

WE Must Get it Right

Common but differentiated responsibilities and abilities

An agreement that sanctions disappearance of Island nations; puts the most vulnerable at greater risk is unacceptable. Moral and social justice loudly speak against sanctioning these vulnerable states and populations to oblivion.



ROBERT MBURIA

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Introduction

Stakes are high. Moving from acknowledging climate change as a threat to human security issue toward tangible sustainable solutions for the well-being of the planet, human life and ecosystems is taking place. New York SGD's Summit and Paris Climate talks both take place in 2015. History is being made in a generation affecting trans generations to come.

“Of nine climate-related key regional risks identified for Africa, eight pose medium or higher risk even with highly adapted systems, while only one key risk assessed can be potentially reduced with high adaptation to below a medium risk level, for the end of the 21st century under 2°C global mean temperature increase above preindustrial levels (medium confidence).” (IPCC AR5).

IPCC Africa risk projections under climate change:

- ✚ Land temperature in Africa will rise higher than global land average
- ✚ Reduction in precipitation especially in North Africa and Southern Africa while Sub Sahara predictions remain uncertain.
- ✚ Ecosystems range shift due to CO₂ and warming while future shifts will be significantly high
- ✚ Amplified water stress
- ✚ Disruption of agriculture systems especially in semi-arid lands
- ✚ Increased food insecurity
- ✚ Increased risks to water vector and waterborne diseases
- ✚ Adverse effects on livestock
- ✚ Triggering migration
- ✚ Climate change will also exacerbate/multiply existing threats to human security such as food insecurity, food, health, etc.

The residual impact in a 2°C at the close of the 21st century suggests that even under high levels of adaptation there would be very high risks for the region.

- ❖ Adaptation gap in Africa is huge. As indicated by various studies; the present institutional framework is insufficient to effectively coordinate the various adaptation initiatives being rolled out.
- ❖ The sociopolitical, environmental, economic and technology factors limit adaptation and resilience capacity in the region.
- ❖ IPCC identifies conservation agriculture as sustainable means to building adaptation and resilient capacity in agro ecosystems and livelihoods.

- ❖ Large data and research gap hinders informed decision making process to increase resilience, implementation of adaptation strategies and reduce vulnerability in light of climate change risks in Africa. Flow of scientific climate information from the source to national, county level to village levels or where county governments are responsible for policy formulation and development projects planning usually lack the necessary information tools on how to utilize climate change information in planning and implementation of such projects. Most of climate change information is left on paper and scarcely used except by metrological departments where farmers are warned on little or increased rainfalls in certain seasons. Beyond this, climate information is rarely factored into county/national planning.

INDC and Tangible Paris outcome

EU 2015 commitment to greenhouse gas cutting:

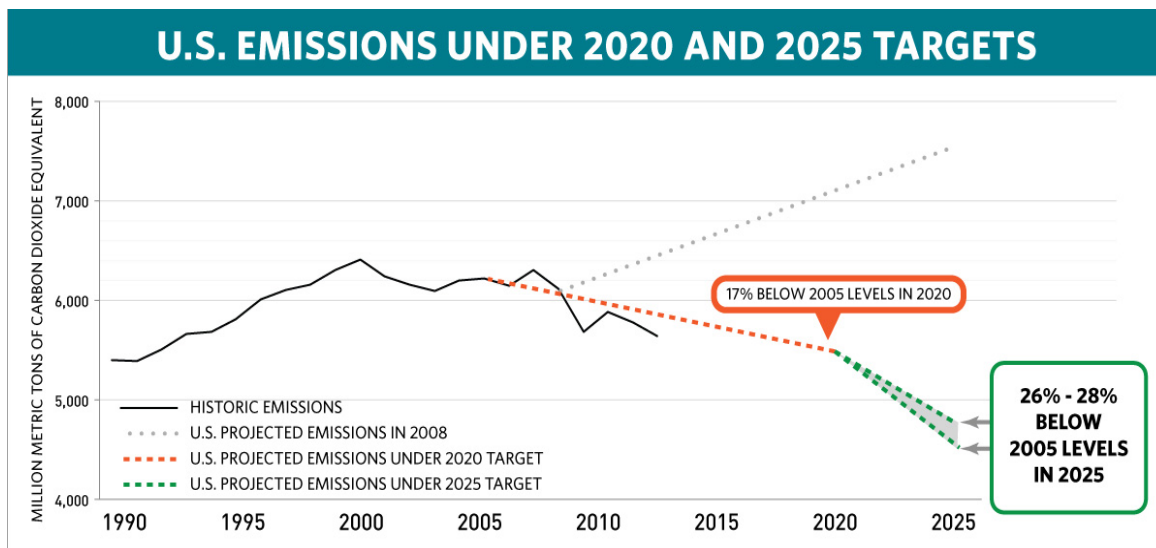
The European Union has committed to reducing CO₂ emission by 20% by 2020 through increase of renewable energy by 20% and achieving energy efficiency of 20%. Medium goal of 2030 sees EU commit to reduction of CO₂ by 40% compared to 1990; this will be achieved by use of 27% increase in renewable energy and 27% energy efficiency. The EU long-term is to achieve a 80-95% emissions reduction compared to 1990.

