



ECREEE
TOWARDS SUSTAINABLE ENERGY



ECOWREX

Regional Workshop on GIS for
Energy Planning

PRESENTATION OF ECOWREX2 PROJECT
by Jafaru AbdulRahman

26th July 2016

Presentation Outline

- Background & Objectives
- Content of ECOWREX
- ECOWREX2 Project



BACKGROUND & OBJECTIVES

ECOWREX was launched in October 2012, at the 11th meeting of the ECOWAS Energy ministers.

Overall goal

To mitigate the existing information and Knowledge barriers in the energy Sector

Objectives --

Provide reliable and targeted information to policy makers, investors and other stakeholders about the energy sector, in West Africa

Build up a network of key players both local and international, to share the best practices and technical knowhow

CONTENT OF ECOWREX

- **Country Profile**
 - Data Contributors
 - Glossary
 - Submit Data
- **Map Viewer**
- **Resources**
 - Project
 - Stakeholders
 - Power Plants
 - Documents

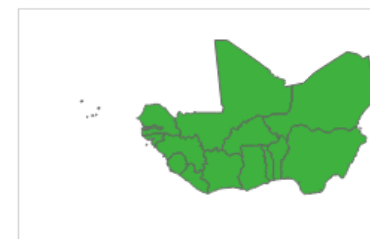
NEW COUNTRY PROFILE

[INFOGRAPHICS](#)
[GLOSSARY](#)
[CONTACT US](#)


COUNTRY Profiles

Country: Topic: Indicator: Technology: Data Year: [Raw Data](#)

Country	Data Type	Topic	Indicator	Description	Technology	Sub Tech	Value/Unit	Sources		
	Government	Additional Informa..	Noteworthy Trends	The strategy for the ad..	Non-Technology ..			✓		
			Electricity	Generation from Renewables (Share)	Sustainable biomass generation.	Bioenergy	Biomass	1 % 36 %	✓ ✓	
				Target rate of access t..		Bioenergy	Biomass	60 %	✓	
			Installed Capacity (On-Grid)	Dogo Bis on the Ouém..		Hydro		128 MW	✓	
				Installed small hydropo..		Hydro	Small Hydro	2 MW	✓	
				No installed biomass c..		Bioenergy	Biomass	0 MW	✓	
				No installed hydropow..		Hydro		0 MW	✓	
				No installed solar PV c..		Solar		0 MW	✓	
				No installed wind capa..		Wind		0 MW	✓	
			Energy Access	Access to Electricity, National (% total of population)			Non-Technology Specific		28.4 %	✓
								29.2 %	✓	
								30.78 %	✓	
								32.44 %	✓	
										4.48 %
			Access to Electricity, Rural (% of rural population)				Non-Technology Specific		5.5 %	✓
								6.22 %	✓	
								7.02 %	✓	
					55.2 %	✓				
					56.4 %	✓				
	Access to Electricity, Urban (% of urban population)				Non-Technology Specific		58.99 %	✓		
						61.71 %	✓			
										✓
	Energy Efficiency	Energy Efficiency Pol..	National Agency for R..		Non-Technology ..			✓		
			Improved Clean Cookstoves (Share)	Improved stoves		Non-Technology Specific	3 % 36 %	✓ ✓		



Hover for more details [Submit Data](#)

- Ministry of Energy
- Rural Electrification
- Renewable Energy
- Energy Management and Energy Efficiency
- Electricity/Energy Regulator
- Electricity Operator

