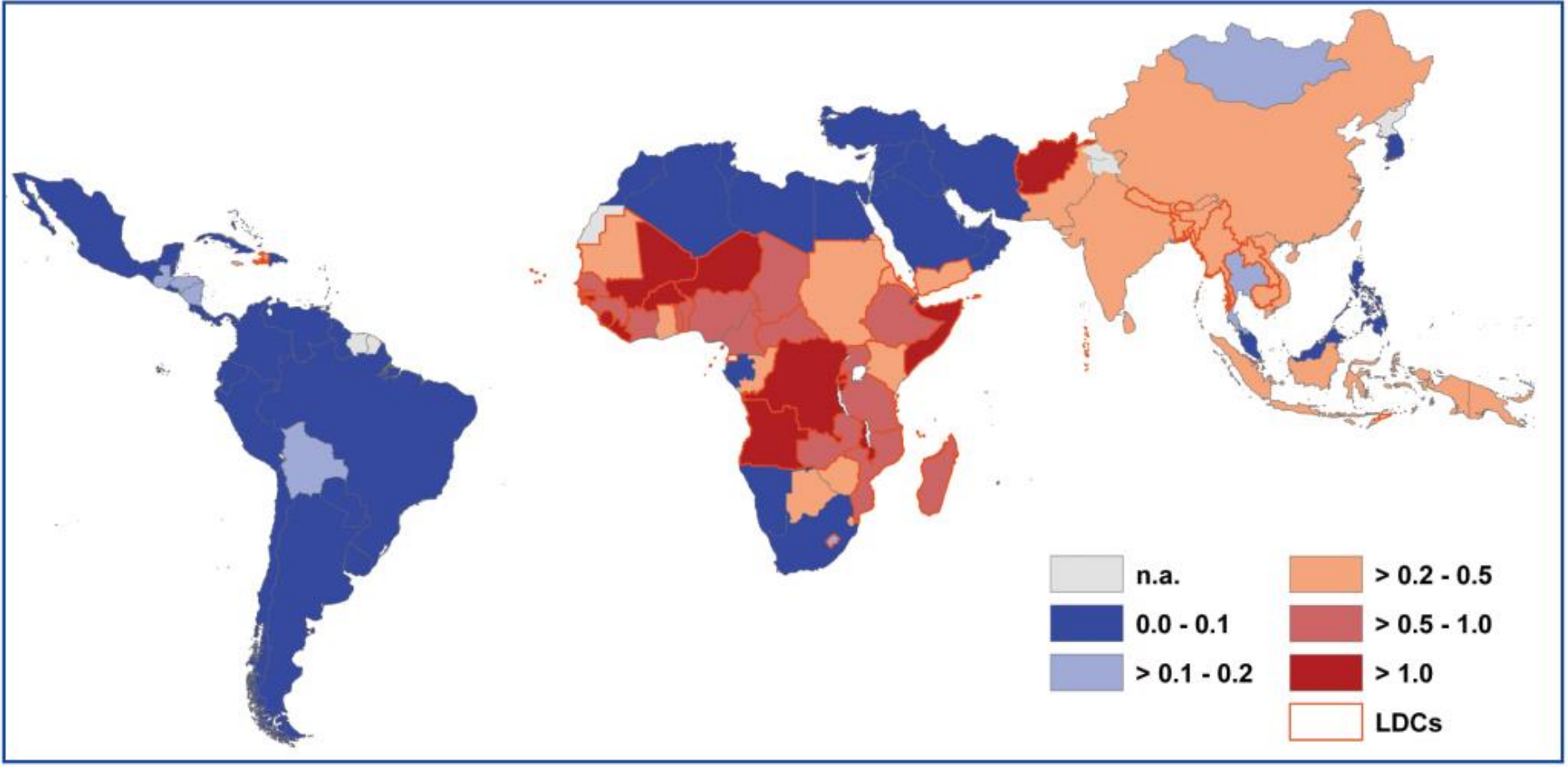
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Access to electricity in the world, 2008

	Total population (in millions)	Electrification rates (%)	Total population without electricity (in millions)
World	6,692	78.2	1,456
OECD and transition economies	1,507	99.8	3
Developing countries	5,185	72	1,453

