Reporting on the Impacts of Response Measures: Ghana Case Study

Project Update

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ERCST's work on Response Measures

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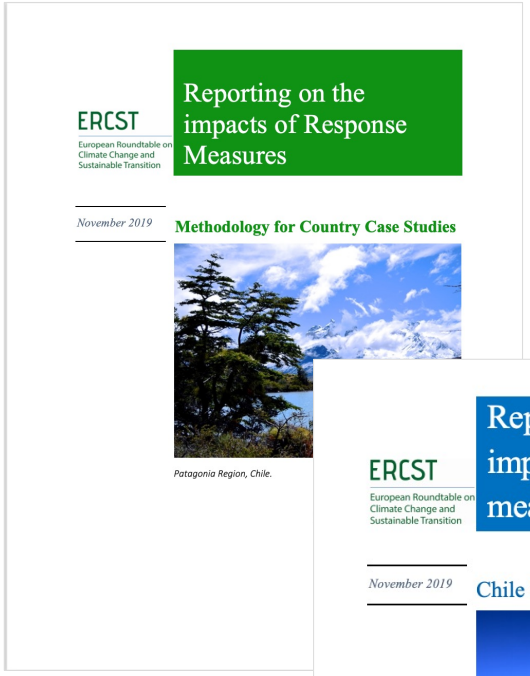
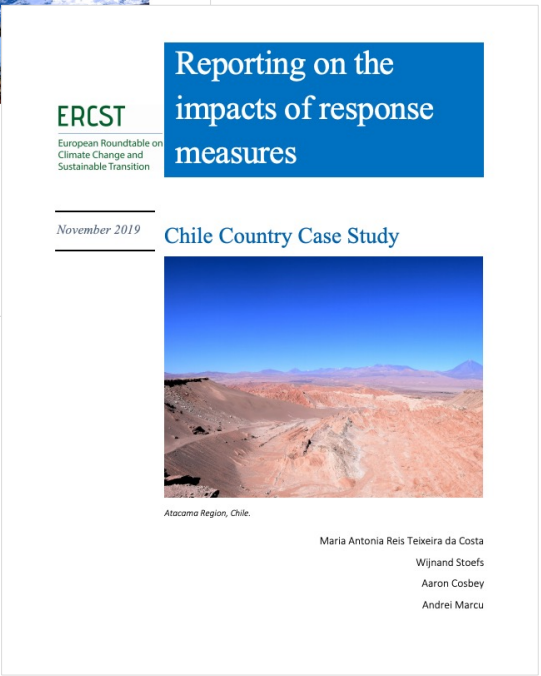
- **In 2018,** ERCST launched an informal dialogue on response measures, bringing together UNFCCC negotiators and key stakeholders to discuss this issue and its negotiations under the UNFCCC.
- **In 2019,** ERCST continued this informal dialogue on response measures, focusing on the agreed work programme in Katowice. ERCST also carried out a case study on "reporting on response measures under biennial update reporting" in Chile.
- **In late 2020,** ERCST has started developing a new case study for Ghana. This work will continue throughout 2021 and the information of the dialogue will be shared with the KCI.
- ERCST's work has been pioneering in developing a methodology and by practically applying it with country case studies.



ERCST,2019



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Case Study for Ghana

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- ERCST and the EPA in Ghana have been working together on **identifying, measuring and analysing the impacts of the implementation of response measures in Ghana.**
- One of the main objectives is to **test, refine and improve the methodology** that ERCST has developed in different countries.
- The research and information from this Informal Dialogue will be shared and will **feed into the discussions of KCI and the Forum** on response measures.
- To foster capacity building and stakeholder participation, virtual workshops are being organized at each stage of the development of the case study. Three workshops have been already organized.

Methodology for Country Case Study: Ghana

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STEP 1 Describe the country and its characteristics

STEP 2 Identifying important sectors to the Ghanaian economy

STEP 3 Identify sectors potentially vulnerable to international response measures

Identifying Vunerable Sectors

STEP 4 Identify relevant response measures

Identifying Response Measures

STEP 5 Assess the impacts of international response measures

Assessing the Impacts

STEP 6 Look at possible domestic and international tools and support which may be needed to address the impacts

Results Step 2 & 3: Identification of vulnerable sectors

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Table 1. Top 12 sectors ranked by Vulnerability Indicator

- Filtering procces, from 71 to 12 sectors

Sector Description		GDP at Current Market Prices Gh¢	Employment by econ. activity	(1) GHG Intensity	(2) Trade Intensity	(3) Vulnerability Indicator
ISIC Rev 4 Code	Description	% of GDP	% of tot. workforce	kgCO2e/$	Indicator	(1)*(2)
0127, 1073	Cocoa	1,35%	0,36%	2,624	1,70	4,449
0126	Palm oil	0,59%	0,16%	2,635	0,50	1,308
11, 10 (-1073, -1020)	Manufacture of beverages & food products	2,64%	7,95%	0,545	0,51	0,280
03,1020	Fishing	0,93%	0,09%	0,419	0,54	0,226
0610, 0620, 1920	Oil and gas	4,55%	0,03%	0,100	1,82	0,182
05, 07 (- gold of 0729), 08,09	Mining and quarrying without oil and gas and gold	3,19%	0,15%	0,356	0,33	0,118
23	Manufacture of other non-metallic mineral products	0,95%	0,21%	0,103	0,46	0,048
2420, 0729	Gold	7,13%	1,62%	0,027	1,44	0,039
25	Manufacture of fabricated metal products, except mach. and equip.	0,85%	0,52%	0,009	0,50	0,004
22	Manufacture of rubber and plastics products	1,11%	0,09%	0,005	0,54	0,003
20	Manufacture of chemicals and chemical products	2,43%	0,16%	0,005	0,48	0,003
WTO 1.33, 1.36	Tourism (travel & expend. by main purpose of trip)	2,77%	3,70%	-	-	-

