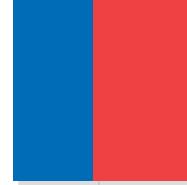




Ministerio del  
Medio  
Ambiente

Gobierno de Chile



# Green Taxes in Chile

Nov, 2018



# Context

- Chile has significant environmental problems:
  - Atmospheric pollution
  - Climate Change
  - Congestion and motor vehicle pollution.
- Environmental policy is centered on standards and regulations.
- GHG Inventory 2013:
  - Total emissions: 109,9 million tons CO<sub>2</sub> eq (0,3% total).
- Increasing GHG emissions: 113.4% (1990-2013)
- Chile is a highly vulnerable country for climate change (IPCC, 2001).
- The economic losses are estimated to be around 1,1% of annual GDP (2010-2100).



# Green Taxes

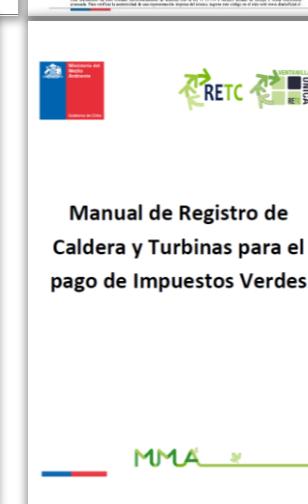
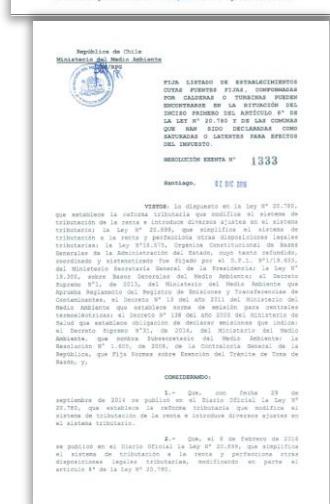
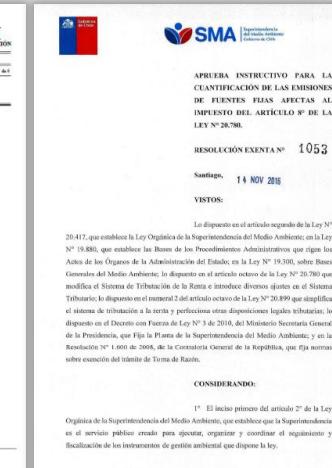
- In September 2014, Chile passed a green tax law. Three new taxes were introduced:
  1. A tax on CO<sub>2</sub> emissions from stationary sources with boilers and turbines.
  2. A tax on local contaminants also on stationary sources with boilers and turbines (PM, SO<sub>2</sub> and NO<sub>x</sub>), and
  3. A tax on the first sale of new cars considering the expected NO<sub>x</sub> emissions over their lifetime.
- These taxes went into force in 2017, and required detailed regulation which was developed mainly during 2016.

# Carbon Tax

- The carbon tax is fixed at USD 5 per ton of CO<sub>2</sub> emissions (Estimated by the Ministry of Social Development in 2014).
  - Today the shadow price of carbon is estimated at USD 32.5 per ton of CO<sub>2</sub>.
- The tax is levied on 'sources' with boilers and turbines that produce a heat power of 50 megawatts considering the sum of the combined facilities' heat output.
- The threshold was set at 50 megawatts because the main target was the electricity sector, which accounts for 27% of our total national emissions.
- Co-benefits:
  - Health
  - The tax generates a price signal
  - New institutional infrastructure.

# Institutional Infrastructure

*Ministry of the Environment and Superintendence of the Environment*



# Bylaw

- The bylaw was developed to define procedures and clarify definitions related to the implementation of the tax.
- It also defines the role of the different public services related to the implementation of the tax.



