SETTING A GLOBAL DEVELOPMENT FRAMEWORK AND THE G20 AGENDA

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THE WORLD OF THE EARLY 21\textsuperscript{ST} CENTURY:

- GLOBAL-SCALE PRODUCTION AND FINANCIAL SYSTEMS
- COMPUTATIONAL AND COMMUNICATIONS REVOLUTION
- MASSIVE DEMOGRAPHIC CHANGE (AGING IN HIGH-INCOME COUNTRIES; RAPID GROWTH IN LOW-INCOME COUNTRIES)
- GEOPOLITICAL UPHEAVAL (SHIFT TO ASIA AND TO MULTI-POLARITY)
- MEGA-ENVIRONMENTAL DISRUPTION

ENORMOUS VULNERABILITY OF THE PLANET AND HUMAN SYSTEMS TO ABRUPT CHANGE
POLICY IMPLICATIONS AND CHALLENGES:

OUR GENERATION HAS THE ABILITY TO END POVERTY AND SUSTAIN GLOBAL GROWTH, YET:

HIGH VULNERABILITY TO CONFLICT (SYRIA, YEMEN, UKRAINE, SOUTH CHINA SEA)
WIDESPREAD SOCIAL INSTABILITY
ENERGY/ENVIRONMENTAL CRISES IN ALL REGIONS
DEMOGRAPHIC CHANGE AND MASS MIGRATION
GLOBAL FINANCIAL-SECTOR INSTABILITY
POTENTIAL RACE TO THE BOTTOM: TAX, LABOR, ENVIRONMENT
SETTING GLOBAL GOALS AND STRATEGIES:

UN SUSTAINABLE DEVELOPMENT GOALS (SDGS)

UNFCCC 2-DEGREE C LIMIT OF MEAN TEMPERATURE RISE (COP21)

FINANCING FOR DEVELOPMENT

G20 INVESTMENT-LED MACROECONOMIC FRAMEWORK

REVISION OF TRADE, FINANCE, ENERGY, AND ENVIRONMENTAL RULES AT THE GLOBAL SCALE FOR CONSISTENCY WITH SUSTAINABLE DEVELOPMENT
“PLANETARY BOUNDARIES”

Source: Rockström et al 2009a)
IN APRIL, 2013, CO2 CONCENTRATION REACHES 400 PPM FOR FIRST TIME IN 3 MILLION YEARS
GLOBAL CRISES, GLOBAL READINESS FOR SOLUTIONS
SUPERSTORM SANDY, NYC, OCTOBER 29, 2012
BEIJING ENVELOPED IN POLLUTION, JANUARY 2014
MEGA-DROUGHT IN SAO PAULO, BRAZIL FEBRUARY 2014
Drought and Forest Fires in Sumatra, March 2014
QUEENSLAND FLOODS, JANUARY 2013
Temperatures across Australia

Wednesday 15 January 2014
20:00 local time (09:00 GMT)

°C

Source: Australia Met Office
THE SDGS

Sustainable Development was adopted at the UN Rio+20 Summit as the organizing principle for the Post-2015 global goals.

The UN Member States are now negotiating Sustainable Development Goals (SDGs)

SDGs will integrate Economic, Social, and Environmental Goals
The Sustainable Development Solutions Network (SDSN) operates under the auspices of UN Secretary-General Ban Ki-moon, and engages scientists, engineers, business and civil society leaders, and development practitioners for evidence-based problem solving. It promotes solution initiatives that demonstrate the potential of technical and business innovation to support sustainable development (www.unsdn.org)
SDGS AS RECOMMENDED BY SDSN:

End Extreme Poverty
Promote Sustainable Growth and Jobs
Education for All
Social Inclusion
Health for All
Sustainable Agriculture
Sustainable Cities
**Sustainable Energy and Climate Change**
Sustainable Biodiversity
Good Governance
STRATEGY FOR MEETING THE SDGS:

SET GOALS FOR 2030 AND 2050 (GOAL SETTING)
IDENTIFY PATHWAYS TO SUCCESS (BACKCASTING)
R&D ROADMAPS (ROADMAPPING)
DEMONSTRATE SUCCESS (PROTOTYPING)
SCALE-UP OF PROVEN SUCCESSES (PPP SCALE UP)
ACCELERATE EDUCATION (MASS LEARNING)

“DIRECTED” INVESTMENT-LED GROWTH
Emissions are heading to a 4.0-6.1°C "likely" increase in temperature.
Large and sustained mitigation is required to keep below 2°C.

