



**CLGCHILE**  
LÍDERES EMPRESARIALES POR LA ACCIÓN CLIMÁTICA



85 años



THE PRINCE OF WALES'S  
CORPORATE LEADERS GROUP



**arauco**



VIÑA CONCHA Y TORO



# Cambio Climático: ¿Cuál es el rol del sector privado?

Marina Hermosilla, Directora Ejecutiva

Líderes Empresariales por la Acción Climática, CLG-Chile  
1° de julio de 2019



# CLGCHILE

LÍDERES EMPRESARIALES POR LA ACCIÓN CLIMÁTICA



THE PRINCE OF WALES'S  
CORPORATE LEADERS GROUP

Impulsamos la transformación hacia una economía menos intensiva en carbono y resiliente al clima cuidando mantener un buen ambiente para los negocios, de manera que ésta se traduzca en oportunidades de desarrollo para Chile.

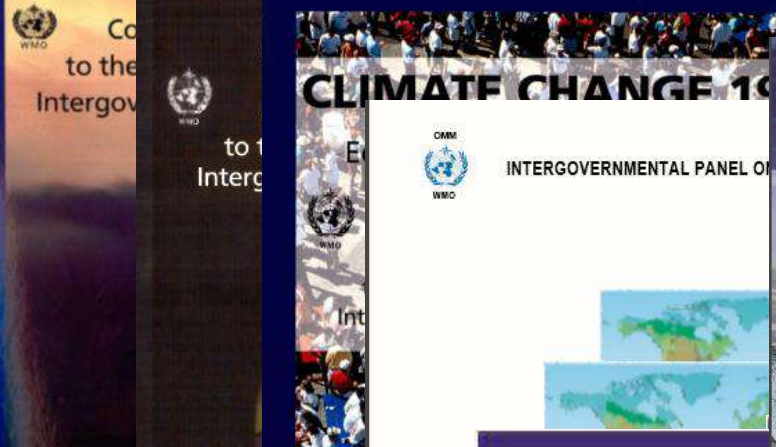


**“El cambio climático probablemente provocará  
escasez de agua y alimentos,  
enfermedades pandémicas,  
peleas por refugiados y por recursos,  
y destrucción de regiones alrededor del mundo por  
desastres naturales”.**

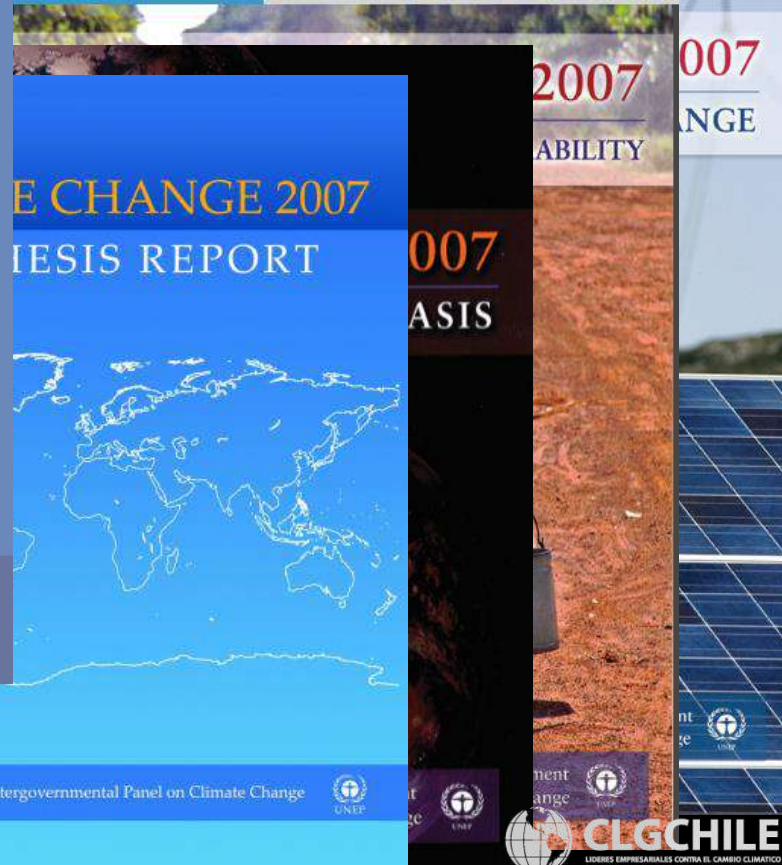
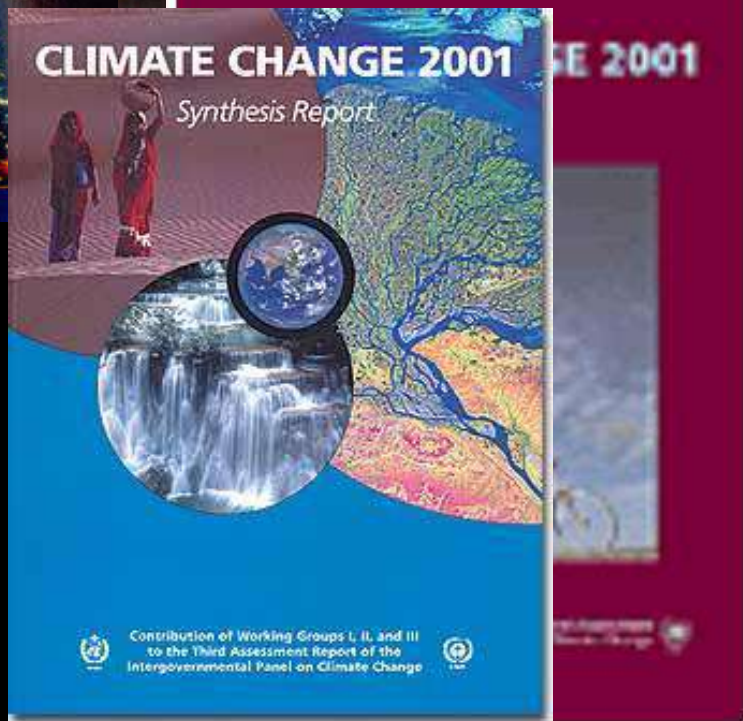
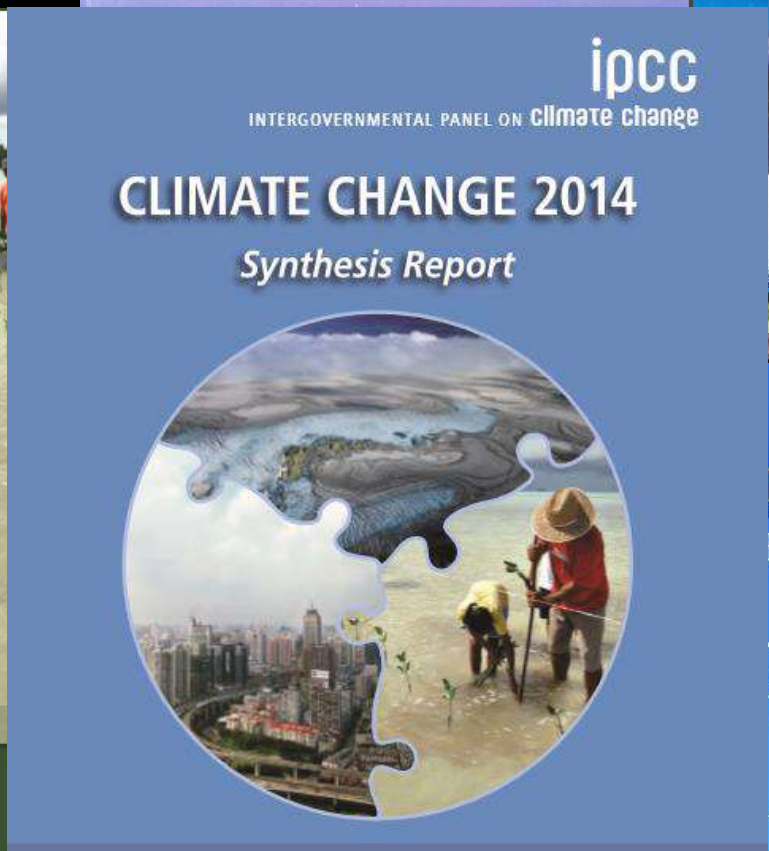
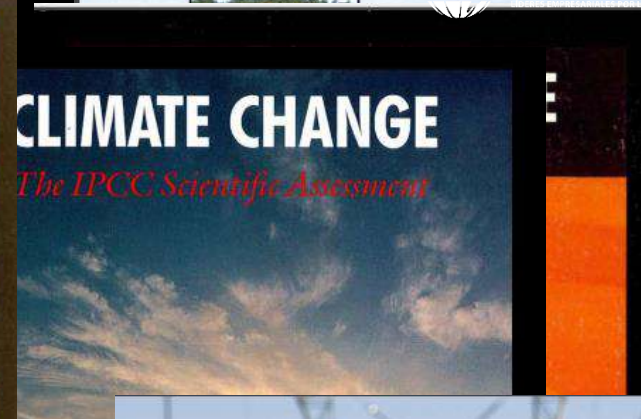


U.S. Department of Defense  
2014 Climate Change Adaptation Roadmap  
October 13, 2014

**CLIMATE CHANGE 1995**  
Impacts, Adaptations and Mitigation



**CLIMATE CHANGE 1992**



# Nations Unies

## Conférence sur les Changements Climatiques 2015

COP21/CMP11

Paris France



# #ParisAgreement

**“Long live the planet.  
Long live Humanity. Long live life itself.”**

Arnaud Bouissou - MEDDE / SG COP21

ACUERDO ALCANZADO POR TODOS LOS PAISES DEL MUNDO, EXCEPTO SIRIA.