Number of deaths per 1000 capita per year, attributable to indoor air pollution from solid fuel use, 2004



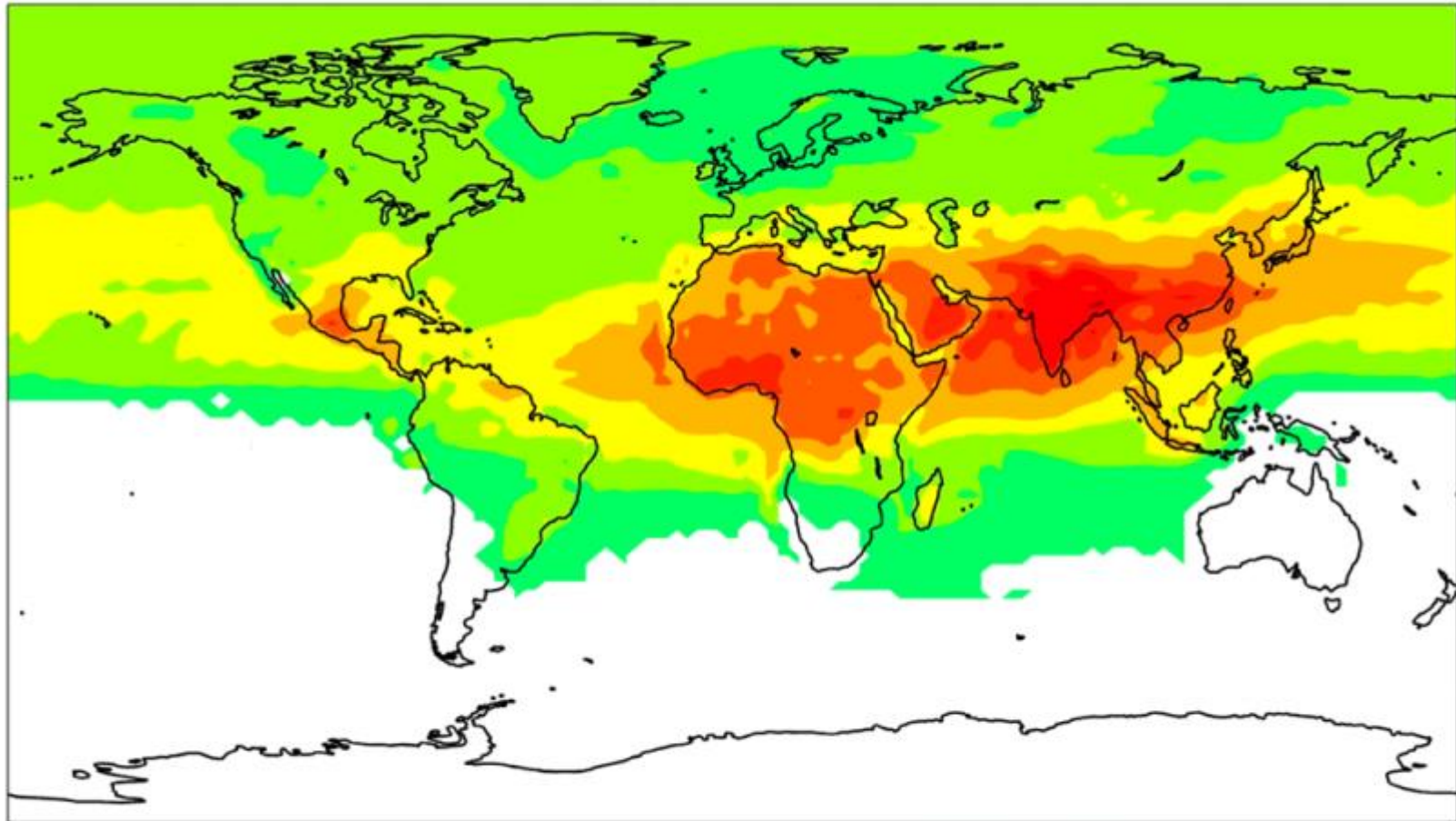
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Direct radiative forcing by BC emissions from kerosene lamps



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The Problem

- Half of the world's population earns perhaps less than \$2 a day. Yet many spend up to \$200 a year on fuel to keep their homes lit at night with polluting kerosene-based lamps.
- A third of the world's population relies on kerosene, candles or firewood for lighting
- Burning kerosene indoors has been proven to be detrimental to peoples' health causing respiratory disease such as pneumonia and tuberculosis. Children, pregnant women and elderly are most at risk.
- Fire danger – Burns and house fires. In India 2.5 million people (350,000 of them children) suffer severe burns each year from house fires, due to overturned kerosene lamps.