This INDC still insufficient in light of fairness, social justice and equity in emissions reductions for the EU, noting that further reductions by 2030 are a requisite for the EU INDC to be sufficient (Climate Action Tracker 2015).

Japan INDC 2015 falls way below the line to inadequate whereby the intended INDC can be achieved without any effort or shift from business as usual (Climate Action Tracker 2015). Japan's INDC aims to reduce emissions by 18% compared to 1990 levels or 26% below the 2013 levels. If all countries adopt this INDC then the planet is committed to 3-4°C warming in the century (CAT, 2015).

The USA INDC sets to cut emissions by: 26-28% below the 2005 levels by 2025; 17% by 2020 below the 2005 levels and; 80% or more deep wide economy emission reduction by 2050

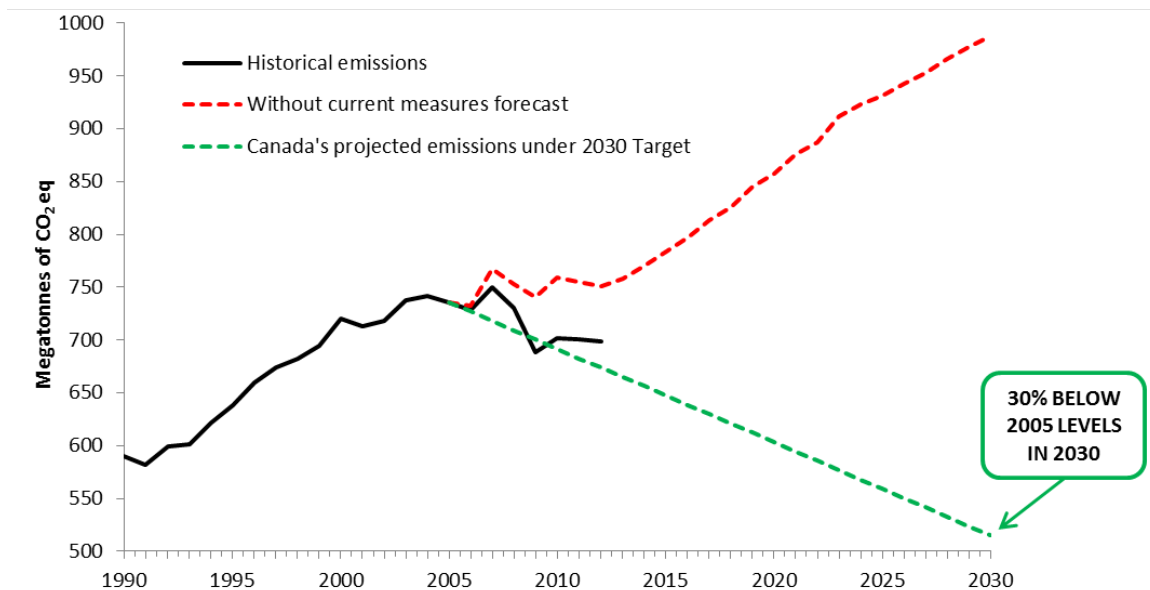
**The USA pledges are not sufficient to limit warming below 2°C unless other countries outdo this target.*



Source: *USA cover note INDC 2015*

Canada IDNC aims to reduce economy wide emissions by 30% by 2030 below the 2005 level. CAT has placed this target as just 2% below 1990 industrial GHG emissions levels rendering the target inadequate. Concurrently Canada will fall short of the 2030 and 2050 targets by greater margin if the laid down trajectory is followed. The country needs more stringent measures.

