



Interactions between the Kigali Amendment and Paris Agreement

Virtual MOP32 Side Event

Tuesday, 24th November 2020, 6:00-7:00 pm (EAT time, Nairobi)

Facilitators: Janna Breitfeld, Julia Schabel

Please note that the event will be recorded

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On behalf of



Federal Ministry
for Economic Cooperation
and Development

Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety



Agenda

Welcome Remarks

Dr. Claudia Hiepe, Federal Ministry for Economic Cooperation and Development (BMZ), Germany

International carbon market mechanisms and Kigali amendment phase down paths – harnessing synergies and developing robust baselines

Axel Michaelowa, Perspectives

Experiences from Kenya

Marindany Kirui, National Ozone Unit
Michael Ochieng Okumu, Climate Change Directorate
Ministry of Environment and Forestry, Kenya
Ruth Moraa, NDC Partnership, GIZ

Questions and Answers

All

Closing

Philipp Munzinger, GIZ Proklima



International carbon market mechanisms and Kigali amendment phase down paths – harnessing synergies and developing robust baselines

Axel Michaelowa

Senior founding partner, Perspectives Climate Group

GIZ Proklima MOP32 Side Event “Interactions between the Kigali Amendment and Paris Agreement”
Tuesday, 24 November 2020

Agenda

- **Evolution of the regulatory framework for HFC: the Kigali Amendment and Paris Agreement**
- **HFC mitigation through Art. 6**
- **Linkages and overlaps of the two regimes**
- **Challenges for harmonization: HCFC adder and end-of-use emissions**
- **Conclusions**



Evolution of the regulatory framework for HFC

- HFC emissions (high GWP replacements of HCFCs) are growing quickly in the **Refrigeration – Air Conditioning - Foam (RACF)** sector
- By 2030 the sector could be responsible for **13% of global GHG emissions**

1980s;
ODS
found to
cause loss
of ozone
layer

HCFCs are
phased out and
HFCs serve as
replacement

UNFCCC KP
includes HFCs in
their reduction
commitment. But
HFC emissions
increase 10-15%
annually

Policy and
technology
development
for HFC
substitution

1987:
Montreal
Protocol bans
substances
with ODP

HFCs contribute
significantly to
the global GHG
emissions

Kigali
Amendment
adopted in
October 2016,
phasing down
HFCs

Kigali HFC phase-down path

- Entered into force **January 1, 2019**
- HFCs to be phased down **until 2040s** by **80-85%** from baseline levels
- Compliance will **reduce** global warming **by 0.4°C** by 2100 (compared to baseline)
- Phase-down paths will be calculated in terms of **CO₂e**, not ozone depleting potential
- Special consideration for equipment where **current alternatives to HFC are not energy efficient at high ambient temperature (HAT) conditions**
 - Two groups of countries with **different phase-out paths**
- **Multilateral Fund to fund some HFC reduction activities from 2020s**

The Paris Agreement and HFCs

- PA is built on **national mitigation pledges (NDCs)**
- Parties' NDCs should move towards **economy-wide emission reduction targets**, which include HFCs:
 - **70** of the 174 first NDCs have economy wide targets
 - 6 valid NDCs list **policies and actions to reduce HFC emissions** (Australia, Barbados, Canada, China, Ghana, Nigeria, Swaziland)
- Art. 4.19 encourages Parties to communicate **low emission development strategies (LEDS)**
 - **Industrialized country LEDS** cover HFCs under the KA (zero HFC emissions by 2036). Currently many country LEDS are being developed.
- Art. 6 establishes **two market mechanisms** and **one non-market mechanism** that can generate **financial incentives** for HFC mitigation

The carbon markets under Article 6

Article 6.2

'Cooperative Approaches'

- Between two or more countries, on the basis of **bilateral** agreements
- Involves the use of internationally transferred mitigation outcomes (ITMOs)
- No international oversight

Article 6.4

'Sustainable Development Mechanism'

- Open to all countries
- Contributes to GHG mitigation and sustainable development
- Similar features as CDM:
subject to international rules
→ successor mechanism

Common principles

- **Environmental integrity (→ additionality, NDC ambition)**
 - **Transparency, prevention of double counting**

