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Climate Change Projects

Reference List

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DNV has specialised in delivering independent third party services for climate change activities and has over the last 6 years been engaged in a number of validation, verification and certification activities related to CDM and JI projects and the verification of corporate emissions.

The following pages show a selection of our most recent Climate Change Projects.

Best Verification /
Certification Agency
GHG Emission, Global

Environmental Finance,
December 2004 - January 2005

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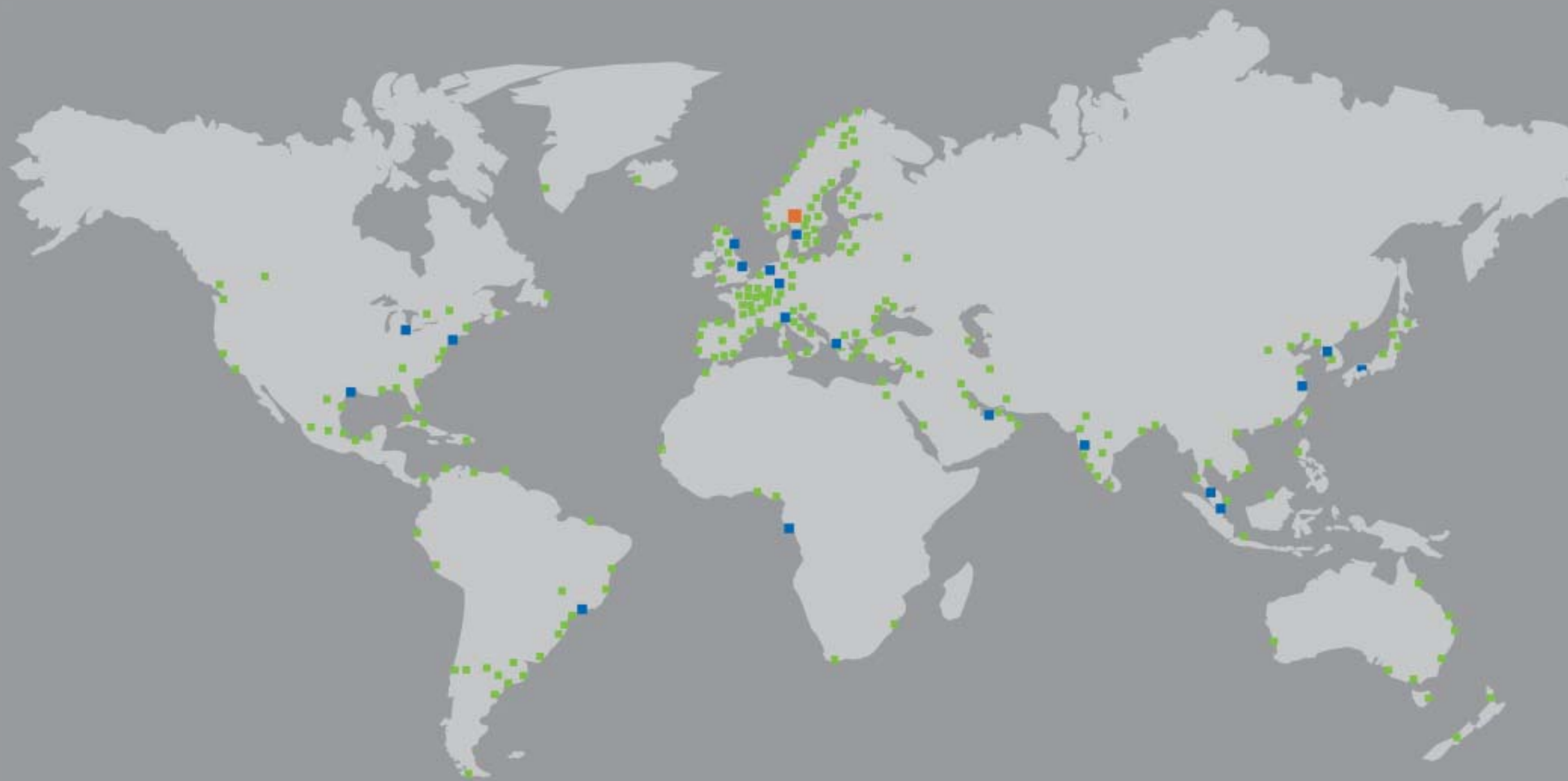
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Clean Development Mechanism Projects

South America

Aconcagua Chile	Validation of the Lepanto Landfill Gas Capture and Flaring Project
Agrosuper Chile	Validation of the Methane Capture and Combustion from Swine Manure Treatment Project
AgCert Brazil	Initial Verification of the Granja Becker Swine Manure GHG Mitigation Project
Arauna Group Brazil	Validation of the Anaconda Landfill Capture and Flaring Project
Bandeirantes Brazil	Validation of the Bandeirantes Landfill Gas to Energy Project
CAEMA Peru	Validation of the Paramonga CDM Bagasse Boiler Project in Agro Industria Peruana S.A.
Caieiras Brazil	Validation of the Caieiras Landfill Gas Capture and Flaring Project
Celulosa Arauco y Constitución Chile	Validation of the Trupán Biomass Power and Heat Project
Celulose Irani Brazil	Validation of the Irani Biomass Electricity Generation Small-Scale Project
COBEE Bolivia	Validation of the Santa Rosa Hydropower Project
CORN Products Brazil	Validation of a Natural Gas-Fired Cogeneration Project in a Corn Processing Plant
Ecoenergy Brazil	Validation of the three Bagasse-Based Co-Generation Projects, Jalles Machado, Lucélia and Barralcool
Ecoenergy / ESTRE Brazil	Validation of the Landfill Gas to Energy Project at the Paulinia Landfill

