

# Project Experiences

## Other Countries

● Comprehensive analysis on introduction and dissemination of photovoltaic power generation technology for developing countries / JICA ~ JV of Private Company

## Moldova

● Demonstration study for measurement, reporting and verification model for "the biomass heating using agricultural wastes as fuels" / GEC ~ Private Company

## Turkey

● Survey for preliminary environmental impact assessment to establish a waste-to-energy plant / METI ~ Private Company

## Iran

● Study for strengthening and improving air quality management in greater Tehran area / JICA  
● Data collection survey on air pollution control in Tehran municipality (Equipment) / JICA  
● Detailed planning survey on the project for capacity development on air quality control in Tehran municipality (PM apportionment study) / JICA

## Pakistan

● [GA] Constructing facilities and preparing equipment for meteorological radar and preparing a network for weather observations on the ground and in upper air / JICA

## UAE

● Provision of oceanographic phenomenon forecasts / Private Company

## Senegal

● Statistical analysis for ocean wave off the coast / JICA ~ Private Company

## Ghana

● Air quality survey on the construction project for a power barge in Ghana / JICA ~ Private Company

## India

● Computational work on reproduction for cases of strong wind occurred in the past, between Mumbai and Ahmadabad / RTRI

## Bangladesh

● [GA] Constructing facilities and preparing equipment for meteorological radar / ODA  
● [TCP] Increasing capabilities of weather observations and forecasts / JICA  
● Analysis of estimation of waves for the preparatory survey for the construction of coal-fired power plant in Chittagong, Bangladesh / JICA ~ Private Company

## Rwanda

● Project to create and support core regional enterprises / METI Tohoku

## Kenya

● Project viability study of atmospheric & hydrospheric information service for vessels in the Lake Victoria / METI ~ JV of Private Company

## Tanzania

● CDM project formulation study for jatropha biodiesel development in Tanzania / GEC ~ Private Company

## Mozambique

● Estimation for solar radiation and wind energy potential at Nanpula, Mozambique / JICA ~ Private Company

## China

● CDM study for the installation of equipment of idling stop for local buses in Jinan city of Shandong Province, China / GEC  
● [TCP] Japan-China Cooperation Center for meteorological disasters / JICA  
● Consultation for creating a prediction system for PM2.5 / Private Company  
● Wave statistics in straits and ocean areas between Hainan and Leizhou Bandao / Private Company

## Myanmar

● [GA] Constructing facilities and preparing equipment for meteorological radar and preparing a network for weather observations on the ground and in upper air / ODA  
● [GA] Preparing the management system of weather data for the aviation weather service / ODA  
● Evaluation of wind power and solar energy using numerical weather models for the study to estimate natural energy using mesh in Southeast Asia / NEDO

## Bhutan

● Detailed planning survey on the project for enhancement of national disaster management capacity in the Kingdom of Bhutan (Weather Forecasting & Warning) / JICA

## Nepal

● Creation of wind condition maps for Nepal / Private Company

## Kyrgyz

● Preparatory study on project for snowdrift protection on Bishkek-Osh Road / JICA ~ JV of Private Company

## Mongolia

● [GA] Constructing facilities and preparing equipment for meteorological radar / ODA  
● [TCP] Weather forecasts and data analysis / JICA

## Viet Nam

● Guidelines for preliminary estimations of carbon emissions reduction in urban transport projects / World Bank ~ Private Company  
● JCM methodology development for waste management sector / Private Company  
● [GA] Constructing facilities and preparing equipment for meteorological radar and preparing a network for weather observations on the ground and in upper air / ODA  
● Meteorological observations, numerical simulation of air flow and wave estimation for the feasibility study to introduce a nuclear power plant in Viet Nam / Private Company  
● Support on capacity building for environmental and social safeguard policies / JICA

## Korea

● Survey for wind conditions in Korea / Private Company  
● Survey for estimating solar power generation in Jeollabuk-do, Korea / Private Company  
● Provision of weather forecasts for world cities / Private Company  
● Distribution prediction of PM2.5 / Private Company