Canadian Emissions under 2030 Target



Source: Canada INDC (2015)

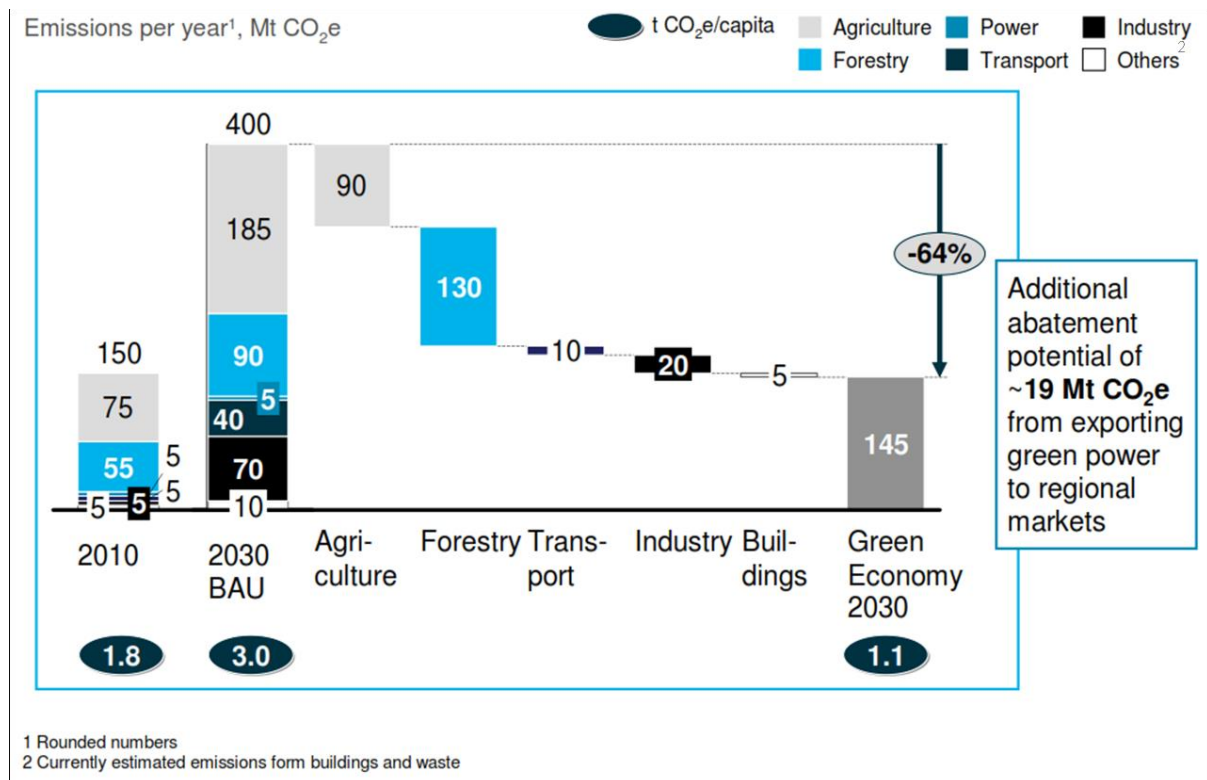
Russia INDC indicates a long term emissions reductions of 70-75% economy wide by 2030 using 1990 as a base year; this is '***subject to the maximum possible account of absorbing capacity of forests.***'

Russia's target is inadequate although it's not the country's final INDC submission but it lacks ambition as fail to commit the planet to a below 2°C warming.

China made historic pledge of peaking emissions by 2030 or earlier while increasing share of non-fossil energy in primary energy supply to 20% by 2030.