Clients & Descriptions

Validation of the Rickli Biomass Electricity Generation Small-Scale Project	EcoSecurities Brazil
Validation of the MARCA Landfill Gas to Energy Project at Cariacica, Espirito Santo State	EcoSecurities / MARCA Ltd Brazil
Validation of the Gerdau Carbonisation Improvement Project for Steel Factories This project introduces a new technology to reduce the methane emissions associated with the production of charcoal.	Gerdau Brazil
Validation of the Santa Cruz Landfill Gas Combustion Project	Grontmij and SUMA Bolivia
Validation of the Copiulemu and Cosmito Landfill Gas Utilisation Projects	Group Machiels / EcoSecurities Chile
Validation of the Imbituva Biomass Power Generation Plant Small-Scale Project	Imbituva Brazil
Validation of the Inácio Martins Biomass Small-Scale Project	Inácio Martins Brazil
Validation of the Landfill Gas to Energy Project at Lara Landfill, Mauá	Lara Co-Geração e Comércio de Energia Ltda. Brazil
Validation of the GHG Emission Reductions at ALUAR Alumínio Project The project intends to install a new algorithm in the Automatic Control System (ACS) in 400 smelting pots.	MGM International Argentina
Validation of the Metrogas Methane Recovery from Gas Pipeline Rehabilitation Small-Scale Project, Metropolitan Area of Santiago	MGM International Chile
Validation of the Metrogas Package Cogeneration Project for an Industrial Plant	MGM International Chile
Validation of the La Vuelta and La Herradura Hydroelectric Power Plant Projects (31.5 MW)	MGM International Colombia
Validation of Fuel Switching Project at the Graneros Plant of Nestlé Chile S.A.	MGM International Chile

South
America

Clean Development Mechanism Projects

South America

Clients & Descriptions

MGM International Brazil	Validation of the Run-Off-River Grid Connected Aquarius Hydroelectric Small-Scale Project at Itiquira, Mato Grosso State
Netherlands Clean Development Facility (NCDF) Colombia	Validation of the Rio Amoyá Run-Off-River Power Project
Onyx Brazil	Validation of the Onyx Landfill Gas Capture and Flaring Project at the SASA Landfill Facility in Tremembé, Sao Paulo
Santa Cândida Brazil	Validation of the Expansion of the Bagasse-Based Cogeneration Facility Project of Santa Cândida Sugar Mill
São João Brazil	Validation of the São João Landfill Gas to Energy Project (20 MW)
Van der Wiel Holding BV Argentina	Validation of Landfill Gas Extraction in the Landfill Villa Dominico Project in Buenos Aires
Pacific Consultants International Argentina	Validation of the Antonio Moran Wind Power Small-Scale Project
Vallourec & Mannesmann Brazil	Validation of the UTE Barreiro SA Small-Scale Project The project intends to generate part of the electricity (12.9 MW) required by Barreiro's Steel Plant, utilising blast furnace gas and wood tar (both deriving from renewable charcoal).
VEGA Bahia Tratamento de Resíduos S.A. Brazil	Validation of the Salvador Bahia Landfill Solid Waste Incineration and Composting Project
World Bank Chile	Validation of the Hornitos and Quilleco Hydropower Run-Off-River Projects in the Aconcagua Region
World Bank, Carbon Finance Ecuador	Validation of the Abanico and Sibimbe Run-Off-River Hydroelectric Power Plant Projects
World Bank, Carbon Finance Argentina	Validation of the Olavarria Landfill Capture and Flaring Project
World Bank, Carbon Finance, Colombia	Initial Verification and Subsequent Periodic Verifications of Emission Reductions from the Jepirachi Wind Farm Project

Validation of the Nova Gerar Landfill Incineration and Composting Project	World Bank, Carbon Finance Brazil
Validation of the Plantar Renewable Energy Project A pig-iron production project with several GHG components: Carbon sequestration, renewable energy use via charcoal, and CH ₄ mitigation in charcoal production.	World Bank, Carbon Finance Brazil
Validation of the Chacabuquito Run-Off-River Hydropower Project in the Aconcagua Region	World Bank, Carbon Finance Chile
Validation of the Landfill Gas Utilisation Project	Urquidi, Riesco & Co Chile

South
America

Clean Development Mechanism Projects

Central America

EcoSecurities Nicaragua	Validation of the San Jacinto Geothermal Power Plant Project
EcoSecurities, 2E Carbon Access Honduras	Validation of six Small-Scale Run-Off-River Hydro Plant Projects in Cuyamel, La Gloria, Esperanza, Cuyamapa, San Carlos and Cortecito
Finnish CDM/JI Pilot Programme Honduras	Validation of four Hydropower Small-Scale Projects, Cecepaca, Yojoa, Rio Blanco and Zacapa of AHPPER
Grupo Saret Costa Rica	Validation of the Rio Azul Landfill Gas Capture and Utilisation Project
MGM International Guatemala	Validation of the Hidroeléctrica Candelaria Power Plant Small-Scale Project of the Trece Aguas River
MGM International Mexico	Validation of the Petrotekem Energy Integration Project The project involves fuel and electricity savings as well as fuel switching and the installation of new electricity self-generation equipment.
The Netherlands SenterNovem Costa Rica	Validation of the Peñas Blancas Hydroelectric Power Plant Project (35.4 MW)
World Bank, Carbon Finance Mexico	Validation of the INELEC Small-Scale Hydropower Projects, Benito Juarez, Trojes and Chilatan
World Bank, Carbon Finance Mexico	Validation of the INELEC El Gallo Hydropower Project
World Bank, Carbon Finance Guatemala	Validation of the El Canada Hydropower Power Plant Project
World Bank, Carbon Finance Nicaragua	Validation of the Gemina Rice Husk Grid-Connected Power Plant Project
World Bank, Carbon Finance Mexico	Pilot Verification and Certification of the ILUMEX Project: Efficient Lighting and GHG Emissions Reduction Together with CICERO in Norway and ICF Kaiser in the US, DNV performed a pilot certification of carbon offsets in a GEF financed AIJ project to introduce more efficient light bulbs.