### CO2-ENERGY EMISSIONS CONSISTENT WITH 2-DEGREE C LIMIT

<table>
<thead>
<tr>
<th>Cumulative Emissions Remaining</th>
<th>Around 1,000 Billion Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current CO2 Emissions Per Year</td>
<td>35 billion tons CO2 (or 10 billion C)</td>
</tr>
<tr>
<td>Years remaining at Current Rate</td>
<td>Around 29</td>
</tr>
<tr>
<td>Target Emissions 2050</td>
<td>Around 15 billion tons</td>
</tr>
<tr>
<td>Target Emissions 2070</td>
<td>Around 0 billion tons</td>
</tr>
<tr>
<td>Total Carbon in Proved Coal Reserves</td>
<td>2,126 billion tons</td>
</tr>
<tr>
<td>Total CO2 in Proved Oil Reserves</td>
<td>723 billion tons</td>
</tr>
<tr>
<td>Total CO2 in Proved Gas Reserves</td>
<td>356 billion tons</td>
</tr>
</tbody>
</table>
Australia’s CO2 Emissions Per Person, 1990-2012
<table>
<thead>
<tr>
<th>Country</th>
<th>Billion of Tons CO2</th>
<th>Share of World</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>9.86</td>
<td>28.6%</td>
</tr>
<tr>
<td>US</td>
<td>5.19</td>
<td>15.0%</td>
</tr>
<tr>
<td>EU</td>
<td>3.74</td>
<td>10.8%</td>
</tr>
<tr>
<td>India</td>
<td>1.97</td>
<td>5.7%</td>
</tr>
<tr>
<td>Russia</td>
<td>1.77</td>
<td>5.1%</td>
</tr>
<tr>
<td>Japan</td>
<td>1.32</td>
<td>3.8%</td>
</tr>
<tr>
<td>Korea</td>
<td>0.64</td>
<td>1.9%</td>
</tr>
<tr>
<td>Australia</td>
<td>0.56</td>
<td>1.6%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.49</td>
<td>1.4%</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.46</td>
<td>1.3%</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.46</td>
<td>1.3%</td>
</tr>
<tr>
<td>Saudi</td>
<td>0.46</td>
<td>1.3%</td>
</tr>
<tr>
<td>Canada</td>
<td>0.43</td>
<td>1.2%</td>
</tr>
<tr>
<td>Top 3</td>
<td>18.79</td>
<td>54.5%</td>
</tr>
<tr>
<td>Top 5</td>
<td>22.53</td>
<td>65.3%</td>
</tr>
<tr>
<td>Top 13</td>
<td>27.35</td>
<td>79.3%</td>
</tr>
</tbody>
</table>
## COAL RESERVES, BILLION METRIC TONS, 2012

<table>
<thead>
<tr>
<th>Country</th>
<th>Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>237.2</td>
</tr>
<tr>
<td>Russia</td>
<td>157.0</td>
</tr>
<tr>
<td>China</td>
<td>114.5</td>
</tr>
<tr>
<td>Australia</td>
<td>76.4</td>
</tr>
<tr>
<td>India</td>
<td>60.6</td>
</tr>
<tr>
<td>World</td>
<td>880.9</td>
</tr>
<tr>
<td>Top 5 % of World</td>
<td>73.3%</td>
</tr>
</tbody>
</table>
A NEW KIND OF AGREEMENT TO ACHIEVE THE 2-DEGREE C LIMIT

DEEP GLOBAL ENERGY SYSTEM TRANSFORMATION:
LOW-CARBON ELECTRICITY (RENEWABLE, NUCLEAR, CCS)
MASSIVE ENERGY EFFICIENCY
ELECTRIFICATION OF VEHICLES AND HEATING

BIOLOGICAL STORAGE, INCLUDING END OF DEFORESTATION

PHASE OUT COAL USE EXCEPT WITH CCS

MORATORIUM ON EXPLORATION AND DEVELOPMENT OF UNCONVENTIONAL OIL, INCLUDING ARCTIC, DEEP OCEAN, OIL SANDS, AND NON-PROVED-RESERVE OIL RESOURCES