# Results

## *Facilities - 2017*

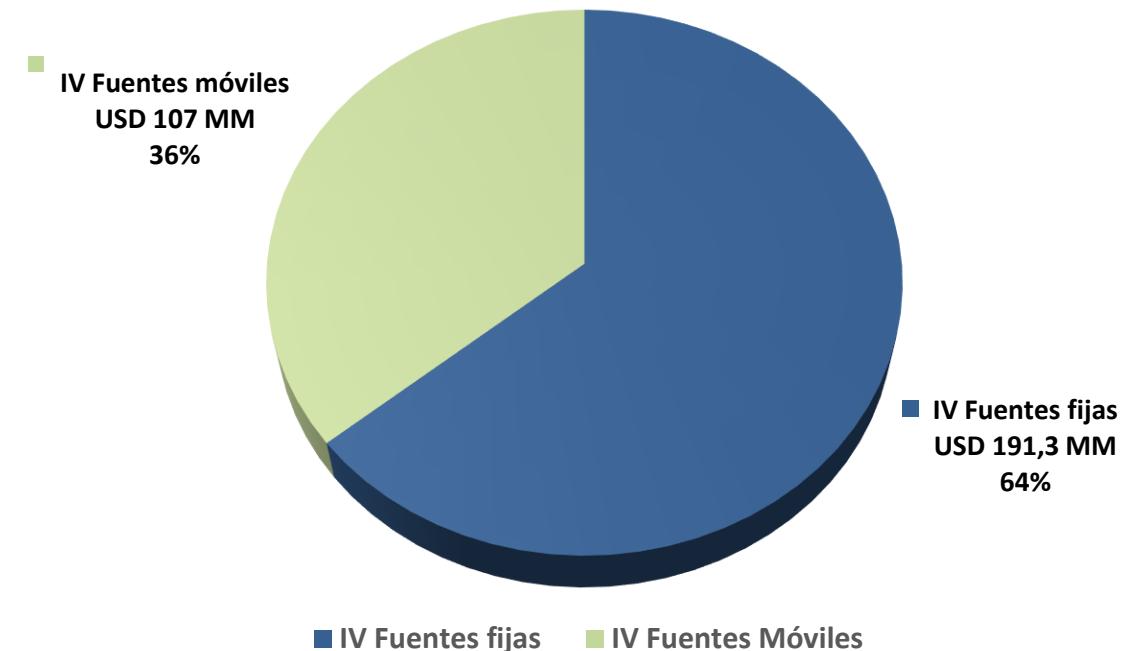
**94 Facilities  
(303 sources)**

<b>Sector</b>	<b>Facilities</b>	<b>%</b>
Energy generation	55	58,5%
Fishing	14	14,9%
Paper mill	7	7,4%
Agriulture	7	7,4%
Logging	4	4,3%
Otros	7	7,4%
<b>Total</b>	<b>94</b>	<b>100%</b>

