

Sustainability – Improved Cookstoves helping tackle Climate Change

ICC MEMBERS' INITIATIVES

Mr. Zia Khaleeli - CEO, Revive Environment
Senior Chair ICC Pakistan - Chair Environment and Energy Commission
zk@reviveenviro.com



ABOUT ME

Decades of experience of businesses in Pakistan.

Schooling and university at Oxford University in the UK

Returned to work at Pakistan's largest gas field and in an international oil marketing company.

After which I worked in the family business – soft drinks, entertainment and construction.

Set up and continue to run my own business of specialty industrial chemicals

Began representing international bulk commodity traders in Pakistan. Products were iron ore and metallurgical coal to then petroleum products, LNG and ethanol exports.

Developed Zephyr Power Ltd. 50 MW wind farm in partnership with British International Investment (BII), FMO and local investors. In 2017, I handed over as CEO to my son Kumayl Khaleeli.

As of 2022, I have been working on developing Revive Environment, a carbon emission reduction project.

Since 2014 I am Chairman Environment and Energy Commission ICC Pakistan.

Previously, I was Chairman Oxford and Cambridge Society Karachi Education Trust (2000–2017)

Director State Bank of Pakistan and Director Federal Bank for Cooperatives (2001–2004)

Director A.C.E, Pakistan's largest engineering consultants (2010–2018)



CLIMATE CHANGE

- **Pakistan floods, 2022**



- **Dubai rains, 2024**



Temperatures in Asia 2023 two degrees Celsius above the 1961 – 1990 average.

Reducing greenhouse gas emissions and adapting to evolving climate is not merely an option, but a fundamental necessity.

Source: World Meteorological Organisation (WMO)
<https://wmo.int/news/media-centre/climate-change-and-extreme-weather-impacts-hit-asia-hard>



REVIVE ENVIRONMENT

SIZE OF PROBLEM - WORLDWIDE

- Since humans started emitting CO₂ – Approx. 2.5 trillion tons of CO₂ equivalents released into the atmosphere. Still releasing 50 billion tons of CO₂eq each year.¹
- Meeting Paris Agreement climate change targets: the voluntary carbon markets need to grow 15-fold by 2030 and 100-fold by 2050, from 2020 levels.²
- Globally, circa 16% of climate finance needs are currently being met i.e. climate finance must increase by at least 590% – to \$4.35 trillion annually by 2030. ³
- International finance must match the needs and priorities of local communities in the Global South being the forefront of climate impacts and therefore must take the driver's seat in global adaptation and resilience efforts.²

Source: 1,2,3

<https://carboncredits.com/what-is-the-best-carbon-credit-to-buy/>

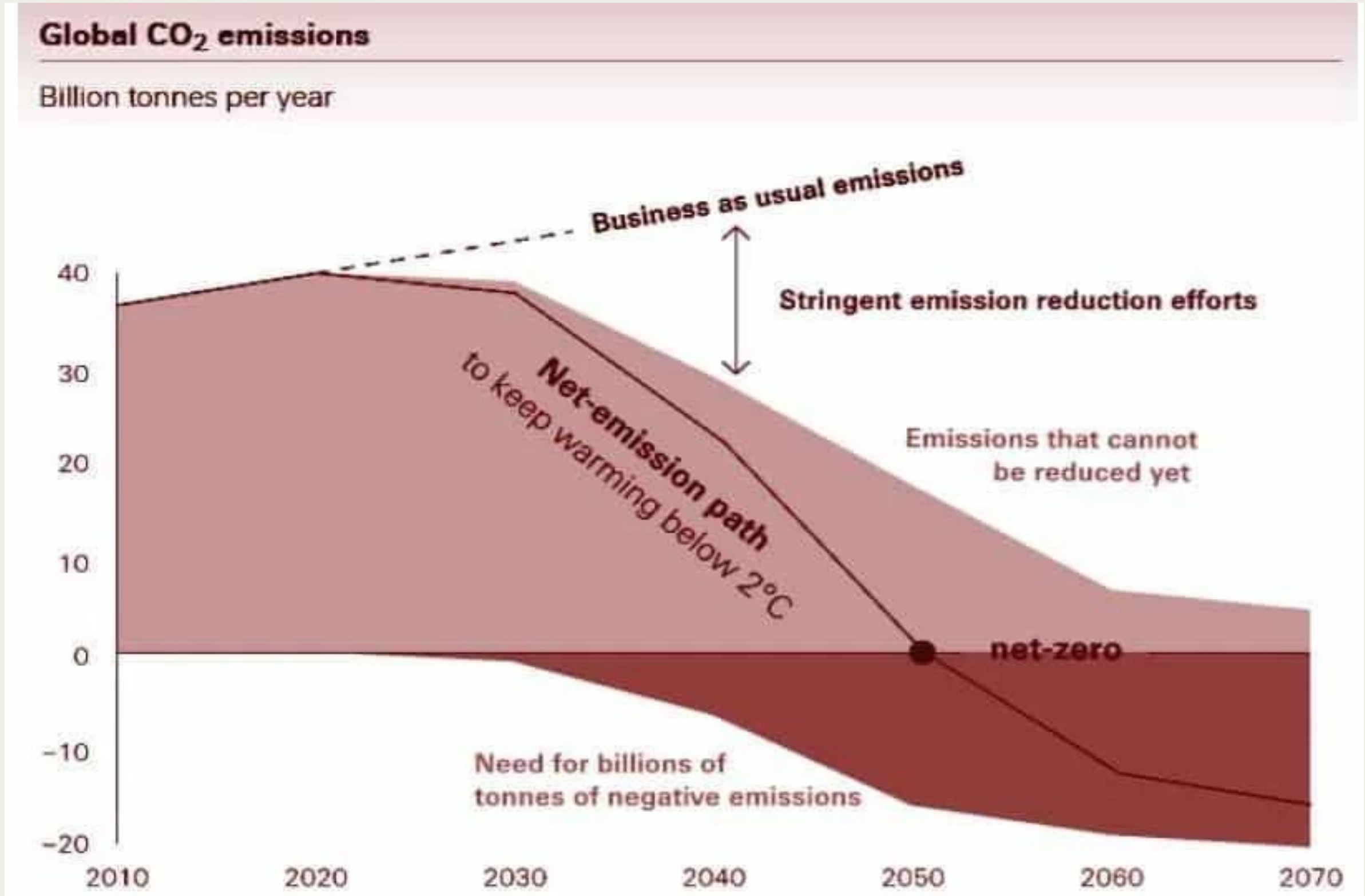
<https://www.iisd.org/articles/deep-dive/will-international-carbon-markets-finally-deliver> | COP28: Financing Net Zero

