Assessing and communicating benefits of INDCs

Please join the LEDS GP and encourage others to join.

www.ledsgp.org
Session overview

Through country case studies and other materials, this session will provide an introduction to:

• some of the tools that countries have used to assess the expected benefits of their INDCs;
• how the results have been communicated with stakeholders; and
• why this will be important in future implementation of contributions.
# Format of the session

<table>
<thead>
<tr>
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<th>Presenter</th>
<th>Topic</th>
<th>Organization</th>
</tr>
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<tr>
<td>10min</td>
<td>Lachlan Cameron</td>
<td>Introduction - INDCs and benefits</td>
<td>ECN</td>
</tr>
<tr>
<td>15min</td>
<td>Lupe Guinand</td>
<td>The case of Peru</td>
<td>Libelula / PlanCC</td>
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<tr>
<td>15min</td>
<td>Moisés Álvarez</td>
<td>The case of the Dominican Republic</td>
<td>National Council on Climate Change</td>
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<tr>
<td>15min</td>
<td>Dr. Alain Serge Kouadio</td>
<td>The case of Ivory Coast</td>
<td>Ministry of Environment and Development</td>
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<tr>
<td>15min</td>
<td>Imane Chafiq</td>
<td>The case of Morocco</td>
<td>GIZ / 4C Maroc</td>
</tr>
<tr>
<td>40min</td>
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<td>Breakout session</td>
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<tr>
<td>10min</td>
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<td>Feedback from breakout groups</td>
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</tbody>
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INDCs and benefits – introduction

Lachlan Cameron

LEDS Global Partnership 2015 Annual Workshop – Punta Cana
15th October, 2015
Contents

• Introduction to ECN
• INDCs refresher
• Benefits and INDCs
• Tools overview
• Country examples
• Independent studies
Energy research Centre of the Netherlands (ECN)

ECN Policy Studies
- Research NGO since 1955 – not for profit
- Over 500 staff in seven research areas
- 60 staff in Policy Studies unit
- Main think tank for Dutch government on energy and climate

Global Sustainability
Dedicated team working on international issues, with the mission to help mobilise investment by promoting low carbon policies and measures.

Our focus is on four key themes:

- Policy and strategy development
- Increased policy effectiveness
- Scoping and prioritisation
- Renewable energy deployment

Clients include: European Commission, UNFCCC, UNEP, UNDP, CDKN, DFID, GIZ, BMUB, World Bank and the IPCC

Experience working in: Argentina, Brazil, Columbia, Ghana, Indonesia, Kenya, Kuwait, Mexico, Mongolia, Pakistan, South Africa, Thailand
INDCs refresher

- Under the UNFCCC, countries “in a position to do so” submit intended nationally determined contributions (INDC)
- Outline what post-2020 climate actions they intend to take
- The purpose of INDCs:
  - An urgent need to reduce emissions
  - Build trust that countries do their part
  - Give clarity, transparency and understanding
  - Enable assessment of whether we would meet the global 2°C goal
  - Foster a dialogue on ambition and equity

See also: Tirpak (2015) and http://unfccc.int/focus/indc_portal/items/8766.php
INDCs current status

Understanding and demonstrating benefits of climate action will be vital in raising ambition

Source: www.climateactiontracker.org | Climate Analytics / Ecofys / NewClimate / PIK | updated as of 1st Oct 2015
Benefits and INDCs

- Sustainable development benefits are a key driver for countries to engage in the development of INDCs.
- INDCs are an opportunity to communicate the benefits of climate action; showing how to reach national development objectives in the most efficient way.
- Can be done in the INDC process directly, or part of the plan/strategy that informs the INDC.
- When looking at mitigation only, costs are often overestimated when there is not a thorough assessment of different benefits.
A broader shift

Moving from the MDGs to the SDGs, climate change is now a distinct topic (Goal 13)

New Climate Economy identifies 10 key areas for stronger climate action which also bring significant economic benefits
Benefits are hugely varied and country determined

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Economic</td>
<td>Economic</td>
<td>Economic</td>
<td>Soil retention or replenishment</td>
<td>Engineering, science, and technology capacity, especially in clean/green related areas</td>
<td>Engineering, science, and technology capacity, especially in clean/green related areas</td>
</tr>
<tr>
<td>- Increased GDP, both per sector and per capita, higher median income and lower unemployment</td>
<td>- Increased stocks of physical capital</td>
<td>- Land-use efficiency (or yields), including both large and small scale production</td>
<td>- Natural resource production (e.g., timber and medicinal plants)</td>
<td>- Investment in R&amp;D, especially in technology areas with large potential co-benefits and spill-overs</td>
<td>- Engineering, science, and technology capacity, especially in clean/green related areas</td>
</tr>
<tr>
<td>- Improved terms of trade/competitiveness</td>
<td>- Reduction of stranded assets</td>
<td>- Water efficiency (e.g., reduced leakage, advanced irrigation)</td>
<td>- Fresh water flow and purification (e.g., through better forest/vegetation cover)</td>
<td>- Legal frameworks for intellectual property rights</td>
<td>- Investment in R&amp;D, especially in technology areas with large potential co-benefits and spill-overs</td>
</tr>
<tr>
<td>- Energy, food and other resource security</td>
<td>- Resilience of assets to natural hazards</td>
<td></td>
<td></td>
<td>- Technical standards for technologies with large network effects</td>
<td>- Investment in R&amp;D, especially in technology areas with large potential co-benefits and spill-overs</td>
</tr>
<tr>
<td>- Increased econ</td>
<td>- Increased resilience to exogenous shocks (price)</td>
<td></td>
<td></td>
<td></td>
<td>- Access to risk capital for entrepreneurs, especially those with triple bottom-line businesses</td>
</tr>
<tr>
<td>- Reduced risk damage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Access to risk capital for entrepreneurs, especially those with triple bottom-line businesses</td>
</tr>
</tbody>
</table>

**Environmental**
- Increased preservation of natural environments
- Reduced pollution/contamination
- Reduced waste landfilled
- Increased biodiversity
- Reduced risk of catastrophic environmental damage (like climate change)
- Land/soil stocks (e.g., agriculture, coastal zones)
- Water (slow- or non-replenishing)
- Atmospheric assets (ozone layer, low GHG atmosphere)
- Fish stocks
- Natural raw material stocks (e.g., forest timber)
- Other natural resources

**Social**
- Poverty reduction
- Increased economic opportunity of labor
- Improved education and literacy levels
- Improved health levels

**Improved foreign currency reserves**
- Improved foreign currency reserves
- Increased employment, especially among vulnerable populations
- Reduced income inequality
- Improved access to resources and opportunities (for vulnerable groups)
- Civil and/or political participation
- Reduced vulnerability to ecological risk

Source: Bishop et al. (2014)
How are countries determining the scope of their INDC?

