

WIND ENERGY RESOURCE SURVEY IN INDIA - VIII

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*Prepared under a project funded by the
Ministry of New and Renewable Energy,
Government of India
New Delhi*



**CENTRE FOR WIND ENERGY TECHNOLOGY
CHENNAI**

Wind Energy Resource Survey in India - VIII

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The “Wind Energy Resource Survey in India – VIII” project funded by the Ministry of New and Renewable Energy (MNRE), Government of India.

Rs. 2500.00

Printed by M/s. Surya Adsystems Private Limited, Chennai.

ISBN 978-81-909823-1-3

Printed in India 2012

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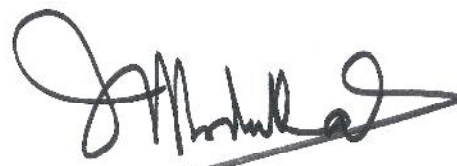
मंत्री
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NEW AND RENEWABLE ENERGY
GOVERNMENT OF INDIA

MESSAGE

I am delighted to learn that Centre for Wind Energy Technology (C-WET), Chennai is bringing out the eighth volume of the Handbook on Wind Energy Resource Survey in India.

The availability of accurate and readily accessible wind data is a pre-requisite for the development and growth of the wind power sector. Our Ministry had launched the National Wind Resource Assessment Programme in the year 1986; the programme still continues and is now implemented by C-WET in association with State Nodal Agencies. The data so generated is being published by C-WET in the form of a Wind Energy Resource Survey in India hand book.

I understand that seven volumes of Wind Energy Resource Survey in India have been published so far. Data from a total of 234 stations have been published in these volumes. This is a huge database. This database has been made possible by the combined efforts of numerous scientists and field staff of C-WET. I congratulate them for this effort. I also hope that this will prove useful to the stakeholders and will effectively serve its objective of driving the growth of the wind sector in India faster and better.



(Farooq Abdullah)



गिरीश भा० प्रधान
Gireesh B. Pradhan



सचिव
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SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY

30th Jan. 2012

FOREWORD

The availability of adequate wind resource data is significant in determining the techno-economic viability of a wind power project. In order to facilitate the stakeholders with authentic knowledge of wind availability in the country, the data collected under wind resource programme is published in the handbook form. The first book named Wind Energy Resources Survey in India was published in 1990 by the then IITM, FRU, Bangalore. Since then, a total of seven volumes containing wind data from 234 stations have been published in the form of hand books.

The eighth volume of the handbook being published by C-WET contains the data from 76 stations for 10 states which includes the details on the parameters like monthly wind speed, wind direction, wind power density etc. I am very glad to note that this data book publication would be valuable information on wind statistics for all stakeholders.

As the current technology brings up the wind turbine of higher hub heights in the range of 80-120 m, and land use pattern was not considered in the previous assessment, it is necessary to know the potential at higher hub heights with the details of actual land availability. Recently the Ministry has initiated a programme for measurement of wind energy at 100 m level for the wind potential states.

I congratulate all the scientists and other colleagues involved in this activity and assure the continued support of the Ministry of New and Renewable Energy.

(Gireesh B. Pradhan)



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पवन ऊर्जा प्रौद्योगिकी केन्द्र
(नवीन और नवीकरणीय ऊर्जा मंत्रालय (एनएनआरई) के अधीन स्वायत्त अनुसंधान एवं विकास संस्था)
CENTRE FOR WIND ENERGY TECHNOLOGY
[An Autonomous R & D Institution under the Ministry of New and Renewable Energy (MNRE)]
भारत सरकार / GOVERNMENT OF INDIA



डॉ. एस. गोमतिनायगम
कार्यकारी निदेशक
Dr. S. GOMATHINAYAGAM
Executive Director

PREFACE

This volume is the eighth in the series of publication on "Wind Energy Resource Survey in India" prepared on behalf of the Ministry of New and Renewable Energy (MNRE), Government of India by C-WET.

The first four volumes were printed and published in 1990, 1992, 1994 and 1996 by Allied Publishers, New Delhi. The fifth volume was published in 1998 by the erstwhile Bangalore based Field Research Unit of Indian Institute of Tropical Meteorology, Pune. The sixth and seventh volumes in this series were published in 2001 and 2005 by the Centre for Wind Energy Technology, Chennai. All the data that had gone into these volumes were collected from dedicated wind monitoring stations all over the country that were operated and maintained by C-WET and the erstwhile Field Research Unit of Indian Institute of Tropical Meteorology based in Bangalore in close association with the concerned state nodal agencies under MNRE sponsored projects.

The data for the eighth volume was compiled and processed at the Centre for Wind Energy Technology (C-WET). Data from the seventy six wind monitoring stations spread over twelve states and one UT have been published in this volume. Each of the monitoring station location has been marked in the respective district map to facilitate the user of the handbook. Important details are given in graphical forms also for thirty six stations.

