

# Global Trends and Future Climate Regime

## 気候変動将来枠組みと世界の潮流

Kentaro TAMURA and Takeshi KURAMOCHI  
Climate Change Group, IGES

田村堅太郎、倉持壮  
気候変動グループ（公財）地球環境戦略研究機関

International Symposium

Dialogue with Global Negotiators: the Future of Climate Change Regime

公開シンポジウム「世界の交渉責任者と語る気候変動課題の将来」

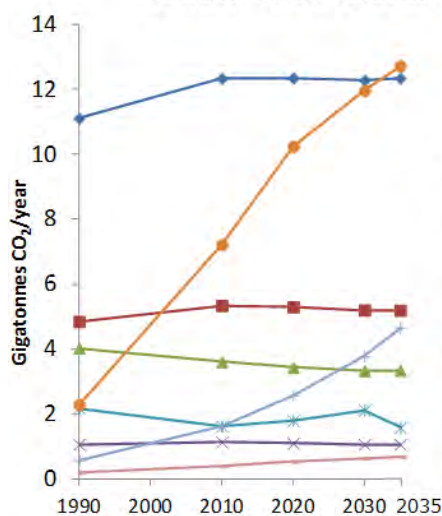
23 March 2013

### 2°C目標達成には、早急かつ大規模な排出削減が必要

*To achieve the 2 degrees C goal, urgent and large scale reduction in GHG emissions is imperative.*

現行政策シナリオ

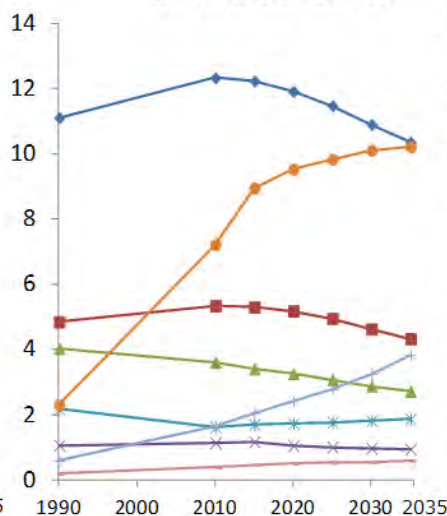
Current Policies Scenario



2011年央時点で実施されているもの以外、新たな追加政策がないという想定に基づくシナリオ

新政策シナリオ

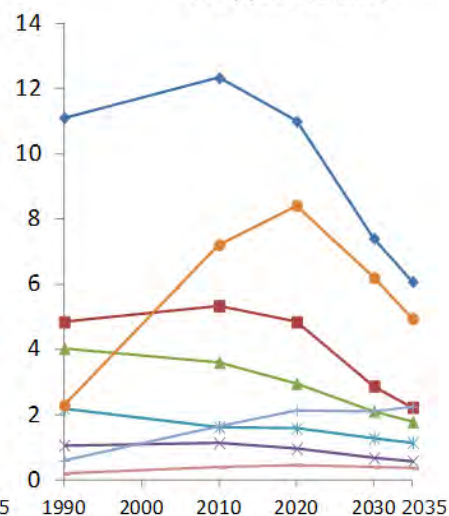
New Policies Scenario



直近の政府の政策公約が慎重に実行されるという想定に基づくシナリオ

450ppmシナリオ

450 ppm Scenario



産業革命以降の平均気温上昇を2°C以内に抑えるという目標から導き出されたシナリオ

—●— OECD Total —■— United States —▲— EU27 —×— Japan —◆— Russia —○— China —+— India —— Brazil

Includes fossil-fuel based CO2 emissions only. Source: IEA (2012b)

# 各国がどの程度、どのような形で貢献するのか？

*How and to what extent do countries contribute to the reduction required?*

- 「衡平性」と「共通だが差異ある責任及び各国の能力 (CBDR&RC)」原則

*“Equity” and “common but differentiated responsibilities and respective capability (CBDR&RC)” principles*