Morocco has been hailed for submitting ambitious INDC target whereby it commits to reducing GHG emissions by 32% by 2030 compared to business as usual projected emissions. This is subject to funding and support in relation to previously received support. Morocco adaptation spending equals 9% of all investment expenditure (Morocco 2015).

Ethiopia '*intends to limit GHG by 2030 to 145Mt CO₂e or lower*' this represents a 62% reduction by 2030 compared to business as usual scenario (Ethiopia 2015).



Source: Ethiopia 2015 INDC

Climate Action Tracker places each country depending on its INDC submissions as inadequate; medium; sufficient; and role model. On this scale

- ❖ Bhutan falls at role model
- ❖ Morocco and Costa Rica scale at sufficient
- ❖ Brazil, China, EU, India, Indonesia, Kazakhstan, Mexico, Norway, Switzerland, USA scale at medium
- ❖ Australia, Canada, Chile, Japan, New Zealand, Russian Federation, South Africa, South Korea and Ukraine scale at inadequate (CAT 2015)

The G7 declaration showed a readiness to adopt a legally binding COP21 outcome or agreement that has legal force under the UNFCCC that sets the world to a 2°C limit. However, the G7 failed to give a specific number of emissions cut that would allow it to contribute to limiting warming to below 2°C.

Examination of submitted INDC to UNFCCC ahead of Paris 2015 COP21 clearly marks the world out of target in limiting warming to below 2°C. Paris outcome, unless revised INDC is submitted the 2°C target remains elusive due to lack of good will, ambition and owning up the set target.

Greatest strides have been achieved whereby all countries agree on urgency in addressing climate change; need for binding COP21 outcome. UNFCCC SD 2013-15 reveals availability of technology to achieve long term global goal but their deployment is not off-track. Hence it is not lack of capacity but commitment, policy failure and absence of ownership of the global agenda. Countries need to own up the 2°C or 1.5°C target and take necessary national measures to limit warming to this level.

Will the 2°C warming limit help save Africa?

UNFCCC SED 2013-2015 emphatically points:

“Scenario analysis shows that limiting global warming to below 2 °C implies the following: a large reduction in global greenhouse gas emissions in the short to medium term, global carbon dioxide neutrality early in the second half of this century, and negative global greenhouse gas emissions towards the end of the twenty-first century. The longer we wait to bend the currently increasing curve of global emissions downward, the steeper we will have to bend it, even with negative emissions. Limiting global warming to below 2 °C necessitates a radical transition (deep decarbonization now and going forward), not merely a fine tuning of current trends.”

2 degrees warming presents high risks that IPCC raised red flags over; such risks include:

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| <ul style="list-style-type: none">i. <i>Unique and threatened systems would be at high risk, in particular systems with limited or barely any adaptive capacity (e.g. Arctic sea ice and coral reefs);⁶¹</i>ii. <i>Extreme weather events would pose a high risk for human health, urban housing and infrastructure in megacities, also in relation to the urban heat island effect, air pollution and differential vulnerabilities; displacement and permanent migration; livelihood struggles and conflict in resource-dependent livelihoods, such as agriculture and pastoralism; and high impacts on livelihood (trapped populations are more vulnerable to environmental change because of their inability to move);</i>iii. <i>The risks will be increasingly unevenly distributed, and are generally greater for disadvantaged people and communities in countries at all levels of development; populations that experience shifts from transient to chronic poverty and related social marginalization and food insecurity; and the elderly, children, the socially marginalized, and outdoor workers, who are disproportionately at risk from heat stress;</i>iv. <i>Global aggregate impacts show a moderate economic impact, but these aggregates may mask impacts across sectors and regions (evaluations are incomplete, in part because they do not take into account large-scale singular events affecting several sectors at once or other effects from disrupted</i> |
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interdependencies);

- v. *The risk of large-scale singular events, such as the disintegration of ice sheets in Greenland and Antarctica, would be moderate.*

Source: copied from UNFCCC;SED 2013-2015

Significant climate impacts are already occurring at the current level of global warming and additional magnitudes of warming will only increase the risk of severe, pervasive and irreversible impacts. Therefore, the 'guardrail' concept, which implies a warming limit that guarantees full protection from dangerous anthropogenic interference, no longer works. This calls for a consideration of societally or otherwise acceptable risks of climate impacts.