## EU-Japan trade deal first to carry Paris climate clause

Published on 17/07/2018, 3:32pm

The world's largest ever trade deal is also the first Europe has signed that commits both parties to upholding the UN climate accord



European council president Donald Tusk (Photo: European Union)

By [Karl Mathiesen](#)

Europe's massive free trade deal with Japan is the first the EU has struck with a specific provision on the Paris climate agreement.

## EU and China agree sweeping joint statement on climate action

Published on 16/07/2018, 1:32pm

Leaders put climate at centre of relationship, push for agreement on the Paris deal rulebook and reject Trump's efforts to undermine global cooperation



Chinese premier Li Keqiang and European Commission president Jean-Claude Juncker. (Photo: European commission)

By [Soila Apparicio](#) and [Karl Mathiesen](#)

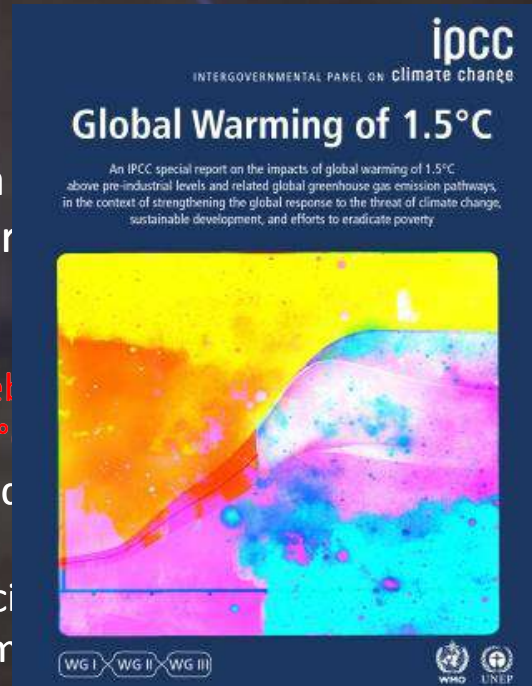
Climate change will become a “main pillar” of the relationship between the European Union and China, said leaders on Monday.

# ACUERDO DE PARÍS

## Art. 2: Objetivos

Fortalecer la respuesta mundial a la amenaza en el contexto del desarrollo sostenible y los esfuerzos para reducir la pobreza, en particular:

- Mantener la elevación de la **Tª media mundial** de los niveles pre-industriales; **intentando limitarlo a 1,5 °C** por encima de los niveles pre-industriales, lo que reduciría significativamente los riesgos e impactos asociados con el cambio climático.
- Incrementar y fomentar la capacidad de adaptación al cambio climático, así como el desarrollo bajo en emisiones de gases de efecto invernadero, **de manera que no amenace la producción de alimentos;**
- Hacer que los flujos financieros sean consistentes con un desarrollo dirigido hacia un sistema de bajas emisiones de gases de efecto invernadero y resiliente al clima.



Balance emisiones cero al 2050

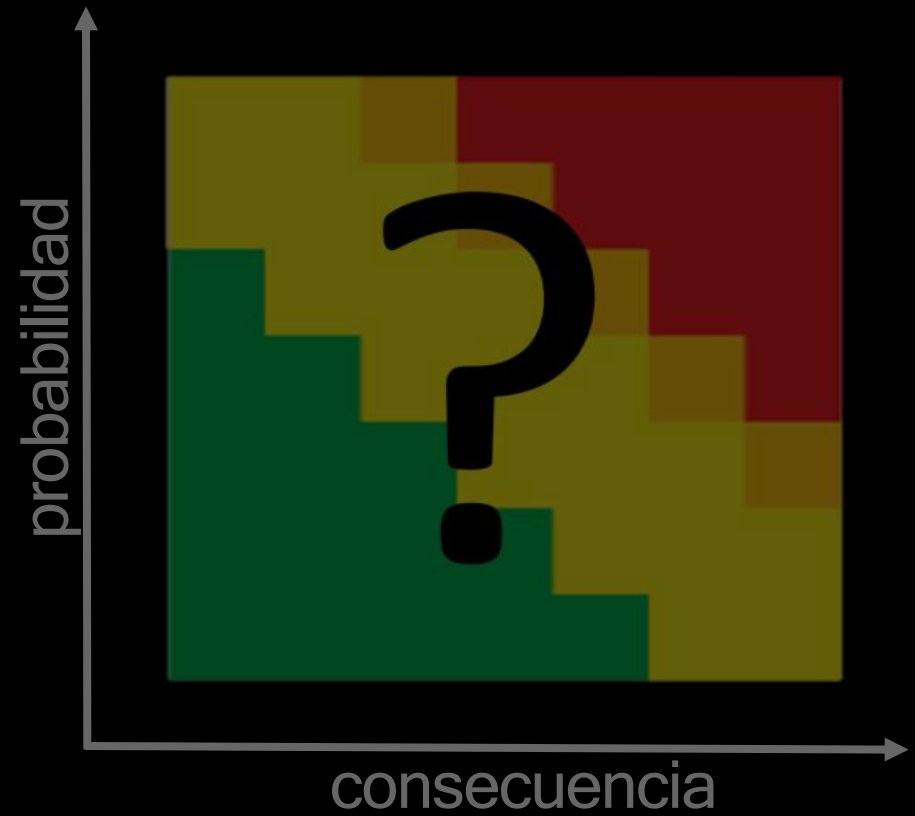
El 2020 cada país debe entregar su Estrategia al 2050 y nuevas metas

Cada 5 años, los países se comprometen a entregar sus nuevas metas (NDCs), las que deben ser cada vez más ambiciosas.

El Acuerdo se llevará a cabo equitativamente, y bajo el principio de responsabilidades comunes pero diferenciadas, considerando las capacidades y circunstancias nacionales.



# Precio al Carbono



D detained in Myanmar

Energy &amp; Environment

Brexit

North Korea

Charged: The Future of Autos

Future of

ENVIRONMENT JUNE 3, 2018 / 7:21 PM / UPDATED 7 HOURS AGO

## Big investors urge G7 to step up climate action, shift from coal

Alister Doyle

3 MIN READ



OSLO (Reuters) - Institutional investors with \$26 trillion in assets under management called on Group of Seven leaders on Monday to phase out the use of coal in power generation to help limit climate change, despite strong opposition from Washington.



In the letter, pension funds and asset managers said that “effective climate mechanisms” were vital for investors to make informed investment decisions.

“The investors are concerned they could lose money if different governments have inconsistent policies on climate change”

# Exxon, BP and Shell back carbon tax proposal to curb emissions

Tue 20 Jun 2017 17:32 BST

- Oil giants among numerous firms to support conservative group's plan
- But Greenpeace says: 'A PR exercise is no cure for decades of deception'



▲ Under the proposal, a \$40 carbon tax, rising over time, would be levied on emissions in order to encourage a shift towards renewable energy sources such as solar and wind. Photograph: Franck Robichon/EPA

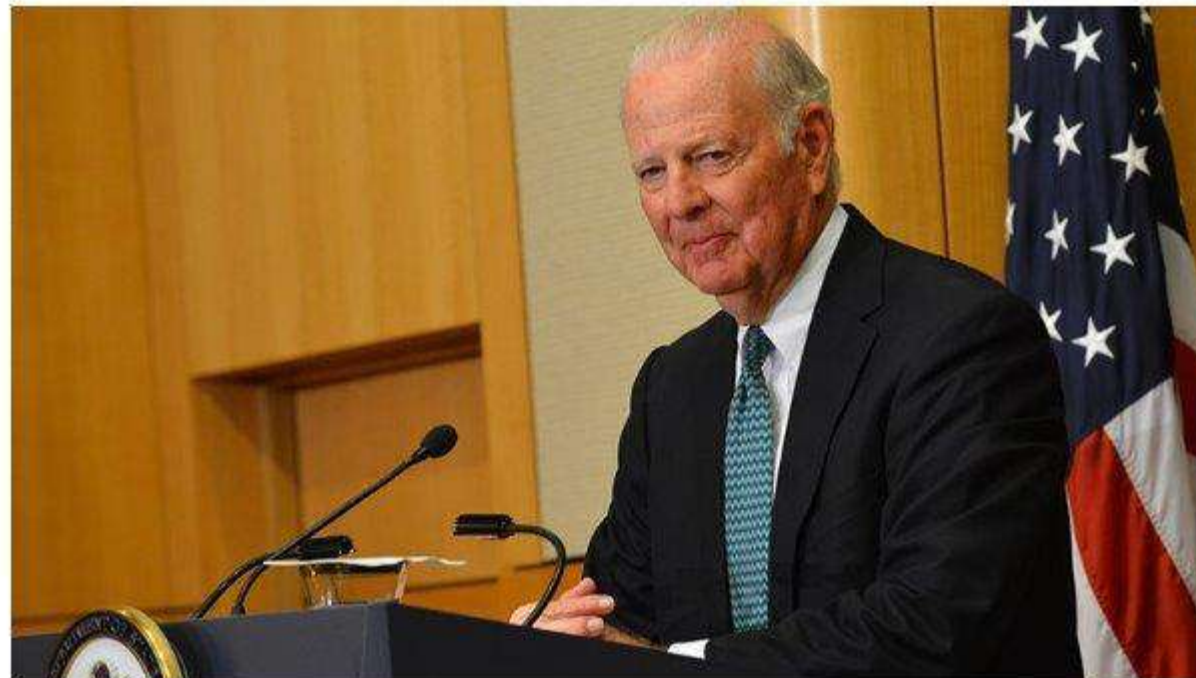
Oil giants [ExxonMobil](#), Shell, BP and Total are among a group of large corporations supporting a plan to tax carbon dioxide emissions in order to address climate change.