## Taiwan

● EIA for offshore wind power / Private Company  
● Provision of solar irradiance estimation data service / Government Institute  
● Provision of weather satellite imagery / Private Company  
● Provision of weather information / Central Weather Bureau of Taiwan  
● Provision of weather information / Civil Aeronautics Administration of Taiwan

## Philippines

● [GA] Constructing facilities and preparing equipment for meteorological radar / ODA  
● [GA] Preparing detailed designs to restore the meteorological radar system / ODA  
● Assistance for creating a national implementation plan (NIP) for environmental measures in transportation sector of the Philippines / MLIT

## Parau

● Provision of precipitation data / Private Company

## Samoa

● Project for capacity building on climate resilience in the Pacific / JICA ~ JV of Private Company  
● [TCP] Improvement program on weather observations and disaster countermeasures / JICS  
● [GA] Preparing a network for weather observations on the ground and in upper air / ODA

## Fiji

● [GA] Constructing facilities and preparing equipment for the special regional meteorological center / ODA

## ASEAN

● Assisting the formulation of National Implementation Plan (NIP) in the transport sector in accordance with AJ-APEIT / JICA ~ JTCA  
● Data collection survey for formulating a new AJ-APEIT / MLIT  
● Best practice study on natural disaster and traffic safety in the Transport Sector in accordance with AJ-APEIT / MLIT ~ JTCA  
● System creation for integrating and using observation data from GSMaP, Himawari and the ground in Southeast Asia / JAXA ~ RESTEC

## Indonesia

● Detailed survey and study for finding an assistant project for the efficient operation of cement carriers in Indonesia / NEDO ~ JV of Private Company  
● Ocean wave analysis for offshore wave in the ocean area of west Java / JICA ~ Private Company  
● Provision of precipitation data par watershed / Private Company

## USA

● Visit to the USA for verifying measures to prevent bird strikes at wind turbine sites / MOE

## El Salvador

● Creation of wind potential maps for the project to formulate a national master plan for renewable energy / JICA ~ Private Company

## Cuba

● Electricity sector master plan study for development of renewable energy / JICA ~ JV of Private Company

## Ecuador

● Survey for creating a detailed plan to increase monitoring capabilities for earthquakes causing tsunami / JICA  
● Data collection and verification survey for the weather observation system, the warning system and weather-related disasters in Ecuador / JICA

## Brazil

● Study for basic research to develop weather businesses in overseas / MLIT ~ JTCA

## Argentina

● Evaluation of wind power potential / NEDO ~ Research Institute

## Chile

● Provision of models and instruction on data analysis for building air dispersion simulation models in Chile / JICA

## Malaysia

● Rainfall analysis for preparing the high-speed railway / Private Company  
● Study on the use of meteorological information / Private Company

## Australia

● Provision of weather information for the breadbasket in Australia / Private Company

## Laos

● [GA] Constructing facilities and preparing equipment for meteorological radar / ODA  
● [TCP] Improvement program on meteorological and hydrological works / JICA  
● [GA] Global Telecommunications System, aviation weather service and preparing gauging stations / ODA

## Sri Lanka

● [TCP] Improvement of meteorological observation, weather forecasting and dissemination / JICA

## Thailand

● MRV Demonstration Study(DS) "Transport modal shift through construction of MRT system" / GEC ~ JV of Private Company  
● New Mechanism FS for development of MRT network in Bangkok, Thailand / GEC  
● CDM feasibility study for the transportation sector in Thailand / MOT Thailand ~ Khon Kaen University

## Mauritius

● [GA] Constructing facilities and preparing equipment for meteorological radar / ODA  
● [TCP] Meteorological observation, weather forecasting and warning capabilities / JICA