NEW COUNTRY PROFILE

INFOGRAPHICS

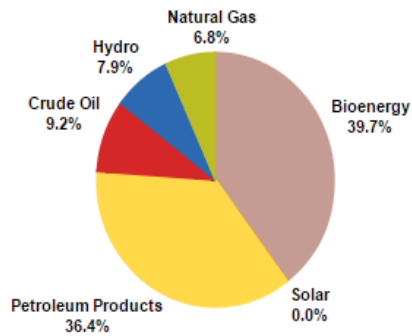
GLOSSARY

CONTACT US

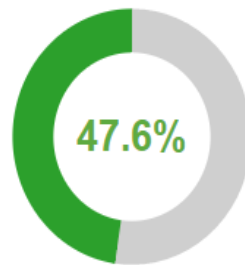


Country Key Performance Indicators

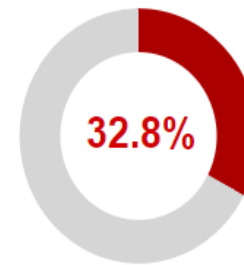
Share of TPES in Ghana, 2014



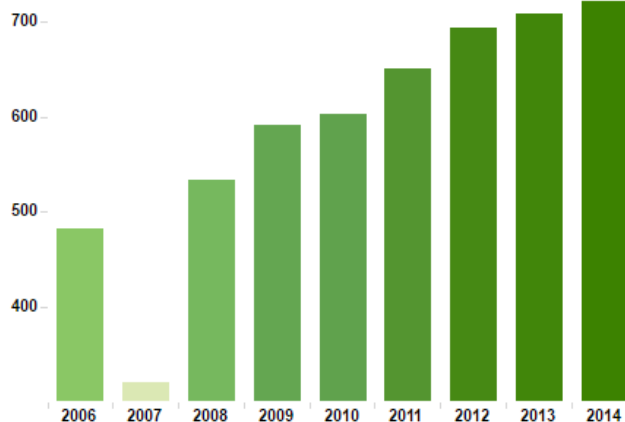
Share of RE in TPES in Ghana, 2014



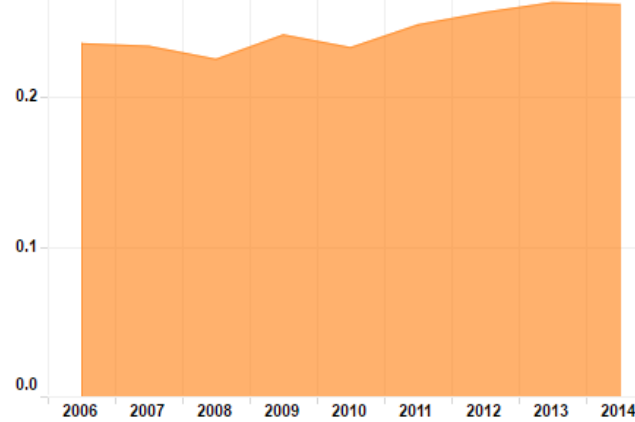
Thermal Plant Efficiency in Ghana, 2014



TPES (ktoe) in Ghana, 2006-2014



Energy Intensity (toe/capita) in Ghana, 2006-2014



Technology

- Bioenergy
- Solar
- Petroleum Products
- Crude Oil
- Hydro
- Natural Gas

Filter by:

Country

Ghana

Technology

Hydro

MAP VIEWER

The screenshot displays the ECOWEX Map Viewer interface. The main map shows West Africa, with a focus on Mali. A 'SHARE' panel is open, providing options to share the map composition. The 'LAYERS' panel on the right shows various data layers, including 'BASE MAP', 'COUNTRY INFO', 'INFRASTRUCTURES', 'RENEWABLE ENERGY POTENTIAL', and 'ENERGY DEMAND'. The 'RENEWABLE ENERGY POTENTIAL' section is expanded to show 'Solar DNI Energy Resource', 'Solar GHI Energy Resource', and 'Wind Energy Resource'. The 'ENERGY DEMAND' section is also expanded to show '3TIER' data. The 'SHARE' panel includes sections for 'Embedding widget', 'Url bookmark', 'Geo RSS feed', and 'ECOWEX OGC Web Services'. The 'Embedding widget' section contains a code snippet for embedding the map. The 'Url bookmark' section contains a URL: <http://www.ecowrex.org/mapView2/>. The 'Geo RSS feed' section contains a description of the ECOWEX metadata catalog geoRSS feed. The 'ECOWEX OGC Web Services' section contains a list of OGC Web Services endpoints: WMS (Web Map Service), WFS (Web Feature Service), WCS (Web Coverage Service), and CSW (Catalog Service for the Web). The interface also includes a search bar, a legend, and a navigation toolbar. The Google logo is visible in the bottom left corner of the map area.

SHARE
Western Sahara
Find below different ways to share the current map composition.

