



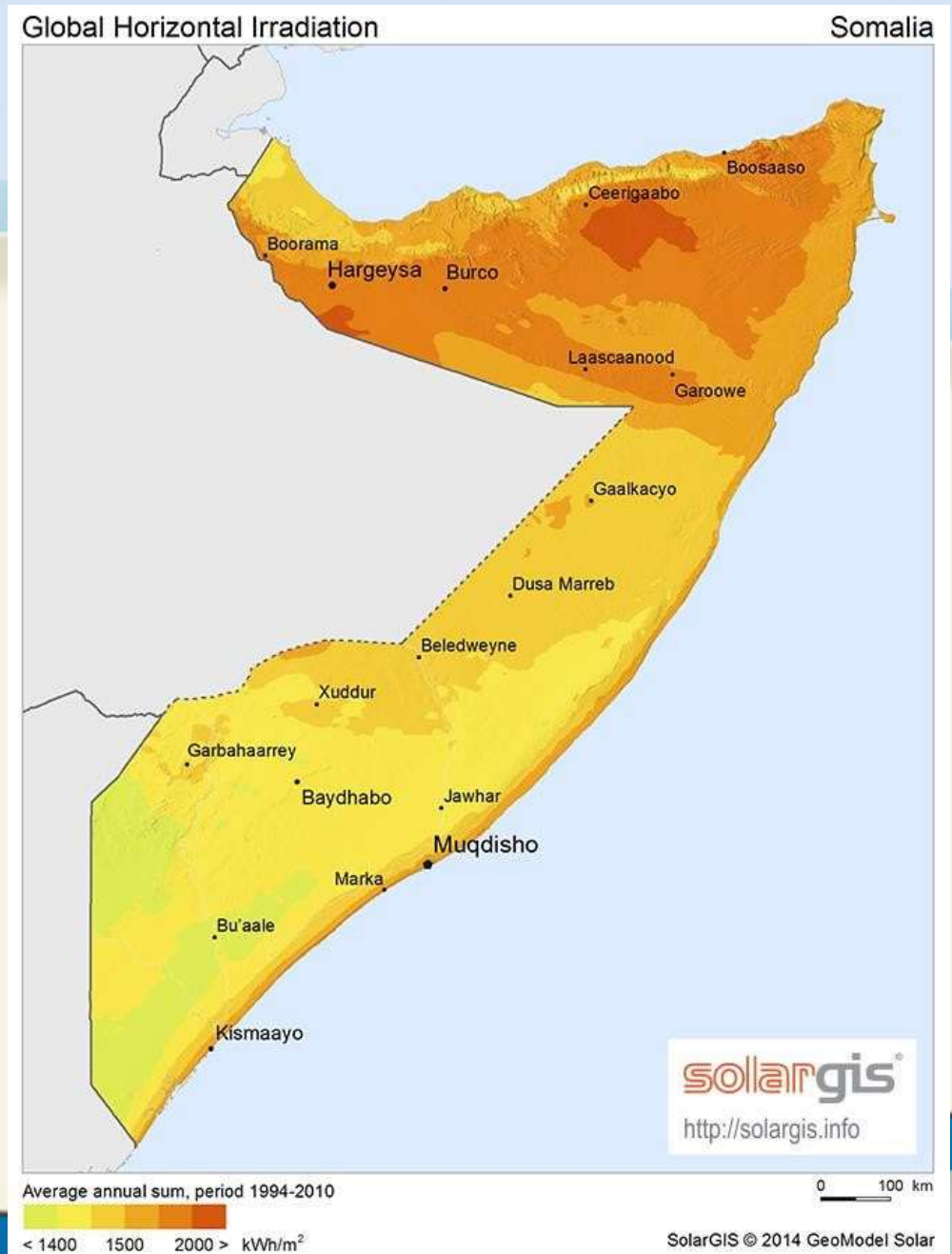
FEDERAL REPUBLIC OF SOMALIA

MINISTRY OF ENERGY & WATER RESOURCES

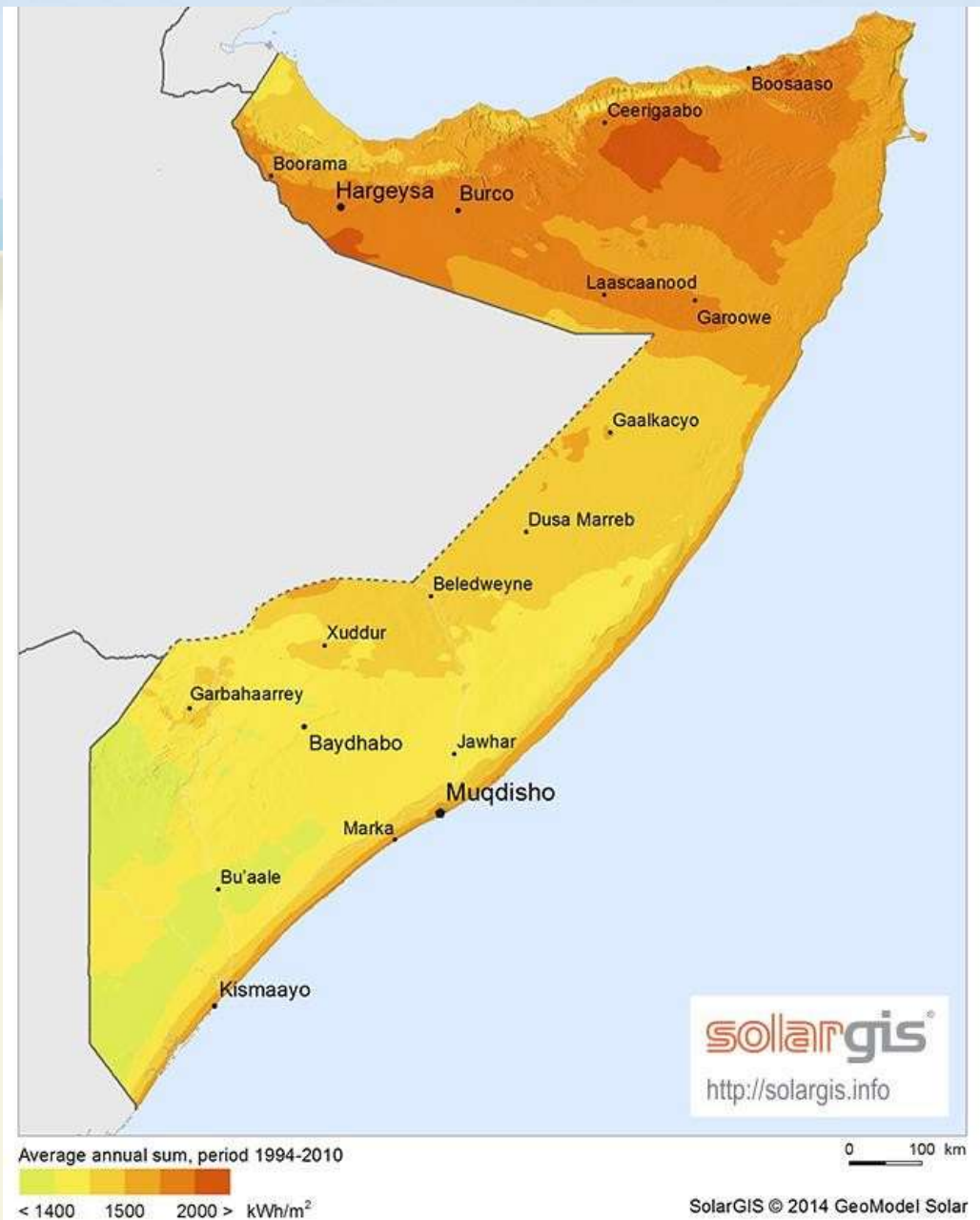
Energy & Electricity