## Climate Change

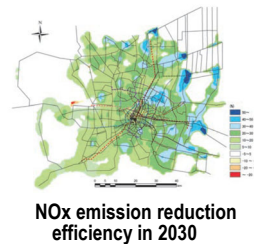


- **Project countries**  
Thailand, China, Tanzania and Moldova
- **Applied technologies**
  - Long-term forecast
  - Analysis for interannual variability
  - Analysis for greenhouse gas emission

**Key Words:** IPCC, Global Warming and CDM

JWA has been working on climate change issues for a long time on the back of professional meteorological knowledge. JWA conducts surveys and studies widely for predicting the effects of climate change and on mitigation and adaptation measures for climate change using the best mix of technologies on weather, environment, disaster prevention and oceans. JWA had conducted surveys for creating CDM business in several countries.

### MRV Demonstration Study (DS) "Transport Modal Shift through Construction of Mass Rapid Transit (MRT) System" / Global Environment Centre Foundation (GEC) ~ Joint Venture of Private Company



This was a Global Environment Centre-funded study for demonstrating the Joint Crediting Mechanism (JCM) methodology to reduce greenhouse gas emissions by a modal shift from existing transportation systems (such as buses and passenger cars) to a new MRT system in Bangkok. JWA carried out a study for reducing greenhouse gas emissions with considering not only the reduction of fuel consumption by the modal shift but also increasing fuel efficiency through improving traffic flows on roads around the MRT.

## Environment and Air Quality



- **Project countries**  
Iran, the Philippines, Thailand and China
- **Applied technologies**
  - Observation and analysis for air pollution
  - Air quality simulations
  - Appropriate installation of monitoring stations

**Key Words:** PM2.5, Air Quality Simulations and Air Pollution

JWA contributes to implementing environmental impact assessment for the construction of power plants in overseas, as JWA has many achievements in environmental monitoring and atmospheric diffusion simulations in Japan. JWA also provides technical support such as strengthening the management system of air quality and creating national policies through dispatching environmental and air quality experts to undeveloped countries.

### Assisting the formulation of National Implementation Plan (NIP) in the Transport Sector in Accordance with AJ-APEIT /MLIT Japan



Electric Jeepney

This was a project funded by the Ministry of Land, Infrastructure, Transport and Tourism, the government of Japan. The project aimed to create an action plan for traffic environment between Japan and ASEAN from 2016 to 2021. JWA surveyed measures that each ASEAN country developed to introduce high-quality public transportation, and created indexes to evaluate those measures based on the current conditions of each country. For the Philippines, Vietnam and Cambodia, JWA visited those countries and conducted field surveys and hearings to government officials to understand the current situation of public transportation in those countries.

## Renewable Energy



- **Project countries**  
Myanmar, Nepal and Mozambique
- **Applied technologies**
  - Surveys for wind conditions and amount of solar radiation
  - Creation of database for wind conditions and amount of solar radiation
  - Predictions for power generation amount
  - Environmental Impact Assessment

**Key Words:** Wind Power Generation and Solar Power Generation

JWA provides a one-stop service for renewable energy including wind power generation and solar power generation. JWA's one-stop service includes surveys for the amount of potential renewable energy, appropriate places to install equipment, Environmental Impact Assessment, and predictions for power generation amount. JWA provides consulting services for various countries using weather forecast technologies. JWA estimates wind conditions and the amount of solar radiation using weather satellite images and weather models in a case that on-site data is unavailable.

### Development of the Typical Mini Grid Design Supportive Tools in the World / New Energy and Industrial Technology Development Organization (NEDO)



Screen image from the database on the amount of solar radiation in Asia

This was a project funded by NEDO. The project aimed to develop a support tool for designing a solar power generation system for renewable energy enterprises. The renewable energy enterprises will have chances to expand their business in Asia using this support tool. As the developer of weather database, JWA collected and organized weather data by NEDO and improved the database for the amount of solar radiation in Asian countries.

