clasp

A Global Campaign to Transition to LED Lighting

By Banning Fluorescent Lighting Under the Minamata Convention on Mercury

Clean Lighting Coalition

In a major win for people and the planet, 137 Parties to the Minamata Convention on Mercury agreed to phase-out compact fluorescent lamps (CFLs) by 2025 at COP4.

By accelerating the transition to LED lighting, the move will avoid –

- **262 million metric tons CO_2 emissions from 2025–2050**
- **26 metric tonnes mercury pollution**
- **$78 billion in energy bills**

This case study opens the window to the Clean Lighting Coalition's 15-month campaign leading to Minamata COP4. We outline successful strategies, challenges and key lessons.

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Clean Lighting Coalition

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CLiC

Introduction & Campaign Overview

Background

- **All fluorescents contain mercury**, a chemical and neurotoxin released whenever a fluorescent bulb breaks and in manufacturing and disposal.
- **Mercury is highly toxic** to humans and threaten environmental and ecosystem health.
- The **increasing accessibility and affordability of LED lighting** means people no longer need to tolerate mercury-containing fluorescents.
- The **Clean Lighting Coalition (CLiC)** brought together LED industry, public health, mercury, and climate experts and NGO partners to advocate for a global ban on fluorescents under the **United Nations Minamata Convention on Mercury,** in support of the African Lighting Amendment.

MINAMATA CONVENTION ON MERCURY

The Benefits of a Global LED Transition

Climate Change: Phasing out fluorescents would avoid up to **3.5 gigatonnes of CO_2** emissions and lower global power consumption by **3%** by 2050.

Technology: LED bulbs are the only 'smart' lighting technology, providing people with an improved experience.

Environment: Transitioning to LEDs would eliminate 232 metric tonnes of mercury from the environment, both from the lamps and from avoided burning of coal in power plants.

Economics: LED lighting last 2-3 times longer and consume up to 50% less energy than fluorescents, offering people, businesses and governments long-term energy savings.

Health: LEDs are mercury-free, posing no risk to public health.

Campaign Structure

Country & Regional Engagement: Engaged with local stakeholders and government experts to demonstrate the benefits of mercury-free lighting.

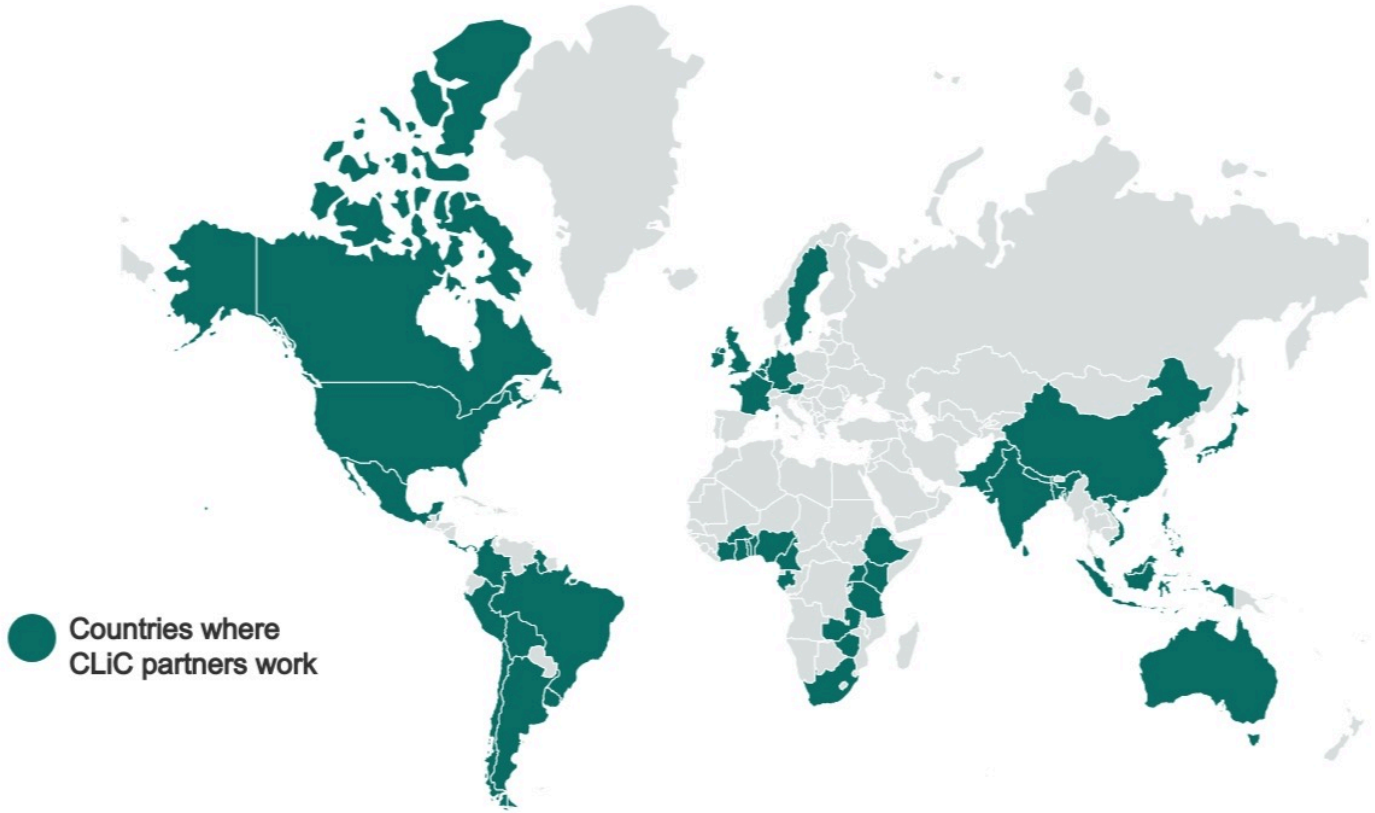
Evidence-Base: Developed tailored resources and research to demonstrate the availability, affordability and quantify the benefits of LED retrofits.

