



# Achieving Net Zero Emissions Through International Development Practice

November 2023

As greenhouse gas (GHG) emissions drive climate change and threaten human health and safety, our future depends on drastically transforming the systems around us. To this end, businesses and governments continue to make net zero commitments to equalize the release and removal of GHG emissions. However, the path to net zero requires rapid coordination and reform. Throughout this complex process, international development implementers play a critical role in rapidly catalyzing and coordinating private and public sector change based on the latest evidence-based solutions.<sup>1</sup>



To support governments and businesses to navigate this critical transition, RTI International facilitates net zero strategies, leveraging its deep cross-sectoral expertise as a nonprofit global research institute and development implementer. Governments on five continents have trusted RTI as an advisor and coordinator, as have civil society organizations, businesses, and associations seeking to assemble and unify their voice.

This brief recommends:

- 3** international development priorities and opportunities for implementers
- 5** priority sectors and points for intervention
- 3** key considerations for transitioning to net zero in a just and equitable way

<sup>1</sup>The [International Panel on Climate Change \(IPCC\)](#) calls for equalizing the release and removal of GHG emissions by 2050.

# Top 3 Development Priorities and Opportunities

## 1. Government Action

Climate change adversely affects all development sectors. To engender a climate-conscious culture and accelerate a green future, governmental policymakers and officials at national, regional, and local levels must balance the competing priorities of climate mitigation and adaptation activities by exploring the costs and opportunities of action vs. inaction. **Driving rapid change requires strong, consistent political will**, to design ambitious emissions policy and take action, which presents opportunities for implementers to advise public servants with data-driven insights and field research.

### Opportunities

**Advise on net zero strategy development.** As of 2023, most governments have not passed their own national net zero strategy. Developing one entails a complex process of establishing emissions baselines and ambitious reduction targets, mapping practical and equitable action plans, and structuring financial mechanisms. While careful planning is essential to optimizing efficiency, delays in decision-making impede critical action on the ground. In other cases, implementing agencies and stakeholders can encounter challenges when high-level strategic goals do not connect directly with practical timebound next steps. Therefore, implementers must **expedite the strategy-development process** and **seamlessly translate planning into implementation**. To this end, whether a country's net zero strategy involves Low Emission Development Strategy (LEDs) investments, promoting energy-efficient buildings, or implementing cost-effective municipal lighting, RTI promotes inclusively informed and integrated approaches and facilitates participatory discussions to bridge the transition from design to execution.



In 2023, the Kenyan National Treasury accepted RTI's inputs for the National Green Fiscal Incentives Policy Framework, which directs budgeting, spending, and private investment for a low-carbon, resilient economy.

**Support policy implementation.** Citizens in countries with favorable enabling environments benefit from lower costs, greater reliability, and more widespread availability of net zero solutions and renewable energy. Governments that enact laws, standards, and initiatives to incentivize net zero practices, technologies, and investments lead the world in emission reduction. However, the regulators, utilities, and companies interpreting and implementing these new policies, regulations, tax and duty waivers, and guidelines often need further clarification, deliberation, and assistance at the onset. As they navigate the uncertainty of rendering policy into practice, they must do so not in isolation but in alignment with partners with similar experiences. At such critical moments, implementers must **proactively serve as connectors**, drawing on their expansive networks across geographies to offer time-proven approaches and facilitate solutions-oriented learning



At the forefront of their respective fields, RTI's experts inform partners of the most promising innovations to adopt, developing tools like a [Demand-Side Management Toolkit](#) in Abu Dhabi and a [Net Zero Planner – Integrated Modeling Tool](#) for the U.S. Army Corps of Engineers. In 2017, RTI led the development of the first net zero energy building in El Salvador.

between entities. RTI has drawn on its deep global experience in supporting governments to implement and/or formally propose 569 laws, policies, standards, and regulations to strengthen systems and accelerate net zero implementation.