## Disaster Prevention



- **Project countries**  
Sri Lanka, the Philippines and Bangladesh
- **Applied technologies**
  - Rainfall forecasts by weather models and radars
  - Flood and Tsunami simulations
  - Forecast system for landslide disasters

**Key Words:** ODA, Weather Radars and Natural Disasters

JWA has been implementing capacity building for weather bureaus in undeveloped countries for nearly 30 years through Japan's Official Development Assistance (ODA). JWA has been providing supports to install weather radars and technical cooperation for weather forecasts and data analysis. JWA also analyzes the characteristics of rainfall for areas where transportation infrastructure such as high-speed railways to be designed.

### The Programme for the improvement of the Weather Forecasting System and Meteorological Warning Facilities (Technical Cooperation Project)



Disaster prevention education using the animation at school

This was an official development assistance grant project funded by Japan International Cooperation System for Samoa. Samoa is an island country in the South Pacific Ocean and it is fragile to climate change. JWA supported to install Wind Profilers and provided technical cooperation including weather observations and forecasts and the improvement of disaster prevention information. JWA created an animation on disaster prevention to raise public awareness and to have the public use improved disaster prevention information efficiently from the Samoa Meteorology Division. JWA provided disaster prevention education at elementary and junior high schools in Samoa, where JWA conducted on-the-job training for the Samoa Meteorology Division officials at the same time.

## Oceans

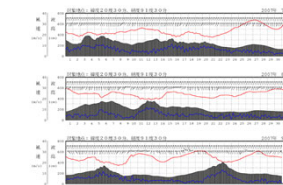


- **Project countries**  
Senegal, Indonesia and Viet Nam
- **Applied technologies**
  - Wave and ocean simulations
  - Database for estimation of waves
  - Weather routing services

**Key Words:** Waves, High Tides and optimum Sea Routes

JWA analyzes waves for spots where port facilities to be designed. JWA develops a database for estimating waves for the whole world. JWA also provides a support system to create optimum sea route plans for ships and conducts the simulations of oil diffusion using ocean-current simulations.

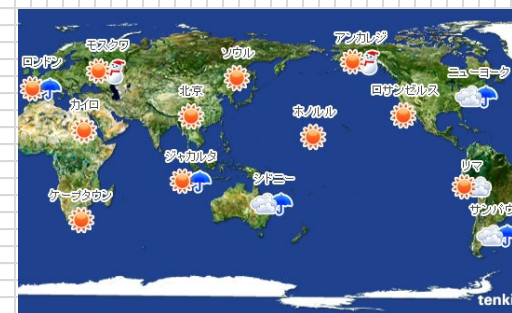
### Preparatory Survey on the Construction of the Coal-Fired Power Plant in Chittagong Bangladesh (Wave Prediction)



Time-sequence diagram for waves and winds along the Bay of Bengal

This was a project funded by the Japan International Cooperation Agency. In order to construct structures on the coast, it is necessary to set design wave height based on wave conditions on site. There was not much observed wave data for the Bay of Bengal bordering Bangladesh. Therefore, JWA analyzed calmness and extreme value statistics using an estimation database for global waves to compute ordinary waves and a design wave height along the Bay of Bengal, before constructing the coal-fired power plant in Chittagong.

## Weather



- **Project countries**  
Taiwan and South Korea
- **Applied technologies**
  - Weather forecasts
  - Provision of weather contents
  - Weather satellite images

**Key Words:** Weather Forecasts and Media

JWA provides weather forecasts for countries around the world through "tenki.jp" that is a dedicated weather forecast site operated by JWA. JWA also provides original weather information and manipulated satellite images to weather bureaus and private weather companies in overseas.

### Weather Forecast for Agricultural Sector/ Private Company



Image: breadbasket

This was a project requested by a private company. Large scale weather phenomena such as El Nino give big impacts on crop production in each country. As a reference for the customer, JWA provided long-range weather forecasts for the breadbasket in Australia to understand the trends of crop production. JWA also provided a lecture on how the decline of El Nino phenomenon affects target areas.