**Sector prioritisation practices**

<table>
<thead>
<tr>
<th>Potential impact</th>
<th>Synergies/continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions reduction potential</td>
<td>Common mitigation and adaptation goals</td>
</tr>
<tr>
<td><strong>Accrual of wider economic and social co-benefits</strong></td>
<td>National priorities</td>
</tr>
<tr>
<td></td>
<td>Other national climate change processes</td>
</tr>
</tbody>
</table>

Figure 5: Criteria that countries have used to prioritise sectors for their INDCs

Why determine benefits?

- Make a case for prioritizing sector and measures to include in the INDC
- Increase the willingness of decision makers and stakeholder to increase ambition
- Mobilize sectoral departments and economic actors
  - Increase buy-in, engagement and leadership amongst stakeholders and ministries
  - Justify actions that face resistance
  - Promote ownership of climate change actions in various ministries
  - Make trade-offs clear – identify winners and losers

See also: Murphy (2015), Hoehne (2015) and Gagnon-Lebrun (2015)
Why determine benefits? (cont.)

• Link INDC measures to national development goals and find synergies

• Link INDC measures to other international goals
  – Rio Conventions or Sustainable Development Goals

• Attract international finance
  – Demonstration of social, economic and environmental benefits to potential funders
  – Demonstration of country ownership/leadership

See also: Murphy (2015), Hoehne (2015) and Gagnon-Lebrun (2015)
## Tools for assessing benefits

<table>
<thead>
<tr>
<th>Bottom-up or option-level impact analysis</th>
<th>Individual Issue (e.g. low carbon energy, sustainable agriculture)</th>
<th>Multiple Issues (e.g. sustainable growth / natural resource protection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(most applicable for action-based INDCs)</td>
<td>• Cost-effectiveness analysis</td>
<td>• Cost-effectiveness analysis</td>
</tr>
<tr>
<td></td>
<td>• Marginal abatement cost curves</td>
<td>• Multi-attribute analysis</td>
</tr>
<tr>
<td></td>
<td>• Cost-benefit analysis</td>
<td>• Multi-criteria analysis</td>
</tr>
<tr>
<td></td>
<td>• Accounting models (e.g. EFFECT, LEAP, MEDEE, 2050 Pathways)</td>
<td>• Multi-purpose spatial planning (GIS-based) models</td>
</tr>
<tr>
<td></td>
<td>• Sector-based and geographical-based agri-environmental frameworks</td>
<td>• Land-use models (e.g. CLUE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Urban energy systems</td>
</tr>
</tbody>
</table>

| Top-down or system-level impact analysis |                                                                 |                                                                 |
| (most applicable for outcome-based INDCs) |                                                                 |                                                                 |
|                                          | • Optimization approaches                                        | • Optimization approaches                                        |
|                                          | • Energy system models (e.g. Markal, MESSAGE)                     | • Energy system models (e.g. Markal, MESSAGE)                     |
|                                          | • Computable general equilibrium models                         | • Computable general equilibrium models                         |
|                                          | • Dynamic stochastic general equilibrium models                 | • Dynamic stochastic general equilibrium models                 |
|                                          | • Integrated Assessment Models Simulation approaches            | • Integrated Assessment Models Simulation approaches            |
|                                          | • Energy system models (Energy 20/20, POLES)                    | • Energy system models (Energy 20/20, POLES)                    |
|                                          | • Macro-econometric models (e.g. E3MG)                          | • Macro-econometric models (E3MG)                               |
|                                          | • Ecological macroeconomic models                               | • Ecological macroeconomic models                               |
|                                          | • Agent-based models                                            | • Agent-based models                                            |
|                                          | • System dynamics models                                        | • System dynamics models                                        |

Source: Blyth et al. (2014)
Country examples

Peru
PlanCC feeding into the INDC process

Dominican Republic
Sectoral action plans behind the INDC

Ivory Coast
Sectoral analysis

Morocco
Multi-criteria analysis
Independent studies

- New Climate Institute study
- US, China, EU, Canada, Japan, Chile, India and South Africa
- Considered two levels
  1. Submitted INDC targets
  2. 100% renewables in 2050 scenario
- Assessed three benefits
  - Cost savings from fossil fuel imports
  - Premature deaths from outdoor air pollution
  - Creation of green jobs in domestic renewable energy
- 2°C compatible pathway has up to 10 times the benefits for countries

See also: http://newclimate.org/2015/03/27/indc-cobenefits/
Thank you

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F +31 88 515 44 80  www.ecn.nl
Breakout session

- Each table assign one reporter to fill in the template

- Discussion questions (also on the template):
  - Were benefits used in selecting the scope of your INDC? How?
  - Were benefits assessed: 1) in the INDC process; 2) in other inputs to the INDC?
  - If benefits were not considered, why was that?
  - What tools were used and were these appropriate to your needs?
  - Did you communicate benefits associated with the INDC and how?
  - What more would you like to do to understand benefits of your INDC, and in the future during implementation?
  - What tools or assistance is missing? How could the LEDS GP help?

