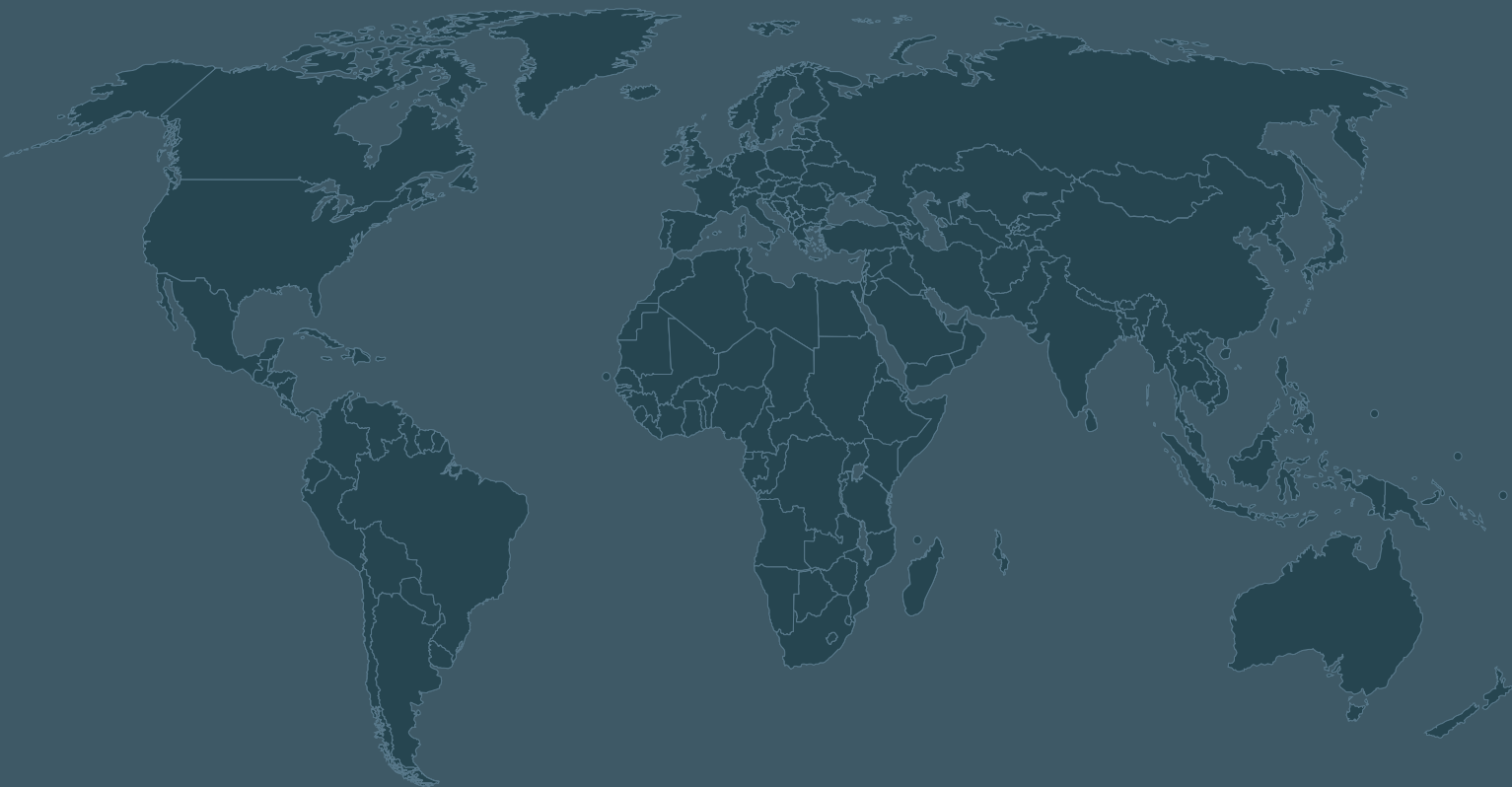


WORLD SMALL HYDROPOWER DEVELOPMENT REPORT 2013

www.smallhydroworld.org

TOGO



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1 Africa

1.5 Western Africa

1.5.10 Togo

Lara Esser, International Center on Small Hydro Power

Key facts

Population	5,858,673 ¹
Area	5,017,000 km ²
Climate	Tropical; hot, humid in south; semi-arid in north
Topography	Gently rolling savannah in north; central hills; southern plateau; low coastal plain with extensive lagoons and marshes ²
Rain Pattern	In the North: one wet season (May to November) and one dry season (December to March, when the Harmattan wind blows north easterly). The South has two wet seasons: from March to July and a shorter wet season from September to November. ³ The northern and central regions receive 200-300 mm rain per month in the peak months of the wet season (July to September). Average annual rainfall in coastal areas is 950 mm. ⁴