# Results Green Taxes

## *Total collection - 2017*

Total collection of stationary and mobile sources 2017:  
**USD 298,3 MM**

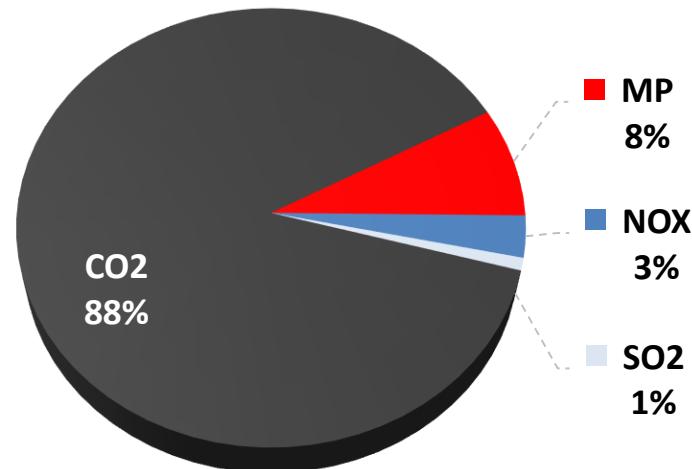


# Results Green Taxes SS

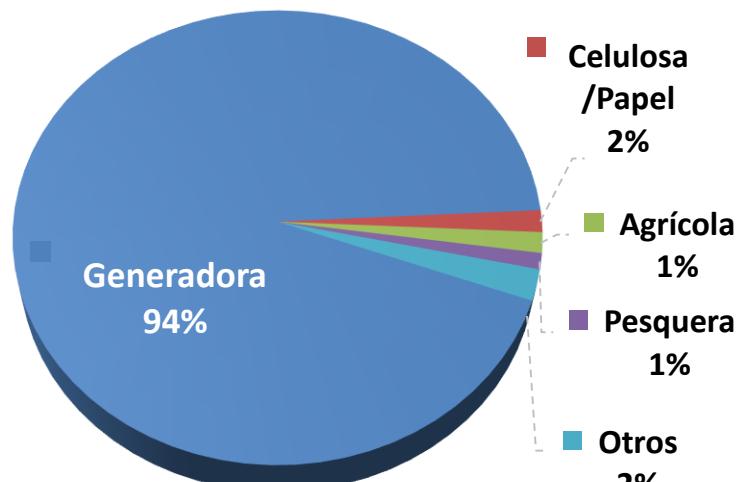
## *Collection - 2017*

Official collection IV stationaries sources:  
**USD 191,3 MM**

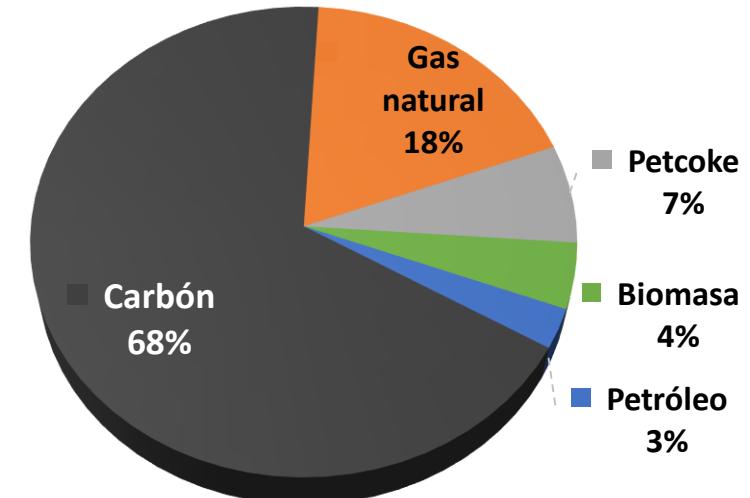
By Pollutants



By Sector



BY Fossil Fuel



# To sum up

- Green taxes raised USD 191.3 MM
- Chile is a pioneer in the region in establishing a green tax on local and global emissions.
- It reveals the social cost of local pollution, establishing the "polluter pays" principle as an incentive to reduce it.
- Its application diversifies the range of environmental management instruments of the State incorporating economic instruments.
- Institutional infrastructure developed for the application of the instrument guarantees its correct implementation.
- MRV system developed by the Superintendence of the Environment: key piece for the implementation.
- The implementation ratifies our commitment in combating climate change.