- 附属書I国と非附属書I国に基づく二分法; 京都議定書の下では、附属書I国のみ削減義務

*Dichotomy based upon Annex I Parties vs Non-Annex I Parties*

- 国際気候変動交渉における異なる「世界観」

*Two distinctive “world views” in international climate negotiations*

- 「世界は変わった・これからも変わる」論⇒新しい現実に沿った貢献の仕方

*“The world has changed.” ⇒ new approach along with new realities*

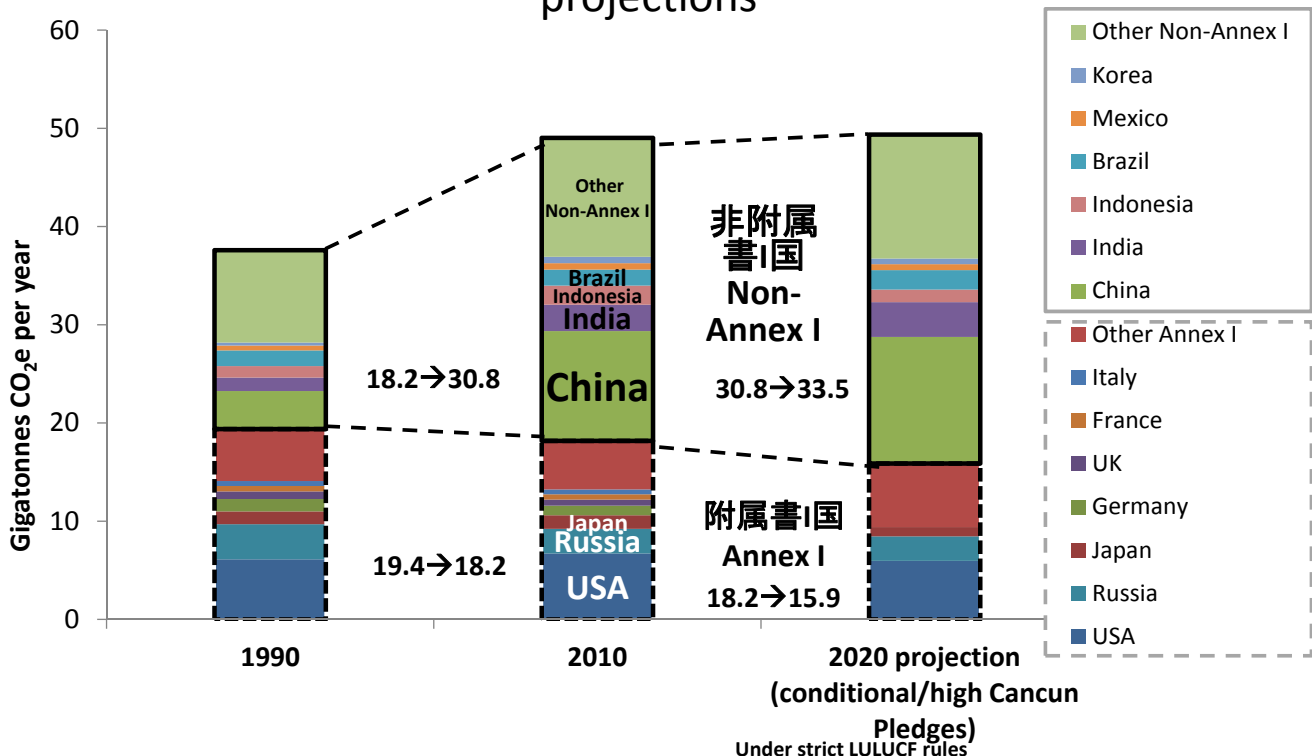
- 「世界は変わってない」論⇒現状維持

*“The world has not changed.” ⇒ Status quo*

3

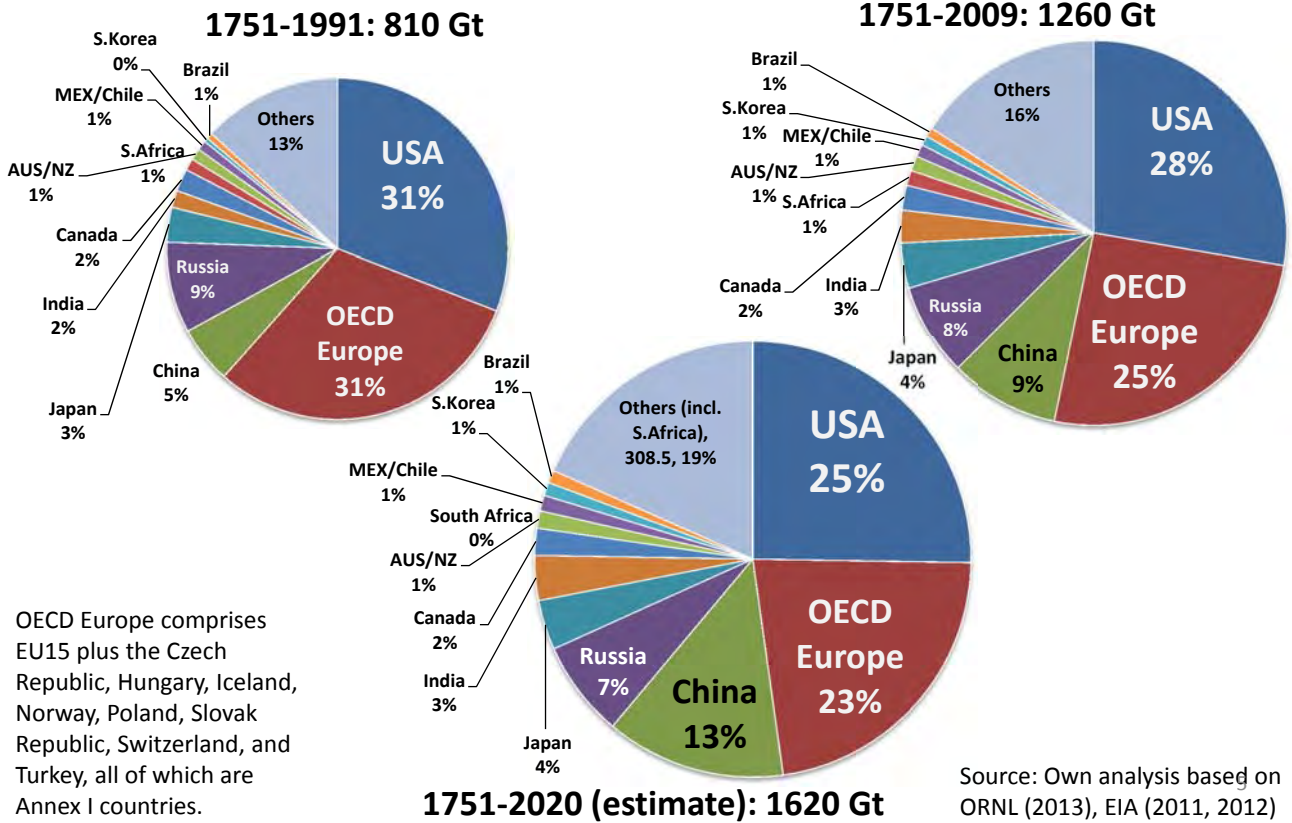
## 責任(1): 年間GHG排出量

Responsibility (1): GHG emissions 1990, 2010, and 2020 projections



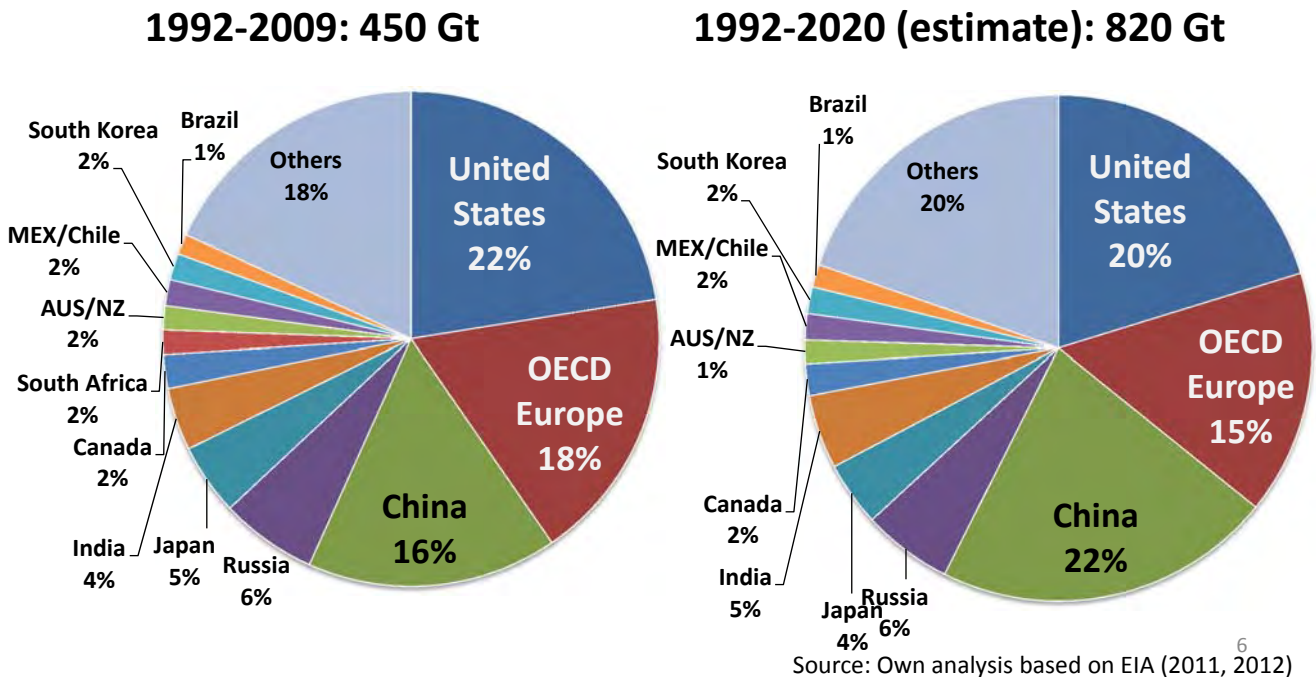