The companies have revealed their support for the [Climate Leadership](#)

## Top US Republicans pitch \$40 carbon tax to Trump

Published on 08/02/2017, 10:47am

**GOP veterans say carbon dividend could put money in pockets of 70% of poorest in US while significantly cutting greenhouse gas pollution**



James Baker served as U.S. Secretary of State and White House Chief of Staff under President George H. W. Bush (Pic: State Department/Flickr)

# Regional, National and Subnational Carbon Pricing Initiatives

14 of the G20 economies have a national or subnational carbon tax or ETS planned or implemented

57

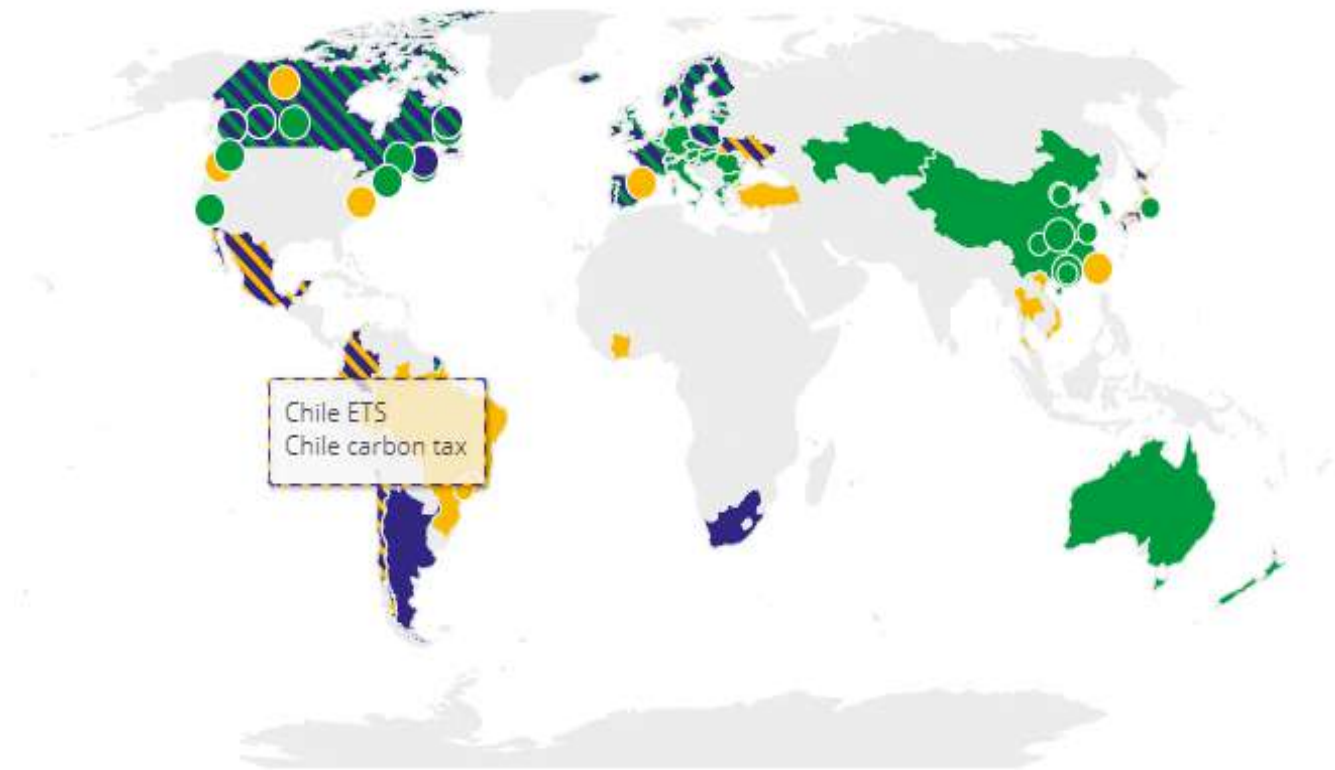
Carbon Pricing initiatives implemented or scheduled for implementation

These initiatives represent 19,5% of global GHG emissions

Total value (US\$ Bn) of carbon pricing initiatives in 2018



Summary map of regional, national and subnational carbon pricing initiatives



- ETS implemented or scheduled for implementation
- ETS or carbon tax under consideration
- ETS implemented or scheduled, tax under consideration

- Carbon tax implemented or scheduled for implementation
- ETS and carbon tax implemented or scheduled
- Carbon tax implemented or scheduled, ETS under consider...

## EU carbon prices have hit a 10-year high

European allowance price, €

Price

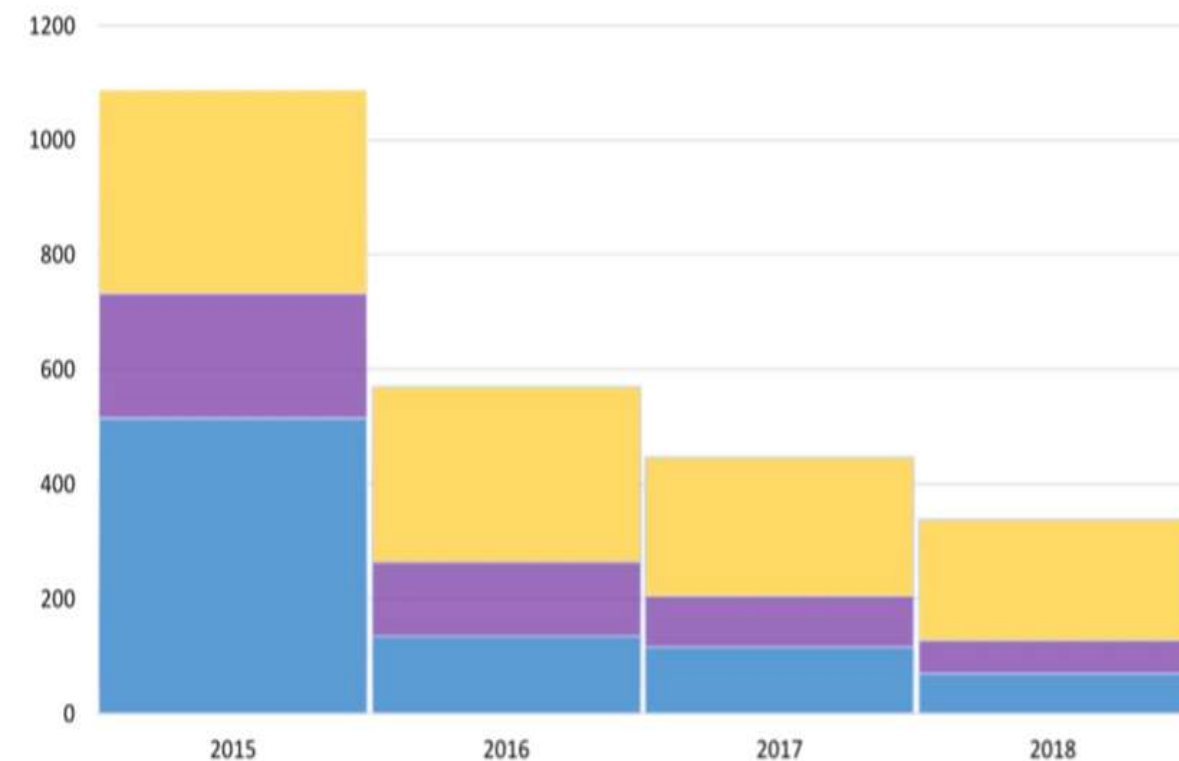


Guardian Graphic | Source: Sandbag

...los mercados responden consecuentemente...