**Steward effective innovations.** Public and private sector institutions have the potential to radically reduce emissions on a massive scale by ushering into their operations simple changes, such as upgrades to energy-efficient technologies and digitalization campaigns for office accounting and printing systems. Successful implementers not only **advise and guide partners on the latest advancements but lead by example with net zero goals and progress reports**. For example, by publishing a biennially [Environmental, Social, and Governance Report](#) and internally published annual [Environmental Sustainability Review](#) to stay abreast of the latest advancements to inform the global community, implementers are also well served to **partner with industry leaders and conduct applied research** across the chemical, petrochemical, gas processing, transportation, fuels, and electric power industries. Toward this goal, RTI is among the few USAID nonprofit implementing partners that reinvests its profits into industry-leading research and development (R&D), spanning such topics as [carbon capture from the cement industry](#) and [fossil fuel powerplants, biofuels research](#) to maximize biomass carbon and energy recovery, [the development of low- and zero-carbon ammonia](#) for agriculture, and clean hydrogen and hydrogen-fuel storage technology.

## 2. Access to Finance

The cost of transitioning to a net zero economy is high, and entails considerable public and private investment. For energy-related investments alone, the International Monetary Fund estimates that the world will require \$3.3 trillion annually until 2030 to achieve net zero by 2050.<sup>2</sup> However, current global annual spending on clean energy, at \$750 billion, is just a fraction of that requirement—and is especially insufficient in emerging markets and developing economies (EMDEs), at about \$150 billion. **This investment gap can be challenging, especially in EMDEs, where access to finance for bankable mitigation and adaptation projects is limited.** RTI has a wealth of experience in operationalizing projects, attracting investors into new markets, and swiftly facilitating transactions.

### Opportunities

**Support climate investors to accelerate their pace.** Governments recognize the urgent need to accelerate greater private sector investments in climate mitigation and adaptation. In the financial sector, implementers **occupy a unique intermediary role**, with access to expansive local and regional networks that they can leverage to help investors and donors quickly overcome information gaps, perform due diligence on investees, advise on legal considerations to facilitate transactions, structure facilities for social and climate impact, and serve as a neutral party in resolving questions and challenges between entities. Beyond this suite of services, RTI also works with stakeholders to de-risk activities before and after investments, explore innovative green funding mechanisms through grants under contract, facilitate structured equity securities and green bonds, and collaborate with multilateral institutions to enhance their understanding of local and regional financial institutions. Successful implementers need to connect and communicate widely and **look for opportunities to unlock further capital** through major climate and social impact funds (i.e., Green Climate Fund and 2X Challenge) and concessionary funding.

**Strengthen local partners' investment readiness.** To attract and secure funding in EMDEs, public and private entities often close transactions and win grants with targeted technical assistance from implementers aiming to strengthen their capacity and knowledge. In line with these efforts, implementers **improve sustainable outcomes by facilitating collaboration between local institutions**, for example, national and sub-national governments. Depending on the needs of the situation, successful implementation strategies might include subcontracting with specialized consultancies for coaching and co-creating training courses for project scenario planning, emissions forecasting, and progress tracking. In several countries across sub-Saharan Africa, RTI has helped companies upscale their deployment of renewable energy products by advising on their grant applications, pitch decks, and treasury management.

<sup>2</sup> IMF 2022b

<sup>3</sup> IEA, 2021



In 2023, RTI signed a strategic partnership with the Caribbean Community Climate Change Center (5Cs), an intergovernmental organization established by Heads of Government of the Caribbean Community (CARICOM) to coordinate the region's response to climate change and build resilient and sustainable solutions. 5Cs is an accredited entity of the Green Climate Fund and Adaptation Fund. Since 2005, it has mobilized \$280+ million and successfully implemented 50+ projects across the Caribbean.

## 3. Climate-Smart Infrastructure Planning

To achieve a net zero future, a community needs to redesign and retrofit existing infrastructure, integrate modern climate-smart technologies, mainstream energy efficiency and renewable energy, and rethink resource extraction. The community must **conduct climate change vulnerability assessments and resilience planning** for all new and existing power plants, transportation systems, and public and private facilities, and **find and allocate funding**. Beyond merely transforming infrastructure, community members need to change their behavior to **adopt more energy-efficient practices** to realize sustainable emissions reductions.

### Opportunities

**Let cities lead the way.** As hubs of economic activity, growth, and energy use, cities are uniquely positioned to implement large-scale strategies to fulfill net zero goals. At the municipal government level, **planning is key**. Implementers are well suited to help officials align infrastructure plans with net zero policies and climate adaptation priorities. Implementers can source and analyze data to inform decision-making, lead community outreach to solicit feedback, disseminate plans to stakeholders, and build community awareness through campaigns and incentives. Municipalities are laboratories for innovation. Implementers can **share plans and learnings as templates with other municipalities** and help national governments drive wider systemic change and scale impact.

