

Overseas Reports

【Current Activities of a Former Participant】



Climate data for Socotra													[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	27.2 (81)	28.5 (83.3)	30.5 (86.9)	32.7 (90.9)	34.2 (93.6)	33.9 (93)	32.0 (89.6)	32.3 (90.1)	32.7 (90.9)	31.4 (88.5)	29.8 (85.6)	28.0 (82.4)	31.1 (87.98)
Daily mean °C (°F)	22.0 (71.6)	23.4 (74.1)	25.1 (77.2)	27.5 (81.5)	28.9 (84)	29.0 (84.2)	27.6 (81.7)	27.5 (81.5)	27.6 (81.7)	26.0 (78.8)	24.2 (75.6)	22.7 (72.9)	25.96 (78.73)
Average low °C (°F)	16.8 (62.2)	18.3 (64.9)	19.8 (67.6)	22.2 (72)	23.7 (74.7)	24.1 (75.4)	23.2 (73.8)	22.8 (73)	22.6 (72.7)	20.6 (69.1)	18.7 (65.7)	17.5 (63.5)	20.86 (69.55)
Average rainfall mm (inches)	23 (0.91)	18 (0.71)	14 (0.55)	22 (0.87)	37 (1.46)	18 (0.71)	12 (0.47)	15 (0.59)	27 (1.06)	38 (1.5)	18 (0.71)	16 (0.63)	258 (10.17)
Average rainy days (≥0.6 mm)	2.0	2.0	2.1	3.4	4.1	6.0	9.7	9.3	4.9	3.2	3.0	3.0	52.7
Average relative humidity (%)	20	21	24	27	29	29	28	27	27	25	22	21	25

Source: Climatic Research Unit, University of East Anglia^(en)

Hasan-san reported his current activities in Yemen

- 1) Course Leader: Mr. Taisuke FUJII
- 2) Former Participant: Mr. HASAN Ahmed Salem Abdullah

January 10th, 2018


Training Division

Kitakyushu International Techno-cooperative Association

We introduce current activities of former participants playing on active role after completing their JICA/KITA training course

This issue of Overseas Reports covers activities being run in their homeland by participants who attended the training course, “Renewable Energy in Grid -Mainly on Photovoltaic-(A)”. Mr. Taisuke FUJII, the course leader, introduced us his activity situation.

1. Introduction of the participant, who has given the report

Nickname	Photo	Name	Country	Period of JICA Training Course
Hasan-san		Mr. HASAN Ahmed Salem Abdullah	Yemen	July. 02, 2017 to Aug. 11, 2017



Famous sights of Yemen



Socotra Islands



The memorial photo of participants with course leader Mr. T. FUJII.



Hasan-san who is presenting the Job Report



Trainees studying about the solar system

2. Message from Mr. T. Fujii, Course Leader



Nine various participants from nine countries have joined in the training course “Renewable Energy in Grid -Mainly on Photovoltaic-(B)” in 2017.

I was very impressed that each of them including Mr. Hasan worked on lectures, site visits and practices diligently in order to tackle with their issues.

While we had a tight training schedule, from Kitakyushu to Tokyo and Kitakyushu again, everyone exchanged information with each other in a good team work and undertook the training actively with asking many questions to lecturers.

Though Yemen, Mr. Hasan`s homeland, is rarely reported in Japan, it is faced with a severe situation due to political instability after the civil war since 2015. Currently electricity mostly depends on oil and gas and people are suffered from short supply.

Although Yemen has difficulty in developing power infrastructure which is the basic for daily life, he is promoting solar power generation project both at Socotra Island, the most popular tourist spot of Yemen, and at Aden University in order to disseminate solar power generation with an eye towards the future.

Yemen is located in the southern part of the Arabian Peninsula and this region is suitable for solar power generation.

I look forward to sooner realization of Mr. Hasan`s project, with regaining political stability by the prompt end of the civil war.

3. Letter from Hasan - san



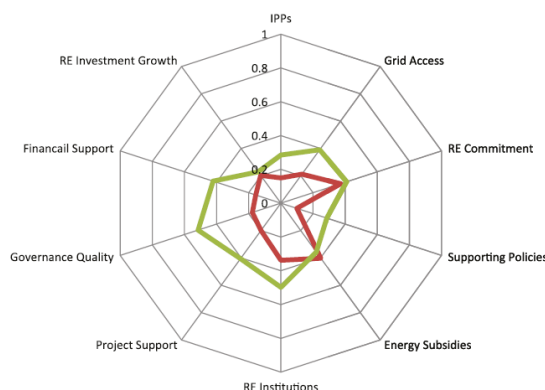
Latest Activities



- ① **Participant:** Mr. HASAN Ahmed Salem Abdullah
- ② **Country:** Yemen
- ③ **Title of Report :** COME OVER THE OBESTCALES BY IMPLEMENTANG MICRO GRID SOLAR PILOT PROJECTS. (1MW Socotra Island &500KW Aden City)

Yemen Renewable Energies Obstacles (source:Arab Future Energy Index (AFEX))

Yemen faces the challenge of delivering electricity to a larger portion of its population. The current difficult political situation which directly affected electricity access around the country, has stimulated a new market for small scale solar energy projects for both residential and agriculture sectors. Since 2014, Yemen has substantially increased the prices of diesel. Switching from diesel to solar can help the people improve their livelihood conditions. Yemen should focus on exploring the opportunities of designing innovative energy systems based on decentralized small-scale power generation. Distributed photovoltaic systems are now the key solution to have access to electricity in current complex. Due to the war, Yemen has not been able to make progress in attracting large scale investments in renewable energy.



