



Presidencia de la República Dominicana
Consejo Nacional para el Cambio Climático
y el Mecanismo de Desarrollo Limpio

Summer School 2014
of the
International Partnership on Mitigation and MRV
“Intended Nationally Determined Contributions: preparation and implementation”
Punta Cana, Dominican Republic, September 3rd to 10th, 2014

Presentation of Country Cases on ambition level:

Dominican Republic

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International Partnership
on Mitigation and MRV

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Building and Nuclear Safety

of the Federal Republic of Germany

Climate-compatible development plan (CCDP) for the Dominican Republic





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Climate-Compatible Development Plan – Phase I & II



National Launch
September 15th , 2011, National Palace

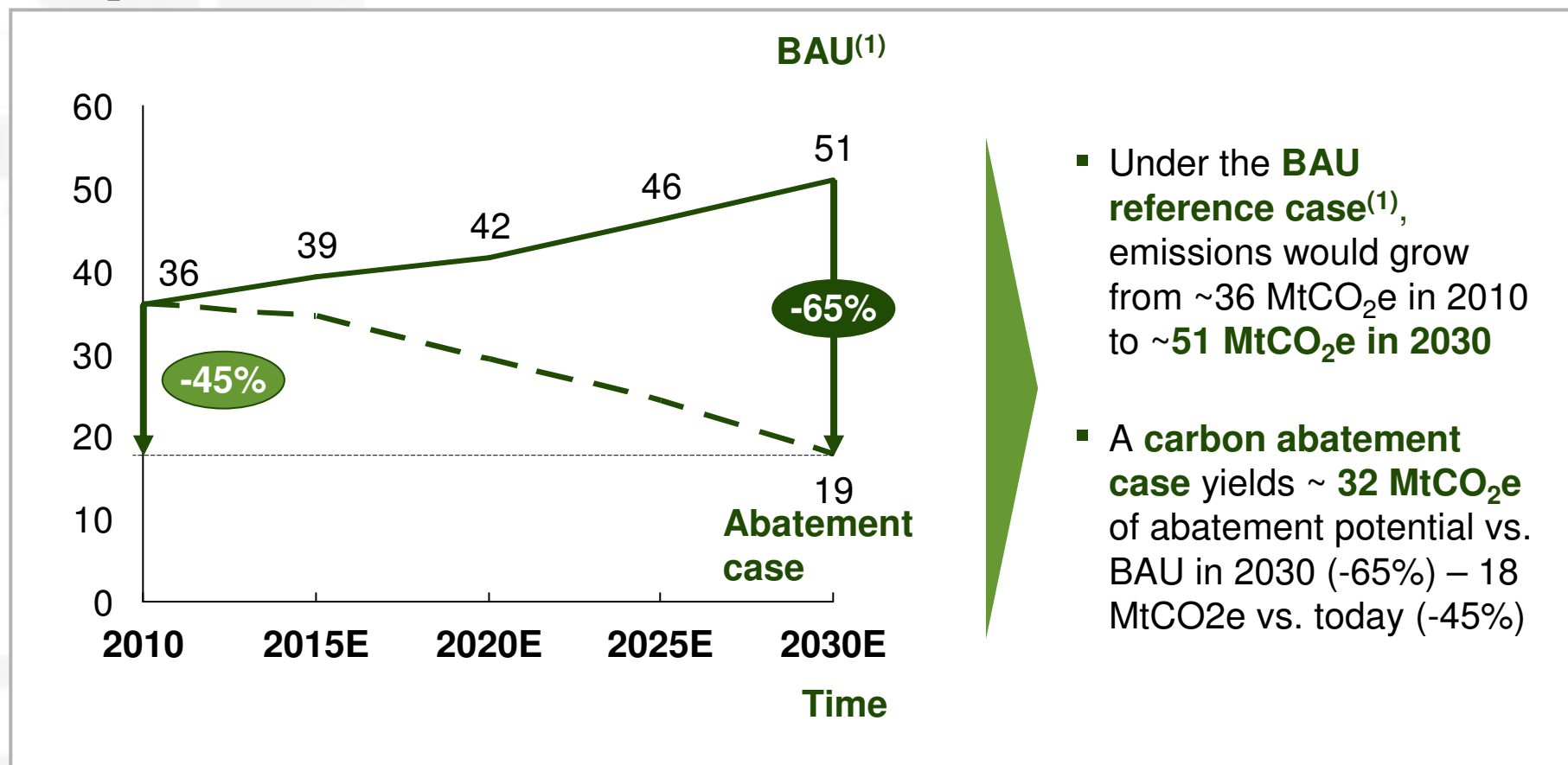


International Launch
COP17 – Durban, South Africa

**Based on DR-specific analysis of technical abatement potential,
~ 65% of its BAU GHG emissions can be reduced by 2030**