# **New Tax Reform Project**

## **'Tax modernization'**

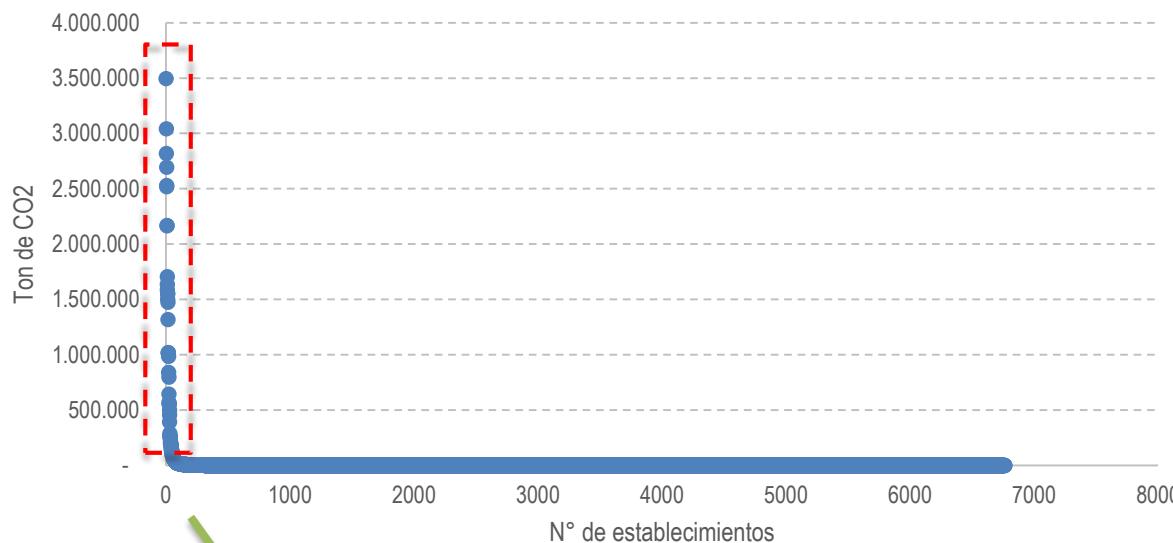


## Green taxes – Proposals (1/3)

- Change the logic of affectation.
  - From a technological to complementary thresholds of emissions (considering either CO<sub>2</sub> or PM emissions). Starting in 2020.
- Rationality: Double purpose of the green tax as an instrument of environmental management.
- Addressing both the main environmental problem of Chile: air pollution, and; climate change, the main global challenge.
  - Report threshold: 15,000 tons CO<sub>2</sub> or 50 tons PM.
  - Affectation threshold: 25,000 tons CO<sub>2</sub> or 100 tons PM.
- It concentrates on large emitters of local and global pollutants.

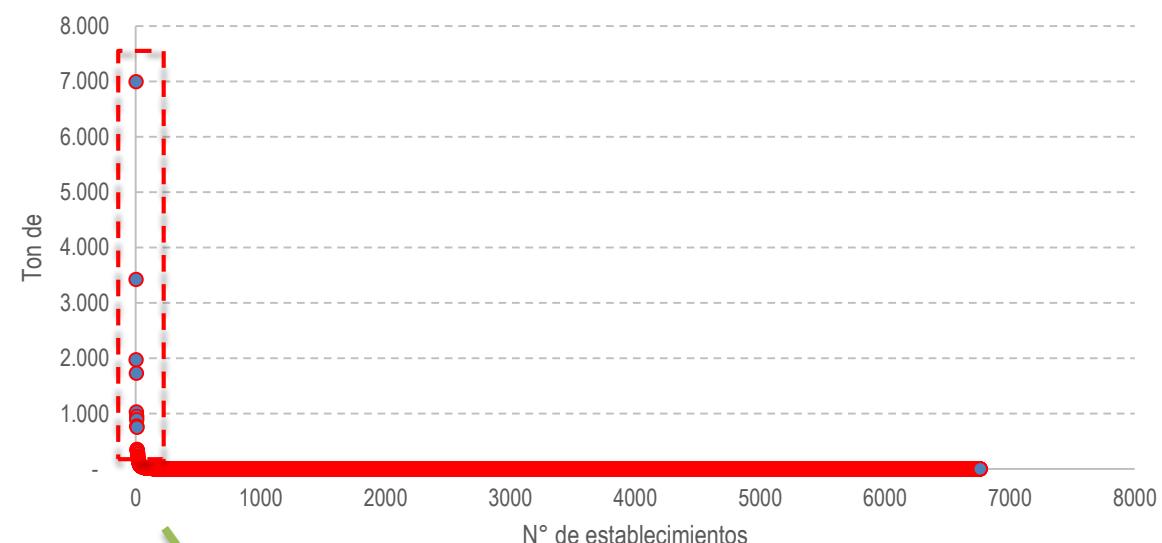
# Green taxes – Proposals

CO<sub>2</sub> Emissions by facilities – Stationary facilities (2016 -17)



- 95 % of CO<sub>2</sub> emissions  
(from stationary facilities)
- 1,2 % of total stationary facilities

PM Emissions by facilities – Stationary facilities (2016 -17)



- 84 % of PM emissions
- 0,4 % of total stationary facilities

## Green taxes – Proposals (2/3)

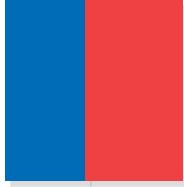
- "The shadow price of each local pollutant will be reviewed every ten (10) years by the Ministry of the Environment."
- It allows evaluate the dynamics of the marginal damage associated to each tone of pollutant.
- Adjustment of local tax, according to the updated social cost of pollution.
- It recognizes and corrects potential deterioration or improvement situations in terms of air quality.
- Do not change the formula, just update PM, NOx and SO<sub>2</sub> social costs.
- The price of CO<sub>2</sub> tax remains flat (USD 5 per ton)