4

# 責任 Responsibility (2): 累積エネルギー起源CO<sub>2</sub>排出量 Cumulative Emissions since 1750

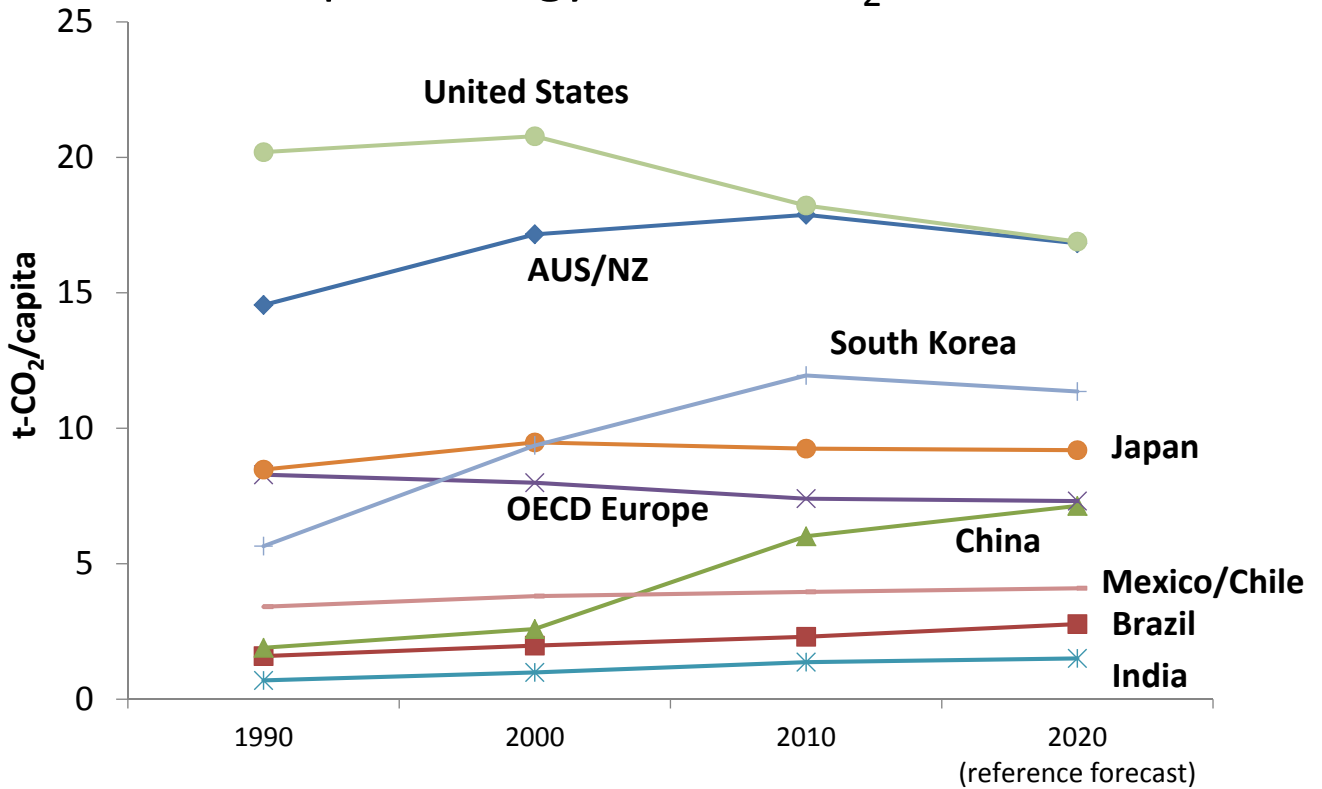


## 累積エネルギー起源CO<sub>2</sub>排出量 1992年～2009年及び2010年～2020年(予測)

Cumulative CO<sub>2</sub> Emissions from fossil fuel combustion: 1992-2009 and 2010-2020 (estimate)