- What lessons or insights can you take from the three country case studies? (good practices)

- At the end of the breakout session (after 45min) – briefly report back on a few interesting stories about how benefits are being assessed and used per table
**Session Title: Assessing and communicating benefits of INDCs**

**Group members (countries):**

**Selected challenges discussed:**
- How were benefits used in selecting the scope of your INDC?
- Were benefits assessed: 1) in the INDC process; 2) in other inputs to the INDC?
- If benefits were not considered, why was that?
- What tools were used and were these appropriate to your needs?
- Did you communicate benefits associated with the INDC and how?

**What more would you now like to do in your home country to understand benefits of your INDC?**

**What tools or assistance is missing? How could the LEDS GP help?**

**Can an organisation at the table offer support? How?**

**Good practices and lessons for overcoming these challenges**
ECN – INDC and NAMA support

**ECN experience on NAMAs**
- In-country experience in developing concrete NAMA proposals
- Assistance for attracting implementation funding.
- Convene stakeholders on NAMA prioritisation and design
- Robust analyses on costs and benefits, mitigation potentials, feasibility, financial risks, and business models
- ECN supports the UNFCCC Secretariat with their NAMA Day 2015

**ECN experience on INDCs**
- Supported the development of the Pakistan INDC (with IISD)
- Supported the development of the Mongolia INDC (with NewClimate)
- Indonesia: Technical analysis INDC for the power sector

**What we offer:**
- NAMA and INDC trainings for various audiences
- Practical assistance to conceptualise and develop NAMAs and refine INDCs
- Thought leadership on the concept of NAMAs and INDCs, bringing insights to international dialogues, reviews, and workshops
- Comparative case studies, country profiles, and policy briefs
- Publications on issues such as development impacts, finance, benefits, ODA, and sectoral priorities
Assessing and communicating benefits of INDCs: the case of Peru

Lupe Guinand
LEDS Global Partnership 2015 Annual Workshop
Implementing LEDS: Innovation and Good Practices
Punta Cana, October 16th, 2015
Questions for this session:

1. What types of INDCs were submitted?

2. How was the scope of which benefits and impacts to consider decided?

3. How were these benefits and impacts assessed? What tools or methods were used?

4. How were the results of this process communicated and used?

5. How will the results be used and how will they be relevant to implementing the INDCs in the future?
Content

• Peru’s submitted INDCs
• Relationship between Peru’s INDCs and the PlanCC project
• Identifying and communicating cobenefits and impacts: PlanCC phase 1
• Assessing and quantifying cobenefits: tools and methods
• Conclusions
Presentation of Peru’s Intended Nationally Determined Contributions (iNDCCs) in the perspective of the New Climate Economy

Presented by Minister of Environment Manuel Pulgar Vidal and Sir Nicholas Stern in Lima
October 7th, 2015
PERU INDC MITIGATION COMPONENT

↓ 30% compared to BAU in year 2030

↓ 20% Not conditioned
↓ 10% Conditioned

Scope
• National

Methodology
• IPCC
• Sectorial dynamics + GDP and population projections
• Considers LULUCF (emissions and removals)

Ambition and fairness
• Low share of emissions now and historically
• Low emissions per capita.
• High vulnerability

Market mechanisms
• No purchases of emissions reductions
• Considering selling emissions reductions if it is not an obstacle for INDC compliance

↓ 30% compared to BAU in year 2030

↓ 20% Not conditioned
↓ 10% Conditioned

<table>
<thead>
<tr>
<th>Year</th>
<th>MtCO2</th>
<th>2010</th>
<th>2030 (BAU)</th>
<th>2030 (INDC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otros</td>
<td></td>
<td>78.0</td>
<td>170.6</td>
<td>298.3</td>
</tr>
<tr>
<td>USCUSS</td>
<td></td>
<td>92.6</td>
<td>159.0</td>
<td>208.8</td>
</tr>
</tbody>
</table>

↓ 30% compared to BAU in year 2030

↓ 20% Not conditioned
↓ 10% Conditioned
Relationship between Peru’s INDCs and the PlanCC project
May to July 2015 → 664 participants, 513 institutions, 25 regions

5 macro-regional workshops and 23 meetings with business associations, indigenous people representatives, youth organizations, renewable energy enterprises, universities and research centers, local governments, NGOs, trade unions, Gender organizations, general public, actively commented the proposal.
Identifying and communicating cobenefits during phase 1 PlanCC
Co-benefits

Local benefits of climate change mitigation policies/actions (beyond GHG reductions). These benefits can range from improved air quality, to cleaner technologies, to better jobs, improved competitiveness.

Social
• Better health

Environmental
• Less pollution

Economic
• More and better jobs
Methods:

2. Computable General Equilibrium Model (CGE) to project mitigation scenarios
3. Consultation process to choose Sustainable Scenario
Expert judgement

Esta medida consiste en la combinación de diferentes fuentes de Recursos Energéticos Renovables (RER) no convencionales e hidroenergéticas para la generación de electricidad a nivel nacional desde el año 2013. De esta manera, la participación de las fuentes de energía del Sistema Eléctrico Interconectado Nacional (SEIN) sería: RER 24%, hidroeléctrica 59% y térmica 17%.

El porcentaje de participación objetivo de RER correspondería a un 20% más de lo que está establecido actualmente mediante la ley de promoción a la generación de la electricidad con RER. Para el año 2050, la capacidad instalada y la generación de electricidad total requerida por el país, sería de 48,000 MW y 246,400 GWh, respectivamente. En dicho año la capacidad instalada y la generación de energía proveniente de fuentes renovables no convencionales sería de 16,324 MW y 58,165 GWh; respectivamente.

- Mayor seguridad energética y confiabilidad.
- Diversificación de la matriz energética.
- Desarrollo de la industria nacional de equipos más eficientes.
- Uso eficiente del recurso energético (reducción del costo de la energía).
- Impacto ambiental y sostenibilidad.
- Creación y mayor cobertura de electrificación rural en regiones y territorios no atendidos.
- Mayor valor agregado por creación de mercado de biomasa de residuos agrícolas y forestales.
- Mayor disponibilidad de reservas de fuentes fósiles no renovables.
- Incrementar la frecuencia de subastas y que el porcentaje de contribución a la generación de electricidad con energías renovables sea mayor al 5%.
- Incentivos tributarios: depreciación acelerada y recuperación anticipada del IGV.
- Incremento de la tarifa de electricidad.
- Desarrollo de estudios de cuantificación de potencial.