It may not be out of place here to acknowledge all the foundation work carried out by so many scientists, engineers and administrators who have contributed to this inter-state co-operative exercise that has stood the test of time. Beginning with a determined Miss A. Mani the mantle was carried forward seamlessly by Dr. S. Rangarajan. The list of contributors is growing with every passing year. The Ministry has been very flexible and result oriented. Successive Secretaries of Ministry of New and Renewable Energy Sources have shown understanding and commitment to this grass roots level activity and provided full support. Wind Resource Assessment Unit has taken great pains to compile, discuss, rework tables and write ups to present data objectively. Thanks to all those who executed met-mast installation, wind data collection & analysis and to their collective effort, today we are in possession of one of the best databases on wind resources for India, which supplements with measured wind data for use along with field validated meso scale based Indian Wind Atlas published in 2010.

I request the users of the book to feel free to write to us with any suggestions on the content or presentation.

(S. Gomathinayagam)

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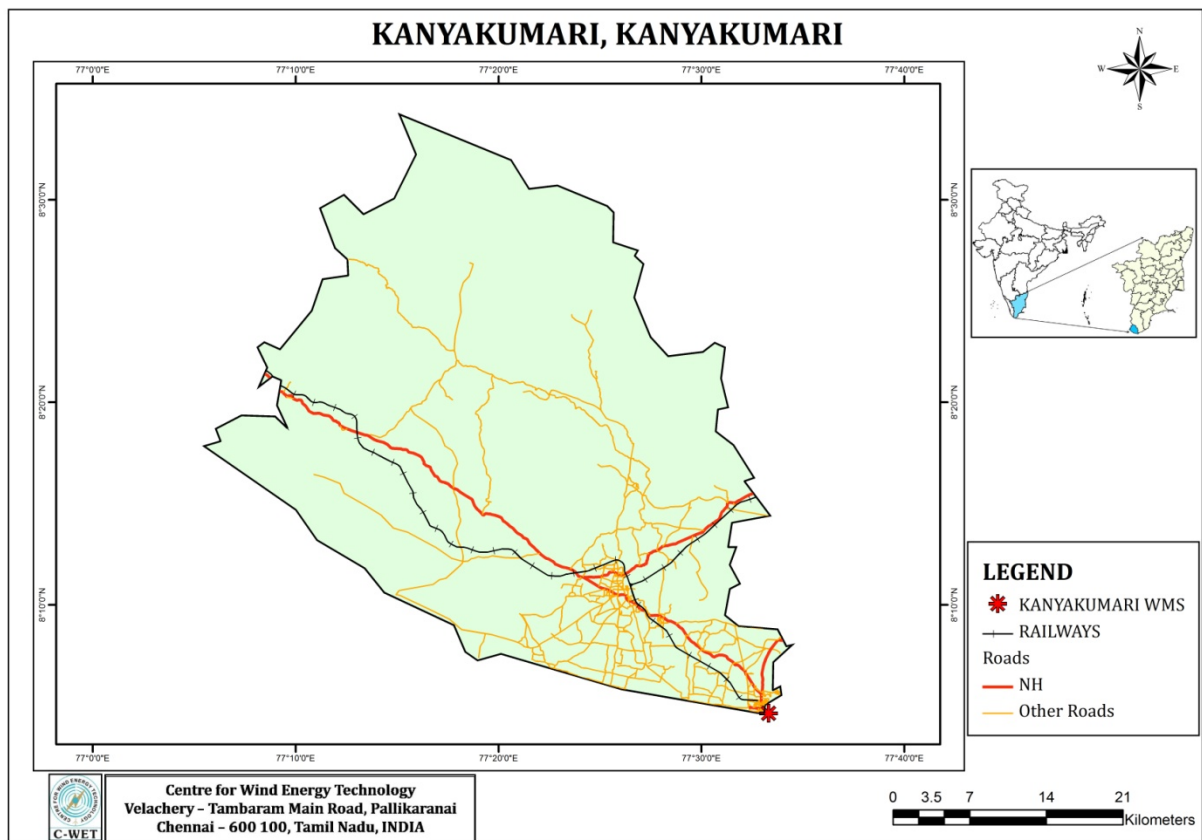
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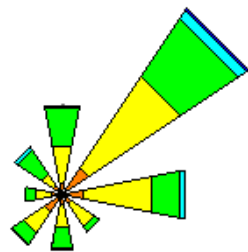
KANYAKUMARI, TAMILNADU

Site Description

Site Name	:	Kanyakumari
State	:	Tamil Nadu
District	:	Kanyakumari
Taluk	:	Nagercoil
Latitude	:	08° 04' 38.98" N
Longitude	:	77° 33' 19.08" E
Elevation	:	5m amsl
Period of measurements	:	January 2004 – December 2004
Met mast height	:	30m
Data Logger	:	NRG Symphonie