## Planned coal power capacity in pre-construction status has declined, with the biggest drops in China and India (gigawatts)

China = blue, India = purple, Other = yellow

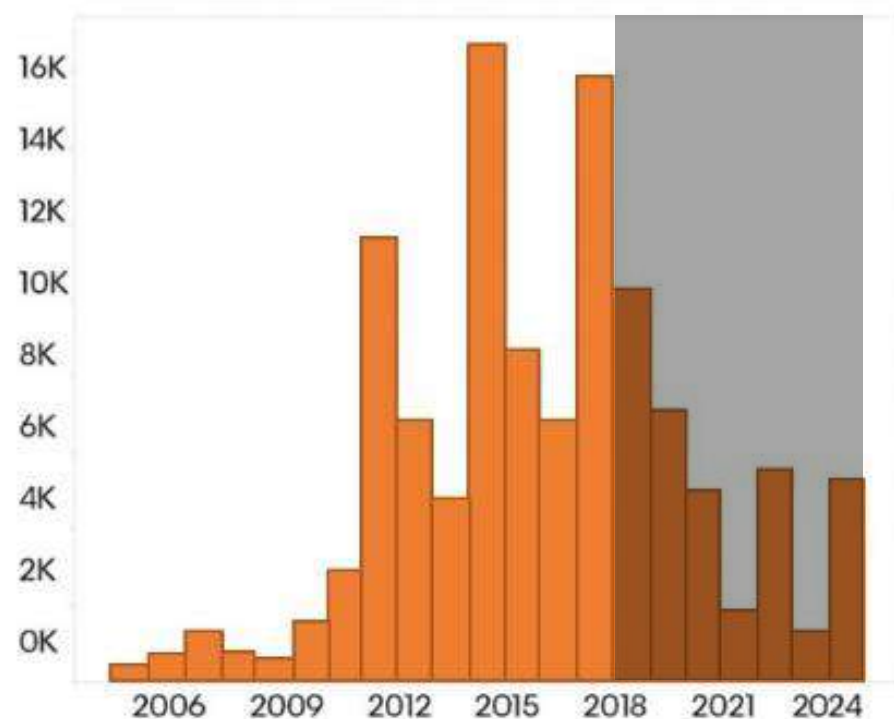




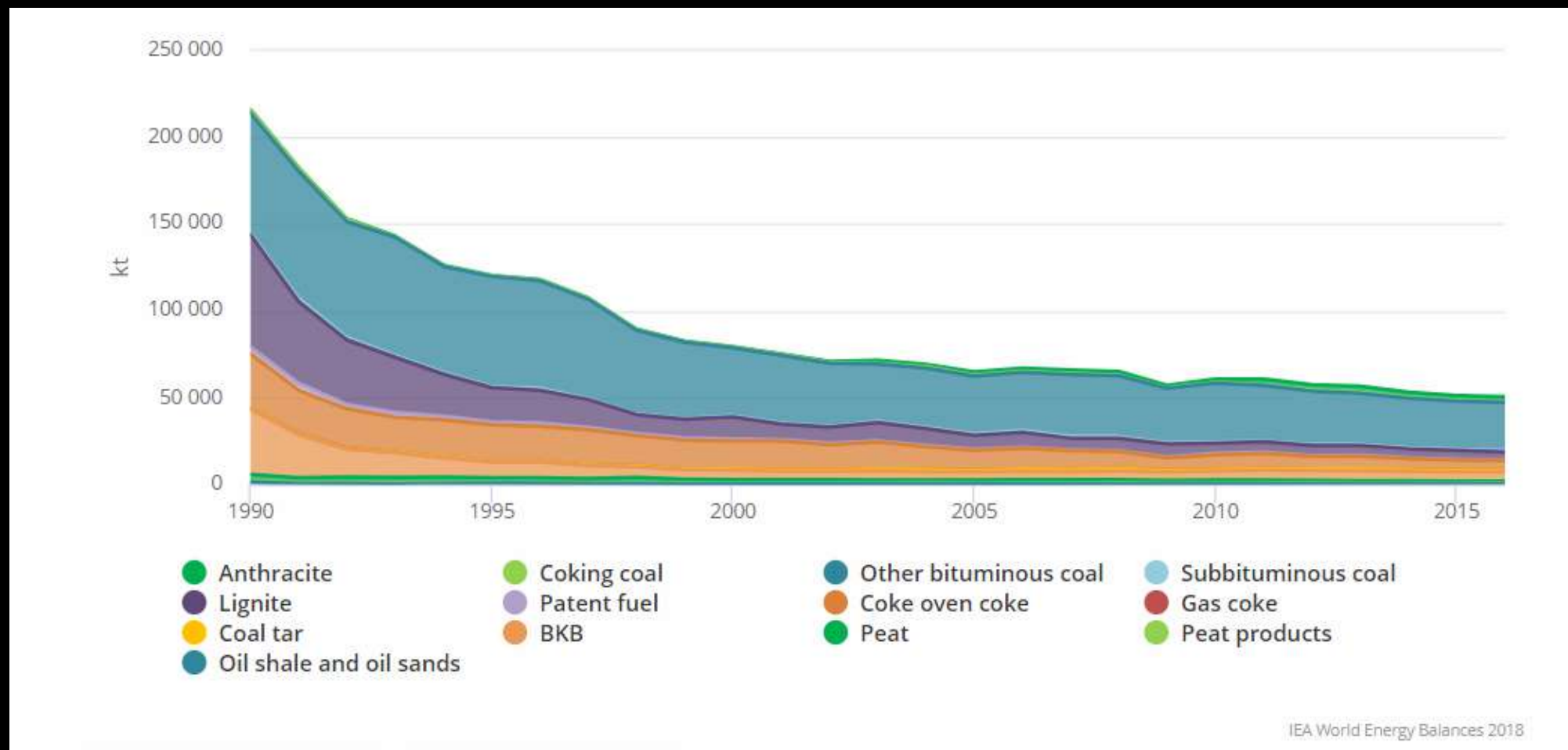
BloombergNEF

## U.S. Coal Plant Retirements Near All-Time High

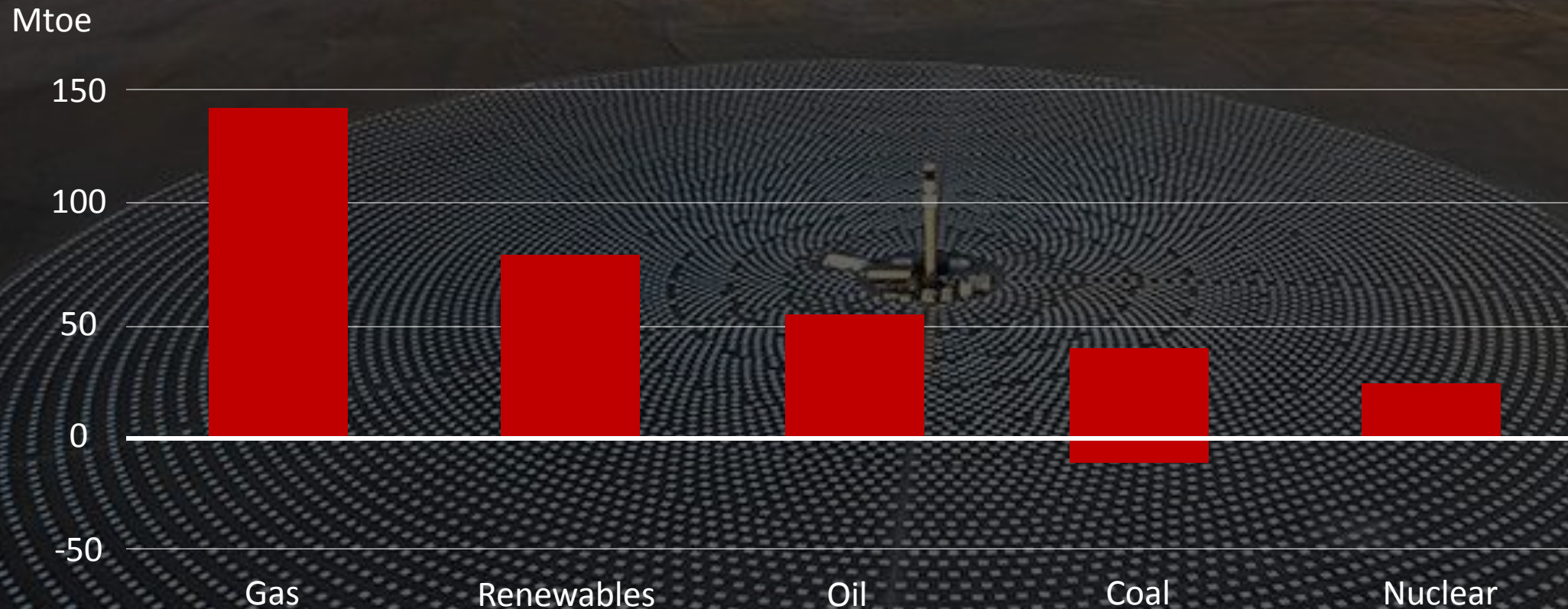
Historic and planned U.S. coal retirements (megawatts)