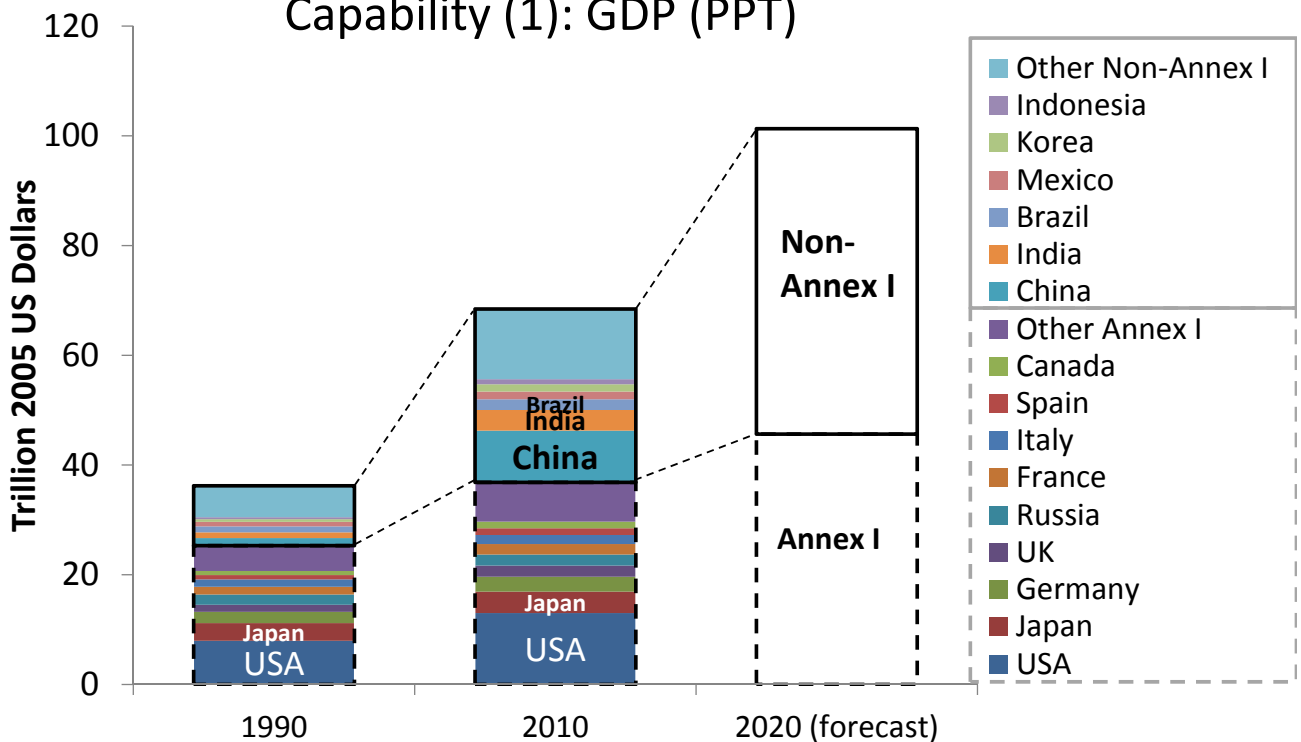


# 責任 Responsibility (3): 一人あたりCO<sub>2</sub>排出量 Per Capita energy-related CO<sub>2</sub> Emissions



Source: Own