0.85°C warming	1.5°C warming	2°C warming
<ul style="list-style-type: none"> • Glacier and ice sheets consistent mass loss and arctic systems. • Sustainable economic development and increased economic losses from extreme weather. • Ecosystems: increased tree mortality/forest die back; and negative impact of arctic, fresh water and terrestrial species and warm water coral reefs. • Food production: low wheat/maize yields; negative impacts on marine fisheries and sea level rise and its associated impacts on a low lying coastal zone and small islands. 	<ul style="list-style-type: none"> • Sea level rise may remain below 1M • most terrestrial and marine species would be able to follow speed of climate change • Some arctic ice may remain • Ocean acidification impacts stay at moderate levels • 50% of coral reefs may remain • More scope of adaptation would exist especially on agriculture sector. 	<ul style="list-style-type: none"> • sea level rise may exceed 1M • Climate change too rapid for species to move sufficiently fast and migrate to their preferred temperature zones. • Arctic Summer Sea will be at high risk • High risk of ocean acidification and warming leading to mass coral bleaching (high confidence) and deaths. • Unique threatened species will be at high risk due to their limited/ barely adaptive capacity such include arctic sea and corals. • Crop production at high risk with adaptation potential for some crops

*Global average of 2°C or 1.5°C is an aggregate meaning some regions will be warmer than this limit while others cooler hence putting the limit at 2°C is condemning Africa, small island nations and unique ecosystems to higher climate risks. Warming in Africa and middle east will be higher than the global average.

Regional vulnerability remains key in considering a new target for the Paris Agreement. A 2°C warming would mean greater warming for Africa which is compounded by low resilience and delicate ecosystems.

Failure to heed to scientific warning is to condemn the disadvantaged, marginalized and the elderly as well as the children worldwide to greater risks and those in transient poverty to chronic poverty. The world leaders meeting in Paris require to uphold human security in relation to climate risks posed by unsustainable development patterns. Deployment of clean technology is long overdue; fear of change must be met by leadership determination. The bridge can be crossed; delay is denial in case of climate change impacts for Africa and small island nations.

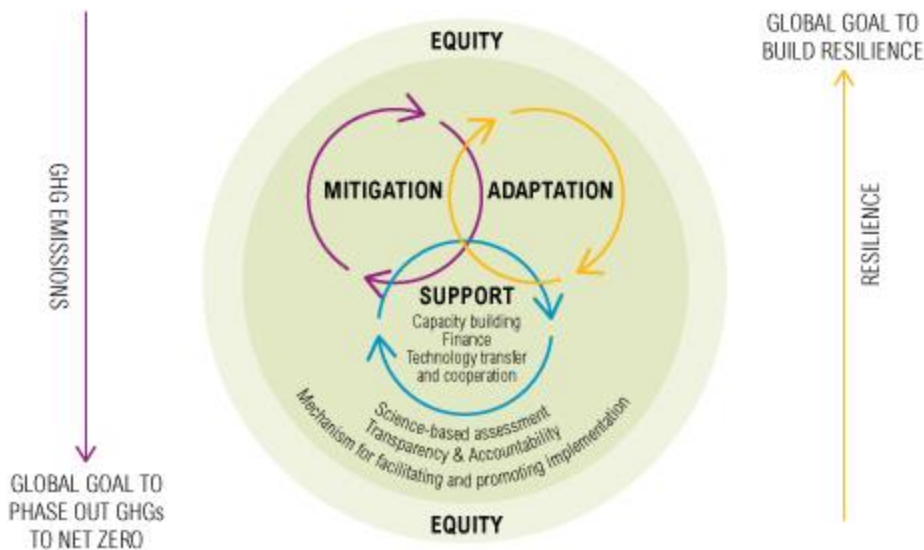
Africa continent through Africa Union together with Island nations call for warming to be limited to below 1.5°C; this is in tandem with the experts call for lower warming target. During the Copenhagen climate talks more than a 100 countries called for warming to be limited below 1.5°C relative to pre-industrial period. The same call was repeated in Durban South Africa. UNFCCC chief Christina Figueres has rated 2°C warming as inadequate pointing that warming should be limited to below 1.5°C. this mark is possible to achieve within the century.