**COSTO MARGINAL**

- 60.44

**COSTOS DE IMPLEMENTACIÓN**

Escenario BAU

S/. 284,654.58

Escenario de mitigación

S/. 261,292.06

Costo de implementación de la medida por tonelada evitada de CO₂ equivalente (TCO₂ eq.). El valor es positivo cuando implica un costo y negativo cuando implica un ahorro o ingreso.

La reducción de emisiones proviene por el desplazamiento de la generación térmica por la generación de electricidad procedente de recursos renovables, dado su prioridad en el despacho de electricidad durante el periodo 2013 al 2050.

Los costos incluyen la inversión en generación, transmisión y distribución; la operación y mantenimiento, combustibles y el costo de transacción. En la estimación de los costos del escenario BAU se consideró una participación del 5% de energía renovable en el sistema.
2. Analysis of Sustainable Scenario

![Graph showing CO2 emissions over time for different scenarios]

- Fast Scenario
- Savings Scenario
- Sustainable Scenario
- Required by Science Scenario
Will it be valuable for Peru to promote low carbon emission development?

Yes... according to the analysis, due to 7 reasons.
1. Generates new investment projects

Investment 7,300 million soles

- Equivalent to 26% of “Proinversión” portfolio
- 2/3 could be mobilized by the private sector
- Main opportunities: Energy and Transport
2. Generates savings and improves competitiveness

- **Cement**
  - 10% de annual savings by replacing Clinker (S/. 17,455 MM)

- **Hybrid vehicle**
  - 47% annual savings compared to using fuel

- Improving competitiveness due to projects promoting technological innovation and better business practices.
3. Secures better energy security

- Sustainable Scenario 2050: Increasing participation of renewable energy + hydroenergy
- More diversified energy matrix and increases energy security
- Perú will be energetically more efficient. Less energy to generate same level of development
4. Increases GDP in the medium term

- **Sustainable Scenario**: From years 2022 to 2050, GDP would grow annually between 0.3% and 0.8% (additionally to BAU projections)

- Computable General Equilibrium Model (CGEM).
5. Reduces emissions, improves env. quality

Millones t CO₂

S/. miles de MM

1994 2049

2010 - 5.7 t per capita

2050 - 8 t per capita

2050 - 4.3 t per capita

Chile 3.6 t (2006); Colombia 4.2 t (2004), Costa Rica 2 t (2005).
6. Increases the value of forests

Provides value to 1/2 million hectares of forests through reforestation and agroforestry projects

Generates additional income of 11,900 million soles through sales of timber, cacao, coffee

- The lost of **2.4 million hectares** of primary forest will be avoided
7. Improves quality of life

- Travel time reduced in Lima 2050: 60% increase of urban population, 180% increase in solid wastes.
- Sustainable Scen: adequate waste disposal in landfills improves from 38.8% to 51%
Results Phase 1 PlanCC:

- The results of phase 1 indicate that it will be valuable for Peru to promote a low emissions development, because in addition to reducing GHG emissions, there would be new investments, greater energy security, savings and improved competitiveness, better environmental quality without affecting economic growth in a significant way.
Assesing and quantifying benefits: studies in progress
Studies in progress:
(relevant to recent INDCs discussions)

1. Quantifying cobenefits and competitiveness analysis (APOYO, MINAM and CDKN)

2. Financial analysis of 10 projects corresponding to mitigation options in Perú
   (Intelfin, MINAM, PMR World Bank)
Quantifying cobenefits and competitiveness analysis

Objective of the study:
To analyze competitiveness and cobenefits of 10 mitigation measures proposed by PlanCC (forestry, energy and waste) and determine if the measure is beneficial from the economic perspective. This is relevant to justify public investment in the implementation of the measures.

Methodology:
• Cost- Benefit Analysis
• Sectoral average productivity
• Competitiveness global index
Financial analysis of 10 projects corresponding to mitigation options

- 10 projects in 3 sectors: Energy, Forestry and Waste.

- In the energy sector, the projects correspond to actual cases of companies that are operating in Peru. In forestry and waste sectors, the estimations were done with information from studies and interviews with experts.

- The analysis was based on projected financial flows which allowed to calculate the following financial indicators: amount of investment (CAPEX) required, net present value (NPV), internal rate of return (IRR), payback period (PP) and the cost of Capital (COK).
Financial analysis of 10 projects corresponding to mitigation options in Perú

- 9 of 10 projects: economic profitability (economic IRR) exceeded the cost of capital, and they are therefore potentially attractive projects for private investors.

- The study tries to demystify some prejudices, i.e., "green is expensive and uneconomic". It is not true, green can be profitable if provided the right conditions for its development”

Study conducted by Intelfin with the support of World Bank (PMR-iNDCC)
Conclusions:

• Methods to assess cobenefits were qualitative during PlanCC phase 1 and more recently quantitative (although phase 1 included the CGE modeling).

• PlanCC results were key to analyze and estimate the costs and benefits of Peru’s INDCs.

• Quantitative analysis of cobenefits will be relevant for iNDC implementation. Stakeholders’ expectations on cobenefits and enabling conditions of mitigation measures need to be addressed. (PlanCC phase2)

• The challenges will be to discuss and validate methodologies, particularly in the forestry sector and involve economists and business leaders in the assessments.
Thank you
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lguinand@libelula.com.pe
Assesing and communicating benefits of INDCs:
The Dominican Republic Case

Moises Alvarez
Technical Director

LEDS Global Partnership 2015 Workshop
Implementing LEDS: Innovation and Good Practices
Punta Cana
Dominican Republic
October 15th, 2015
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%).

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(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).