Clean Development Mechanism Projects

India

Validation of the 5 MW Grid-Connected Dehar Hydropower Plant Small-Scale Project in Himachal Pradesh State	Astha Projects Ltd. India
Validation of a 22 MW Bagasse-Based Cogeneration Plant Project in Karnataka	Sri Chamundeswari Sugars Ltd. India
Validation of a 4.5 MW Maujhi Hydropower Plant Project in Maujhi Khad in Himachal Pradesh State	Dharamashala Hydro Power Ltd. India
Validation of two 58.2 MW and 16.8 MW Wind Farm Projects in Chitradurga, Karnataka and in Jaisalmer, Rajasthan	Enercon Ltd. India
Validation of two Small-Scale Wind Farm Projects under the CERUPT Programme in the State of Tamil Nadu	Factor Management + Consulting, Switzerland India
Validation of nine Biomass Gasifier-Based Power Plants totalling around 2 MW proposed by Women for Sustainable Development	Finnish CDM/JI Pilot Programme India
Validation of the Parpikala Mini Hydropower Plant Small-Scale Project (9 MW) proposed by Women for Sustainable Development.	Finnish CDM/JI Pilot Programme India
Validation of a Project Comprising Changing Mode of Transport from Roadways to Railways Small Scale CDM Project for Cosmetics Factories in Assam.	Hindustan Lever Ltd. India
Validation of an Aluminium Smelter PFC Reduction Project in the Hirakud Plant of INDAL in Orissa The project intends to install Point Break Feeders (PBF) in 468 Horizontal Stud Soderberg (HSS) cells.	INDAL (Indian Aluminium Company Ltd.) India
Validation of a 7.5 MW (gross) Nonconventional Renewable Sources Biomass Power Project in Nizamabad District of Andhra Pradesh	Indur Green Power Private Ltd. India
Validation of an Optimisation of Steam Consumption by Retrofit Measures in Blow Heat Recovery System CDM Project at ITC Bhadrachalam The project intends to upgrade the design of existing blow heat recovery system at the pulp digester mill to recover additional flash steam available at disposal and increase the efficiency of heat exchange between flash steam and fresh water.	ITC Paperboards and Speciality Papers Division (PSPD) India

Central
America

India

Clean Development Mechanism Projects

India

Clients & Descriptions

ITC Paperboards and Speciality Papers Division (PSPD) India	Validation of Demand-Side Energy Efficiency Programmes for Specific Technologies at ITC Bhadrachalam Pulp and Paper Making Facility in India
Jaiprakash Associates Ltd. India	Validation of an Energy Efficiency Project in Cement Plant in the Rewa and Satna District of Madhaya Pradesh
KMS Power Private Ltd. India	Validation of a 6 MW Biomass Power Plant Project in Andhra Pradesh
Nahar Spinning Mills India	Validation of a 3 MW Rice-Based Biomass Power Plant Project
Narayanapur Power Company (P) Ltd. India	Validation of a 6 MW Grid-Connected Hydropower Plant in Somanamaradi, Karnataka
Oswal Woolen Mills India	Validation of a 3 MW Rice-Based Biomass Power Plant Project
Perpetual Energy Systems Ltd. India	Validation of a 7.5 MW Biomass Power Plant Project in Andhra Pradesh
Raghu Rama Renewable Energy Ltd. India	Validation of a 18 MW Biomass Power Plant Project in Tamil Nadu
Satya Maharshi Power Corporation Ltd. India	Validation of a 6 MW Biomass Power Plant Project in Guntur District of Andhra Pradesh
Southern Biofuels (P) Ltd. India	Validation of a 30 TPD Biodiesel Project in Andhra Pradesh The project intends to manufacture biodiesel from edible / non-edible oils derived from tree borne oil bearing seeds, fatty acids, animal fats etc. for substituting petro-diesel or using as a blend in petro-diesel.

Validation of the TA Sugars Proposed Sugar Cogeneration Plant and Fuel Switch Project at four Sugar Plants in Tamil Nadu	World Bank, Carbon Finance India
Validation of the Municipal Solid Waste Treatment Project in Lucknow The project utilises methane generated from waste treatment to generate power (5.6 MW) and organic fertiliser.	World Bank, Carbon Finance India
Validation of a Coke Dry Quenching Project The project intends to replace current steam generation with the steam generated by a CDQ (coke dry quenching process) boiler.	Confidential client India

India

Clean Development Mechanism Projects

Asia

Clients & Descriptions

Confidential client China	Validation of the Yantai Coal Boiler Energy Efficiency Small-Scale Project for Domestic and Industrial Heating	Validation of a Fuel-Switch Project in a Power Station Boiler in Thu Doc	Confidential client Vietnam
Confidential client China	Validation of a N₂O Abatement Project An industrial project implementing N ₂ O-reduction technology in an adipic acid plant.	Validation of the Rang Dong Associated Gas Recovery and Utilisation Project	Japan Vietnam Petroleum Vietnam
Sumitomo Corp. China	Validation of Coalmine Methane Capture and Utilisation Project	Validation of the Jinlin Wind Power Plant Project in Taonan	CREIA China
Confidential client Malaysia	Validation of a Waste Heat Recovery Power Generation Project in a Cement Plant	Validation of the Small-Scale Surat Thani Biomass (Empty Fruit Bunches) Power Plant Project (9.9 MW)	Mitsubishi Securities Ltd. Thailand
Confidential client Malaysia	Validation of a Biomass (Agricultural Waste) Power Generation Project	Validation of the Dan Chang Biomass-Energy Cogeneration Project at the Sugar Mill of Mitr Phol Sugar Corporation in Dan Chang, Suphan Buri Province	Dan Chang Bio-Energy Co., Ltd. Thailand
Confidential client Malaysia	Validation of a Small-Scale Hydropower Plant Project	Validation of the Kunak Biomass to Energy Project at the TSH Kunak Palm Oil Mill	Danish Energy Management Malaysia
Confidential client Mongolia	Validation of a Small-Scale Solar Energy Project for Rural Electrification (Use of Photovoltaic Panels)	Validation of the Energy Efficiency Improvement Project in Hou Ma City, Shanxi Province	Danish Ministry of Foreign Affairs China
Confidential client Philippines	Validation of a Small-Scale Wastewater Treatment Project	Validation of the Yuzaikou Hydropower Plant Small-Scale Project	EcoSecurities China
Prototype Carbon Fund Philippines	Validation of the NorthWind Bangui Bay 33 MW Wind Power Plant Project in Bangui Bay	Validation of the Anding Landfill Gas Recovery and Utilisation Project The project involves installation of a landfill gas recovery system at the site and the use of the gas as fuel to evaporate leachate in a leachate evaporator unit (LEU).	Energy Systems International China
Prototype Carbon Fund Philippines	Validation of the Burgos 40 MW Wind Power Plant Project in the Municipality of Burgos	Validation of the Pansan Coal Mine Methane Utilisation and Destruction Project The project at Pansan consists of three main activities replacing the current system of venting the drained coal mine methane gas: 1) utilisation by households, 2) utilisation for power generation and 3) destruction by flaring.	Huainan Coal Mining Group China
Prototype Carbon Fund Philippines	Validation of the 20 MW Nasulo Geothermal Project in the Municipality of Valencia, Province of Negros Oriental	Validation of a Wind Plant Project in Zhangbei	IT Power China
Confidential client Thailand	Validation of a Landfill Methane Collection and Utilisation Project	Validation of the Rubber Wood Waste Fuelled Power Plant Project	J-Power Thailand
Confidential client Thailand	Validation of three Wastewater to Energy Projects		