Embedding widget
Copy/paste the code below to embed the current map composition into your page html.

```
&embed=true" width="500" height="300" scrolling="no" marginheight="0" marginwidth="0" frameborder="0" class="ecowrex-mapview-widget"></iframe>
```

Url bookmark
Copy/paste the url below to share/bookmark the current map composition.

<http://www.ecowrex.org/mapView2/>

Geo RSS feed
ECOWEX metadata catalog [geoRSS feed](#). You can subscribe to the ECOWEX geoRSS feed, which will allow you to be automatically notified when a new geospatial layer description is available in ECOWEX.

ECOWEX OGC Web Services
The ECOWEX platform is is compliant with the OGC Web Services (OWS) and allows to share data and metadata through the following endpoints:

- [WMS \(Web Map Service\)](#)
- [WFS \(Web Feature Service\)](#)
- [WCS \(Web Coverage Service\)](#)
- [CSW \(Catalog Service for the Web\)](#)

LAYERS

- BASE MAP
- COUNTRY INFO
- INFRASTRUCTURES
- RENEWABLE ENERGY POTENTIAL
 - Solar DNI Energy Resource
 - Solar GHI Energy Resource
 - Wind Energy Resource
- SOLAR SUITABILITY MAPS
- WIND SUITABILITY MAPS
- ENERGY DEMAND
 - 3TIER

Map data ©2016 GeoBasis-DE/BKG (©2009), Google, Inst. Geogr. National, Mapa G(Srael), OPRON-MF

ECOWREX GEONETWORK

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Get started

Search over **32** data sets, services and maps, ...



ECREEE Data Portal

Here you will find data, services and maps and more.

Browse by topics



Geoscientific inform...