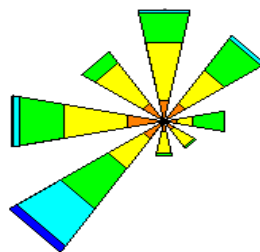
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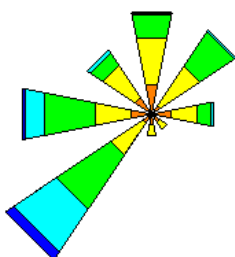
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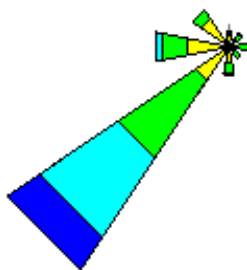
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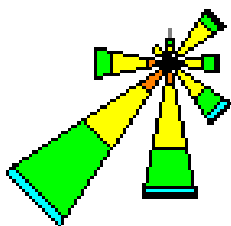
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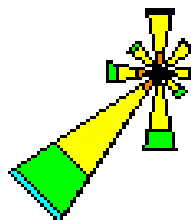
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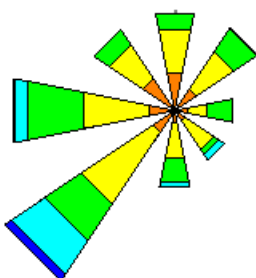
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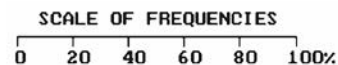
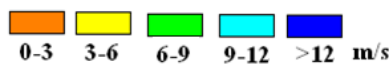
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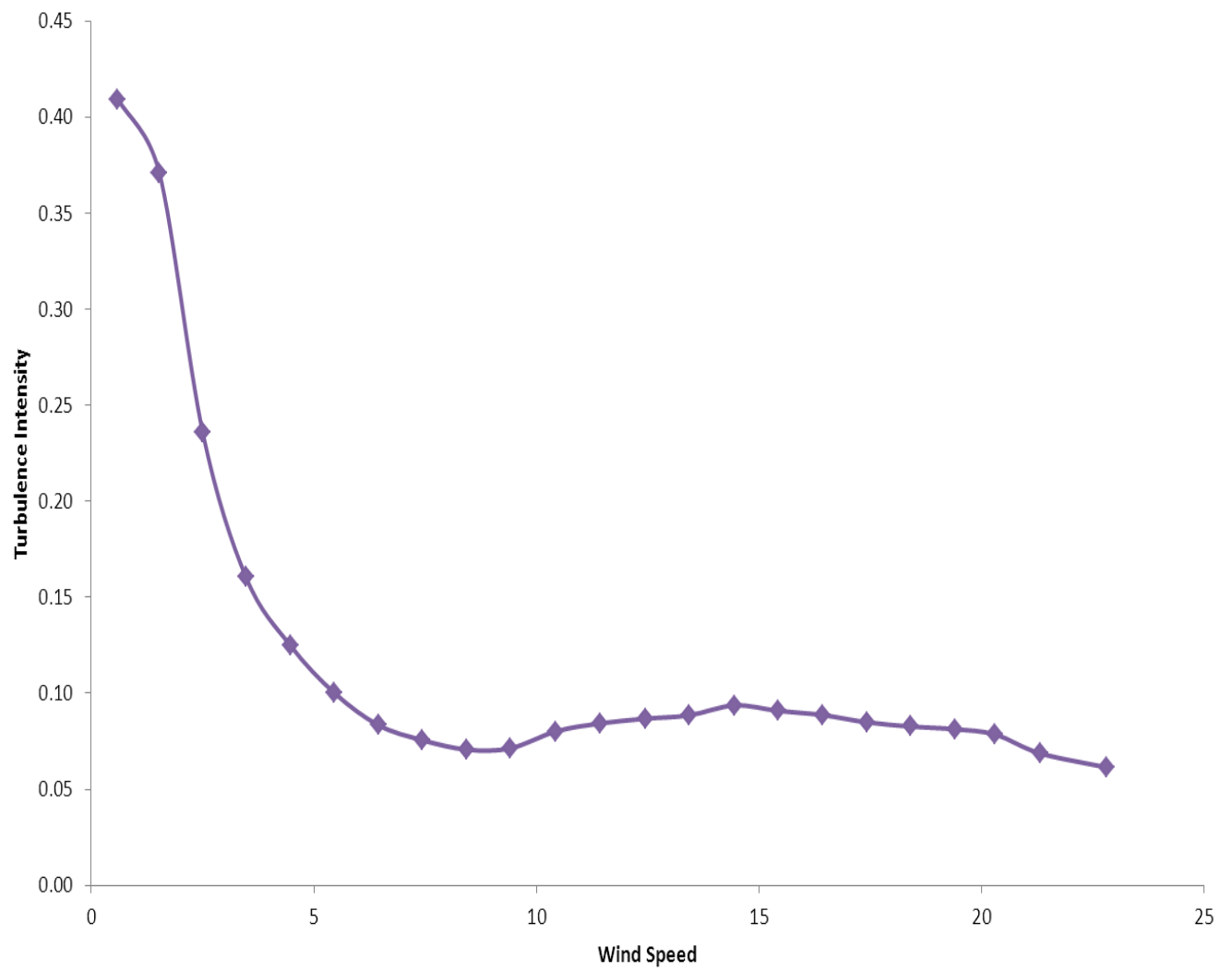
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DEC



WIND ROSES FOR AKAL (MAY 2010 TO APR 2011)



Averaged Wind Speed Vs Turbulence Intensity at Jagmin (120m)