Clean Development Mechanism Projects

Asia

Clients & Descriptions

Lafarge Malaysia	Validation of a Project using Palm Kernel Shells in Cement Manufacturing	Periodic Verifications of the Ulsan HFC23 Decomposition Project	INEOS Fluor Japan
Mitsubishi Securities Cambodia	Validation of the Angkor Rice Husk Co-Generation Power Project (1.5 MW) in the Kandal Province	Validation of the Coalmine Methane Utilisation Project at Nanshan Mine	Sumitomo China
Mitsubishi Securities Thailand	Validation of the ATB Rice Husk Biomass Power Plant Projects	Validation of a Bagasse-Based Power Generation Project for a Sugar Factory	TEPCO Indonesia
Mitsubishi Securities Thailand	Validation of the Jaroensompong Corporation Rachathewa Landfill Gas to Energy Project (1 MW)	Validation of two Biogas Small-Scale Projects in Rural Areas	World Bank, Prototype Carbon Fund Nepal
Mitsubishi Securities Malaysia	Validation of the Bumibiopower Methane Extraction and Power Generation Small-Scale Project This project intends to process palm oil effluent in an anaerobic digester and to utilise the produced biogas for electricity generation, mitigating methane emissions and displacing grid electricity.	Validation of a Fuel Switching Project (66 MW) from Heavy Oil to Natural Gas	Confidential client Vietnam
Mitsubishi Securities Malaysia	Validation of the Bumibiopower Biomass Power Plant Small-Scale Project using Waste from Palm Oil Mills	Validation of eight Swine Manure Treatment Small-Scale Projects	EcoSecurities Ltd. Philippines
Mitsubishi Securities Malaysia	Methodology Submission for a CO₂ Capture and Storage Project DNV reviewed and submitted the first CO ₂ Capture and Storage CDM methodology for the Methodology Panel's review and the Executive Board's approval.	Validation of eleven Swine Manure Treatment Projects	Confidential client Philippines
NEDO/ Mayekawa Manufacturing Vietnam	Validation of an Energy Efficiency Project in a Brewery		
Nuon China	Validation of the Shantou Dan Nan Wind Farm		
Pacific Consultants Indonesia	Validation of a Landfill Gas Recovery and Utilisation Project		
World Bank Carbon Finance China	Validation of the Jincheng Coal Bed Methane and Utilisation Project The project intends to capture the methane gas drained from the coal seam for safe coal mining operation and to utilise the gas for a 120 MW power plant, rather than venting it directly to the atmosphere.		
Rhodia South Korea	Validation of a N₂O Reduction Project in an Adipic Acid Plant		

Other World Regions

Clients & Descriptions

Corobrik
South Africa

Validation of the Lawley Fuel Switch Project from Coal to Natural Gas

ENI Italy
Nigeria

Validation of the Kwale-Okpai Power Plant Project in Nigeria

A gas-fired power plant project utilising associated gas that otherwise would have been flared from neighbouring oil fields.

Danish Environmental Protection Agency
Moldova

Validation of the Methane Gas Capture and Electricity Production Project at Chisinau Wastewater Treatment Plant

EcoSecurities/EcoTraders
Israel

Validation of the Hiriya Landfill Capture and Utilisation Project

World Bank Carbon Finance Business
Georgia

Validation of a Methane Leak Reduction from Natural Gas Pipeline in Georgian Project

Lafarge
Morocco

Validation of a 10.2 MW Wind Power Plant Small-Scale Project Providing Energy for Lafarge's Cement Plant

Mitsubishi Securities
Egypt

Validation of the Zafarana Wind Power Plant Project (120 MW)

Nesher Cement Enterprises
Israel

Validation of the Optimisation of Clinker Use in Cement Production Project in Nesher Cement Enterprises

The project intends to install a new state of the art grinding technology, a vertical mill which is capable of grinding clinker to finer particles. This enables to lower the percentage of clinker in cements due to the increase of the fineness of the grinding while maintaining the level of strength in the cement produced.