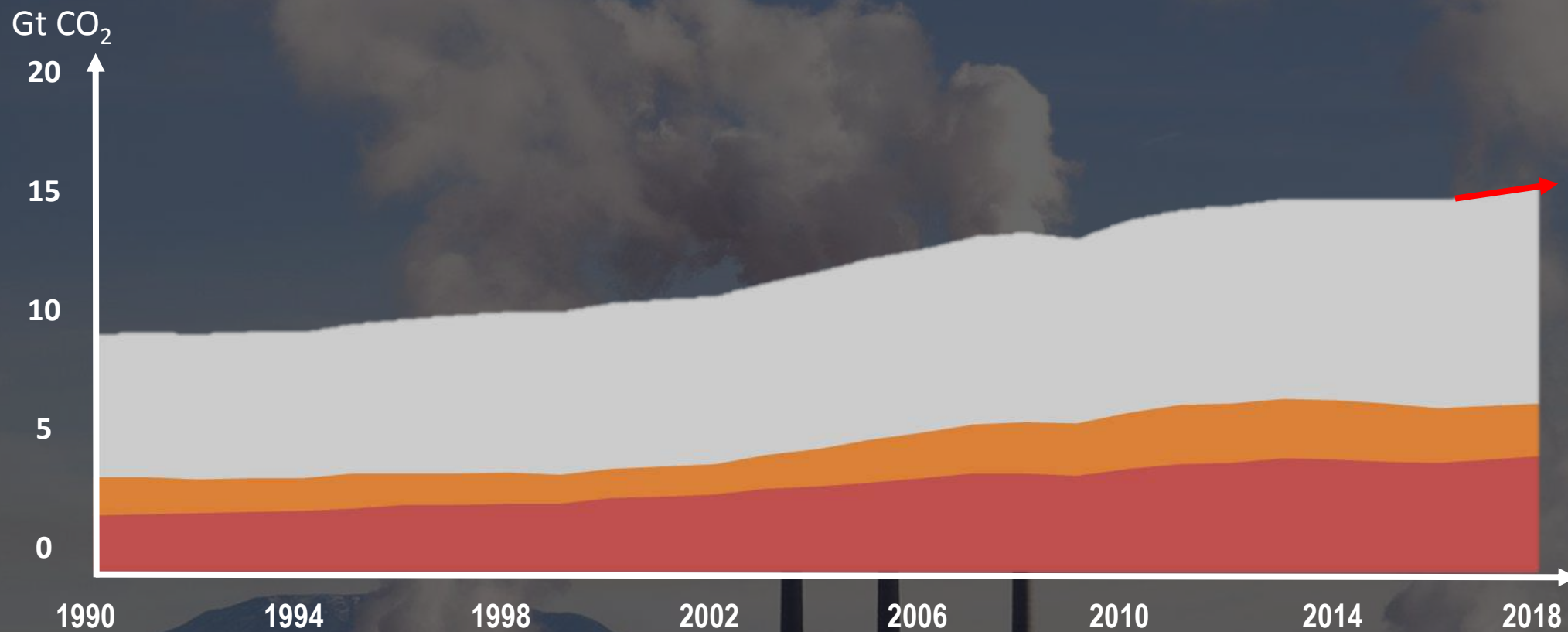
# Unión Europea-28: Consumo final de carbón por tipo 1990-2016



# Crecimiento global de energía primaria por combustible, 2017-18

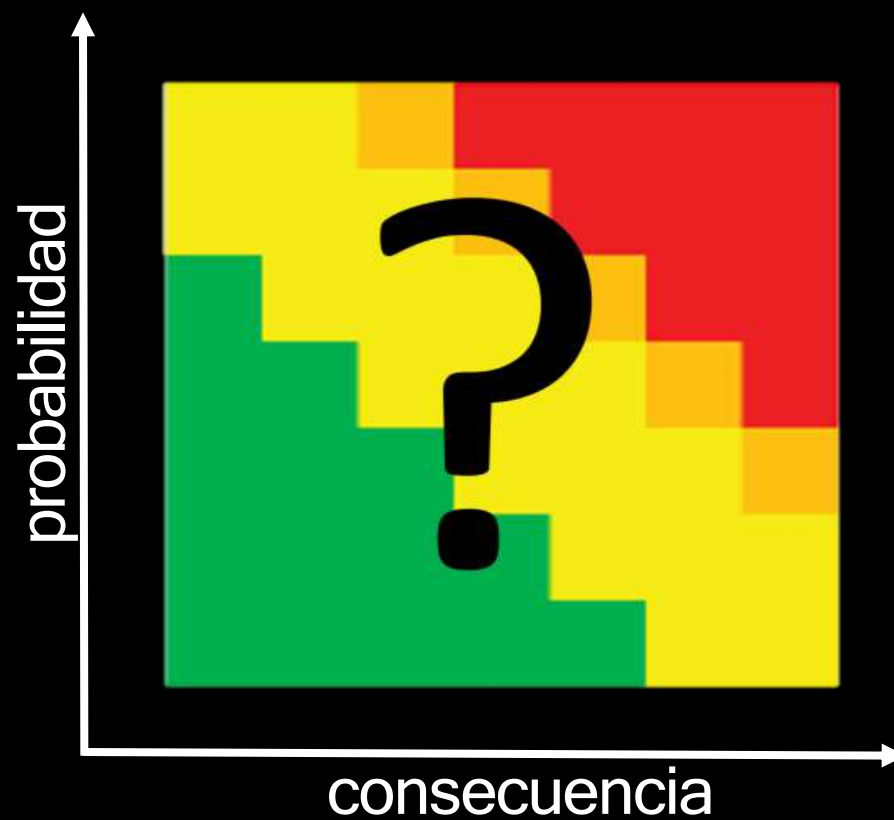


# Emisiones globales de CO<sub>2</sub> derivadas de combustibles fósiles, 1990-2018



Fuente: <https://www.iea.org/geco/emissions/> consultado el 9 de abril de 2019

# Precio al Carbono



# Climate Change Drives Fish Into New Waters, Remarking an Industry

The cash is shifting northward as water temperature rise, forcing crews to retool boats and rework their business

## The Price of Climate: Is Commercial Fishing in Hot Water?

# California Drought Leaves Few Farmers Unscathed

Even those with high-priority access to water are at risk of having their spigots turned off

# THE WALL STREET JOURNAL.

U.S. Edition ▾ | April 7, 2019 | Print Edition | Video

BUSINESS

## PG&E: The First Climate-Change Bankruptcy, Probably Not the Last

The fast fall of PG&E after California's wildfires is a jolt for companies considering the uncertain risks of a warming planet



A PG&E truck makes its way past a hot spot during the Camp Fire in Paradise, Calif., in November. PHOTO: HECTOR AMEZCUA/SACRAMENTO BEE/ZUMA PRESS





**CLIMATE CHANGE**

# Billion-Dollar Storms: Is This the New Normal?

By DEBORAH ACOSTA | Jan. 29, 2018 | 5:39

In 2017 the U.S. saw some of the strongest and most expensive storms in history. As global temperatures continue to rise, things will get worse and more costly.

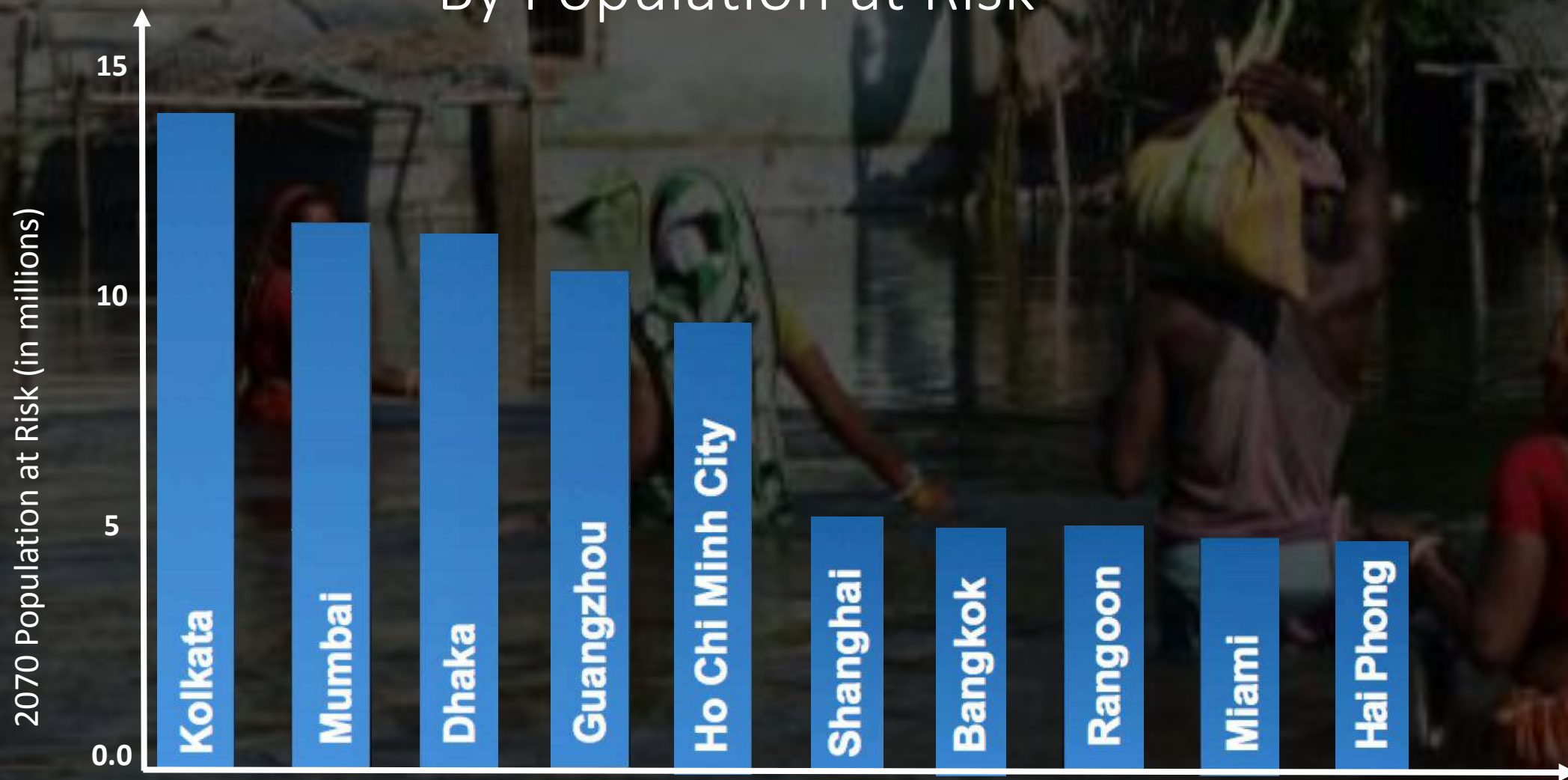
Share:      