SOURCE: GHG abatement cost curve v2.0; Team analysis
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.
Sectoral Action Plans

- Energy
- Transport
- Forestry
- Quick-wins
Sectoral Action Plans

- Energy
- Transport
- Forestry
- Quick-wins
## Selection of major programs the sector is committing to and underlying impact estimate

**2030, steady state**

### Programs

<table>
<thead>
<tr>
<th>Programs</th>
<th>Objectives</th>
<th>New permanent jobs 2030</th>
<th>Economic impact US$ millions per year</th>
<th>Abatement impact MtCO₂</th>
<th>Others Non-GHG Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substituting fuel-oil with gas</td>
<td>Remove or convert all fuel-oil plants still operating in 2030 under the base line (4 GW) substituting them with natural gas</td>
<td>+/- 0</td>
<td>130</td>
<td>1.0</td>
<td>Cleaner air</td>
</tr>
<tr>
<td>Remove or convert all fuel-oil plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce auto-generation</td>
<td>Reduce inefficient and dirty auto-generation from ~25% to 5% through a reliable and low cost electric system clients can trust.</td>
<td>+/- 0</td>
<td>20</td>
<td>0.5</td>
<td>Cleaner air</td>
</tr>
<tr>
<td>Reduce auto-generation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renewable energy</td>
<td>Increase participation of renewables in generation to ~38%, doubling hydraulic to 1.1 GW, and installing 850 MW wind capacity and 300 MW of biomass.</td>
<td>1,300</td>
<td>300</td>
<td>4.3</td>
<td>Cleaner air</td>
</tr>
<tr>
<td>Renewable energy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>Reduce the need for electric generation by 13% vs. baseline demand through changes in light bulbs, efficiency standards in buildings and electronics, as well as efficiency in industry.</td>
<td>33,000</td>
<td>550</td>
<td>2.8</td>
<td>Cleaner air</td>
</tr>
<tr>
<td>Accessible and clean matrix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Σ ~ 35,000 ~ 1,000 ~ 9
Sectoral Action Plans

- Energy
- **Transport**
- Forestry
- Quick-wins
## Selection of major programs the sector is committing to and underlying impact estimate

**2030, steady-state**

<table>
<thead>
<tr>
<th>Programs</th>
<th>Objectives</th>
<th>New permanent jobs</th>
<th>Economic impact (^1) MM USD</th>
<th>Abatement impact MtCO(_2)</th>
<th>Others Non-GHG Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency Standards</td>
<td>Establish efficiency standards that ensure a decrease in fuel consumption in diesel and gasoline vehicles</td>
<td>0</td>
<td>~500</td>
<td>~1.3</td>
<td>Cleaner air Black Carbon Reduction</td>
</tr>
<tr>
<td></td>
<td>Decrease the share of annual imported of used cars,, from 67% in 2010 to 33% in 2030.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Decrease the average age of the vehicle fleet from 15 years in 2010 to 10 years in 2030.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift to CNG</td>
<td>Promote the use of CNG through a conversion program so that by 2030 we have converted:</td>
<td>~4,000</td>
<td>~600</td>
<td>~1.1</td>
<td>Cleaner air Black Carbon Reduction</td>
</tr>
<tr>
<td></td>
<td>– 110,000 vehicles from diesel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– 108,000 vehicles from gasoline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Eliminated 240,000 vehicles that use LPG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create a network of CNG service stations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biofuels</td>
<td>Produce locally ~2 million barrels of sugar cane bioethanol (E20 mix) and ~2 million barrels of biodiesel (B12 mix)</td>
<td>~21,000</td>
<td>~400</td>
<td>~2.4</td>
<td>Cleaner air Black Carbon Reduction</td>
</tr>
<tr>
<td></td>
<td>Import bioethanol and biodiesel to reach average E50 and B50 mixes by 2030</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Transportation</td>
<td>Increase the number of travels in the metro system from 100,000 people/day in 2010 to 700,000 by 2030, continuing with the construction of the metro network and reorganizing the current traditional system, based on a network of feeding lines with buses operated with CNG with capacity for 1.3 million people per day</td>
<td>0</td>
<td>~200</td>
<td>~0.5</td>
<td>Cleaner air Black Carbon Reduction, Less Traffic Congestion</td>
</tr>
</tbody>
</table>

\(^1\) Savings in fuel consumption for the final user

Annex Table: Final Results forTransport

<table>
<thead>
<tr>
<th>Program</th>
<th>New permanent jobs</th>
<th>Economic impact (^1) MM USD</th>
<th>Abatement impact MtCO(_2)</th>
<th>Others Non-GHG Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency Standards</td>
<td>0</td>
<td>~500</td>
<td>~1.3</td>
<td>Cleaner air Black Carbon Reduction</td>
</tr>
<tr>
<td>Shift to CNG</td>
<td>~4,000</td>
<td>~600</td>
<td>~1.1</td>
<td>Cleaner air Black Carbon Reduction</td>
</tr>
<tr>
<td>Biofuels</td>
<td>~21,000</td>
<td>~400</td>
<td>~2.4</td>
<td>Cleaner air Black Carbon Reduction</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>0</td>
<td>~200</td>
<td>~0.5</td>
<td>Cleaner air Black Carbon Reduction, Less Traffic Congestion</td>
</tr>
</tbody>
</table>

Total: ~25,000, ~1,700, ~5
Sectoral Action Plans

- Energy
- Transport
- Forestry
- Quick-wins
### Selection of major programs the sector is committing to and underlying impact estimate