FULL ELECTRIFICATION OF PERSONAL VEHICLES BY AROUND 2030
COORDINATED GLOBAL R&D ROADMAPS AND ROUNDTABLES INCLUDING THE FOLLOWING AREAS:

FOURTH-GENERATION NUCLEAR POWER

**CARBON CAPTURE AND SEQUESTRATION**
- FACILITY CAPTURE
- DIRECT AIR CAPTURE
- SOIL AND FOREST CAPTURE (BIOLOGICAL STORAGE)

STORAGE OF INTERMITTENT (SOLAR, WIND) RENEWABLE ENERGY

ELECTRIFICATION OF VEHICLES

GRID MANAGEMENT WITH LARGE-SCALE RENEWABLES

SMART-GRID POLICIES, PRICING, AND MANAGEMENT
INTERNATIONAL FINANCING FOR SUSTAINABLE DEVELOPMENT
SOME KEY PRINCIPLES FOR INTERNATIONAL FINANCING FOR SUSTAINABLE DEVELOPMENT

CONTINUED 0.7% COMMITMENT OF ODA FOR LOW-INCOME COUNTRIES

GRADUATION FOR MIDDLE-INCOME COUNTRIES

CLIMATE FINANCING (GRANT AND GUARANTEE) ON THE ORDER OF $100 BILLION PER YEAR, ADDITIONAL TO ODA

POOLING OF DONOR FUNDING IN MULTILATERAL INITIATIVES: HEALTH, EDUCATION, ENVIRONMENT, CLIMATE

MOBILIZATION OF PENSION AND INSURANCE FUNDS FOR LARGE-SCALE SUSTAINABLE INFRASTRUCTURE
GOOD GOVERNANCE PRINCIPLES FOR INTERNATIONAL FINANCE:

EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE

PUBLICATION OF CONTRACTS

TRANSPARENCY OF ROYALTY AND OTHER RESOURCE PAYMENTS

END OF SECRECY HAVENS AND SHELL CORPORATIONS

END OF TAX HAVENS

ENHANCED MONITORING OF SHORT-TERM DEBT AND CROSS-BORDER INTERBANK CREDIT LINES
Australia’s Aid Trajectory:
Wrong Direction at the Wrong Time
Figure 1: UK ODA levels since 1970

INVESTMENT-LED GROWTH FRAMEWORK
INCREASE OF GLOBAL INFRASTRUCTURE OUTLAYS (POWER, PORTS, ROADS, RAIL, TELECOMMS)

CURRENTLY ESTIMATED TO BE AROUND 3.5% OF WORLD OUTPUT

SHOULD INCREASE TO PERHAPS 5% OF WORLD OUTPUT. AN INCREMENTAL $1.4 TRILLION PER YEAR

REGULATORY, INSURANCE, PROJECT-FINANCE, AND PRUDENTIAL FRAMEWORK NEEDED AT THE GLOBAL LEVEL (E.G. IMF/WB/RDB STANDARDS)
REVISION OF TRADE, FINANCE, AND INVESTMENT RULES FOR SUSTAINABLE DEVELOPMENT
ALL RELEVANT UN AGENCIES SHOULD BE ASKED TO COMMENT TO THE UN AND THE G20 ON CONSISTENCY WITH THE SDG AND UNFCCC FRAMEWORKS:

WTO (TRADE AND ENVIRONMENT RULES)
WIPO (IP AND SUSTAINABLE INVESTMENTS)
WHO (GLOBAL RULES AFFECTING PUBLIC HEALTH)
UNFCCC (IMPLEMENTATION OF CLIMATE AGREEMENT)
UNCTAD (ON FOREIGN INVESTMENT RULES)
IMF (ON MACROECONOMIC TARGETS)
BIS (ON MACROPRUDENTIAL REGULATION)
TIMELINE FOR SETTING THE GLOBAL AGENDA

G20: ENDORSE SDGS, 2-DEGREE C LIMIT, COP21 NEGOTIATIONS, FINANCING FOR DEVELOPMENT

SPRING 2015: FINANCING FOR DEVELOPMENT

SEPTEMBER 2015: ADOPTION OF SDGS

DECEMBER 2015: ADOPTION OF NEW CLIMATE AGREEMENT AT COP21