GHG emissions

MtCO₂e



- Under the **BAU reference case**⁽¹⁾, emissions would grow from ~36 MtCO₂e in 2010 to ~**51 MtCO₂e in 2030**
- A **carbon abatement case** yields ~ **32 MtCO₂e** of abatement potential vs. BAU in 2030 (-65%) – 18 MtCO₂e vs. today (-45%)

⁽¹⁾ “BAU” reference scenario is a basis for assessment of mitigation levers and carbon finance negotiations. It is not the most likely scenario, but a theoretical case assuming a country acts in its economic self-interest and does not include additional action for avoiding GHG emissions (e.g. renewables only added if cost competitive with fossils)



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The Dominican Republic Commits to a 25% Reduction in Greenhouse Gas Emissions by 2030



The Dominican Republic will cut its greenhouse gas (GHG) emissions by 25%, a target set for 2030. The commitment was announced by Omar Ramírez Tejada, Executive Vice-President of the CNCCMDL (Dominican Republic's National Council for Climate Change and Clean Development Mechanism), during his address to the United Nations Climate Change Conference (COP 18) in the city of Doha, Qatar.

Mr Ramírez Tejada, who headed the Dominican delegation to the conference, explained that Law No. 1-12, which covers the country's National Development Strategy, establishes a binding commitment to achieve

an absolute reduction in GHG emissions in the Dominican Republic compared to 2010 levels.



Recommended readings

ALL

LEDS

NAMA

MRV

[OECD \(2012\): Tracking Climate Finance: What and How?](#)

[UNEP RISOE \(2012\): Measuring Reporting Verifying: A Primer on MRV for Nationally Appropriate Mitigation](#)

[CPI \(2012\): The Landscape of Climate Finance 2012](#)

[OECD \(2010\): Low-Emission Development Strategies \(LEDS\): Technical, Institutional and Policy Lessons](#)



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National Development Strategy – 2030 (NDS)

➤ Law No.01-12 of the National Development Strategy (NDS) 2030 of the country, set indicators to reduce emissions and to adapt to climate change. A transversal tool for achieving the indicators and targets for the NDS is the education.

Article 28. Indicators and Targets for the Fourth Strategic Axis:

Indicators	Unit/ Measurement scale	Baseline		QUINQUENNIAL GOALS			
		Year	Value	2015	2020	2025	2030
4.1 Carbon dioxide emissions	Metric tons per capita	2010	3.6	3.4	3.2	3.0	2.8
4.2 National protected areas	Percentage of total land area	2009	24.4	24.4	24.4	24.4	24.4
4.3 Annual deforestation rate (average)	Percentage of total forest area (negative values indicate increases in the total forest area)	2005	0.1	-0.1	-0.2	-0.2	-0.2
4.4 Efficiency of water use in systems and water distribution networks and its final application irrigation system	Percentage of distributed water that was exploited	2010	28.0	36.5	45.0	45.0	45.0



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**National Multi-annual Plan of the Public Sector
 2013-2016
 Updated - 2014**



Product	Measure Unit	2012 (Baseline)	2013	2013 (achieved)	2014	2015	2016	2017	2018	Responsible Institution
Promotion and technical assistance to registry projects under CDM	Registered Projects under CDM	4	6	10	8	10	12	14	16	NCCCCMDL
Projects in Validation in the UNFCCC	Projects in validation process	5	10	8	20	25	30	35	40	NCCCCMDL
Nationally Appropriate Mitigation Action (NAMA)	implemented NAMAs	0	2	2	3	4	4	5	5	NCCCCMDL
Education, public awareness and sensitization on Climate Change	Awareness people	8,500	9,700	15,500	11,100	12,700	14,600	17,500	21,100	NCCCCMDL

The power sector holds 1/3 of the DR's abatement potential and will yield significant net gains in energy efficiency and generation

Power sector narrative



- Under **BAU**, power generation will increase by ~80% from 16 to 28 TWh until 2030, generated by a high-carbon fuel mix, dominated to 90% by **coal, gas, fuel oil, and inefficient off-grid generation**
- Power generating cost will grow even more expensive from 180 to 220 USD/MWh while emissions increase from 11 to 18 MtCO_{2e} until 2030
- Total **abatement potential** in power sector is ~ 11 MtCO_{2e} by 2030, approx. ~60% of BAU emissions
 - A cleaner generation mix** contributes 60% of sector abatement potential (~ 7 MtCO_{2e})
 - Energy efficiency** amounts to 40% of sector abatement potential (~4 MtCO_{2e})
- Because power generation under BAU is so expensive, ~95% of abatement potential can be captured at cost savings (~ -110 USD abatement / ton): **net gains** amount to ~**BUSD 1.2 per year** by 2030