#### 2030, steady-state

<table>
<thead>
<tr>
<th>Programs</th>
<th>Objectives</th>
<th>New permanent jobs</th>
<th>Economic income through funding</th>
<th>Abatement impact MtCO₂</th>
<th>Others Non-GHG Benefits</th>
</tr>
</thead>
</table>
| **Deforestation reduction**   | - Build a solid fact base for land use and land use change to identify the areas where deforestation takes place  
                                - Size historic deforestation rate  
                                - Identify the causes of deforestation and design programs to reduce deforestation from ~6,200 has to ~1,400 has  
                                - Roll-out extension programs  
                                - Reduce illegal charcoal production                                                                                                                                                     | ~3,000            | ~30²                            | ~2.2                  | Clean Air              |
| **Forest fire prevention & control** | - Reduce the area affected by fires in 2030 by ~80% relative to 2010 levels  
                                - Increase the size of the fire prevention brigades from ~100 workers to ~400  
                                - Invest in fire fighting equipment, such as water pumps, water trucks, helicopters                                                                                                                                               | ~300              | ~6                              | ~1.2                  | Black Carbon Reduction   |
| **A/R**                       | - Increase forest cover by ~235,000 hectares through A/R efforts by increasing the reforestation rate from ~6,300 has/yr in 2010 to ~15,000 has/yr in 2030  
                                - Provide ~9,500 new jobs through the reforestation program                                                                                                                                                                                   | ~9,500            | ~11                             | ~2.2                  |                       |

1 5 USD / ton from REDD and CDM mechanisms per ton of abatement  
2 Includes disposable income from Extension program (~18 MUSD)
Sectoral Action Plans

- Energy
- Transport
- Forestry
- Quick-wins
**QUICK WINS**

Quick wins in the cement, waste and tourism sectors can reduce annual emissions by ~5 MtCO2e in 2030

**2030, steady state**

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Objectives</th>
<th>New permanent jobs 2030</th>
<th>Economic impact MUSD annual, 2030</th>
<th>Abatement impact MtCO₂</th>
<th>Others Non-GHG Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cement</strong></td>
<td>Reduce emissions and save money by <strong>Control the threats solid waste represents for public health and the tourism sector</strong></td>
<td>2,000</td>
<td>110</td>
<td>1.1</td>
<td>Municipal Solid Waste reduction</td>
</tr>
<tr>
<td></td>
<td>- Replacing clinker with local mineral ingredients, such as fly ash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Replacing fossil fuels with biomass and fossil waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Waste</strong></td>
<td><strong>Control the threats solid waste represents for public health and the tourism sector</strong></td>
<td>9,500</td>
<td>0.5</td>
<td>3.2</td>
<td>Municipal Solid Waste reduction</td>
</tr>
<tr>
<td></td>
<td>Reduce emissions and save money by installing modern recycling systems, composting and capturing gas from landfills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tourism</strong></td>
<td>A more sustainable tourism sector through the reduction of emissions</td>
<td>12,500</td>
<td>120</td>
<td>0.6</td>
<td>Better environment</td>
</tr>
<tr>
<td></td>
<td>Capitalize on CCDP by promoting Dominican ecotourism on the basis of DR’s growing reputation as a sustainability leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Σ | ~ 25,000 | ~ 230 | ~ 5 |

- Better environment
1. What type of INDC was submitted (based on individual actions/policies or an economy wide assessment)?
   Our INDC is an intensity (Ton of CO2e per capita) economy wide assessment.

2. How a scope was decided for which benefits and impacts to consider?
   This was determined by the contracted consultancy (McKinsey). See answer to question 5 below.

3. How were these benefits and impacts assessed, using certain tools or methods?
   This was determined by the contracted consultancy (McKinsey). The tools and methods used are unknown to us.

4. How were the results of this communicated and used? (this could be internally or internationally)
   This was used and presented internally and internationally in ppt and printed matter.

5. How will the results be used, or how will they be relevant to implementing the INDC in the future?
   The creation of jobs and the economy impact are very attractive for obtaining political and economical support.
For the good of our world, our region, and our country

Thank you!
La Côte d'Ivoire maintient son cap sur l'émergence en réduisant les Gaz à Effet de Serre

PREPARATION DES CONTRIBUTIONS PRÉVUES DÉTERMINÉES AU NIVEAU NATIONAL (INDC) POUR L’ACCORD GLOBAL POST 2020 SUR LE CHANGEMENT CLIMATIQUE
CONTENT

I. BRIEF PRESENTATION OF COTE D’IVOIRE

II. I.N.D.C PROCESS IN COTE D’IVOIRE

III. WHAT TO RETAIN FROM THE INDC IN COTE D’IVOIRE?

IV. PLANNING PROCESS, IMPLEMENTATION AND FOLLOW UP OF THE INDC
• Economic growth in Ivory Coast: 8.3%

• Leader of cocoa production

• Leader in deforestation
INDC of Côte d’Ivoire
I.N.D.C PROCESS IN COTE D’IVOIRE – CONTENT OF THE REPORT

- National context
- Mitigation
- Adaptation
- Planning Implementation & Follow up
- Means for implementation
1. **Diagnostic of greenhouse gas emission in 2012 (Year 1)**

   :Inventory of emissions based on the Third National communication (TNC)

2. **Projection of greenhouse emission in 2030 (target year)**

   a. **In terms of Business as Usual (BAU):**

      case study where no reduction in gas emission is undertaken

   b. **Planned development of clean carbon by Côte d'Ivoire:**

      case study of voluntary contribution
1. MAIN FIELDS OF ACTIVITIES EMITTERS OF GREENHOUSE GASES (2012)

a) Energy-Transport: 8 241 kilotons equivalent of carbon monoxide, that is 51.6% of total greenhouse effects gas emissions

b) Agriculture: 6 141 kilotons equivalent of carbon monoxide, that is 38.5% of total greenhouse effects gas emissions

c) Wastes: 1 582 kilotons equivalent of carbon monoxide, that is 9.9% of total greenhouse effects gas emissions

d) Total emissions of greenhouse gas: 15 964 equivalent of carbon monoxide
WHAT TO RETAIN FROM INDC IN COTE D’IVOIRE? – OUR CONTRIBUTION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production d'électricité</td>
<td>847.45</td>
<td>344.593</td>
<td>623.544</td>
</tr>
<tr>
<td>TRANSPORT</td>
<td>3365.46</td>
<td>6 451.37</td>
<td>4 579.230</td>
</tr>
<tr>
<td>Agriculture</td>
<td>3 889.41</td>
<td>1 658.86</td>
<td>1 286.43</td>
</tr>
<tr>
<td>Agriculture production en énergie</td>
<td>703.04</td>
<td>1 179.22</td>
<td>1 495.06</td>
</tr>
<tr>
<td>Education</td>
<td>339.66</td>
<td>1 928.84</td>
<td>1 173.61</td>
</tr>
<tr>
<td>Agriculture</td>
<td>61.63</td>
<td>7 955.15</td>
<td>6 738.83</td>
</tr>
<tr>
<td>Industrial</td>
<td>2 892.46</td>
<td>2 879.02</td>
<td>3 129.75</td>
</tr>
</tbody>
</table>