Father & Son with kerosene lamp



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Kerosene: Health and Carbon Problem

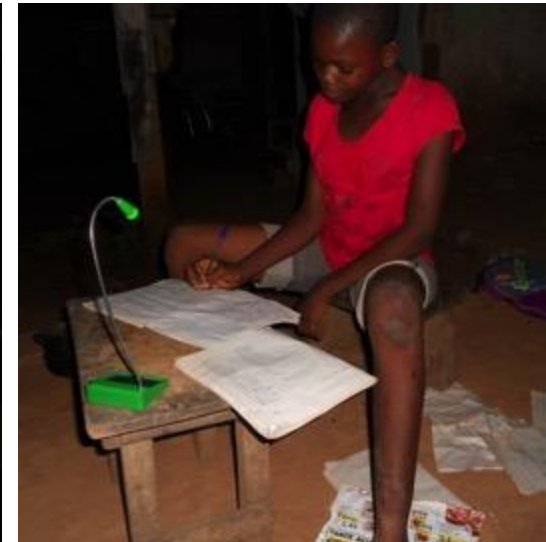
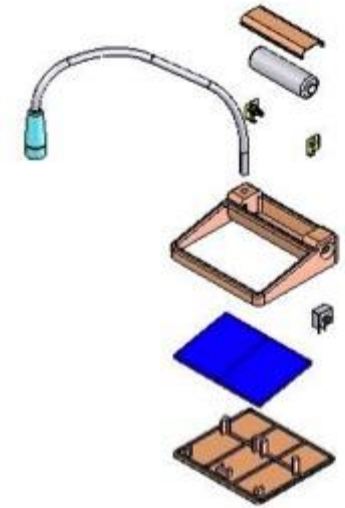
Converting 1 million people to LEDs saves 5000 metric tons of CO₂/year
Converting 1 billion people to LEDs saves 5 million metric tons of CO₂/year.
Lets help save the planet!!!



Multi- Purpose Solar Powered Light

Design Features:

- High efficiency solar cell
- High efficiency LED
- One rechargeable battery
- Low cost (SAVING Kerosene cost)
- Compact and lightweight
- High performance
- Long life
- Water resistant



Manufacturing

- ISO9001, ISO14001 (environmental management systems), ISO/TS16949 (quality system for auto industry) certifications; GB/T28001 certification (a China version OHSAS18001, occupational health and safety management system).



China Quality
Certification
Center



China
National
Accreditation
Service



International
Accreditation
Forum



The
International
Certification
Network



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Area List - 66 Countries - 4 Continents

>100,000 lights shipped

Africa

Burkina Faso Chad Ethiopia Ghana
Kenya Liberia Malawi Niger
Nigeria Rwanda Senegal Somaliland
South Sudan South Africa Tanzania Togo Uganda
Zimbabwe