### Promote energy efficiency and resource conservation strategies.

Communities vary according to their demand and supply of water, energy, and other resources, and reducing their waste can often correlate to reduced emissions. To achieve the most meaningful impact, energy efficiency measures should **start with low-cost, high-impact interventions**, known as **value-engineered solutions**. Conservation measures should emphasize resource recovery and reuse to maximize recycling, minimize waste, and reduce the consumption of materials and commodities. The interventions of implementers must focus on strengthening the capacity of governments and key agencies to **plan, design, and implement low-emission development, energy efficiency, and mitigation strategies** in the power, transport, water, industrial, and land use sectors.



## Top 5 Sectors

Implementers must integrate climate science and economic analysis and advise partners on the value, tradeoffs, and unintended consequences of projects and investments so that they can prioritize the most promising prospects. Global emissions data across EMDEs clearly indicate that dedicated interventions and funding must **target the industries and municipalities that generate the greatest GHG emissions**, with the opportunities listed under the following five sectors being especially promising:

### 1. Electricity

- Deploying low-emission technologies in the construction, transport, and industrial sectors
- Expanding renewable energy generation, reducing power demand and costs. Sustaining these resources helps increase their availability and viability, reduces reliance on fossil fuels, provides greater grid resilience, and reduces pollution
- Embedding energy efficiency in all relevant sector activities and industries. Net zero solutions mean more employment opportunities in solar and wind energy, manufacturing, construction, and maintenance of facilities and homes

### 2. Transportation

- Phasing out fossil fuel road vehicles, which are responsible for 37% of CO<sub>2</sub> emissions from end-use sectors, according to the International Energy Agency (IEA, 2023). Promoting vehicle standards will improve air quality, reduce emissions, and achieve a net zero transition
- Implementing an integrated set of policies promoting more efficient modes of transport, mainstreaming energy efficiency, and encouraging a rapid and sustained transition to electric vehicles<sup>4</sup>
- Integrating urban planning modifications emphasizing walkability, bikeability, and public transportation access
- Transitioning public transportation fleets to net zero and encouraging electric vehicle adoption

### 3. City Governance

- Compared to national governments, cities can move faster

and carve out more ambitious pathways to net zero goals. Mayors have been some of the most effective climate champions in enacting legislation, setting standards, and creating incentives that support programs that go further than national governments. Cities provide a test bed for cross-sectoral approaches, and partnerships such as the Global Covenant of Mayors for Climate and Energy attest to the effectiveness of scaling cities' collaborative actions and knowledge to national and international levels.

- Regulating city development to support green infrastructure planning, net zero transport solutions, sustainable green procurement guidelines throughout the value chain, and net zero waste programs
- Catalyzing net zero projects by supporting climate-smart capital investment planning. Taking on more strategic debt that integrates risk planning scenarios into investments can attract more investments and build more capacity to access public and private sector resources that a city needs to build net zero infrastructure

### 4. Agriculture

- Supporting long-term planning for sustainable agricultural practices and land use methods, both for reducing emissions through carbon sequestration through soil management and producing food efficiently to satisfy rising demand. Building resilience in these systems and adopting sustainable land use planning, crop diversity, and soil health practices can help reduce emissions
- Promoting nutrient use efficiency by reducing fertilizer loss using nitrogen-fixing crops, precision technology to monitor nutrient needs, and sustainable water management with a focus on water use efficiency
- Maximizing the use of natural processes, such as afforestation, reforestation, soil health enhancement, and food waste reduction, alongside other ecosystem-based mitigation strategies

### 5. Heavy Industry<sup>5</sup>

- Innovating the processing or capture of point-source emissions using carbon capture technologies
- Building the capacity to implement policies, regulations, and demonstration projects that provide in-depth evaluations and technical assistance to clean technology companies
- Incentivizing the adoption of clean technologies and promoting the wider adoption of these strategies



<sup>4</sup> *Nota bene:* Accelerating the transition to a net zero, zero-emission, and equitable transportation system requires the deployment of sustainable modes—adhering to best practices that promote the implementation of [Transport Demand Management](#) (TDM) and [Transit Oriented Development](#) (TOD). TMD are strategies and policies to increase the efficiency of transport systems, that reduce travel demand, or redistribute demand in space or in time, while TOD is a type of urban development that maximizes the amount of residential, business and leisure space within walking distance of public transport.