Pan-Ocean Oil Company
Nigeria

Validation of a Gas Fired Power Plant Project using Previously Flared Associated Gas

SMEC
Papua New Guinea

Validation of the Lihir Geothermal Power Plant Project

Office Chérifien des Phosphates (OCP)
Morocco

Validation of the Jorf Lasfar Heat Recovery Project From Sulphuric Acid Production at the Maroc Phosphore III-IV Site of Jorf Lasfar

Validation of the Essaouira Wind Power Plant Project (60 MW) in Cap Sim

Office National d'Electricité (ONE)
Morocco

Validation of the Rosslyn Brewery Fuel-Switching Project from Coal to Natural Gas and Biogas

MGM
South Africa

Validation of the Kuyasa Urban Housing Services Gold Standard Project

An energy efficiency and renewable energy project for urban housing in a township in South Africa. The project includes solar water heaters, energy efficient lighting and insulated ceilings for better thermal comfort. This project has achieved Gold Standard status.

South South North
South Africa

Validation of a Solid Waste Incineration and Composting Project

World Bank, Carbon Finance
Mauritius

JI Projects & AIJ Projects

<p>Confidential client Slovenia</p>	<p>Determination of a Co-Generation Plant JI Project for a Power Plant in Ljubljana</p>
<p>Confidential client Hungary</p>	<p>Determination of Energy Capture in High Pressure Gas Pipelines JI Project</p>
<p>Dalkia France Lithuania</p>	<p>Determination of a Biomass Energy Portfolio JI Project This is a bundle of renewable energy and energy efficiency projects (energy supply projects) implemented in 7 district heating plants across Western Lithuania: Palanga, Telsiai, Kybartai, Kelme, Kazlu Ruda, Marijampole and Vilkaviskis.</p>
<p>Danish Environmental Protection Agency Ukraine</p>	<p>Determination of the Landfill Gas Capture and Flaring JI Projects in Kharkiv Oblast and Donetsk Oblast</p>
<p>Danish Environmental Protection Agency Ukraine</p>	<p>Determination of a Landfill Gas Capture and Flaring JI Project in Kyiv Landfills No.1 and No. 5</p>
<p>Danish Environmental Protection Agency Bulgaria</p>	<p>Determination of N₂O Reductions at the Agropolychim Fertiliser Plant JI Project in Denvia The project intends to reduce the nitrous oxide N₂O emissions from the nitric acid production process by utilising a catalyst that converts N₂O into other products.</p>
<p>Danish Environmental Protection Agency Romania</p>	<p>Verification of the Emission Reductions achieved by the Sawdust 2000 Project The Sawdust 2000 project comprises the establishment of new biomass based district heating systems in five Romanian towns Vlahita, Gheorgheni, Huedin, Vatra Dornei and Intorsura Buzaului. The project is expected to reduce CO₂ emission by substituting fossil fuels and to avoid methane emissions by removing wood residue stockpiles.</p>
<p>EEZ Sp. z o.o. Poland</p>	<p>Determination of the 50 MW Wind Farm Power Plant JI Project in Tymien, Poland</p>
<p>Ecair BV, ERUPT 5, Netherlands</p>	<p>Determination of Landfill Gas Recovery and Utilisation JI Projects in two Landfills in Warszawa - Radiowo and Zabrze</p>
<p>EXIM Invest Biogáz KFT Hungary</p>	<p>Determination of a Landfill Gas Mitigation JI Project at the Hungarian Nyíregyháza-Oros Landfill</p>

Clients & Descriptions

<p>Determination of the Portile De Fier II Hydroelectric Power Plant JI Project The project comprises the modernisation of four hydro units, resulting in an increased generation of renewable energy from an existing hydropower plant.</p>	<p>Hidroelectrica SA Romania</p>
<p>Determination of the Chomutov Wind Power Plant Project in the Northern Bohemian Mountains (180 Wind Turbines)</p>	<p>LessCarbon Czech Republic</p>
<p>Determination of the Te Apiti Wind Power Plant Gold Standard JI Project in the Lower North Island (82.5 - 96.25 MW) This project has achieved Gold Standard status.</p>	<p>Meridian Energy New Zealand</p>
<p>Determination of the Rotokawa II Geothermal Development Project This project aims to construct and operate a 39 MW geothermal power station.</p>	<p>Mighty River Power Ltd. New Zealand</p>
<p>Determination of the Kazakhstan Combined Heat and Power Plant JI Project in Uralsk</p>	<p>NEDO Japan Kazakhstan</p>
<p>Determination of the Saaremaa Animal Waste Treatment JI Project</p>	<p>OÜ Saaremaa Economics Estonia</p>
<p>Determination of the Small Hydropower Plant Vranany JI Project</p>	<p>Provodi Vltavy Czech Republic</p>
<p>Verification of two Slovakian-Norwegian AIJ / JI Projects at Quercus and Semenoles The projects consist of switching existing coke and gas fuelled boilers with biofuel boilers that use wood chips and sawdust to produce heat.</p>	<p>Royal Norwegian Ministry of Environment Slovakia</p>
<p>Pre-Validation of a Boiler Conversion JI Project in Kargopol</p>	<p>Swedish National Energy Administration Russia</p>
<p>Multi-Project Verification of 31 Baltic-Swedish AIJ Projects 31 fuel switch projects in the Baltic district heating sector. The projects have replaced fossil fuel boilers with "CO₂ neutral" biofuel boilers that burn locally produced fuel. DNV developed a methodology for multi-project verification.</p>	<p>Swedish National Energy Administration Baltic States</p>
<p>Pilot Determination of the Swiss Thermal Energy Project (STEP) Energy Efficiency and Combined Heat and Power Plant AIJ Project in Buzau and Pascani DNV also developed a draft monitoring, reporting and verification protocol for the project.</p>	<p>Swiss State Secretariat for Economic Affairs (SECO) Romania</p>