Total émissions (ktonne équiv. CO₂) | 15 964.35 | 34 253.25 | 24 576.16
ACTIONS TO REDUCE THE EMISSION OF GREENHOUSE GASES (2016-2030)

1. **Field of Power-Transport**
   a. Transition to Clean sources of energy (Power)
   b. Power efficiency

2. **Agriculture**
   a. Intensification and mechanization
   b. Control of deforestation

3. **Wastes**
   a. Recovering liquid and solid Wastes

POTENTIAL REDUCTION OF GREENHOUSE EFFECT GAS EMISSIONS (2030)

Projected reduction: -28%
WHAT TO RETAIN FROM THE COTE D’IVOIRE’S INDC’S - ADAPTATION

**Impacts and Vulnerability**

- Loss of Human lives
- Losses related to sea coast erosion
- Damages of agricultural products
- Destruc9ons of infrastructures
- Human resources, Institutional, Technical, Financial capacity building and technological transfer
- Transport, public health and gender issues

**Actions to plan a climate friendly development**

- Mastery and management of water resources
- Adjustment of water ways
- Improvement of agricultural productions
- Landscaping and protection of sea coasts

**Obstacles, shortcomings and needs to succeed in actions of adaptations**

**Losses and Damages**

- V vulnerable fields of activities: agriculture and animal breeding, use of soils, forests, water resources, power, coastal zones, fishing, infrastructures (housing conditions)
PLANNING PROCESS, IMPLEMENTATION AND FOLLOW UP OF THE INDC

Institutional Framework
- Creation of a climate change interministry committee presided by the prime minister
- Logging the secretaryship of the committee on climate change at the ministry of environment

Making the INDC operational
Creating a relationship between the INDC and the National development Plan
- Additional studies after submission of the INDC (inventory of greenhouse gases, potential in renewable energy sources etc.)

Follow up and evaluation of INDC
- Establishing follow up indicators (emission of greenhouse gas, vulnerability, adaptation, agricultural intensification)
- Follow up of expenses related to climate change

Communication and updating / revision of the INDC
- Communication just after the COP 21
- Updating the INDC by the secretaryship of the interministry committee on climate change (for example after the COP 21 and every 5 years)
### MEANS FOR IMPLEMENTATION

**Financing**
- National budget
- Private Finances
- Market induced mechanisms
- Financial and Technical partners

**Capacity building of deciders and actors**
- For reduction
- For adaptation

**Transfer and development of technologies - R&D**
- Technologies of low emission
- Optimization of production processes
CONTINUATION OF THE INDC PROCESS

.....What comes next after the approval of INDC?

September 2015

Submission of the INDC to the CCNUCC commission (Sept. 11, 2015)

Official reception of the INDC by the President of the republic

Handing over by the Minister of environment Cleaned Urbanization and Sustainable Development (Sept. 25th, 2015)

November – December 2015

Negociation at the COP21-CMP11

From January 2016 onwards

Implementation of INDC

What comes next after the approval of INDC?
THANKS FOR YOUR SUSTAINED ATTENTION !
Assessing and communicating benefits of INDCs - Morocco

LEDs Global Partnership 2015 Annual Workshop
Implementing LEDs: Innovation and Good Practices
14- 16 october 2015 Dominican Republic

Imane Chafiq, Technical Advisor
Climate Change Competence Centre Project/IKI
INTENDED NATIONALLY DETERMINED CONTRIBUTION
UNDER THE UNFCCC
Mitigation targets

Unconditional target
13% by 2030 compared to BAU scenario

Conditional target
19% under conditions

Total contribution
32% by 2030 below BAU scenario

Financial needs (2015-2013)

10billion USD

35billion USD

45billion USD
BAU and mitigation scenarios

Mt CO₂ eq

- BAU scenario
- Mitigation scenario for unconditional target
- Mitigation scenario for conditional target


13% 32%
Morocco INDC

Assumptions and methodological approach


Mitigation scenarios:
Implementing 54 projects 2010-2030 based on 3rd National communication results:

- Unconditional scenario: 10 projects
- Conditional scenario: 44 projects
Morocco INDC

Assumptions and methodological approach

Methodology for Estimating Emissions

- 2010 GHG emissions inventory => revised 1996 IPCC Guidelines.

- BAU and mitigation scenarios => "Long-range Energy Alternatives Planning System" (LEAP)

- Other data => National Statistics Directory, economic data on sectorial activities, prospective analysis.
No macroeconomic model used

multi-criteria analysis

a set of criteria established to analyze, guide the discussion toward some key advantages and disadvantages of selected projects.