# Top 10 Cities at Risk from Sea Level Rise in 2070 By Asset at Risk



Fuente: Nichols, et al, 2007, OECD

# Top 10 Cities at Risk from Sea Level Rise in 2070 By Population at Risk



Fuente: Nichols, et al, 2007, OECD

THE WALL STREET JOURNAL.

Oct. 2, 2018 at 10:30 a.m. ET



PRICE OF  
CLIMATE

# Climate Change Is Forcing the Insurance Industry to Recalculate

Insurers are at the vanguard of a movement to put a value today on the unpredictable future of a warming planet.

ENVIRONMENT MARCH 21, 2019 / 4:00 PM / 5 DAYS AGO

## Bank of England to set new rules on climate risk: Carney

Andy Bruce, David Milliken

3 MIN READ



LONDON (Reuters) - The Bank of England will soon spell out how it wants banks, insurers and investment companies to manage the financial risks from climate change, Governor Mark Carney said on Thursday.



FILE PHOTO: Cars caught in flood water after Storm Callum passed through the town of Carmarthen, west Wales, Britain, October 14, 2018. REUTERS/Rebecca Naden

The central bank under Carney has been vocal in highlighting climate change's potential



## HSBC includes climate among its ‘top and emerging risks’

08 April 2019

London-based bank HSBC has included climate-related risk in its list of ‘top and emerging risks’ for the first time.

The physical and transition risks posed by climate change “create potential financial impacts for HSBC through higher risk-weighted assets (RWAs), greater transactional losses and increased capital requirements”, HSBC said.

Last year, the bank was among a group of the world’s largest lenders that [were criticised for their perceived lack of action](#)

# Environmental Finance

Home

Green Bonds

Stranded Assets

Renewables

## 13% of European insurance assets exposed to climate risk

05 April 2019

**Paris, France.** Roughly 13% or €1.4trn (\$1.6trn) of European insurers' €10.6trn of assets are exposed to climate transition risk, according to analysis by the European Insurance and Occupational Pensions Authority (Eiopa).

The findings were presented at an event in Paris organised by the Institut des Actuaire in partnership with Axa and Schrodgers, which discussed how to better manage risk with

# Report calls on Canada to require companies to disclose climate change risks to investors, pension plans

Seleccionar idioma ▼ Con la tecnología de [Google Traductor de Google](#)

OTTAWA, JANUARY 16, 2019: A new report from the International Institute for Sustainable Development (IISD) sets out a three-year policy roadmap for Canada to adjust its financial ecosystem to support meaningful climate change action. Central to this policy map is mandatory transparency around climate change risks held by business.





Martin P...

est

Environment Wildlife Energy Pollution

## New York City plans to divest \$5bn from fossil fuels and sue oil companies

Mayor Bill de Blasio: 'It's up to the fossil fuel companies whose greed put us in this position to shoulder the cost of making New York safer and more resilient'

### THE LOCAL no

9 March 2019 11:19 CET+01:00

Jobs in Norway Noticeboard Advertise with us

## Norway sovereign wealth fund, world's biggest, to dump oil and gas



### ThinkProgress

HOME CLIMATE POLITICS ECONOMY HEALTH CARE IMMIGRATION FEATURES VIDEO RESIST

Another Giant Pension Fund Divested From Oil, Coal, And Gas Companies

# The Asahi Shimbun

Asia & Japan Watch

TOP Japan News Politics Business Sports Culture

The Asahi Shimbun > Business > article

## Nippon Life won't invest in coal-fired power plant projects

By SHUHEI SHIBATA/ Staff Writer  
July 13, 2018 at 16:30 JST

# The Guardian

Search jobs Sign in Search

Sport Culture Lifestyle More

Business Wildlife Energy Pollution

## Glencore to limit coal production after pressure from investors

Wed 20 Feb 2019 12:59 GMT

jobs dating news International edition

### theguardian

travel

browse all sections

## Ireland becomes world's first country to divest from fossil fuels

Detained in Myanmar

ENVIRONMENT JUNE 1

## Swedish pension fund sells out of six firms it says breach Paris climate deal

Gwladys Fouche

3 MIN READ

## Fossil fuel divestment funds double to \$5tn in a year

General Ban Ki-moon welcomes new total revealing concern over investments has entered financial mainstream

## California First State in the Nation to Divest from Coal

### SB 185 Signed by Governor Brown

Thursday, October 08, 2015

SACRAMENTO - Governor Jerry Brown today signed into law SB 185, which requires California's public pension funds, CalPERS and CalSTRS, to divest from holdings in thermal coal. The measure is the first of its kind in the nation. CalPERS and CalSTRS are the largest public pension funds in the nation, with \$293 billion and \$184 billion in assets, respectively.



# \$8.77 trillion

APPROX. VALUE OF INSTITUTIONS DIVESTING

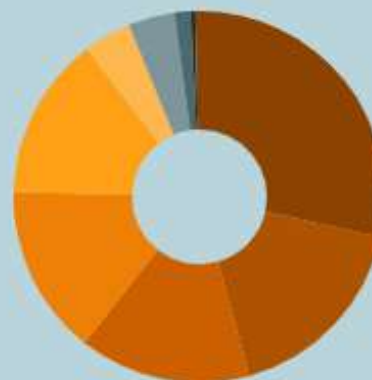
# 1067

INSTITUTIONS DIVESTING

# 58,000+

INDIVIDUALS DIVESTING  
ABOUT \$5.2 BILLION

## What kinds of institutions are divesting?



- Faith-based Organization — 28%
- Philanthropic Foundation — 17%
- Educational Institution — 15%
- Government — 15%
- Pension fund — 14%
- For Profit Corporation — 4%
- NGO — 4%
- Healthcare Institution — 1%
- Cultural Institution — 0%
- Other — 0%

“ Divestment movement has been a key driver of the coal sector’s 60% de-rating over the past five years ”



Goldman Sachs, Oct. 2018



**Acción climática:  
oportunidad  
para asegurar un  
desarrollo sostenible  
e impulsar el  
crecimiento económico**

“

Nuevos empleos, ahorros económicos, competitividad y oportunidades de mercado, y un mejor bienestar para las personas.

- Inversión en infraestructura: USD 90 trillion para 2030 (más que el stock actual).

Invertir en infraestructura de bajas emisiones de carbono ayudará a mitigar las emisiones de gases de efecto invernadero, reducir la contaminación del aire y mejorar la congestión del tráfico.

- Las NDC de 21 economías de mercados emergentes representan USD 23 trillion para 2030 en oportunidades de inversión.

”

World Bank

# Global Investment in Renewable Energy 2004-2017



Fuente: [www.carbonbrief.org](http://www.carbonbrief.org)

QUARTZ

HERE COMES THE SUN

## Renewable energy is becoming so cheap the US will meet Paris commitments even if Trump withdraws

By Zohar Schlinger • July 9, 2017



# U.S. solar energy jobs are growing 9X faster than the overall economy

Morgan Stanley Report, July 2017



# A Warming Climate Brings New Crops to Frigid Zones

Longer growing seasons help lead northern farmers to plow up forests for crops such as corn that were once hard to grow in chilly territories

[https://www.wsj.com/articles/a-warming-climate-brings-new-crops-to-frigid-zones-1543168786?mod=article\\_inline](https://www.wsj.com/articles/a-warming-climate-brings-new-crops-to-frigid-zones-1543168786?mod=article_inline)