Electricity sector overview

The national electrification rate in the Togolese Republic (Togo) is 22 per cent, with 18 per cent access in urban areas and 4 per cent access in rural areas.⁵ An appropriate energy policy was previously lacking but is underway.

Electricity is supplied by two companies: the Compagnie Énergie Électrique du Togo (CEET), which has had a monopoly of electricity distribution and supply to end users since 2006; and the Communauté Électrique du Bénin (CEB), a joint venture with Benin for the purpose of purchasing electricity from the Volta River Authority hydropower facilities in Ghana. Togo depends on foreign sources for its electricity supply and is affected by multiple brownouts (an intentional or unintentional drop in voltage in an electrical power supply system).¹ According to the Clean Energy Portal-Reegle, 70 per cent of the electricity in Togo is imported (figure 1).

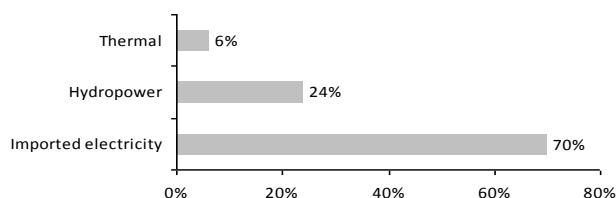


Figure 1 Electricity generation in the Togolese Republic
Source: Clean Energy Portal- Reegle⁶

Small hydropower sector overview and potential

There is a 48-year old small hydropower plant in the country, but it needs renovation. Its installed capacity is 1.6 MW, generating around 2.6 GWh/year. By 2015, up to 58 MW (more than 850 GWh/year) of small hydropower could be installed, however, funding is a major problem.⁵

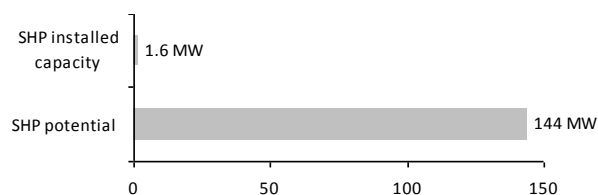


Figure 2 Small hydropower capacities in Togolese Republic

Source: Authors calculation based on Ecowas Centre for Renewable Energy and Energy Efficiency⁸

The last hydropower resource evaluation was conducted in 1984. It assessed a total technical potential of 224 MW (more than 850 GWh/year) on over 40 sites.⁵ Fifteen of these 40 sites have potential capacities of up to 10 MW and a total potential of 81 MW (table).⁷ The *Baseline Report on Small Hydropower in the ECOWAS Region* reports that the feasible potential of small-scale hydropower (defined as up to 30 MW) is 206 MW.⁸ When applying 10 MW as the definition, the feasible potential in Togo is 144 MW, based on 35 sites (figure 2).

Potential small hydropower sites in Togo

River	Village of site	Plant	
		Potential capacity (MW)	Estimated annual electricity generation (GWh)
Amou	Gléi	2	5
Amou	Amou Oblo	3	8
Kara	Landa kpozanda	5	13
Mô	Banga (Bassar)	6	16
Domi	Tomégbé Akloa	8	21
Mono	kpéssi	8	21
Sin Sin	Route Atakpame-Badou	2	5
Kpaza	Parc Fazao	3	7
Assou	Langabou	5	13
Koko			
Keran	Route Kande-Mago	5	13
Mono	Dotecope	9	24
Mono	Sagada/Kpeteta	8	21
Koroon	Seregba	9	24
Gban	Danye Konda	5	13
Houn2			
Mono	Landa Mono	3	8
Total		81	199

The African Development Bank (2011) mentions a need for diversification of energy supply sources by developing the country's hydropower potential.¹