Art.6 mechanisms of the PA: synergies with the KA

- **Art. 6.2 and 6.4 market mechanisms** can finance HFC mitigation through **carbon credit revenues**
- Art. 6.8 on non-market approaches could include **results-based financing**
- **HFC accounting** and **inclusion in NDCs** are prerequisites for high quality credits, as well as KA ratification
 - Develop **joint MRV systems** for PA and KA
- “**Division of labour**”: **market mechanisms** would drive the options with **low marginal abatement costs** while **public climate finance** could harness the **higher cost options**

Applying Art. 6 principles to HFC mitigation

- Include HFC phase-down under KA in **PA NDC baseline**
- **Regularly update HFC baselines/** adopt “dynamic baselines”
 - Baselines for HFC projects should be **linked to the regular TEAP assessments to consider innovations**
- Develop **sectoral or policy-related baselines** for **upscaled crediting**
 - **Carbon pricing** policies and **financial incentive schemes** for large-scale shift of production and consumption practices
- Ensure **additionality** of Art. 6 activities
 - Harmonize additionality tests with **funding guidelines** under the MLF
- **Eliminate perverse incentives** that might reduce ambition
 - **Avoid lock-in** of HFC technologies

HFC mitigation through Article 6 to...

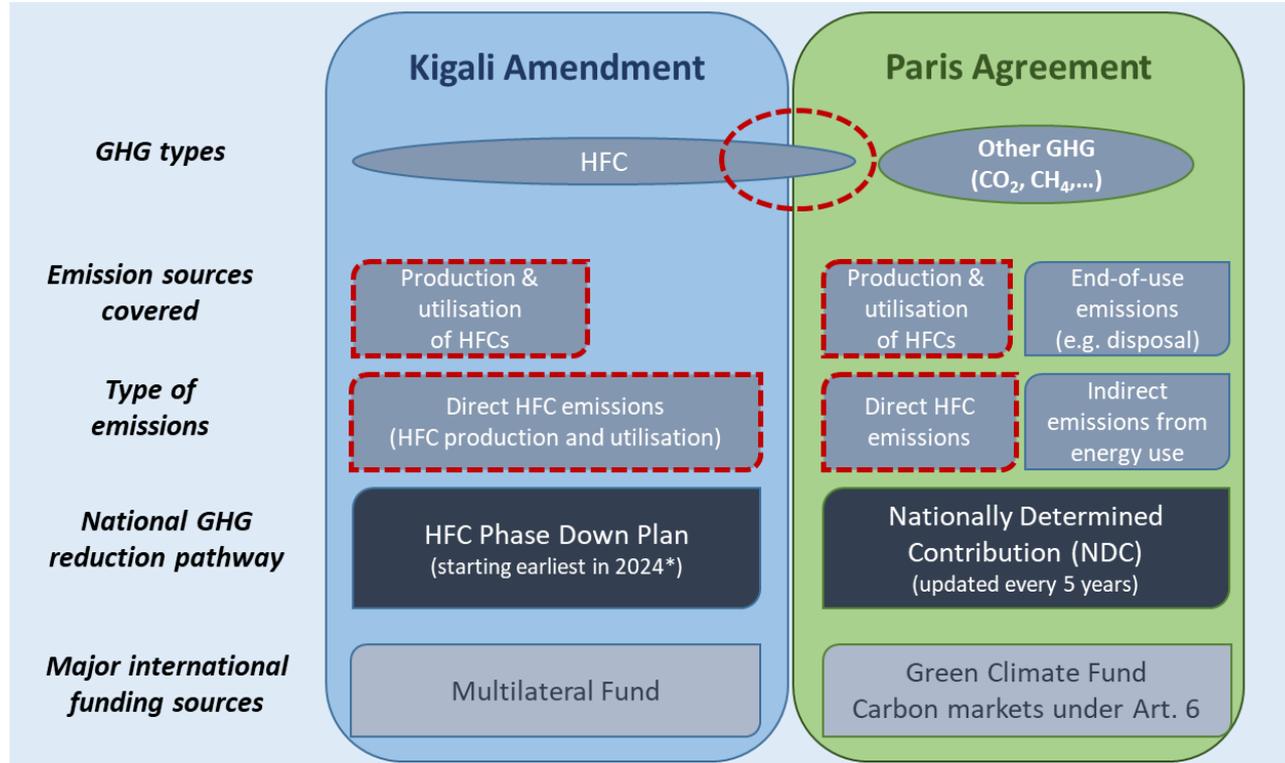
- ...promote **destruction of HFC banks** not covered by the KA
- ... ensure that HFC-23 reduction is **not “falling through the cracks”** by mobilizing MLF funding while making it ineligible for Art. 6 due to high rents
- ... **transition CDM baseline and monitoring methodologies** to cover HFC mitigation activities under the KA and the PA.
- transition CDM approaches such as PoAs and **standardized baselines** that performed well