analysis based on Energy Information Administration (2011, 2012)

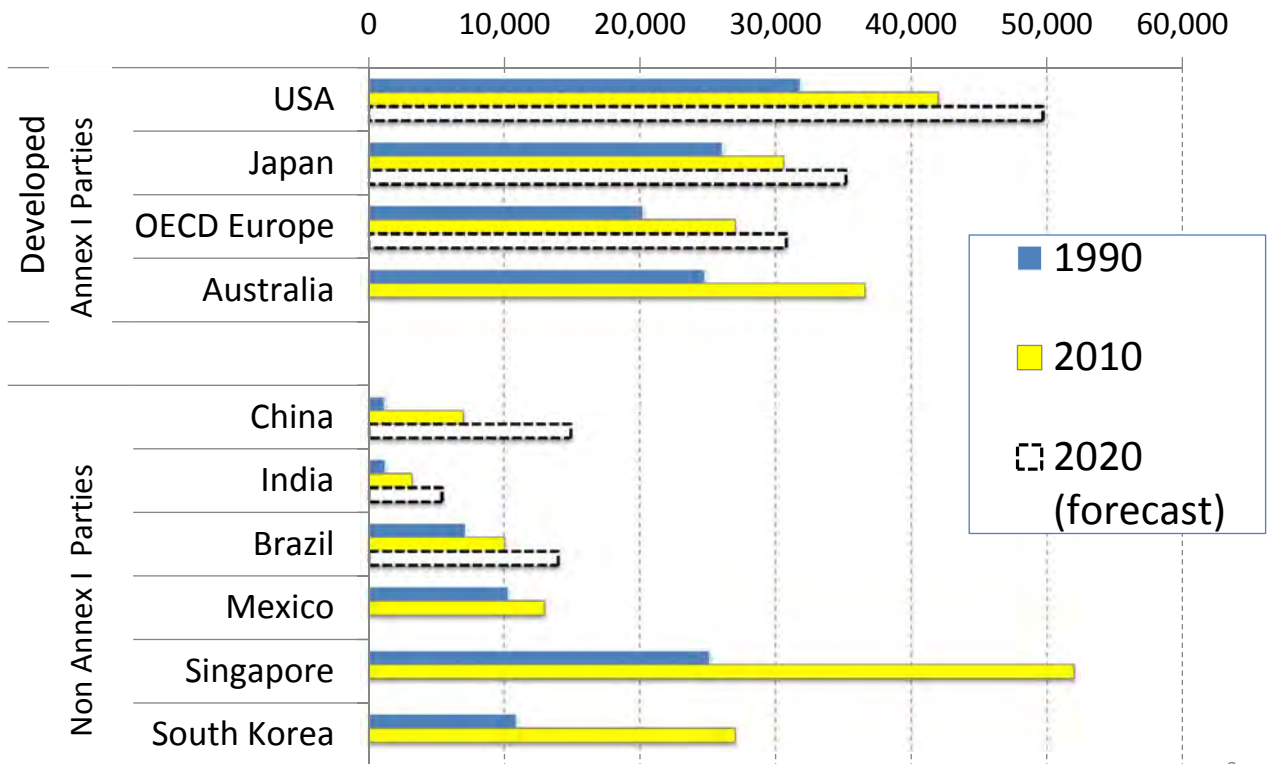
# 能力 (1): GDP (購買力平価) Capability (1): GDP (PPT)