Sources: own elaboration based on GSS, ILOSTAT, BUR/NIR, UN Comtrade, UNWTO and other relevant sources for missing data points

For more info: https://secureservercdn.net/160.153.137.163/z7r.689.myftpupload.com/wp-content/uploads/2021/01/20210215-ERCST-Presentation.pdf

Example results Step 4: Identification of Response Measures

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Palm Oil Sector (ISIC Rev 4. 0126)

Senegal	Nigeria	EU*	Benin, Burkina Faso, Niger
Law 2010-22 Regulating the Biofuels Industry • Grants biofuels fiscal benefits, revenues generated from biofuel activities are exempted from taxation for 5 yrs	**National Renewable Energy and Energy Efficiency Policy (NREEEP)** • Defines the government's position on how to strengthen renewable energy and energy efficiency in the country	**Revised Renewable Energy Directive 2018/2001/EU** • Limits high ILUC-risk biofuels (palm oil) until 2023 and will gradually decrease to zero by 2030	na
Decree No. 2013-684 on the establishment, organization and functioning of the National Agency for Renewable Energies • Promote the use of renewable energy, including bioenergy	**Nigerian Bio-fuel Policy and Incentives** • Measures aimed at stimulating market demand for biofuels and promoting their production (e.g. tax exemptions)	• Belgium, France, Austria and Netherlands announced **ban of palm oil as a raw material for transport biofuel** from mid-2022.	

*Not in the top 5 export countries for this sector, only in top 10 but considered since it is a a priority product for the Ghanaian National Export Development Strategy

Oil & Gas Sector (ISIC Rev 4. 0610, 0620, 1920)

China	South Africa	India	USA	United Kingdom	International Transportation
National ETS (started operating 2021) Scope is expected to be gradually expanded to cover seven other sectors in addition to power: petrochemical, chemical, building materials, steel, nonferrous metals, paper, and domestic aviation	**Carbon Tax Bill** - Came into effect in 2019 - Applies to GHG emissions from the industry, power, buildings and transport sectors irrespective of the fossil fuel used, with partial exemptions for all these sectors	**National electric car purchase subsidy and income tax deduction on loans. Phase II of Faster Adoption and Manufacturing of Electric Vehicles (FAME II)** - Income tax deduction of $ 2000 on interest paid on electric vehicle loans - deployment of charging stations	**Zero-Emission Program (ZEV) for (PHEV, BEV,FCEV)** - by 2025 3.3 million ZEVs in 11 states - by 2050 all passenger vehicle sales to be ZEV in 10 States - Managed by The California Air Resources Board (CARB)	**National electric car purchase subsidy** - Up to USD 3 800 (BEV and PHEV)* - Capped at 35% of retail price. Only for cars < USD 63 600 - *If < 50 gCO2/km and electric range >112 km	• **International Maritime Organization (IMO) and other shipping climate change related measures** • **CORSIA/ICAO (for air freight)**
NEV Programme China - by 2025 25%: PHEV, BEV,FCEV - EV purchase subsidy (10%) - Mandatory credit policy for vehicle suppliers to boost domestic sales of NEVs	**Carbon dioxide vehicle emissions tax (2010)**	**National Electric Mobility Mission Plan (NEMMP) 2020** - Mix of incentive-based policies accompanied by regulatory reforms	**Transportation and Climate Initiative (TCI) ETS** - participating states only	**UK carbon Price Floor** - Users liable for payment of the tax for all fossil fuels. - The tax covers all fossil fuels	

Conclusions Step 4: Identification of response measures

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- We identified several vulnerable **sectors that are at risk of impacts:**
  - **Sectors:** palm oil; fishing; oil & gas; manufacture of beverages and food products (jojoba oil); mining and quarrying without oil and gas and gold (aluminium and manganese).
  - **Response measures:** carbon taxes; subsidies; CBAM; organic standards and labelling requirements for agri. goods and basic materials; aviation and shipping measures.
- We identified several vulnerable **sectors that don't appear at risk of impacts:**
  - **Sectors:** cocoa, gold, manufacture of other non-metallic mineral products; manufacture of fabricated metal products (articles of iron and steel); manufacture of rubber and plastic products; manufacture of chemicals.
- While those sectors are not at risk from country-led response measures, some may still be vulnerable via **soft-incentives, voluntary commitments and shareholder pressure:**
  - E.g. voluntary measures: SBTi, ICMM Mining Principles, ISO 14001 Environmental Management, organic and sustainability standards for food products (e.g. UTZ, MSC), and others.
- Strong asymmetry of climate targets and mitigation actions taken between countries and regions

Next Step: Assessing the impacts of international response

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- A quantitative assessment will be performed for a limited number of response measures using a Global Computable General Equilibrium (CGE) Model.
- Simulations:
  - **IMO carbon tax**
    - Vulnerable sectors in Ghana: oil and gas, mining and quarrying without oil and gas and gold (aluminium and manganese), fishing products.
  - **ICAO/CORSIA carbon tax**
    - Vulnerable sectors in Ghana: fishing products, oil and gas, tourism.
  - **EU CBAM tax**
    - Vulnerable sectors in Ghana: oil, aluminium and manganese (assuming exports to the EU according to National Export Development Strategy to 2029)

Thank you!

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