PRICE OF  
CLIMATE

## Investing in the global green economy: busting common myths

Defining and measuring the investment opportunity



FTSE Russell

## Growth of the green economy vs fossil fuel sector<sup>9</sup>

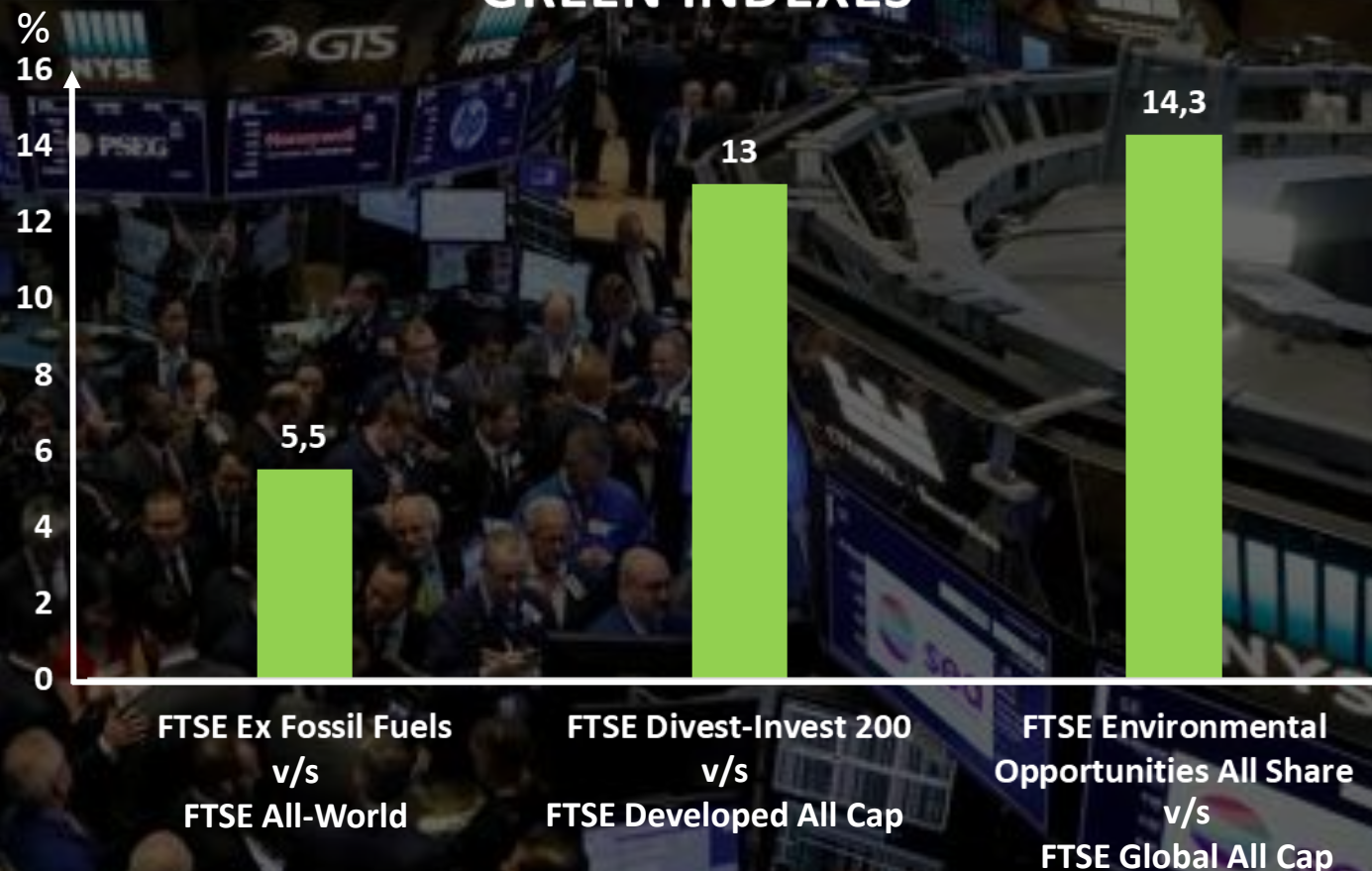


Source: FTSE Russell, data as of December 2017. Please see the end for important legal disclosures.

Nota: en este documento se trata el universo de la acciones públicas globales como un proxy para una evaluación de toda la economía. Como tal, nuestra definición de "economía verde" es la capitalización del mercado de renta variable global, ponderada por los ingresos verdes como una proporción del total de los ingresos, comparado con una evaluación macroeconómica del PIB global

**GREEN ÍNDICES  
ESTÁN  
MOSTRANDO  
MEJOR  
DESEMPEÑO  
EN BOLSA  
QUE SUS  
BENCHMARK**

## FTSE: 5 YEARS OUTPERFORMANCE OF GREEN INDEXES



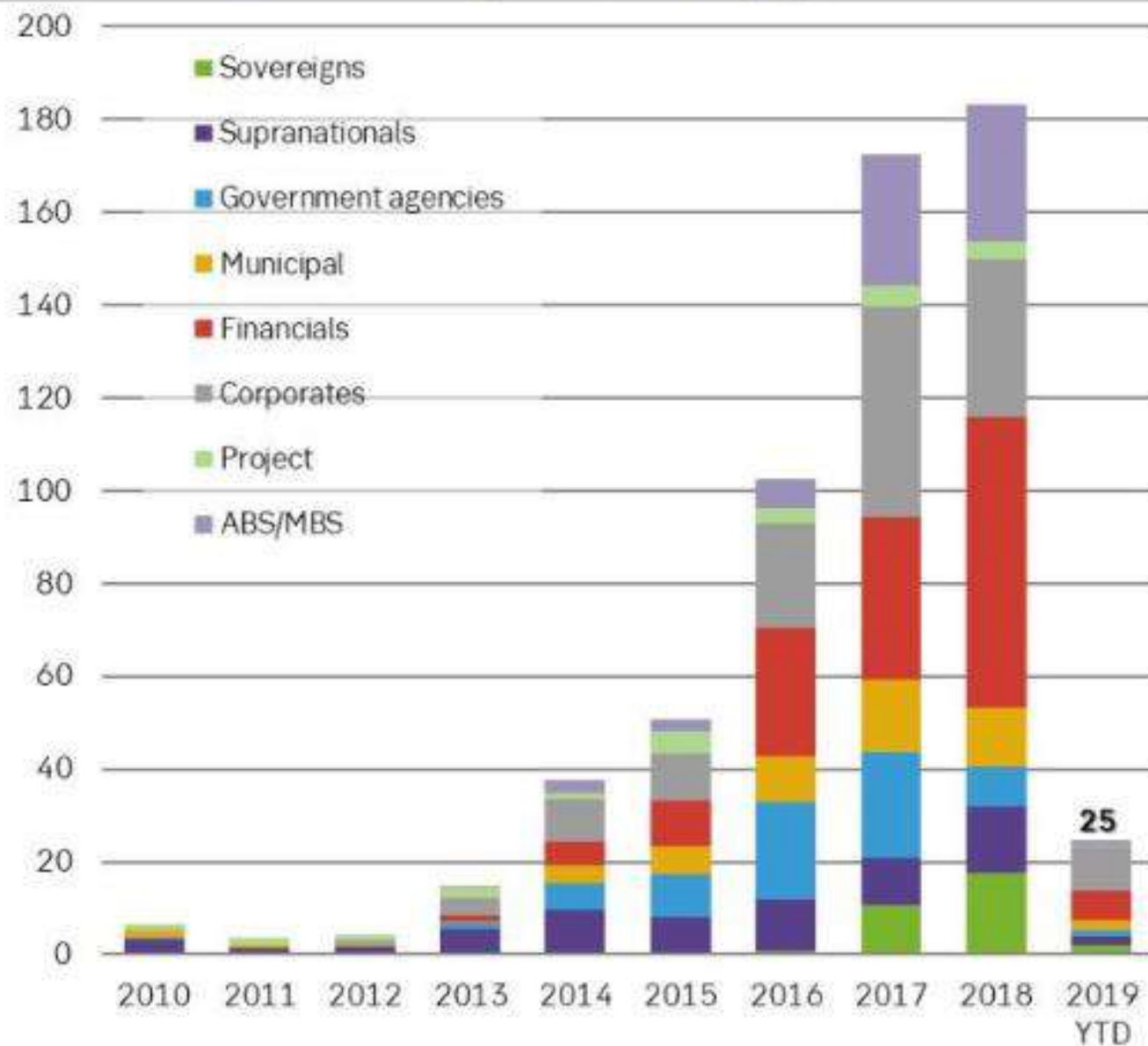
# MSCI: World Index vs. World Index ex Fossil Fuels (Nov. 2010-Abr. 2019)

## CUMULATIVE INDEX PERFORMANCE - GROSS RETURNS (GBP) (NOV 2010 - APR 2019)



Source: <https://www.msci.com/documents/10199/d6f6d375-cadc-472f-9066-131321681404>