Source: Own analysis based on IEA (2012a, 2012b)

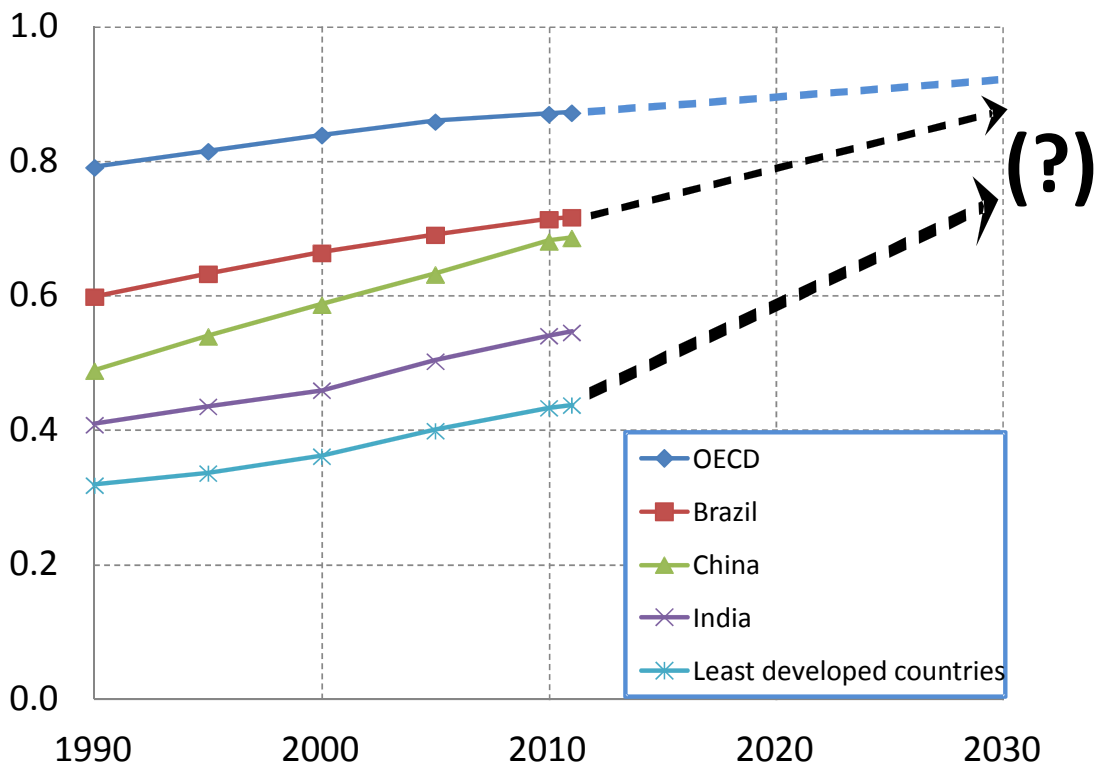
## 能力 (2): 一人あたりGDP (購買力平価)

Capability (2): GDP (PPP) per capita (2005 constant US Dollars)



Source: Own analysis based on IEA (2012a,b) and UN DESA (2010).