Asia

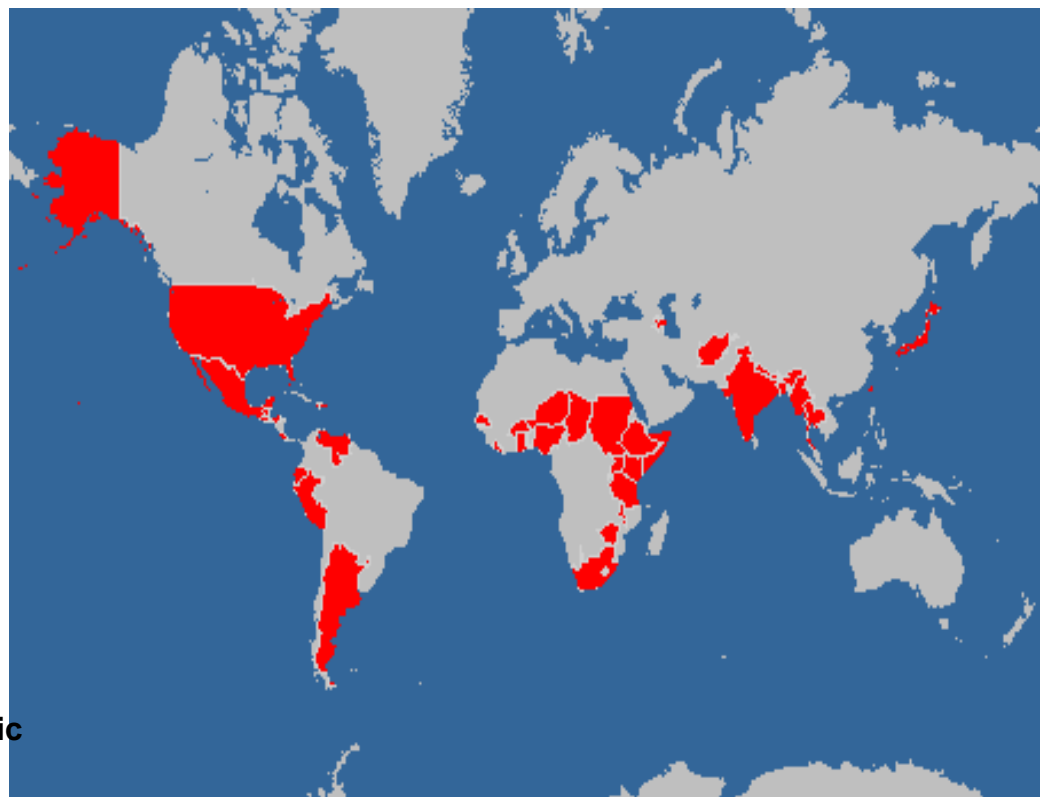
Azerbaijan Bangladesh Japan (Disaster Relief) India
Myanmar Nepal Philippines Thailand

NORTH AMERICA

Haiti Jamaica Mexico United States

CENTRAL AND SOUTH AMERICA

Argentina Belize Costa Rica Dominican Republic
Ecuador Guatemala Honduras Panama Peru
Venezuela



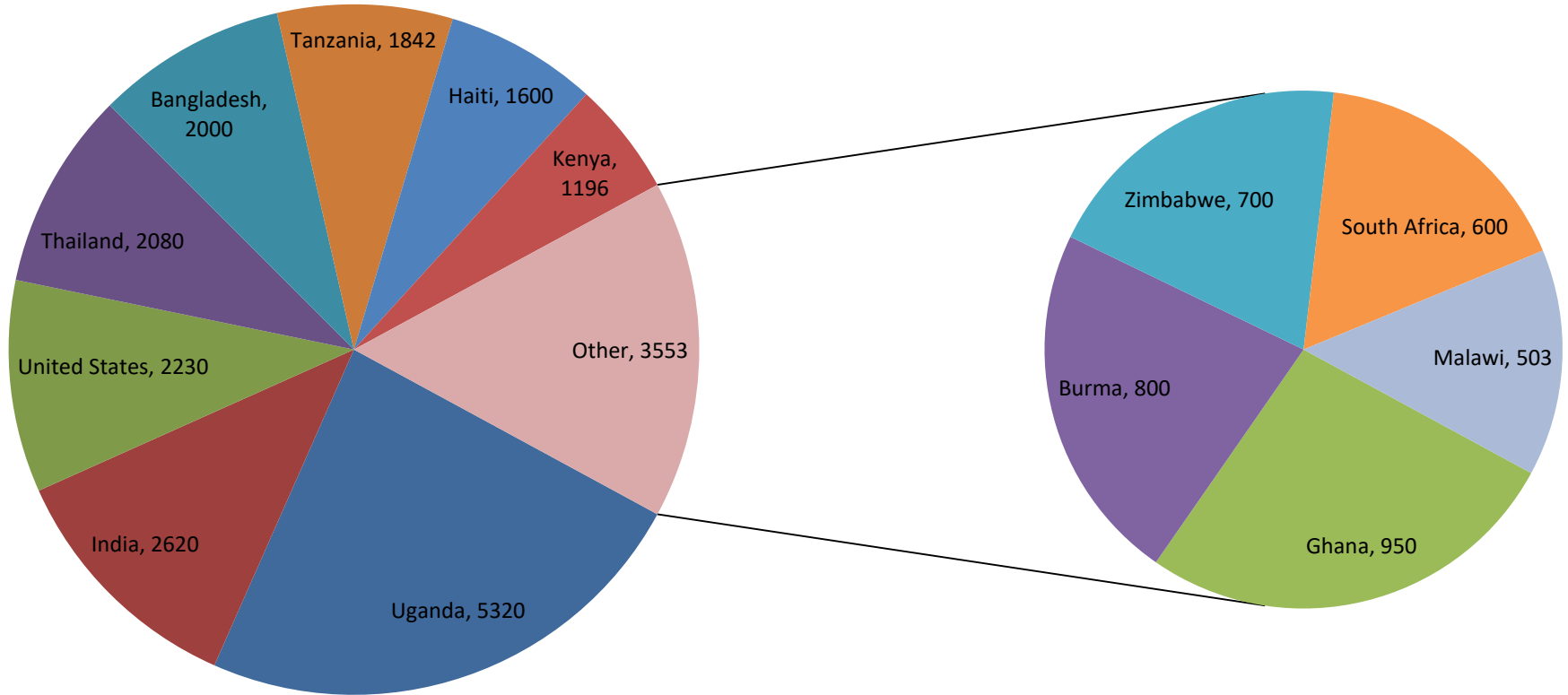
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100,000 lights distributed to date