## Green bond market growth (USD Bn) by sector



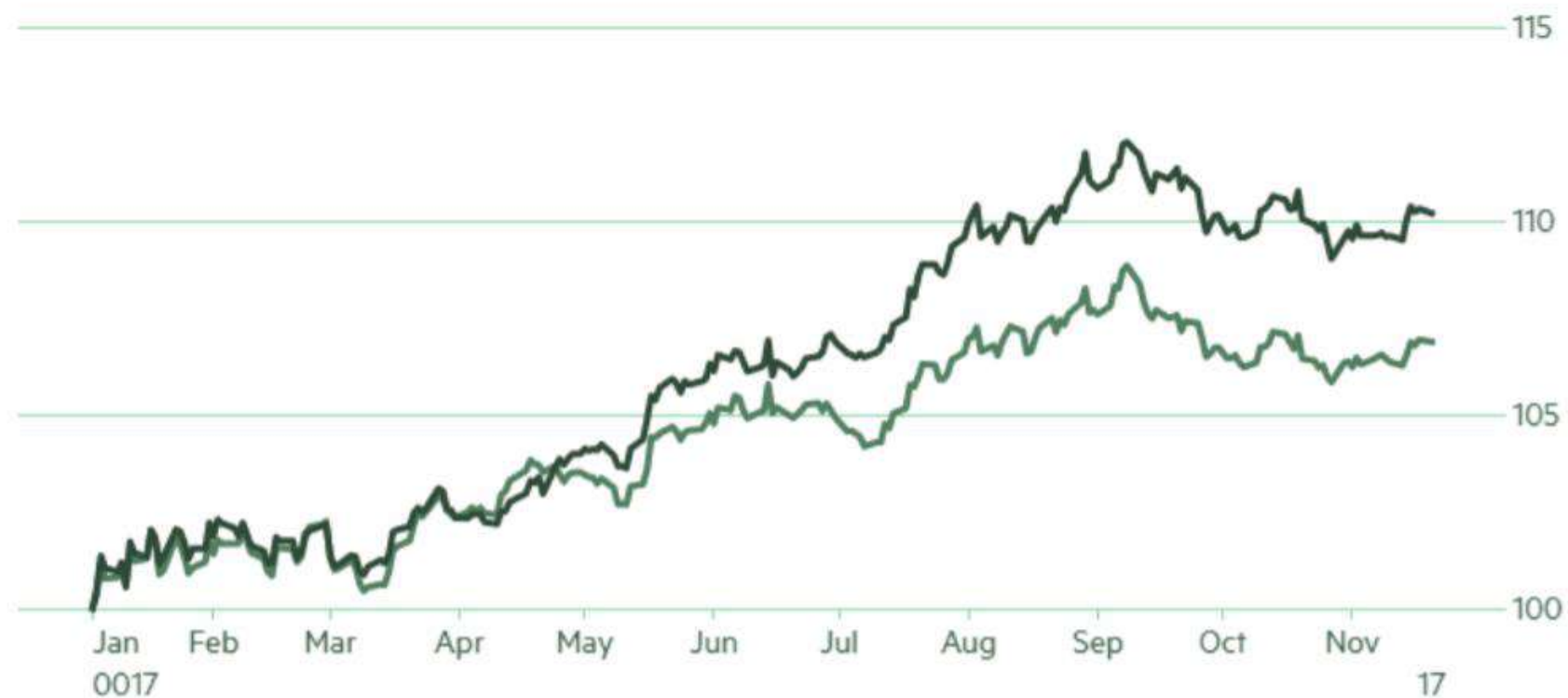
Source: SEB analysis based on Bloomberg and SEB data.

## Green Bond Indices show a positive picture against Global Indices

### Green bonds outperform

Indices rebased (Jan 2017 = 100)

- Green bond index
- Global bond index



\*ICE BofAML indices

Source: Bloomberg

© FT

# Venta de vehículos eléctricos en el mundo



# ....ya producen vehículos eléctricos

BMW

Bolloré

BYD

Chery

Chevrolet

Citroën

CODA

COURB

ElectraMeccanica

Fiat

Geneal Motors

Girfalco

Honda

Hyundai

JAC

JAC Motors

Jaguar

Kewet

Kia

Kyburz

Land Rover

Lightning

Mahindra

Mercedes-Benz

Mitsubishi

MW Motors

NIO

Nissan

Peugeot

Rayttle

Renault

Samsung

Smart

Sono Motors

Stevens

Subaru

Tesla

Toyota

Venturi

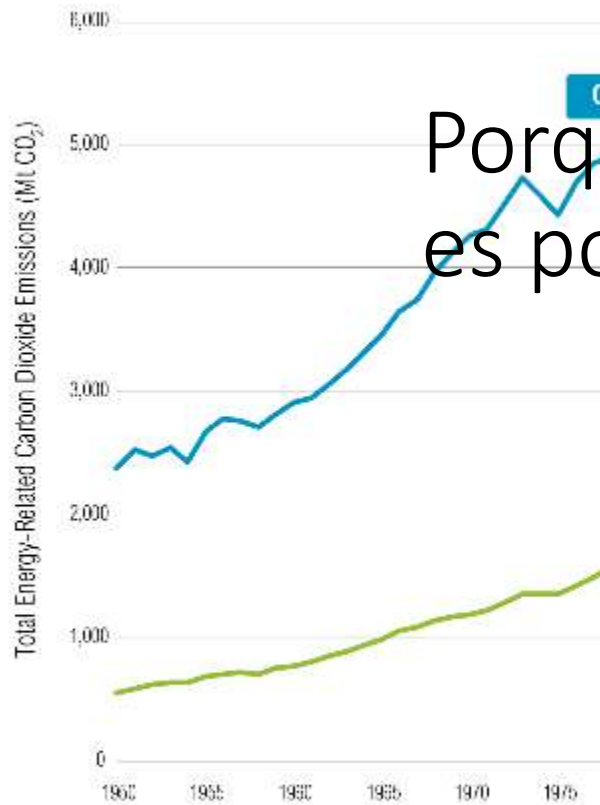
Volkswagen



**CLGCHILE**  
LÍDERES EMPRESARIALES POR LA ACCIÓN CLIMÁTICA

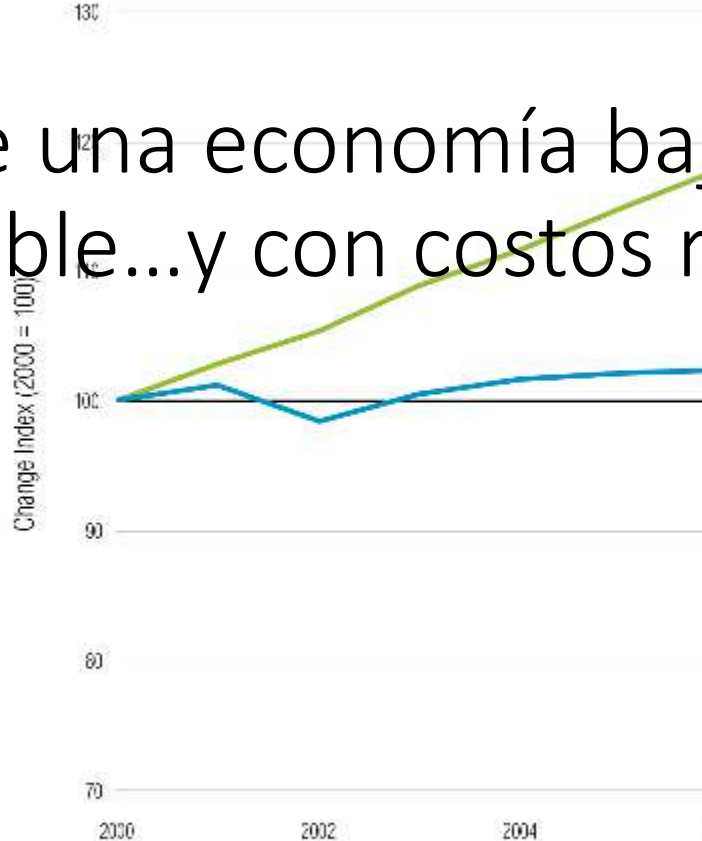


U.S. CO<sub>2</sub> Emissions and GD



Sources: U.S. Energy Information Administration; I

Decoupling UK GDP and CO<sub>2</sub> Emis



Sources: BP Statistical Review of World Energy 2015; World

Since 2000, More Than 20 Countries Have Reduced Annual GHG Emissions While Growing Their Economies

COUNTRY	CHANGE IN CO <sub>2</sub> (2000–2014)	CHANGE IN GDP (2000–2014)
Austria	-3%	21%
Belgium	-12%	21%
Bulgaria	-5%	62%
Czech Republic	-14%	40%
Denmark	-30%	8%
Finland	-18%	18%
France	-19%	16%
Germany	-12%	16%
Hungary	-24%	29%
Ireland	-16%	47%
Netherlands	-8%	15%
Portugal	-23%	1%
Romania	-22%	65%
Slovakia	-22%	75%
Spain	-14%	20%
Sweden	-8%	31%
Switzerland	-10%	28%
Ukraine	-29%	49%
United Kingdom	-20%	27%
United States	-6%	28%
Uzbekistan	-2%	28%

Sources: BP Statistical Review of World Energy 2015; World Bank World Development Indicators

Porque una economía baja en carbono es posible...y con costos razonables...

Si es de Chile, es verde

**Chile**



En esta nueva economía baja en carbono y  
resiliente al clima...

...los primeros capturarán las oportunidades,  
los últimos pagarán la cuenta



**SÚMATE!!!**

**Cambia el Clima**



**Cambia el Clima**



¿Cuáles te parecen buenas ideas para enfrentar el cambio climático?  
Elige un tema:

- Energía
- Agricultura y Ganadería
- Ciudad
- Producción y Consumo
- Transporte
- Agua
- Basura
- Conciencia y Conocimiento

¿Tienes otra idea?

**Cuéntanos aquí**



**CLGCHILE**  
LÍDERES EMPRESARIALES POR LA ACCIÓN CLIMÁTICA



THE PRINCE OF WALES'S  
CORPORATE LEADERS GROUP



VIÑA CONCHA Y TORO



Gracias