<sup>5</sup> *Nota bene:* The manufacturing and production processes in heavy industries such as mining, chemicals, steel, gas, construction, and transportation require large amounts of energy to generate heat typically sourced from fossil fuels. Achieving net zero goals in heavy industry cannot be achieved by emissions reductions and clean energy technologies alone, which can be impractical and costly, besides needing long downtime for retrofitting for old facilities.

## Top 3 Considerations for a Just Transition

Among the broader sustainable development goals (SDGs) that United Nations member countries adopted in 2012 are those focused on maximizing climate action's social and economic opportunities. Equitable and inclusive development means **focusing on people and communities** during the transition and **equitably sharing the benefits of a net zero economy**. As we transition into a greener and more sustainable economy in support of net zero goals, we must ensure the inclusion of marginalized populations and that substantial benefits of a new net zero economy are broadly shared. The global community must not overlook those who inevitably face economic losses from the transition; therefore, implementation strategies must account for the following three considerations:

### 1. Raise Awareness and Obtain Buy-in and Support

**Challenges:** Across EMDEs, there is still a knowledge gap on climate change and the benefits of emissions reduction. A necessary step toward public acceptance and behavior change is raising awareness among government officials, key organizations, and community members at all socioeconomic levels about the need to make drastic changes to conserve and sustain resources.

**Opportunities:** Implementers can support local civil society organizations, businesses, and other institutions to articulate the importance of net zero actions, incentivize action, and raise public awareness about the consequences of inaction. Community networks are well positioned to develop and implement locally targeted awareness campaigns, bringing together municipal, state, and national stakeholders to harmonize activities and coordinate net zero approaches. Social media campaigns can provide a broader level of outreach, engage the audience directly in more targeted ways, and gather critical feedback to increase the success of planned and ongoing activities.

### 2. Promote Gender Equality

**Challenges:** Women experience [energy poverty](#) at a higher rate than men and bear a greater burden from climate change impacts, which correlates with negative physical and mental health outcomes and reduced economic opportunities. Women are underrepresented as leaders in construction and energy sector professions. Policies and reforms run the risk of not being gender-neutral and not addressing gender inequities. At the same time, initiatives and projects meant to improve the sustainability, resiliency, and energy access in communities often exclude women in the planning,



development, and deployment stages.

**Opportunities:** Promoting gender equality at every stage of the employee lifecycle is important to achieving a just transition. There are many opportunities to advance gender equity within organizations, including ensuring that hiring practices are inclusive and equitable, that workers are supported, and, most importantly, that women are involved and effectively represented in decision-making, particularly when it comes to project prioritization, planning, and investments. Gender action is a critical component in developing and achieving net zero plans.

### 3. Equity Through Climate Justice

**Challenges:** Climate change amplifies socioeconomic inequities in vulnerable EMDEs that emit considerably less emissions compared to developed countries. These countries and their vulnerable communities find themselves locked in a cycle of falling further behind in their socioeconomic development as a result of climate change and [extreme climate-induced events](#). Climate change is a [threat multiplier](#) that interacts with environmental, socioeconomic, and political factors, exacerbating the inability of the most vulnerable members of the population to access basic goods, such as water, food, and energy.

**Opportunities:** Creating a path toward a more equitable and sustainable future requires a special emphasis on climate justice as a foundational principle informing net zero target-setting, investments, and implementation planning. Activities must be primarily guided to address the disproportionate impact of climate change on the most vulnerable countries and communities, to promote a more meaningful distribution of resources to address climate change. The public and private sectors' support of climate justice is critical, and to ensure success, implementers can help facilitate, implement, and track scalable net zero activities rooted in climate justice. Implementers can help enhance the design of climate investment funds to incorporate climate justice, coordinate implementation mechanisms to help support national and sub-national governments seeking to open pathways for more investments and promote better infrastructure and preparedness for resilient, sustainable, and equitable economic development.

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