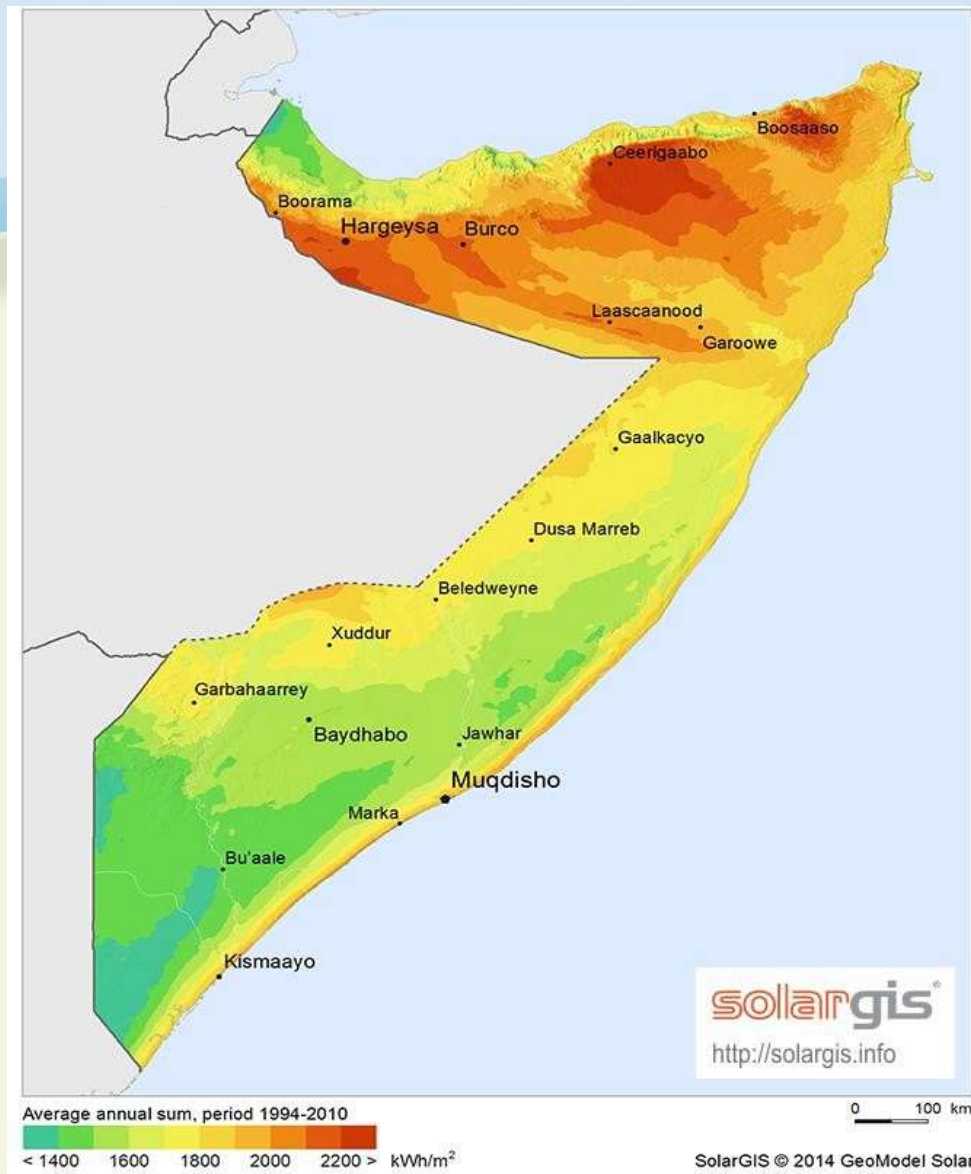
H.E. Mohamed Mursal Sheikh Abdirahman
The Minister
Ministry of Energy and Water Resource

Somalia National Solar Wind and Hydropower Data Processing Development .