JI Projects & AIJ Projects

<p>Verbundplan Austria</p>	<p>Determination of the Vacha Cascade Hydropower Refurbishment JI Project</p>
<p>Wolin North Poland</p>	<p>Determination of the Zagorze Wind Power Plant Project (30 MW)</p>
<p>World Bank, Carbon Finance Hungary</p>	<p>Initial Verification of the PANNONPOWER Gas and Biomass Cogeneration Project at Pécs The project intends to convert two combined heat and power (CHP) blocks to gas-firing and conversion of a third block to biomass firing in a new fluidised bed boiler.</p>
<p>World Bank, Carbon Finance Poland</p>	<p>Determination of a Portfolio of Renewable Energy Fuelled JI Projects in the District Heating Sector</p>
<p>World Bank, Carbon Finance Czech Republic</p>	<p>Determination of a Portfolio of Energy-Efficiency and Renewable Energy JI Projects This portfolio includes several projects in four categories of projects: 1) district heating, 2) retrofit of public building (e.g. hospitals), 3) industrial energy efficiency and 4) renewable energy. Each category utilises a common baseline and monitoring approach.</p>
<p>World Bank, Carbon Finance Latvia</p>	<p>Pilot Validation of the Liepaja Solid Waste Management Landfill Gas Capture and Utilisation Project Validation of PCF 's first project in Latvia.</p>

Corporate Verification Global

<p>EU ETS Pre-Verification Assessment of completeness and implementation of the monitoring and reporting process and procedures against the criteria set within the MRG in 3 cement plants.</p>	<p>Abener Energia Spain</p>
<p>Verification of CCLA Emissions (2002 & 2004) and EU ETS Baseline Emissions (1998 – 2003) as required by DEFRA</p>	<p>Allied Distillers UK</p>
<p>Verification of CCLA Emissions Data 2002</p>	<p>Alcan Rolled Products UK</p>
<p>Verification of CCLA Emissions (2002 & 2004) and EU ETS Baseline Period Emissions (1998-2003)</p>	<p>Alcan Smelting UK</p>
<p>Verification of UK ETS GHG Baseline and Annual Emissions</p>	<p>Asda UK</p>
<p>Verification of EU ETS Baseline Emissions (1998 – 2003) and Annual Verification (2005)</p>	<p>Amerada Hess UK & North Sea</p>
<p>Verification of EU ETS Baseline Emissions (1998 – 2003)</p>	<p>AstraZeneca UK</p>
<p>Verification of EU ETS Baseline Emissions (1998 – 2003)</p>	<p>BNFL Magnox UK</p>
<p>Verification of 1990 and 1998 Baseline Emissions In 1999, a team comprising DNV, KPMG and ICF Consulting carried out an independent audit and verification of BP's greenhouse gas accounting and reporting systems, the GHG data for 1990 and 1998. The project included a review of GHG reporting requirements and the development of an audit framework and methodology that could be relied upon for BP's internal trading system.</p>	<p>BP International UK</p>
<p>Verification of GHG Data for the BP Group for the years 2000, 2001, 2002, 2003 and 2004</p>	<p>BP International UK</p>
<p>Verification of the UK ETS Emissions</p>	<p>BP Exploration Operating Company UK</p>

Corporate Verification Global

Clients & Descriptions

BP Chemicals, Hull UK	Verification of the CIA CCLA Emissions & EU ETS Baseline Period Emissions (1998 – 2003)	GHG Verification under German Emissions Trading Regulations	CP Kelco GmbH Germany
BP Oil UK	Verification of EU ETS Baseline Emissions (1998 – 2003)	GHG Pre-Verification against Cement Monitoring and Reporting Guidelines	CRH GROUP OZAROW Poland
BP Exploration Operating Company UK & North Sea	Verification of EU ETS Baseline Emissions (1998 – 2003)	Verification of EU ETS Baseline Emissions (1998 – 2003) and EU ETS Annual Verification 2005	Derwent Cogeneration Ltd. UK
BP North Sea SPU UK	New Entrant Verification and Verification of EU ETS Annual Emissions (2005)	Verification of Yearly CO₂ Emissions Report – six Power Generation Sites (2005 - 2007)	Electrabel The Netherlands
British Airways UK	Verification of UK ETS GHG Baseline and Annual Emissions and EU ETS Baseline Emissions (1998 - 2003)	Electricity Generation / Pre-Assessment of Monitoring and Reporting Processes and Procedures	Electrabel Netherlands, Harculo The Netherlands
British Energy UK	Verification of EU ETS Baseline Emissions (1998 – 2003)	Electricity Generation / Pre-Assessment of Monitoring and Reporting Processes and Procedures	Electrabel Belgium, Langerlo Belgium
BSN Glasspack Schiedam The Netherlands	Pilot Verification EU ETS Compliance CO₂ - NO_x Reporting Systems	GHG Verification under German Emissions Trading Regulations	ESWE Versorgungs AG Germany
BSN Glasspack Leerdam The Netherlands	Pilot Verification EU ETS Compliance CO₂ - NO_x Reporting Systems	Verification of EU ETS Baseline Emissions (1998 – 2003)	EDF Energy Powerlink UK
Centrica Plc UK	Verification of EU ETS Baseline Emissions (1998 – 2003) and EU ETS Annual Verification 2005	GHG Pre-Verification	Elektrownia Rynik S.A. Poland
CEZ Czech Republic	Power Generation / Pre-Verification EU ETS Compliance CO₂ Reporting Systems	Electricity Generation / Pre-Assessment of Monitoring and Reporting Processes and Procedures	Electrabel Poland, Elektrownia Polaniec S.A. Poland
Chevron Texaco UK (North Sea)	Verification of EU ETS Baseline Emissions (1998 – 2003) and EU ETS Annual Verification 2005	Pre-Assessment of Monitoring and Reporting Processes and Procedures and GHG Verification Assessment of completeness and implementation of the monitoring and reporting process and procedures against the criteria set within the EU MRG.	Endesa Italy
Ciba Spezialitätenchemie GmbH Lampertheim Germany	GHG Verification DNV verified the company's application for CO ₂ emissions under the rules of the German Emission Trading regulations. (TEHG, ZUG 2007).		
Claas SE GmbH Germany	GHG Verification DNV verified the company's application for CO ₂ emissions under the rules of the German Emission Trading regulations. (TEHG, ZUG 2007).		