## 能力 Capability (3): 人間開発指標 HDI



Source: UNDP (2013)

## より広い文脈 Broader Context

- グローバル・ガバナンス(地球公共財を提供・管理・運営を担う枠組み)における途上国の役割の拡大

*Growing roles by developing countries in global governance to supply and manage "global public goods"*

– G7・G8からG20へ

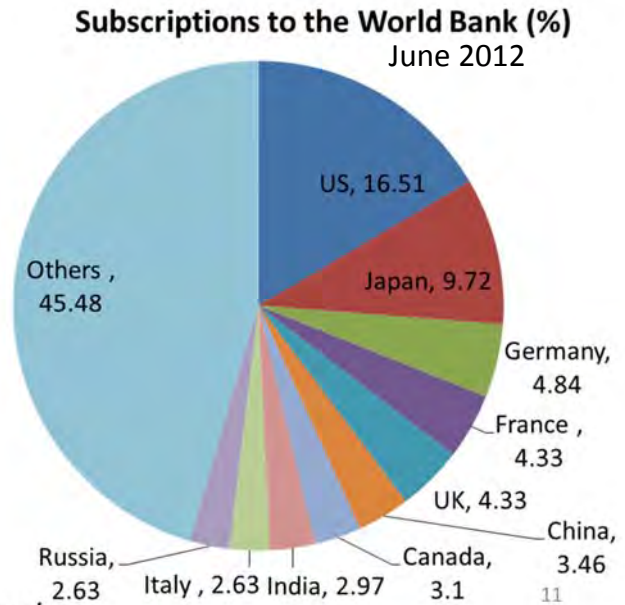
*From G7/G8 to G20*

– IMFへの緊急追加拠出

4560億ドルのうち、EU2000億ドル、日本600億ドル、中国430億ドル、墨、印、伯100億ドルずつ  
EU \$200billion, Japan \$60billion, China \$43billion, Brazil, India and Mexico \$10billion each, out of \$456billion (June 2012)

– 世界銀行への  
資本金拠出比率

*subscriptions to the World Bank*



## まとめ Conclusions

- 世界はどう変わったか? *How has the world changed?*

➤ 変わった部分 *what has changed*

国単位でみた責任指標、能力指標の変化、特に新興国

*Shifts in country-level responsibility and capability indicators, especially with regard to emerging economies*

グローバルガバナンスにおける新興国の役割拡大

*Growing roles of emerging economies in global governance*

➤ あまり変わってない部分 *what has not so much changed*

一人あたりで見た責任指標・能力指標や社会的側面も考慮すると、先進国と途上国間の差は残る。ただし、新興国・途上国の中にも多様性あり。

*Remaining gaps in per capita responsibility and capacity indicators and social*

*Diversity among emerging economies/developing countries*

# References

- den Elzen, M., Roelfsema, M., Hof, A., Böttcher, H., Grassi, G., 2012. Analysing the emission gap between pledged emission reductions under the Cancún Agreements and the 2 °C climate target. Netherlands Environmental Assessment Agency (PBL), The Hague/Bilthoven, The Netherlands, 2012.
- European Commission, Joint Research Centre (JRC)/PBL Netherlands Environmental Assessment Agency (2011). Emission Database for Global Atmospheric Research (EDGAR), release version 4.2.
- EIA (2011). International Energy Outlook 2011. Energy Information Administration, U.S. Department of Energy.
- EIA (2012). International Energy Statistics. Energy Information Administration, U.S. Department of Energy.
- IEA (2012a) CO<sub>2</sub> Emissions from Fuel Combustion 2012 Edition. International Energy Agency, Paris, France.
- IEA (2012b). World Energy Outlook 2012. International Energy Agency, Paris, France.
- ORNL (2013). Fossil-Fuel CO<sub>2</sub> Emissions. Carbon Dioxide Information Analysis Center (CDIAC), Oak Ridge National laboratory (ORNL).
- UN DESA (2010). World Population Prospects: The 2010 Revision. Total Population medium fertility variant 2010-2100. United Nations Department of Economic and Social Affairs.
- UNDP (2013). Human Development Report 2013. United Nations Development Programme.