13



Society

5



Economy

4



Farming

3



Environment

2



Transportation

2



Boundaries

1



Structure

1

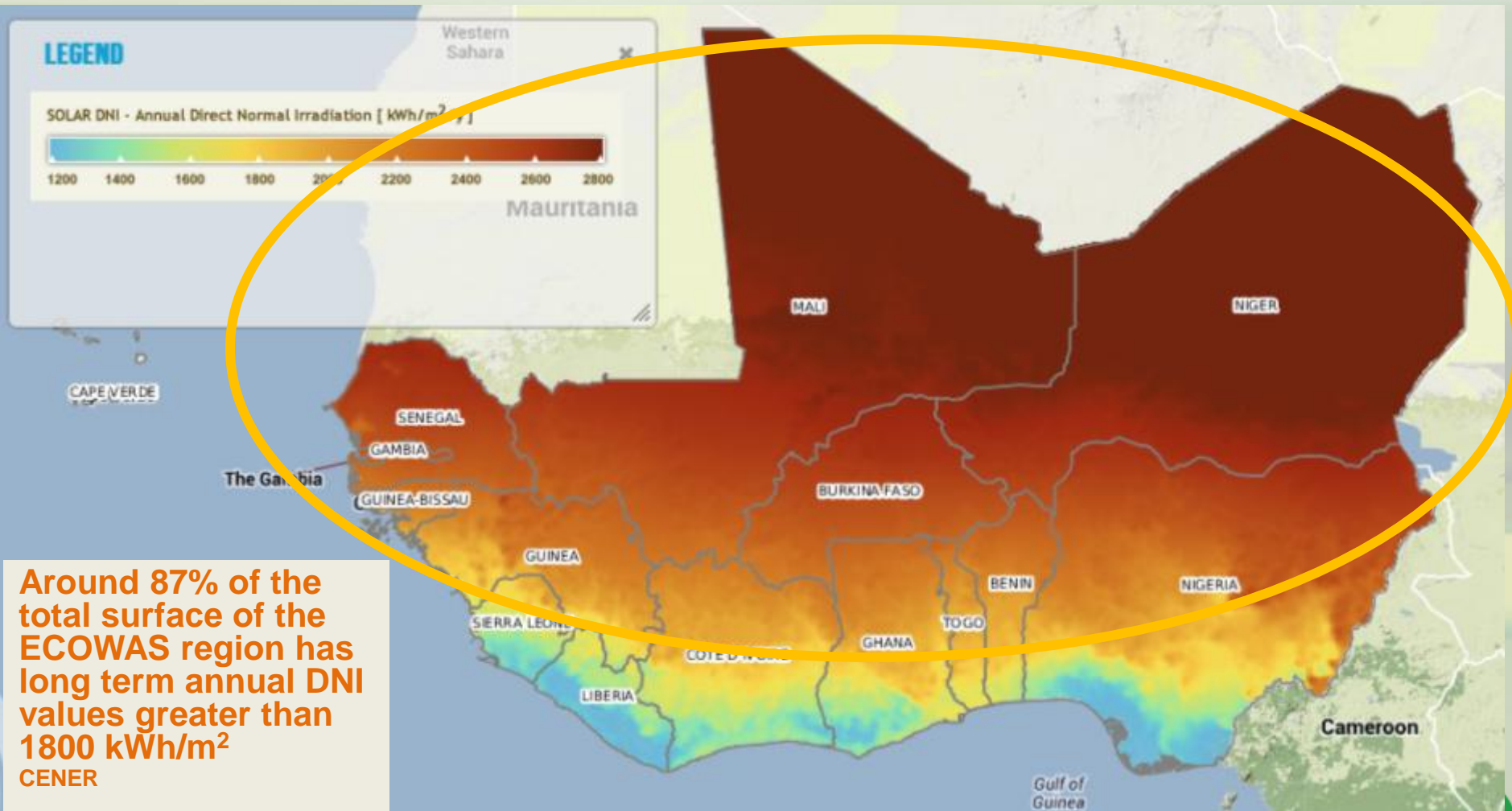
Browse resources



Service

32

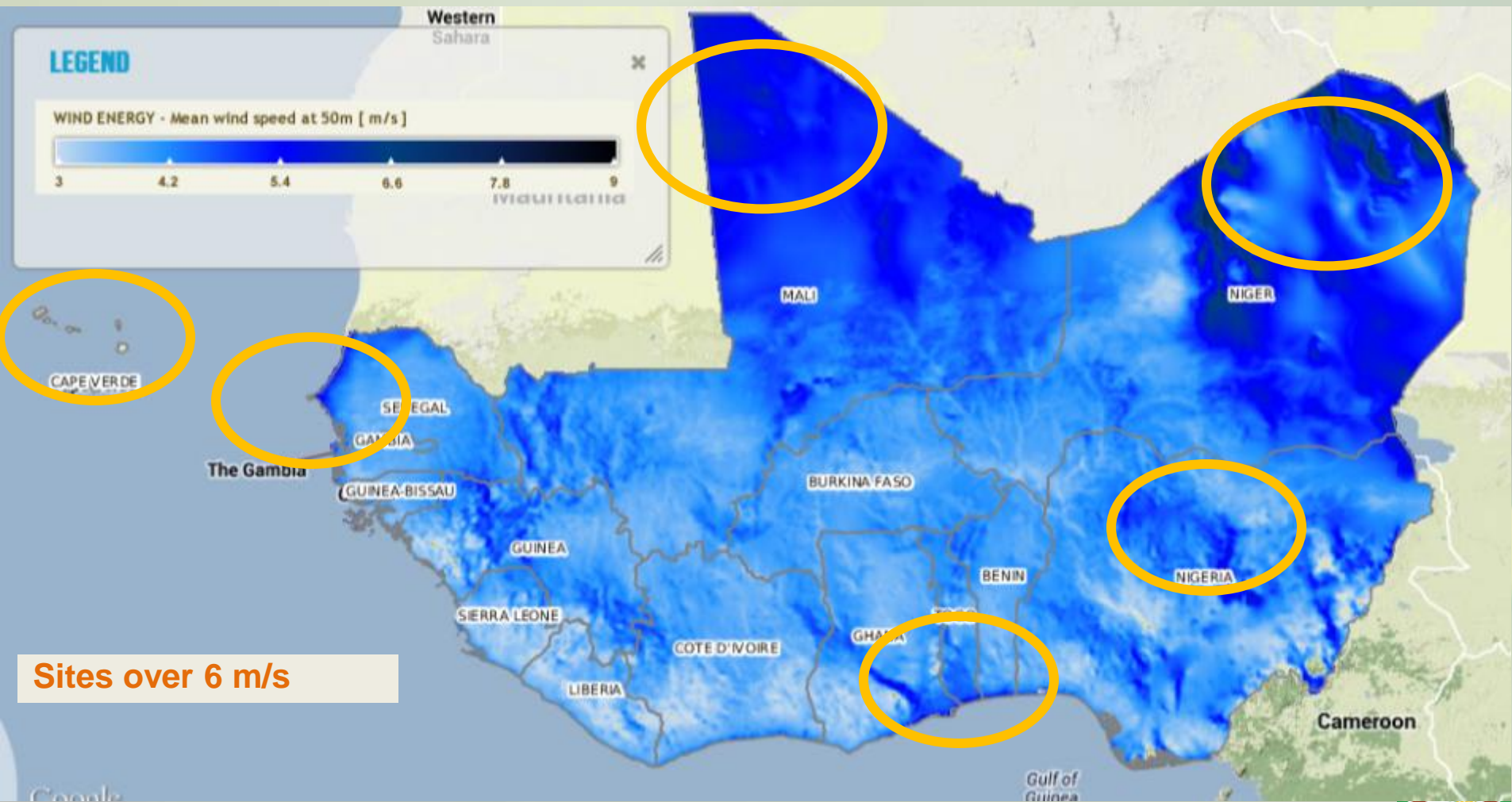
SOLAR POTENTIAL



Around 87% of the total surface of the ECOWAS region has long term annual DNI values greater than 1800 kWh/m²

CENER

WIND POTENTIAL



Resources

REEE INITIATIVES

PROJECTS

STAKEHOLDERS

ENERGY GENERATORS 

DOCUMENTS

ENERGY GENERATORS

Find an Energy Generator

▼ Country

Select All

- Benin
- Burkina Faso
- Cape Verde
- Cote d'Ivoire
- Gambia
- Ghana
- Guinea
- Guinea-Bissau
- Liberia
- Mali
- Niger
- Nigeria
- Senegal
- Sierra Leone
- Togo

▼ Generation Type

Select All

- PV Solar
- Wind
- Small Hydro
- Medium Hydro
- Biofuel
- Biomass
- Wave
- Large Hydro
- Diesel
- Heavy Fuel
- Gas
- Coal

▼ Status

Select All

- Identified
- Planned
- Operational
- Closed

► Connection Type

Items per page

- All -

Apply

Reset

COUNTRY	TITLE	CAPACITY INSTALLED	GENERATION TYPE	STATUS	CONNECTION
Cape Verde	Sal Solar Field	2.50 MW	PV Solar	Operational	Ongrid
Cape Verde	Santiago Solar Field	5.00 MW	PV Solar	Operational	Ongrid

2 results found

Total Operational
PV Solar plant
ongrid is 7.5MW

Searching for capacities of operational or planned power plants in the ECOWAS region

ECOWREX2 PROJECT

“Promoting Sustainable Energy Access through the use of Geospatial Technology in West Africa”