Criteria determined by “national group of experts” in charge of the 3rd national communication
## Morocco INDC

### Benefits and impacts assessment 2/3

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Climate change</strong></td>
<td>mitigation potential of GHG emissions</td>
</tr>
<tr>
<td><strong>2. Economic and social impact</strong></td>
<td>cost-effectiveness, investment spending and operating costs, … Macroeconomic aspects are taken into account: GDP, number of jobs created or lost, effects on inflation and interest rates, impact on the long-term development, exchange and foreign trade, other economic advantages or disadvantages</td>
</tr>
<tr>
<td><strong>3. Administrative, institutional and political considerations:</strong></td>
<td>administrative charges, institutional capacity to carry out necessary operations for information gathering, surveillance, enforcement, authorization, etc.</td>
</tr>
</tbody>
</table>
Morocco INDC

Benefits and impacts assessment 3/3

- A set of 3 to 4 indicators per criteria
- Notation per indicator given on the basis of experts consultations
- Proposed mitigation measures ranked on the basis of total score
- Tool used: excel factsheet
Indicators for benefits/impacts assessments:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| Contribution à la réduction des émissions de GES | de -3 à +3 | Mesurée par la réduction nette des émissions de GES (CO₂, ...)  
Barème: 0 pas de changement dans les émissions de GES comparé au scénario de base et +3 pour une réduction totale des émissions |
| Contribution au développement durable           | de -3 à +3 | L’impact sur l’environnement local sera évalué par le % de variation des émissions du polluant local le plus significatif (CO₂, CO, N₂O, MPS, SO₂, Métaux lourds ...). Une moyenne pondérée doit être envisagée s’il faut tenir compte de plusieurs polluants à la fois.  
Barème : 0 pour pas de changement, +3 pour un évitement total des émissions du polluant et -3 pour un doublement de ces émissions |
| Contribution à la création d’emploi direct net  | de -3 à +3 | Nombre additionnel d’emplois créés par le projet en comparaison avec la ligne de base.  
Barème : 0 pas de changement du niveau d’emploi, +3 doublement du nombre d’emplois et -3 suppression pour tous les emplois prévus au scénario de base. Cet indicateur est problématique car il n’intègre pas l’aspect qualitatif des emplois : qualification, temporaire/permanent, direct/indirect, ... |
<p>| Considérations d’ordre administratif, institutionnel et politique | de -3 à +3 | Capacités institutionnelles de mener à bien les opérations nécessaires en matière de collecte des informations, de surveillance, de mise à exécution, d’autorisation, etc. Mais également, la capacité d’endurer les procédures administratives et bureaucratiques et de maintenir un appui politique cohérent avec les autres mesures d’intérêt public. |</p>
<table>
<thead>
<tr>
<th>N°</th>
<th>Mesures d'atténuation</th>
<th>Investissement de base</th>
<th>Potentiel d'atténuation</th>
<th>Coûts/Bénéfices Nets directs</th>
<th>Coûts totaux directs annalisés</th>
<th>Indicateurs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[US x 106]</td>
<td>([T. E-CO2/an x 103])</td>
<td>(S/T. E-CO2)</td>
<td>(US x 106)</td>
<td>Réduction des GES</td>
<td>Développement durable</td>
</tr>
<tr>
<td>9</td>
<td>Importation et distribution du gaz naturel dans les principales villes industrielles du Royaume</td>
<td>650,00</td>
<td>2 219,41</td>
<td>-458,89</td>
<td>-1 018,46</td>
<td>3</td>
</tr>
<tr>
<td>23</td>
<td>Programme Biomasse - Inventaire, organisation et valorisation de la filière</td>
<td>564,71</td>
<td>973,22</td>
<td>-99,78</td>
<td>-97,11</td>
<td>2</td>
</tr>
<tr>
<td>42</td>
<td>Amélioration du rendement des terres agricoles sur une superficie de 4 200 000 ha.</td>
<td>2,30</td>
<td>6 034,88</td>
<td>0,06</td>
<td>0,37</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Centrales hydroélectriques : 700 MW</td>
<td>1 400,00</td>
<td>1 468,22</td>
<td>-157,06</td>
<td>-230,60</td>
<td>2</td>
</tr>
<tr>
<td>49</td>
<td>Valorisation des émanations de GES en provenance des décharges contrôlées</td>
<td>1 066,13</td>
<td>15 637,10</td>
<td>-13,56</td>
<td>-212,09</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Programme national de Développement des chaudières solaires &quot;SHEMSIL&quot; - Objectif de 1 700 000 m² à l'horizon de 2025.</td>
<td>945,00</td>
<td>189,66</td>
<td>87,35</td>
<td>16,57</td>
<td>1</td>
</tr>
<tr>
<td>46</td>
<td>Renforcement du programme oléopole - plantation de 55 600 Ha par année sur une durée du programme de 10 ans.</td>
<td>167,06</td>
<td>206,87</td>
<td>-406,11</td>
<td>-84,01</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>Ville nouvelle de Chraifat à faible émission de carbone - projet-pilote - population à terme de 150 000 habitants.</td>
<td>165,25</td>
<td>142,27</td>
<td>64,88</td>
<td>9,23</td>
<td>1</td>
</tr>
<tr>
<td>44</td>
<td>Reforestation - reboisement de 60 000 Ha/an sur une période de 10 ans.</td>
<td>300,30</td>
<td>816,75</td>
<td>59,84</td>
<td>48,87</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>Généralisation du Programme &quot;Villes Vertes&quot; à faible émission de carbone - population à 2040 de 1 000 000 habitants.</td>
<td>1 108,35</td>
<td>957,38</td>
<td>79,71</td>
<td>76,32</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Programme national de promotion des Panneaux photovoltaïques (PV) basse tension pour une capacité totale de 1 010 MWc.</td>
<td>2 020,00</td>
<td>753,66</td>
<td>243,73</td>
<td>183,69</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Parcs solaires privés - extension à 150 MW à l'horizon de 2040</td>
<td>11,02</td>
<td>177,56</td>
<td>-135,20</td>
<td>-24,01</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Programme de centrales photovoltaïques en bout de ligne de capacité totale de 400 MW</td>
<td>800,00</td>
<td>963,53</td>
<td>33,83</td>
<td>32,60</td>
<td>2</td>
</tr>
</tbody>
</table>
Communication of results:
CC focal points workshop, April 30

National conference, June 2nd

Factsheet (Fr, Eng, Arabic)

Poster (Fr & Eng)
Results Vs INDC implementation:

- Inclusive governance of climate action
- Reform legal and institutional framework
- Clear and ambitious targets
- Design feasible solutions adapted to national context
- Mobilizing finance
Thank you