Source: Perspectives Climate Group/Climate Focus (2020)



Linkages and overlaps of the two regimes



* For Article 5 countries defined under the Kigali Amendment

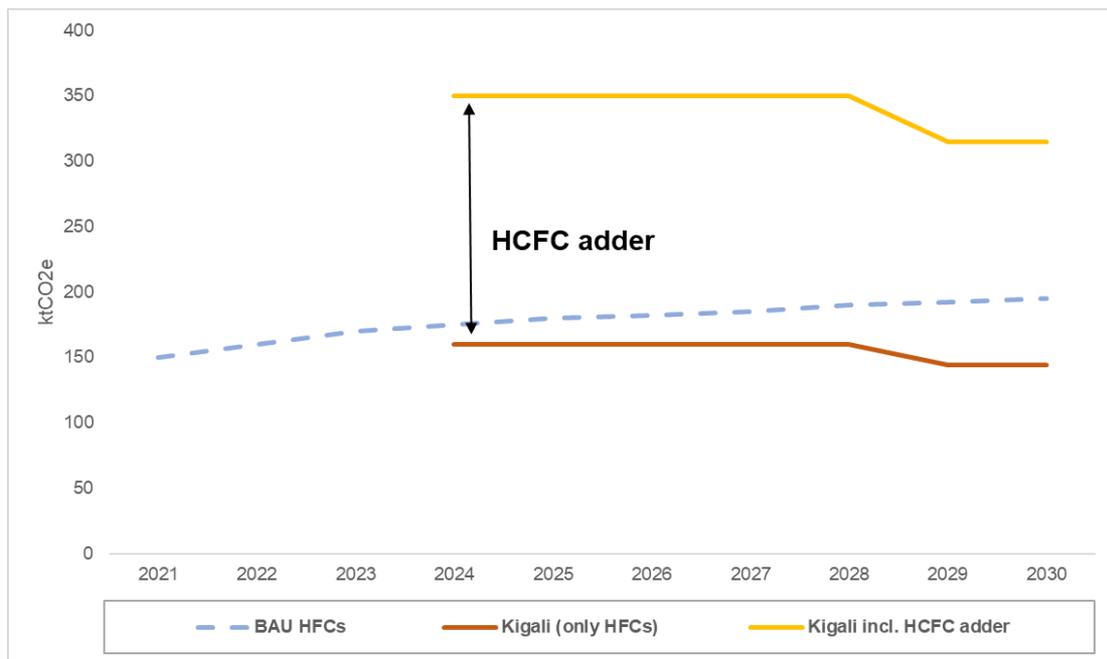
 = Direct overlaps of RAC sector emissions

Challenges for harmonisation of both regimes

- KA baseline has low **environmental integrity** due to “**HCFC adder**”
 - For **some countries**, the HCFC adder leads to baseline levels **massively higher** than projected levels of HFC consumption (‘hot air’).
 - **KA is a “paper tiger”!**
- **Different scopes** are a key challenge for **synchronizing PA and KA**:
 - KA baseline only considers **manufacturing-** and **in-use-**emissions (based on average production & consumption), but does not take into account **end-of-use emissions** during disposal of RAC units
 - Emissions from **ODS banks (HCFCs)** are not covered by the PA



The massive impact of the HCFC adder...