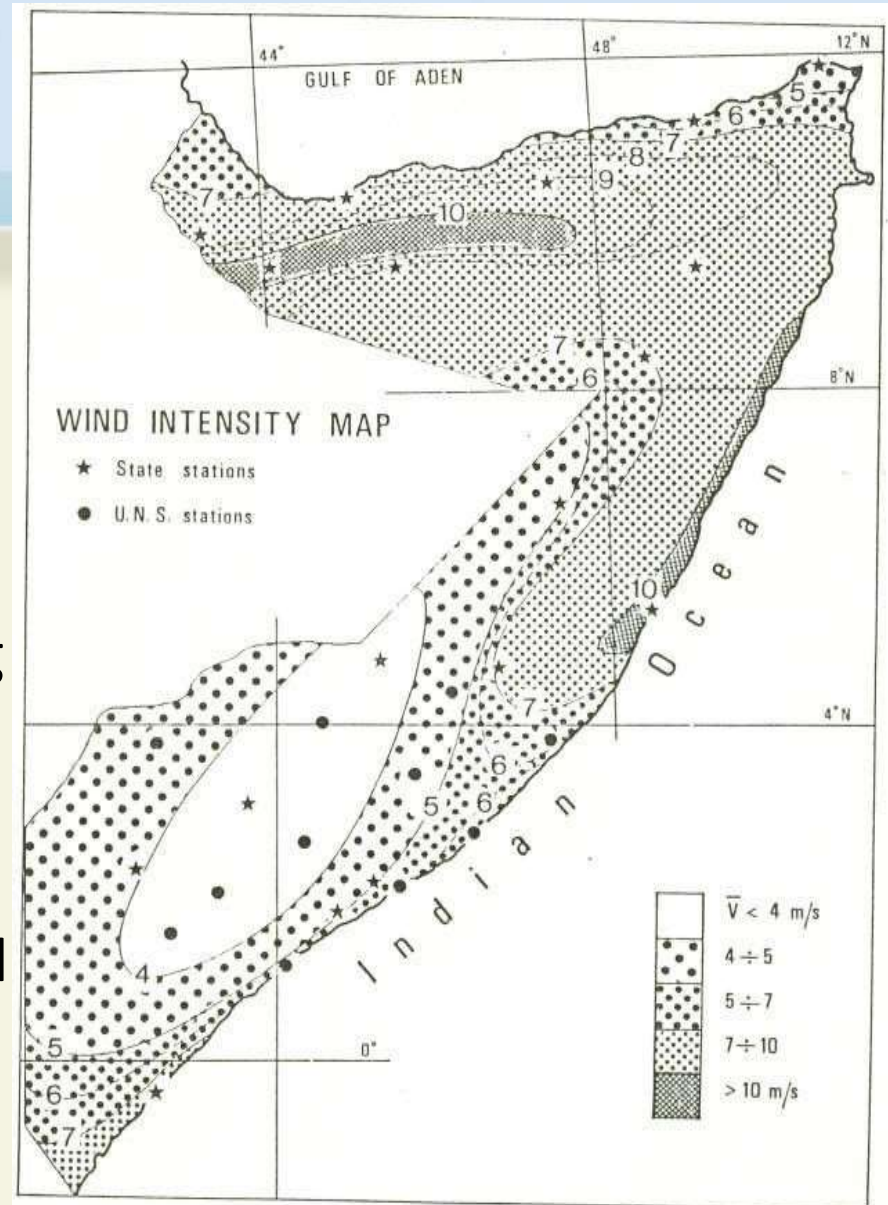
Estimated Low resolution Global Irradiance Map for Somalia. Once stations built accurate data will be available. Not estimates,