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Rotary Partnerships



- 400 million people in India do not have electricity.
➔ 1700 lights to Rotary Club in India
- 90 million (out of 160 million) people in Bangladesh do not have electricity
➔ 2nd project pending: 4000 lights total
- Rotary is selling the lights in the United States for future Rotary-Unite to Light joint projects

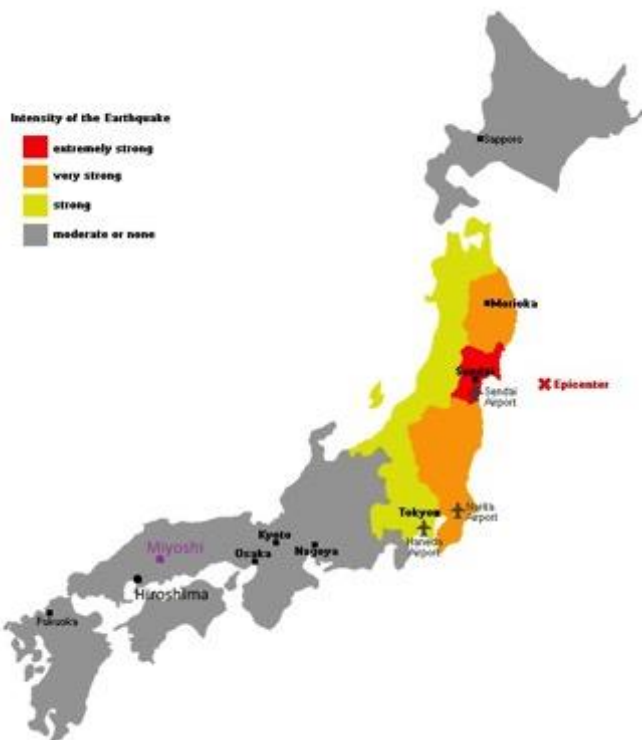
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Mitsubishi KAITEKI Institute



2000 lights to Tsunami victims

4800 lights to developing countries



The KAITEKI Institute, Inc. is a global research institute focused on meeting 21st century challenges in energy, the environment, and healthcare.

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DIRECT RELIEF INTERNATIONAL

- 1000 lights to Haiti
- 1300 lights to



Edna Adan Hospital, Somaliland
Rural health clinics in Uganda
Midwife students supported by DRI
Childbirth kits

THE MISSION

*To improve the health and lives
of people affected by poverty,
disaster, and civil unrest.*

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Peace Corps

Country projects in Burkina Faso and Ghana.