Prioritized Levers


(share of potential)

	Proposed measures	Success factors
Energy efficiency (~40%)	<ul style="list-style-type: none"> Energy efficiency can reduce needed power generation by ~18%, mainly through efficiency standards for new buildings, electronics, appliances, by changing light bulbs, and efficiency in industry 	<ul style="list-style-type: none"> Convince public of net savings Ensure access to (cheap) capital Craft and enforce clear policy
Renewables (~45%)	<ul style="list-style-type: none"> Renewables potential is preliminary but significant and could provide up to ~40% of power generation by 2030 if the DR doubled hydro capacity to 1.1 GW, built 20 wind parks of 50MW each, and built 300MW of biomass and 800MW of solar capacity 	<ul style="list-style-type: none"> Attractive policy and incentive structure for (foreign) investors Grid improvements to integrate intermittent sources
Replace off-grid generation by gas (~5%)	<ul style="list-style-type: none"> Reducing off-grid generation from 24% to 5% of power generation and replacing it with 200 MW of new gas plants by 2030 would save an annual MUSD 40 and 0.4 MtCO_{2e} in annual emissions 	<ul style="list-style-type: none"> Sufficient peak capacity to guarantee reliability Auto-generators planning with grid operators about joining Sufficient infrastructure in place
Retire fuel-oil capacity early & replace by gas (~10%)	<ul style="list-style-type: none"> Retiring all 1.4 GW of fuel oil plants that would remain in 2030 under BAU and replacing them with new gas plants would save ~MUSD 210 and ~1 MtCO_{2e} per year 	<ul style="list-style-type: none"> Revisit contractual obligations where possible Give attractive incentives for early retirement

The transport sector has the potential to reduce the country's oil imports, thus significantly improving the DR's current account balance

Transport sector narrative

Transport




- Under **BAU**, the DR's **vehicle fleet will increase from 1.9 to 3.5 million** vehicles in 2030 (from ~100 to ~160 cars per 1000 inhabitants), resulting in **increased fuel consumption** (from 2.4 to 4.4 billion liters) and **emissions** (~8 to ~11 MtCO₂e)
- Total **abatement potential is ~6 MtCO₂e** amounting to **~50% of 2030 BAU** emissions and is driven by
 - Increased efficiency standards across all vehicle categories
 - Shift of high-emitting gasoline/diesel vehicles to CNG
 - Substitution of traditional gasoline/diesel by biofuels
 - Shift of urban traffic in Santo Domingo to public transport
- Given the **low fuel efficiency** of today's BAU car fleet and **attractive biofuel potential** in the DR, **~80%** of abatement potential can be captured at cost savings (Ø -60 USD abatement / ton): **net gains** in the sector amount to **~MUSD 360 per year**

Prioritized Levers (share of potential)	Proposed measures	Success factors
Efficiency standards (~20%)	<ul style="list-style-type: none"> ▪ Efficiency standards on imported cars through regulation / taxation could reduce consumption of gasoline by ~150mn liters (3%) and diesel by ~250 mn liters (5%) p.a. by 2030, saving USD ~270 mn p.a. 	<ul style="list-style-type: none"> ▪ Effective policy of regulation and tax incentives ▪ Reliable enforcement at customs
Shift to CNG (~20%)	<ul style="list-style-type: none"> ▪ Achieve a 25% share of vehicles using CNG by 2030 (~1.1 MtCO₂e), while eliminating the share of vehicles that currently use LPG 	<ul style="list-style-type: none"> ▪ Secure sufficient supply of CNG and build distribution infrastructure
Biofuels (~50%)	<ul style="list-style-type: none"> ▪ Aspirational scenario of domestic production (E20 + B15) plus imports of E50 + B68 by 2030 yields a ~2.8 MtCO₂e abatement potential ▪ In a purely domestic base case, the DR achieves E20 fuel blend by producing ~340 million liters of ethanol from sugarcane p.a. by 2030 ▪ Local B15 biodiesel production can provide 15% of diesel needs by 2030 through jatropha plantations on 200 kha of marginal lands 	<ul style="list-style-type: none"> ▪ Opportunity to import Biofuels at competitive rates and volumes ▪ Attractive incentives FDI ▪ Sugarcane yield growth ▪ Successful introduction of jatropha cultivation
Public transportation (~10%)	<ul style="list-style-type: none"> ▪ Shift ~700,000 passengers per day traveling in public cars and buses to 5 new metro lines, displacing ~2,000 old, inefficient vehicles and saving ~50 million liters of fuel per year ▪ Build 9 BRTs lines, transporting 1.3 million passengers per day, substituting older bus fleet and saving ~150 million liters of fuel per year 	<ul style="list-style-type: none"> ▪ Smart financing of required capex of ~2.4 BUSD (~80% is for the metro and ~20% is for the BRTs)