Asian Development Bank: <https://www.adb.org/sites/default/files/publication/901611/climate-finance-landscape-asia-pacific.pdf>



REVIVE ENVIRONMENT

SIZE OF PROBLEM - WORLDWIDE



SOURCE: IPCC CLIMATE CHANGE REPORT

LOGISTICS

The Airlines emit **784.45MtCO₂** annually, **2%** of global carbon emissions.

Shipping companies emit **706MtCO₂** annually, **2%** of global carbon emissions.

Trucking emits **1830MtCO₂** annually, **4.97%** of global carbon emissions.

*Reference:1,2,3 <https://www.iea.org/energy-system/transport/aviation> | <https://www.iea.org/energy-system/transport/international-shipping> | <https://www.iea.org/energy-system/transport/trucks-and-buses>



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ACHIEVING SUSTAINABILITY

- Sustainability in relationship to Climate Change leads to the reduction of carbon footprints.
- Mitigation hierarchy needs to be followed. Reduce your emissions as much as you possibly can internally. Inevitably there will be some leftover footprint. Engage in the carbon market and high-integrity projects.
- Turn to Compliance or Voluntary Carbon Market to purchase carbon credits and help reach your goals, whether these be of internal sustainability or NetZero.

AIRLINES AND SHIPPING INITIATIVES

Carbon Offsetting and Reduction scheme for International Aviation (CORSIA)

- First global market-based measure for any sector offsetting the amount of CO₂ emissions that cannot be reduced through the use of technological improvements, operational improvements, and sustainable aviation fuels with emissions units from the carbon market.

Target Net Zero: 2050

International Maritime Organization (IMO)

- Agreed to reduce its GHGs and carbon footprint by at least 40% of 2008 levels by 2050*

Developing a framework towards NetZero



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Traditional stoves



Globally we have 2.3 billion people who use traditional stoves and lack access to clean cooking. Cooking emissions worldwide are about the same as the Aviation industry.



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Source: World Health Organisation <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>

Clean Cooking Alliance: <https://cleancooking.org/news/fueling-a-sustainable-future-the-importance-of-clean-cooking-for-a-healthy-environment/>

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Improved Cookstove - Pilot test



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Pioneering The First Improved Cookstove (ICS) Project in Pakistan

- **ICS provided at Zero Cost to Rural Poor Households.**
Rural poor are the target beneficiaries Rural Income \$2-4 per family per day
Strategy isn't merely a subsidy but a recognition of the economic barriers

ICS promote cleaner energy, alleviates long-term social, economic problems and environmental benefits.

Since ICS have a short gestation from concept to start up, ICS have the ability to address the near-term supply constraints as well as contribute significantly to the overall issuances of credits.

Over the last two years, cookstoves have accounted for around 13% to 14% of carbon market issuances.*

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Targeting 8 UN defined Sustainable Development Goals (SDGs)



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Benefits to the Community

- **ICS are efficient - Socio-Economic Benefits**
 - Reducing fuelwood consumption by 40 – 50%
 - Reducing cost of fuelwood purchase
 - Benefiting Health particularly women and children
 - Emit very little smoke
 - Reducing Respiratory Diseases
 - Reducing time spent on collection of firewood and cooking.
 - Reducing Cooking Time
 - Freeing time empowers women
 - Freeing time of children for education
 - Creating local jobs
 - Portable: Indoor / Outdoor
- **Environmental Benefits**
 - Carbon Emission Reduction
 - Deforestation reduced

The 8 SDGs reflect benefits to the Community.



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LOCAL STAKEHOLDER CONSULTATION



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Pakistan is virtually virgin territory for carbon credit related projects

Hurdles Achieved

- Indigenous design, testing and manufacturing of ICS (while not reinventing the wheel!)
- Building network of service providers to manage supply chain, monitoring and documentation
- Incorporated more stringent methodologies due to recent criticism of governances

Hurdles to be Achieved

- No availability of working capital financing to support manufacturing of ICS (and, if available, too expensive due to high commercial borrowing costs)
- Lack of accessibility to off-takers for the life of the project
- Delays in provision of framework to govern Carbon Credit market in Pakistan
- Development of Community reinvestment mandates based on stakeholder engagements



TAKEAWAYS

Bilateral agreement between the UAE and Pakistan governments.

Facilitate:

ICC continue to support Corporate Member's emission reductions/removal initiatives within its own sphere.



Thank you!

WE LOOK FORWARD TO YOUR QUESTIONS



Mr. Zia Khaleeli
zk@reviveenviro.com