1) Finance and Investment

- No RE fund is established for financing RE projects yet. Currently, a draft resolution on RE fund prepared by the Ministry of Electricity and Energy is under consideration by the cabinet for the final approval.
- No policy of providing financial guarantee to private investors to ensure payment under power purchase agreement.
- Generally, RE projects do not enjoy customs duty exemptions or internal tax privileges; however in some cases the government of Yemen provides customs duty exemption to RE projects.

2) Independent Power Producers (IPP)

- Private power generation was authorized in Yemen in 2009 with the adoption of electricity law No 1. Today, total generation capacity of conventional electricity by IPPs constitutes 450MW.
- No IPPs producing RE exist.
- Currently, Yemen's legal framework does not allow private self-generation of RE (auto-producers) with the possibility of feeding surplus electricity to the grid.
- No RE auto-producers in practice.

3) Institutional Support

- In 2002, the Renewable Energy Department under the Ministry of Electricity and Energy (MEE) was established with the goal of promoting and supporting RE projects in Yemen. In 2009, the department was extended and reorganized into two departments: Solar Energy, and Wind Energy.
- Yemen has published a wind map based on satellite data, but no detailed wind atlas is developed yet.
- For public and private wind projects, land has been identified only in Al-Moccha project. For other private projects, land has not been identified or allocated yet.
- No detailed solar atlas published exists.
- Land for large-scale solar projects is not allocated for private development.

4) Grid Access

- No priority access to RE is granted by law.
- No grid code for RE is developed.
- No detailed grid map for designated renewable energy sites.

5) Supporting Policies

- Public competitive bidding process for private development of large-scale RE projects exists.
- No obligation to conclude long-term power purchase agreements with RE producers.
- No Feed-in Tariffs.
- No net-metering policy for small-scale RE projects.

6) The aims of this activity are below

- Layout and activation of RESAP for grid connection.
- Development of Policy Framework , objectives and targets
- Raising awareness , development research and training.
- Facilitate international cooperation and assistance.
- Prepare the proper technical standards.
- Provide financial support and microfinance for these activities

7) Why Socotra :

- The island has been declared an environmentally protected.
- It's the biggest island in the Arab world and one of the biggest the western Indian Ocean.
- 70% of Tourist of Yemen usually visit it.
- it's considered as home of the largest home of plant diversity in the world.
- Its responsibility of Yemen and internationally to protect the environment of the virgin islands from pollution by introducing the RE for producing electricity.



Fatakat.com

غابات من شجر دم الأخوين

مجموعة من شجر الدم

Socotra dragon tree

Blood Brothers trees



Socotra has a very high annual average insolation at around 6.6 kWh/m²/day

Table 3-5: Average Daily Sunshine Hours

	Al-Cood	Al-Abus	Hodeita	Lahj	Sama'a	Salun	Sadareh	Socotrah	Taitz
Jan	7.6	8.8	8.9	7.1	8.5	7.5	5.1	8.7	7.7
Feb	8.4	7.3	9.1	8.9	7.0	8.7	5.4	9.0	8.7
March	8.3	8.2	7.2	8.0	9.0	9.2	7.2	10.3	9.1
Apr	8.5	7.8	9.1	8.6	6.9	8.7	9.0	10.8	9.3
May	9.9	9.2	8.8	9.1	9.0	10.0	8.6	9.0	9.0
Jun	7.9	7.8	7.6	7.6	7.5	8.8	8.4	7.8	7.8
Jul	7.8	7.2	7.1	7.2	5.9	7.8	8.8	9.2	6.4
Aug	8.2	7.5	6.6	7.8	6.5	7.9	8.2	7.2	7.2
Sept	8.3	6.9	8.0	8.3	7.4	9.2	8.0	9.7	7.5
Oct	9.7	8.3	9.9	9.0	9.3	9.5	7.2	9.6	9.3
Nov	10.1	8.0	10.0	9.3	9.2	9.2	6.5	9.9	9.1
Dec	8.3	7.9	9.1	8.1	7.1	8.7	5.4	8.7	8.8
Ave	8.6	7.8	8.4	8.0	7.7	8.7	7.3	9.1	8.3

Source: GAMA

Table 3-4: Average Solar Insolation

Month	Insolation Levels (kWh/m ² /day)		Socotra Island
	High	Low	
Average	6.6 – 8.8	5.2 – 5.4	6.6
January	6.0 – 6.2	4.1 – 4.6	5.6
February	6.4 – 6.7	4.2 – 4.6	6.6
March	6.6 – 7.2	4.8 – 5.2	7.3
April	6.6 – 7.3	5.5 – 5.6	7.5
May	7.0 – 7.7	5.9 – 6.2	7.4
June	7.0 – 7.5	5.4 – 5.8	7.0
July	6.4 – 6.6	4.8 – 5.4	7.0
August	6.2 – 6.6	4.5 – 5.0	7.0
September	6.6 – 6.9	4.8 – 5.2	7.1
October	6.6 – 7.0	5.3 – 5.6	8.6
November	6.4 – 6.5	5.0 – 5.2	5.9
December	5.8 – 6.0	4.4 – 4.6	5.4

1MW PV Pilot project of Socotra Island

1- Procedure

- Discusses the idea with boss .
- Make plan for preparing the related documents (tenders , others)
- Searching for financing or fund.
- Call for requesting proposal from companies.
- Evaluating the proposals
- Start construction work

2- Goal

- Have start a RE police framework

3- Possible Obstacle

- Instability situation, lack of finance, grid problems, lack of experts

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Average relative humidity (%)	20	21	24	27	29	29	28	27	27	25	22	21	25

Source: Climatic Research Unit, University of East Anglia¹⁰⁰

End of report