- ❑ Up to 90% of the Somali population does not have access to electric power. Where available, electricity costs are the highest in the world. Costs more than \$1.00/kWh
- ❑ Whatever power is generated is done with imported diesel generators.
- ❑ Somalia is one of the most suitable countries in the world to harness renewable energy from solar wind. Also potential for hydropower exists from rivers and ocean power. Such energy must be harnessed to expand urban and rural electrification and electricity access for the Somali people, industries and service business as well as social development in farming, and industrial needs.
- ❑ A major stumbling block is the lack of reliable wind ,solar and hydropower data on which to base investment decisions to promote renewable sources of energy.

This old **estimated** wind intensity map highlights the geographic velocity of winds across Somalia, with many areas having significant opportunities for wind power. The strongest winds are indicated along the coast of Puntland and Galmudug and central areas. This proposed project will develop a current and **accurate updated** wind map for all of Somalia.



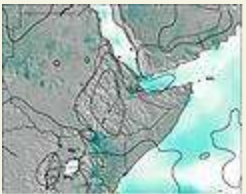
Study on potential energy along the 3333 Km Somalia Coast line



Wave height: average: 0.5 to 2 m



Energy level: 50 to 1000 KJ /Wave



Wind speed: average 4/5 ms



- trawling along the coast of Somalia has reported over a long period of time very heavy current as being one of their main problems to do fishing.
- They have documented current speed at around 2 m/s minimum and increasing to 3.5m/s in summer.

- This Unique source of energy is gigantic and has been most probably overlooked at. We can estimate this source to be in the range of hundreds of GW.
- Underwater current is easier to tap than wave energy and has more energy /m²
- The depth is between 20 m and 200 meters and underwater turbines can be deployed.
- The main problem of any system immersed in seawater is corrosion and nowadays a system was made of stainless steel and Nylon for use.

The Electricity Sector

- Possibly the highest kWh prices in the world = 1 USD/kWh
 - The high prices mean that few private enterprises can compete
- Electricity sector largely in private hands
 - Mainly through organic self-selection

The Electricity Sector 2

- Source of generation is diesel generators
 - Fuel is untested and “dirty”
- Distribution systems are “home made” and very inefficient
- Technical and financial losses are immense = 50%
- Safety levels extremely poor.
- Pollution levels - soil, air, noise, waste – are extremely high
- Levels of skills are low

Broad emerging themes for the Electricity Sector

- Regulations and laws
- Solutions for the disadvantaged
 - Including options for addressing charcoal
- Plans, options and sequencing of electricity sector investments
 - Distribution
 - Transmission
 - Generation
- Documenting resources, especially renewables
 - Wind, solar and maybe others
- Upgrading of utilities
- Private sector development driven by access to power

THANK YOU

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The Minister
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