Source: Authors

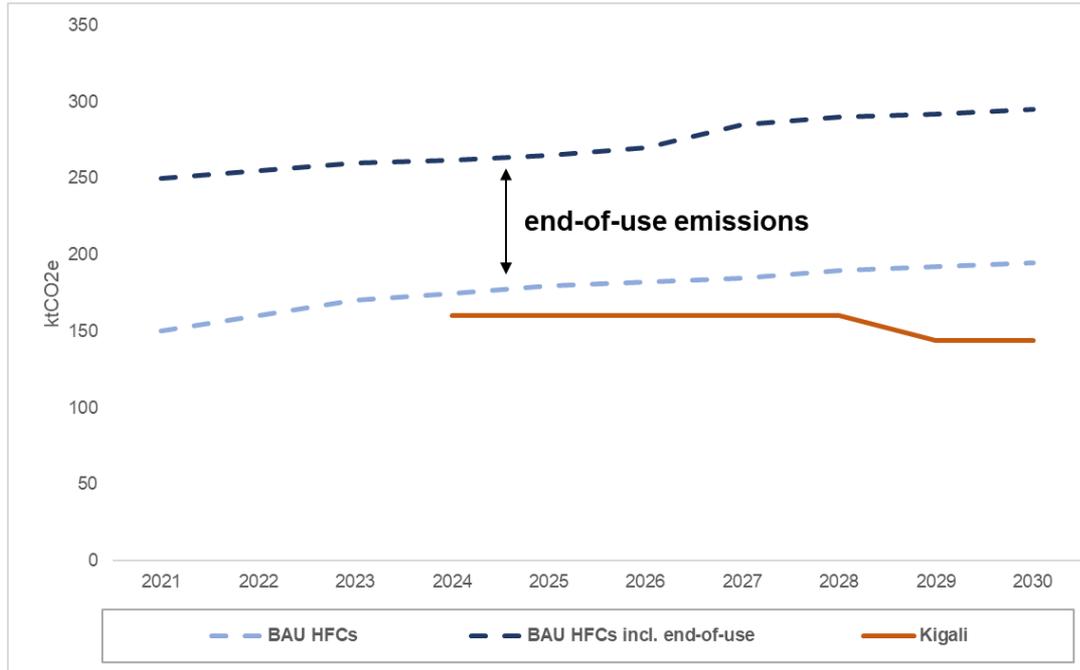
... is a serious problem for environmental integrity of the KA!

... has been found for different countries

HFC Kigali baseline =
average annual HFC
production and
consumption during
2020-22 or 2024-26

+ 65% of average HCFC
production and
consumption of 2009 &
2010: “HCFC adder”

Dealing with end-of-use emissions...



Source: Authors

HFC baseline under the KA does not consider **end-of-use HFC emissions**

→ any non-excessive KA baseline should be **adjusted accordingly** to derive the NDC baseline

... has implications on MRV and accounting of HFC emissions.

Conclusions

- An accelerated action to phase-down of HFCs which **synchronizes activities under the KA and the PA** could lead to a **transformational change in the RAC sector**
 - **Market mechanisms** and **climate finance** can be key drivers
- Unfortunately, KA phase down paths start at a **massively overestimated level due to the “HCFC adder”** – KA is **paper tiger**
- **Baseline setting** for the integration of the RAC sector into NDCs requires a **stringent approach** for the application of the **HCFC adder and end-of-use emissions**
 - **Realistic emissions trends as basis for NDC baseline setting**
- **HFC accounting and MRV systems** for both regimes need to be **synchronized in order to ensure environmental integrity**



Thank you!

Axel Michaelowa

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Experiences from Kenya

**Marindany Kirui, National Ozone Unit &
Michael Ochieng Okumu, Climate Change Directorate**
Ministry of Environment and Forestry, Kenya
Ruth Moraa, NDC Partnership Programme
GIZ



Experiences from Kenya

1. Where do you see the links between the work of the National Ozone Unit (NOU) and the Climate Change Directorate (CCD) from your perspective?
2. Which refrigeration and air-conditioning (RAC) activities have been and/or are being developed that serve as a basis for a potential cooperation between the NOU and CCD?
3. What would you recommend to countries who would like to bring the RAC sector into their NDCs?

Interview with

Marindany Kirui
National Ozone Unit

Michael Okumu
Climate Change Directorate

Ruth Moraa
NDC Partnership
GIZ



REPUBLIC OF KENYA
MINISTRY OF ENVIRONMENT AND FORESTRY

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Thank you!

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 twitter.com/GCIGreenCooling

 www.green-cooling-initiative.org



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Upcoming Online Event



New charge limits for flammable refrigerants in commercial refrigeration: Impacts of the IEC 60335-2-89 standard revision

26th November 2020, 9:00-10:00 am (UTC)

More information:

<https://www.green-cooling-initiative.org/news-media/events>



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Thank you!



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