## Green taxes – Proposals (2/3)

- Incorporation of offsets.
- Instrument in the process of definition
  - Technical Working Group: MMA, MoE, PMR (WB) and GCM (GIZ)
- Methodologies, processes, institutionality
- Percentage (%) to be defined by MMA.
- Active role of the SMA:
  - Ensure the quality of external certification → authorization according to methodological criteria.
  - Registration of authorized external auditors → according to the bylaw.
  - Register of effective (+) emissions and (-) compensations, in order to send the balance associated with CO2 emissions.

## Green taxes proposals (key points)

- The current modification generates certainties on the application of the green tax.
- It generates incentives to reduce local and global emissions.
- The technological criterion of affectation is eliminated, which, in some cases, does not have a direct relation with the intensity of the emissions.
- Incorporation of offsets.

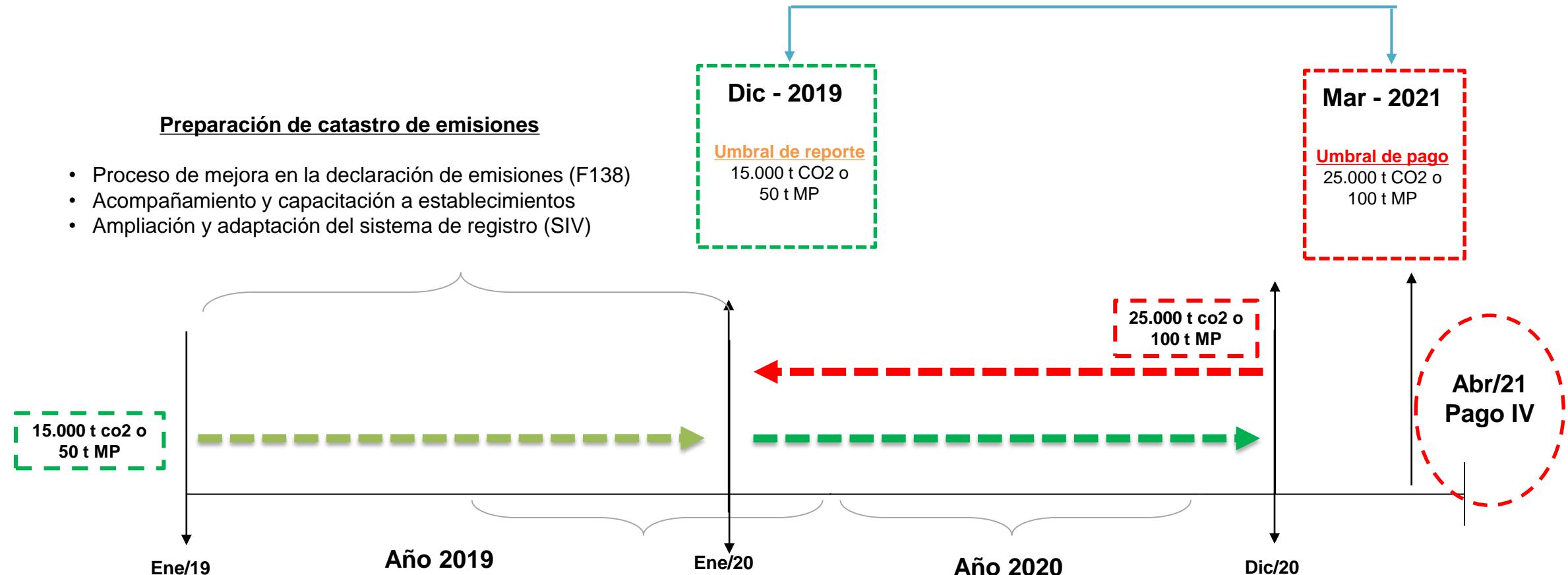


Thanks



# Route Map

## Determinaciones del MMA/SMA



→ Elaboración de catastro: Cuantificación de emisiones según metodología general

→ Obligatoriedad de reporte de emisiones: Cuantificación de emisiones según metodología establecida en protocolos de MRV para impuestos verdes (SMA)

← Umbral de afectación para el pago de impuestos