Policy, Funds, and technology are the tools for achieving a 1.5°C limit; this is well within reach of many developed nations. Low lying coastal zones and island nations would be lost unless drastic measures be taken to limit warming and ocean rise to below 1M. Historical responsibility in regard to emissions should be factored in the INDC; assessment of the submitted INDC shows they are inadequate to limit warming below 2°C or 1.5°C. China, USA, and EU submitted INDC only manage to limit warming to 3°C on aggregate when factored together; the three countries produce approximate 53% of global emissions (Robin 2015). Although already submitted INDC are not an end in themselves, there is need for world leaders to show ambition and commitment while appreciating the small window of opportunity left before irreversible impacts of climate change occurs.

Does Paris COP21 outcome matter?

Different views arise as we near Paris; COP21 is not an end to itself but means, the outcome should not be final but 5 year interval should be adopted whereby revised INDC's are submitted without having to negotiate a new agreement all together. Global climate change agreement at COP21 can only be successful when national initiatives and commitment to INDC is achieved by states. It's a global agreement that wholly relies on national commitment. This ensures equity as all nations stand different abilities hence bearing distinguished responsibility in emissions cuts and production.

Clear, transparent attainment of \$100 billion by 2020 will be raised; channels of distribution, ease of access and utilization; accountability in provision of funds. Criteria for fund access must be skewed in favor of developing countries for mitigation and adaptation as well as capacity development.



Source: Morgan 2015

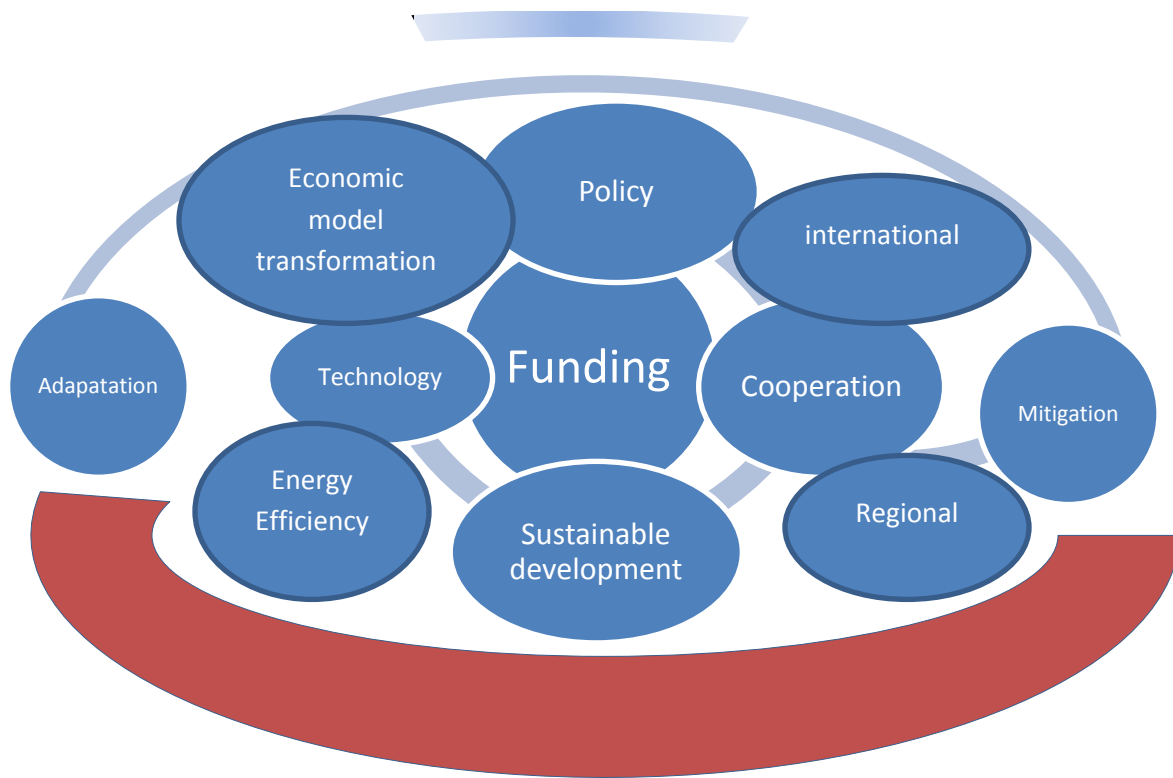
- Attain net zero emissions as early as possible by phasing out GHG but not later than 2050 and beyond. Reject a 2°C warming limit/GUARDAIL and rather adopt a 1.5°C limit in solidarity with developing and vulnerable nations as well as ecosystems.
- Build resilience and reduce vulnerability in regions that are vulnerable and disadvantaged regions like Africa, Asia and Island nations through finance, technology development, and free/affordable transfer
- Robust, binding, transparency and accountability on Monitoring, Reporting and Verification across all states.
- Equity
- Forest degradation/deforestation and best land use practices for REDD+
- The agreement must contain clarity of individual responsibility; legal framework and rule of law
- Interlinked with sustainable development
- Encourage business and investment especially in developing countries