Executed under the ACP-EU Cooperation Programme in Science and Technology II (S&T II), which aims to contribute towards building and strengthening capacities in the areas of Science, Technology and Innovation in ACP countries.

Total Budget for 2 years: 1,090,836.36 EURO

EU Grant: 927,201.47 EURO

Co-Financing: 163,631.89 EURO



www.ecreee.org



Objectives

The overall objectives are:

- **Contribute toward addressing existing Knowledge and Information barriers hindering development in the Energy sector in West Africa.**
- **Support member states to Identify most favourable technologies for improving access to electricity**



SPECIFIC OBJECTIVES

1. **Develop a complete spatial data infrastructure (SDI)**
2. **Enhance existing solar and wind maps on the ECOWREX platform**
3. **Develop electricity access maps and identify most appropriate and cost effective technology for improving access to un-electrified communities**
4. **Develop a ratio map between power consumption vs green power production potential**
5. **Capacity building for member states to promote the use of Geospatial Technology**

PARTNERS

1. **Noveltis S.A S, France**
2. **Department of Energy, Ministry of Tourism, Industry and Energy, Cabo Verde**
3. **Université de Genève, Switzerland (UNIGE)**
4. **The Energy Center, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana**
5. **Offcourse, and you**

CHALLENGES!



DATA

Face the challenges confidently thinking that.. "If I can't, who can!"
And after winning be humble enough to say.. "If I can, who can't."

Thank You! Merci! Obrigado!

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