The forestry sector can attract tangible international funding to the DR and create sustainable employment through active abatement

Forestry sector narrative

<p>Forestry</p> 	<ul style="list-style-type: none"> Acknowledging the high uncertainty given the lack of reliable/consistent land use data, BAU 2030 emissions from the forestry sector could account for ~4 MtCO₂e from deforestation, while carbon sequestration from A/R could account for ~3 MtCO₂e The forestry sector could abate up to ~7 MtCO₂e by 2030 (14% of BAU), almost equally driven by reduced deforestation / forest fire prevention and increased aff-/reforestation efforts Implementation will have significant economic impact on the DR in terms international capital flows (REDD+ and CDM funding of ~ MUSD 35) and increased employment (~ 15.000 additional jobs)
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Prioritized Levers (share of potential)	Proposed measures	Success factors
<p>Reduced deforestation (~30%)</p>	<ul style="list-style-type: none"> ~2,500 ha/yr illegal charcoal logging reduced by 100% through community support programs¹ and enforcement ~800 ha/yr of clearing for agriculture reduced by 100% through extension program and enforcement ~1,300 ha/yr of deforestation reduced by 50% through structured urban planning / zoning program ~1,300 illegal clearing for infrastructure reduced by 50% through enforcement 	<ul style="list-style-type: none"> Capabilities to reach a fragmented rural population Trained staff of agronomists to implement program Increase size and capabilities of enforcement
<p>Forest fire prevention (~20%)</p>	<ul style="list-style-type: none"> ~4,500 ha/yr affected by forest fires brought down by 90% through enforcement and fire prevention / response program 	<ul style="list-style-type: none"> Build fire detection capabilities and increase enforcement size
<p>Afforestation & Reforestation (~50%)</p>	<ul style="list-style-type: none"> Increase A/R efforts by a factor of 4, from 6.3 kha in 2010 to ~25 kha/yr in 2030 to aff- / reforest an additional 180 kha over the next 20 years Implies a 9% growth p.a in the A/R rate 	<ul style="list-style-type: none"> Improve clarity on land ownership and titling Educate land owners on associated benefits

(1) Agro-forestry, productivity, land ordering and forest management programs

Selected easy-to-implement levers in the waste, cement, and tourism industries could yield an additional ~10% of abatement potential

Quick wins narrative



- Under BAU, **waste, cement, and tourism** will account for ~**9.5 MtCO2e** of annual emissions in 2030
- While these sectors are not key sectors, they present a few **outstanding abatement opportunities**
- Technical abatement potential in the waste and cement sectors is an annual ~**6 MtCO2e** by 2030, of which ~5 MtCO2e can be captured by only 5 measures that are relatively easy to implement
- Implementing these quick wins yields a net benefit: Average abatement cost is a saving of USD 25 per ton, generating in sum **cost savings of an annual USD 110 million by 2030** for the DR
- In addition, the **tourism sector can be a catalyst for implementation** of strategies for emissions reduction in the power, transport, and waste sectors

Prioritized Levers

(share of potential)

	Proposed measures	Success factors
Waste (~80%)	<ul style="list-style-type: none"> Recycling 50% of valuable waste can save ~1 Mt and USD 9 million p.a. Equipping 30% of landfills to capture methane for cooking or power generation would save 1 MtCO2e and USD 5 million per year by 2030 Using half of all organic waste for power generation using anaerobic digestion would reduce annual emissions by ~1.3 MtCO2e 	<ul style="list-style-type: none"> Recycling system implemented Create demand for methane Attract investment for retrofitting Investment facilitation
Cement (~20%)	<ul style="list-style-type: none"> Cement production is currently powered to 90% by fossil fuels. Increasing the share of bio- and fossil waste from 10% now to 50% by 2030 would save ~0.4 MtCO2e and USD 35mn per year Reducing the ingredient share of clinker in cement from 95% to 77% by 2030 would reduce emissions by 0.8 MtCO2e and save another USD 75mn per year 	<ul style="list-style-type: none"> Support and assistance for sector's ongoing initiatives Profitable supply chain for biowaste and fossil waste Achieve agreement between cement and coal industry for provision of fly ash
Tourism (N/A)	<ul style="list-style-type: none"> The tourism sector is currently responsible for ~1 MtCO2e of annual emissions from power, transport and waste, but is poised to change A Sustainable Tourism Strategy would be an exemplary catalyst Tourism also is a key opportunity to promote and capitalize on the CCDP by promoting the DR as a green, high-value destination 	<ul style="list-style-type: none"> Get buy-in from tourism association and large hotels Joint decision of major stakeholders to promote the DR as a sustainable destination

For the good of our world, our region, and our country



Thank you!