Additionally Paris agreement needs to be ambitious enough to hold nations together after 2020. This requires courage, sacrifice and clear cut leadership before it is too late.

The Road after Paris

The Paris Climate agreement hedges on concrete actions of governments after the conference door closes. A move from theory to practice; pledges to delivery of the commitment is the sole yardstick for the measure of failure or success of the Paris COP21 agreement.

1. Governments of all nations to work on the commitments made at national levels.
2. Economic transformation with complete overhaul of emissions as early as possible through economy wide DE-carbonization.
3. Carbon budgets- the remaining carbon budget is only 1000 GtCO₂ if warming is to be limited to below 2°C above the pre-industrial period. Hence $\frac{3}{4}$ of untapped fossil fuel on the ground needs to remain there and forgotten.
4. Technological innovation for clean, efficient, affordable energy sources in developing countries and island nations.
5. Protection of forests and grasslands as vital carbon sinks globally. Forest degradation and deforestation not only contributes to emissions generation but also cripples the fight against climate change. Trees are important carbon sinks and global forest losses are all time high. REDD+ policies require a scale up to ensure sustainable development takes place as well as warming is limited to below 2°C or 1.5°C above the preindustrial period.
6. Building strong public-private partnerships, civil society organizations and multilateral institutions to enhance transparency, accountability and sharing of ideas on best practices as well as benchmarking.
7. Scaling up disaster risk reductions, build up resilience of vulnerable communities and nations and reduce vulnerability across all sectors, genders and elderly. Climate change and weather related risks and disasters affects both genders, children and the elderly disproportionately hence need for capacity building, human protection and elaborate DRR strategies.
8. Climate finance: even with a great Paris Climate Pact, the global climate has changed and is changing hence need for adaptation and mitigation fund, technology transfer, research and development- for monitoring and accurate reporting.
9. National policy and international environmental law and policy need a shift to enforce, regulate and monitor shift to



Post Paris national commitments and adjustments for developing countries.

As developing countries come to Paris climate change talks; INDC submitted by most countries is impressive although not sufficient enough to evade the economic development and production pathways. Scale up available technology, policy shift and overcoming change barriers, fear of change e.t.c can set Africa for low emission pathways and raise the continent to clean energy leadership status. Overall cost of adopting low emission/zero emission technology will be lower for the continent if robustly effected in current national planning and economic development blueprints. The longer the continent waits the higher the transition cost will be.

Conclusion

A 2°C limit at Paris COP21 will put Africa, Small Island Nations and least developed countries as well as sensitive ecosystems- Arctic and Coral reefs at greatest risk. 1.5°C warming above the preindustrial levels is an 'acceptable' target given the global warming path. This limit is not safe either but the dangers posed by the 1.5°C warming, though severe for some ecosystems can be averted or reversed.

A successful Paris Climate Agreement needs follow up in three key areas: Policy, Funding and Technology.

Currently submitted INDC's aggregate only place the planet to a 3°C warming above the pre-industrial levels hence insufficient for the Paris pact. Nations have the opportunity to show more commitment, make history and preserve the planet for future generations.

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