Corporate Verification Global

Clients & Descriptions

Federation of Norwegian Process Industries (PIL) Norway	Verification of GHG Emissions of Norwegian Process and Pulp & Paper Industries DNV, together with the Norwegian research organisation SINTEF, verified the GHG emissions from the Norwegian process and pulp & paper industries. The verification results are documented in a White Paper, which besides verified GHG emission data from 60 companies also includes an assessment of potential measures for reducing GHG emissions.	GHG Verification under German Emissions Trading Regulations	Hydro Aluminium Deutschland GmbH Rolled Products Grevenbroich Germany
Fellside Heat and Power UK	Verification of EU ETS Baseline Emissions (1998 – 2003)	GHG Verification under German Emissions Trading Regulations	Industriepark Nienburg GmbH Germany
Gasum Oy Finland	GHG Verification 2005 - 2007	GHG Verification under German Emissions Trading Regulations	Infineon Technologies AG Germany
Georgsmarienhütte GmbH Germany	GHG Verification under German Emissions Trading Regulations	GHG Verification under German Emissions Trading Regulations	Korzilius Interbau GmbH & Co. Allessa Chemie GmbH Germany
GKN Automotive UK	Verification of UK ETS GHG Baseline and Annual Emissions	Verification of CO₂ Emissions (2003) and Status of Compliance with the Criteria Set within the European Monitoring and Reporting Guidelines Verification of CO ₂ emissions generated by kiln, non-kiln fuels and process emissions for the data 2003 as well as an assessment of status of preparedness in respect to requirements set within the MRG.	Ladce Cement Slovak Republic
Glasfabrik Lamberts GmbH & Co. KG Germany	GHG Verification under German Emissions Trading Regulations	GHG Verification against Cement MRG	Lafarge (3 production sites) Spain
GlaxoSmithKline UK	Verification of EU ETS Baseline Emissions (1998 – 2003) and EU ETS Annual Verification (2005 - 2007)	Verification of EU ETS Baseline Emissions (1998 – 2003)	Lhoist UK Ltd. UK
Gorazdze Cement S.A. Poland	GHG Pre-Verification	Verification of Annual EU ETS Emissions 2005	Limerick Alumina Refining Ltd. Ireland
Goma Camps, S.A.U. Spain	GHG Verification against Paper Mill MRG	GHG Verification under German Emissions Trading Regulations	Michelin Reifenwerke KGaA Germany
Hella KGaA Hueck & Co Germany	GHG Verification under German Emissions Trading Regulations	Pre-Verification of Monitoring Plan and its Implementation	MVV Energie Czech Republic
Helsingin Energia Finland	GHG Verification 2005 - 2007	GHG Verification 2005 - 2007	Neste Oil Oy Finland
Humber Power Ltd. UK	Verification of EU ETS Baseline Emissions (1998 – 2003) and EU ETS Annual Verification 2005	Verification of GHG Emissions Inventories and GHG Reductions	Noble Drilling Inc. US

Corporate Verification Global

Clients & Descriptions

Nordkalk
Finland, Sweden, Estonia

GHG Verification 2005 - 2007

Norwegian Oil Industry Association (OLF)
Norway

Verification of GHG Emissions of Norwegian Oil & Gas Industries
DNV verified the GHG emissions from the Norwegian oil & gas industry. The verification results are documented in a White Paper, which besides verified GHG emission data from 60 offshore installations and 4 onshore processing installations also includes an assessment of potential measures for reducing GHG emissions.

Pall Schumacher GmbH
Germany

GHG Verification under German Emissions Trading Regulations

Petrofac Facilities Management
UK (& North Sea)

Verification of EU ETS Baseline Emissions (1998 – 2003), New Entrant Verification 2005 and Annual Verification 2005

Pininfarina
Italy

Pre-Assessment of Monitoring and Reporting Processes and Procedures and GHG Verification

PKE S.A.
Poland

GHG Pre-Verification

PX Ltd.
UK

Annual Verification of EU ETS Emissions 2005

Rolls Royce
UK

Verification of UK ETS GHG Baseline and Annual Emissions and EU ETS Baseline Emissions (1998 – 2003)

Saica
Spain

GHG Verification against Paper Mill MRG

Saltend Cogeneration Ltd.
UK

Verification of EU ETS Baseline Emissions (1998 – 2003)

Shell
France

Verification of Yearly CO₂ Emissions Report - Lubrication Plant Nanterre (2005 - 2007)

Shell
France

Verification of Yearly CO₂ Emissions Report - Chemical Plants Berre, Aubette (2005 - 2007)

Verification of Yearly CO₂ Emissions Report - Refineries Reichstett, Petite Couronne, Berre (2005 - 2007)

Shell
France

Verification of Yearly CO₂ Emissions Report - Refinery Stanlow (2005 - 2007)

Shell
UK

Verification of the CIA CCLA Emissions and EU ETS Baseline Emissions (1998 – 2003)

Solutia
UK

Verification of EU ETS Baseline Emissions (1998 – 2003) and EU ETS Annual Verification 2005

South Manchester University Hospitals Trust
UK

GHG Verification under German Emissions Trading Regulations

Stadtwerke Aachen and Arnstadt
Germany

Verification of UK ETS GHG Baseline and Annual Emissions

Tesco
UK

Verification of UK ETS GHG Baseline and Annual Emissions and EU ETS Baseline Emissions (1998 – 2003)

The Natural History Museum
UK

EU ETS Verification

Vattenfall
Sweden

GHG Verification under German Emissions Trading Regulations

Voss-Biermann, Lawaczeck GmbH & Co. KG
Germany

GHG Verification under German Emissions Trading Regulations

Wilhelmshavener Raffineriegesellschaft mbH
Germany

Verification of GHG Emissions Inventories and GHG Reductions

Wintershall AG
Libya

GHG Pre-Verification

ZEDO S.A.
Poland

GHG Pre-Verification

ZEO S.A.
Poland

Other Climate Change Projects Global

Clients & Descriptions

Australian Government / Australia
Greenhouse Office (AGO)

Development of Proposed Greenhouse Friendly Products Program

Development of product and abatement project specifications, verification and certification procedures, labelling rules and life cycle assessment guidelines for a proposed certification program. Organisations that fund emission abatement projects equivalent to the lifetime emissions of their product or service would be entitled to use a certification label on those products.