Photo taken with a flash to see all the kids!



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Entrepreneurship: Solar Sisters

Lights are sent to Solar Sister in Uganda to support the development of their entrepreneurial sales program designed to create income and assets for women.



Solar Sister eradicates energy poverty by empowering women with economic opportunity. We combine the breakthrough potential of solar technology with a deliberately woman-centered direct sales network to bring light, hope and opportunity to even the most remote communities in rural Africa.

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South Africa: Under four trees

High school graduation exam
success percentage went up 33
after distributing lights to seniors!



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Niger Nomad Foundation



Nomadic populations inherently do not have electricity, but have a great need for education. Nomad Foundation distributing to local organizations selling to nomads.



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Solar Powered Libraries

The newest endeavor is to provide solar powered Kindles loaded with e-books to African schools. The first prototypes have been evaluated. We will ship 50 Kindles in December to schools and libraries that we have relationships with. A website for downloading age appropriate, religion appropriate material is being constructed.



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Volunteer



Colin Ristig of Davidson College raising awareness of solar lighting in India



Unite to Light interns at Earth Day



Volunteer Meeting

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How Can You Help?

Volunteer: Unite to Light needs volunteers for

Fund raising

Managing relationships with specific countries and organizations

Public Relations & Newsletter preparation

Identifying new prospective distribution partners

Tracking shipments and payments

Donor relations

Identifying the best shipping options to overseas destinations

Together, we can eliminate kerosene lighting in the next ten years. Solar powered lighting can be used by children at home for reading and study and for a variety of other uses, such as medical programs and disaster relief.

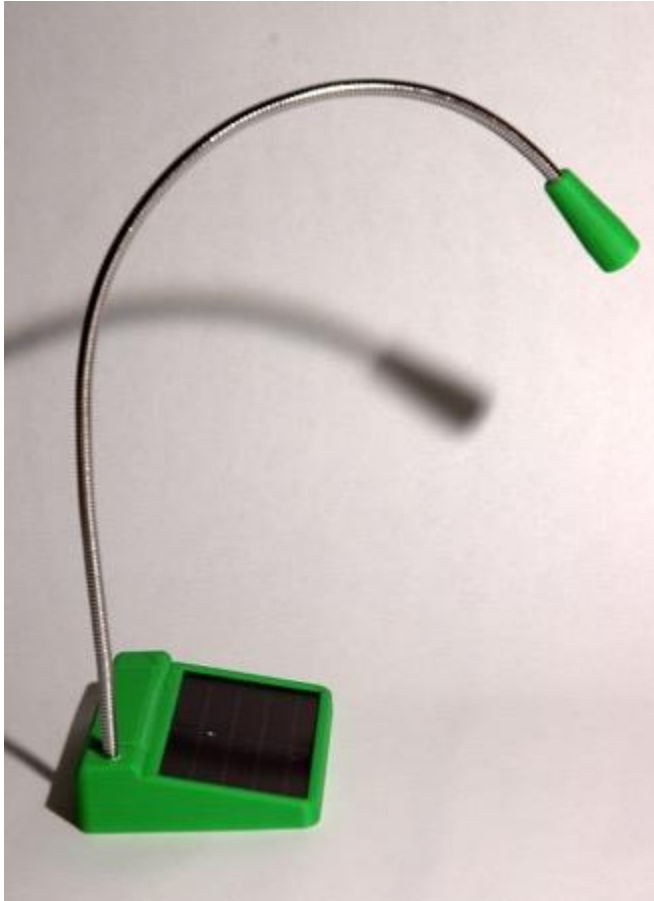
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FINANCIAL SUPPORTERS

(Partial List)

Holbrook Science Foundation

J & J Family Foundation

Paul F. Glenn Revocable Trust

The Bowers Foundation

The KAITEKI Institute, Inc.

Institute for Energy Efficiency at UC Santa Barbara

Goleta Presbyterian Church

St. Andrew's Presbyterian Church

Rotary International

MATCHING GRANTS through various employers (General Electric,
Merrill Lynch, Bank of America)

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