Renewable energy policy

One of the priority areas in the 2006-2008 Poverty Reduction Strategy of Togo is to develop infrastructure needed for growth, by developing energy resources. The priority measures include the decision and implementation of an energy policy, establishment of a national rural electrification agency, a rural electrification fund and a legislative and regulatory framework for developing renewable energies. However, due to the lack of financing, none of the objectives have been achieved.⁹

Barriers to small hydropower development

The hydro potential of small hydropower in Togo is highly seasonal and varies regionally.⁸ Lack of funding is the principal barrier to developing small hydropower projects.⁵ In addition, there is no feed-in-tariff for small hydropower.⁸

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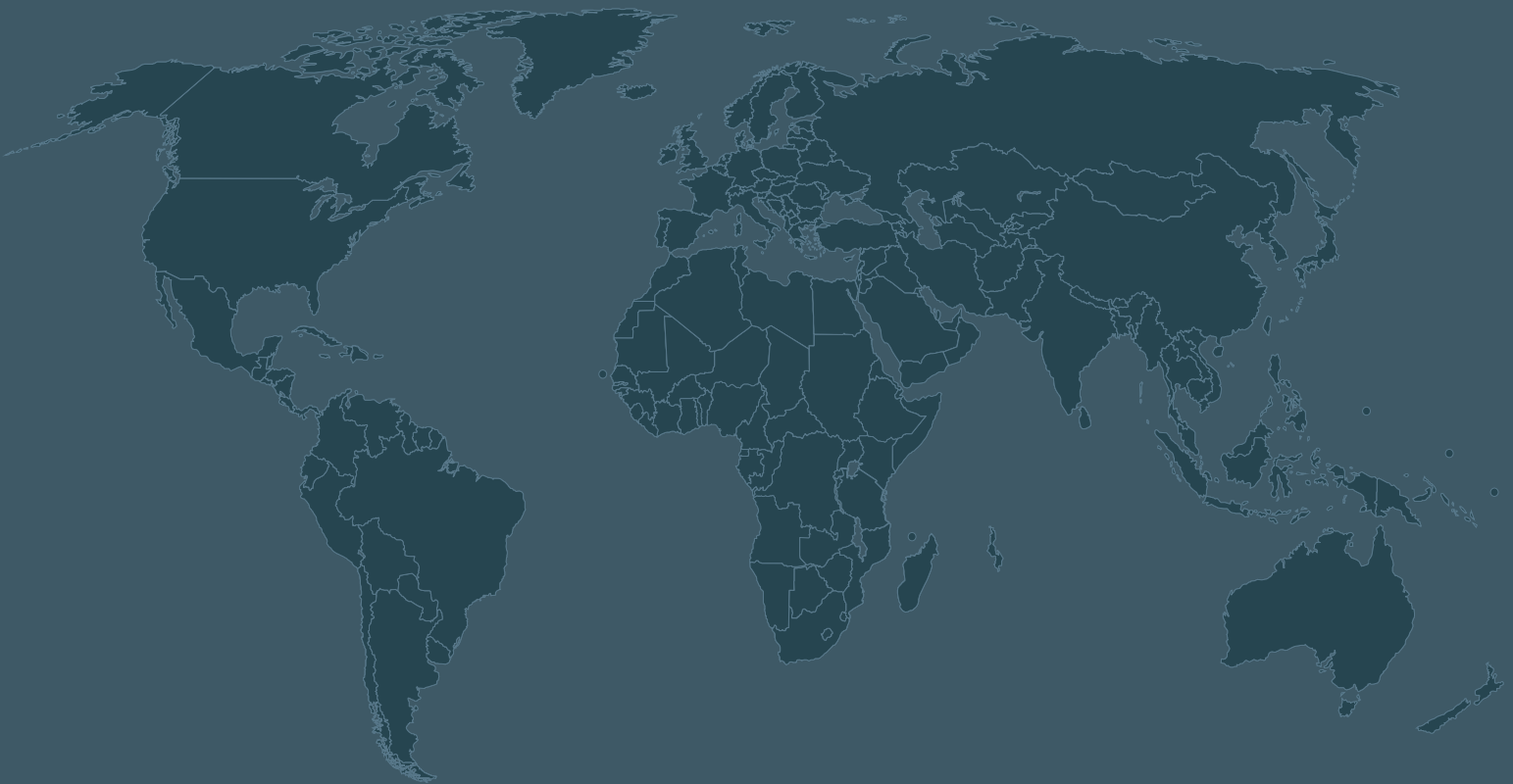
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