Australian Government
Australia Greenhouse Office
(AGO)

Greenhouse Challenge Verification Program

Development of verification and reporting guidelines, selection and training of verifiers, management and co-ordination of the verification process and review of verification reports for 31 selected Australian Greenhouse Challenge participants.

Australia Greenhouse Office
(AGO), Australian Government

Administration of Greenhouse Friendly Products

Review of product and project verification reports, preparation of recommendation reports to the AGO, validation of product LCAs and project designs.

China International Centre for
Economic and Technical Exchanges
(CICETE)

CDM Training Package Development and Implementation

DNV provides capacity building to Chinese government, industry and public sector stakeholders to support the development of CDM projects in China by using of first hand experience and local pilot projects to support "learning by doing".

Department of Trade and Industry
UK

Monitoring and Reporting Guidelines for CO₂ Capture and Storage in the EU Emissions Trading

DNV, together with ERM, analysed the requirements for accounting, monitoring and reporting guidelines under the EU Emissions Trading Scheme in order to include CO₂ Capture and Storage as a climate change mitigation option.

Department of Trade and Industry
UK

Risk Analysis of the Geological Sequestration of CO₂

DNV analysed the environmental and human impact risks associated with the pipeline transport and storage of CO₂ in geological reservoirs.

Dutch Ministry of Environment
The Netherlands

Development of Dutch Guidelines for Baselines including Verification and Certification Procedures

In co-operation with the Dutch energy research organisation ECN, DNV has developed the official Dutch guidelines for Joint Implementation projects under the ERU-PT program between Netherlands and Eastern European countries. A procedure for the independent verification of these reductions, to be used by all independent certification bodies was also developed.

CO₂Remove Project

DNV is a participant in EU project "CO₂Remove", an EU 6th Framework Program Integrated Project. The "CO₂Remove" consortium consists of industrial, research and service organisations with experience in CO₂ geological storage. The consortium proposes a range of monitoring techniques, applied over an integrated portfolio of storage sites, and will develop methods for site evaluation, tools for prediction and for monitoring, risk assessment methodologies and best practice guidelines.

ACCSEPT Project

DNV is the project coordinator for EU project "ACCSEPT" a Scientific Support for Policy Project under EU 6th Framework Program. The project will be carried out together with 5 partner firms. It will assess social, economic, legal and regulatory implications of implementing CO₂ capture and storage technology in the EU and at the world level.

Participation in CO₂NET2

CO₂NET2 is a network of experienced organisations within CO₂ storage in geological formations, CO₂ capture and zero-emissions power generation. DNV contributes to building a complete set of best practices for the entire value chain of CO₂ capture, transport and storage projects.

CO₂SINK

The EU sponsored 6th Frame Project aims to demonstrate innovative verification and monitoring technologies on a demonstration-scale geological storage site near Berlin, Germany. DNV is responsible for the work package covering risk analysis and decision support.

Determination of Uncertainties in a Regional GHG Inventory

Determination of uncertainties (Tier 1 and Tier 2 assessment, IPCC) and development of a quality management system for the Greenhouse Gas emissions Inventory of the Flemish Region.

NSW Greenhouse Gas Abatement Scheme

The NSW government has established a scheme whereby electricity distributors are required to achieve a benchmark greenhouse emission level. DNV is an auditor of benchmark compliance statements, accreditation of abatement scheme projects and verification of the creation and registration of abatement scheme certificates.

Validation of Negotiated Greenhouse Agreements

The NZ government have initiated a program of negotiated agreements whereby major energy intensive industries agree on an emissions improvement pathway to world's best practice between 2004 and 2012. DNV is a validator of the world's best practice studies.

EU Commission

EU Commission

EU Commission

EU Commission

Flemish Environmental Agency
(VMM)

Government of New South Wales
Australia

New Zealand
Climate Change
Office

Other Climate Change Projects Global

Norwegian State Pollution Control Board (SFT), Government of Norway

Development of a Set of Requirements for Activities Implemented Jointly (AIJ) Projects

A set of draft requirements was developed for SFT for Norwegian funded AIJ projects. The general requirements build on available international requirements for JI/AIJ projects and best practices for quality and environmental management.

Petroleum Technology Research Centre, Canada

Risk Assessment of Long-Term Storage of CO₂ in the Weyburn Field

DNV reviewed a wide range of risk assessment applications in different industries to establish alternative approaches that can be considered for assessing CO₂ sequestration risks.

World Bank, Carbon Finance & International Emission Trading Association

Development of the Validation and Verification Manual (VVM)

In co-operation with TÜV Süddeutschland and KPMG, DNV revised and extended PCF's Preliminary Validation Manual to a more comprehensive Validation and Verification Manual (VVM). The VVM builds on existing experience with validation and verification. <http://www.vvmanual.info>

UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC)

Development of a Guidebook Navigating Pitfalls in the PDD Development

DNV has performed an assessment of the most common pitfalls during the project design and validation phase and come up with a comprehensive guidebook on how to overcome them.

UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC)

Clean Development Mechanism PDD Guidebook: Navigating the Pitfalls

This guidebook is designed to help readers navigate the pitfalls of preparing a Project Design Document (PDD) for Clean Development Mechanism (CDM) projects. It draws upon the extensive knowledge of DNV, which has validated over 60% of all CDM projects coming through to the validation stage (as of August 2005), and this guidebook is based on the systematic analysis of projects validated by DNV.

UN Framework Convention for Climate Change (UNFCCC) Secretariat

Methods to Estimate Emission Inventories for International Bunker Fuels

On the basis of inventories of the second national communications to the UNFCCC, DNV has assessed methods, barriers, institutional arrangements and data from reports on international bunker fuels as well as assessed the importance of other greenhouse gases than CO₂ in bunker fuels inventories.