Communications & Advocacy: Built a coalition of environmental and public health advocates, consumer groups and others to secure public & government support.

Industry Engagement: Engaged with progressive lighting companies, component makers, distributors, etc., to sign an LED-only pledge that reflects on their commitment to the transition.

Partner Network

Over a year and a half, the campaign engaged **168 partners in 52 countries**. Together with partners we collected market data, tested light bulbs, grew capacity to recycle fluorescents, engaged with national governments and the media, and spearheaded a petition that garnered more than 200 signatures.



Government Engagement

Strategy

- Supported the African Region (37 Parties to the Convention) in the development and submission of an amendment to phase-out fluorescent lamps.
- Engaged directly with governments and regional representatives around the world to build a coalition of support for the African Lighting Amendment in advance of COP4.
  - **Understood the role that each country and region plays at the COP to develop an outreach strategy for each;**
  - **Adapted approach by country and region;**
  - **Engaged with local stakeholders and government experts to demonstrate the benefits of mercury-free lighting;**
  - **Raised awareness & support through meetings, public consultations & tailored research.**

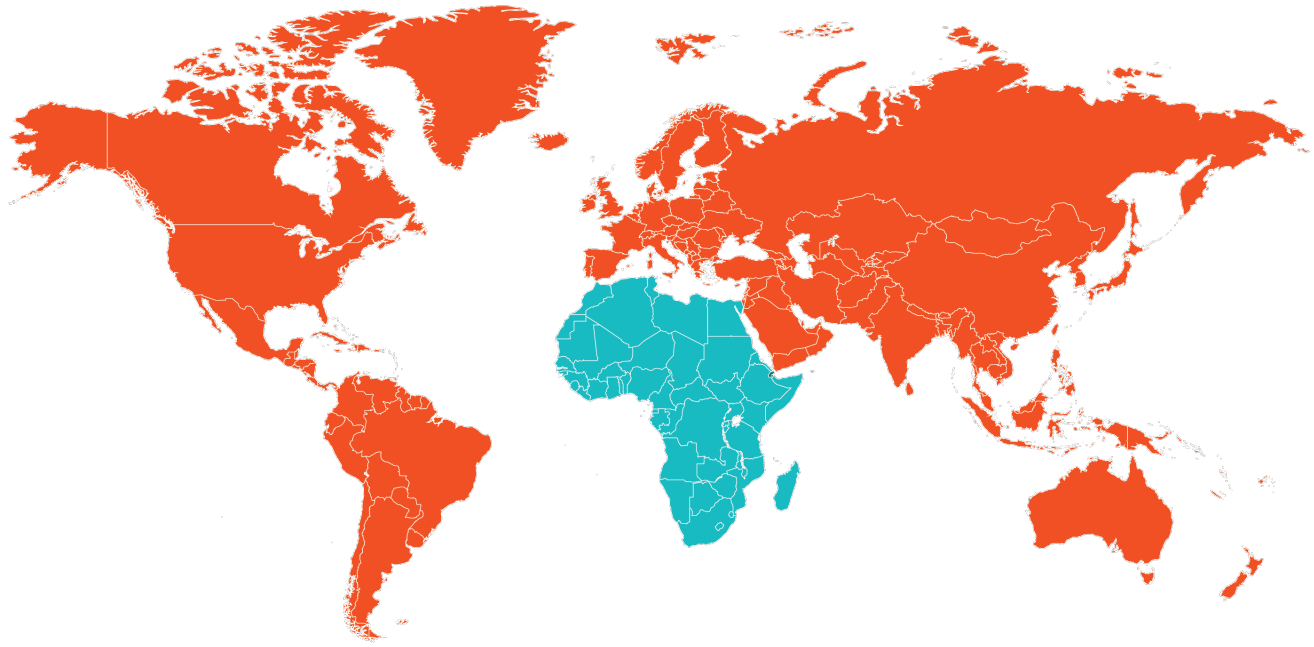
The African Lighting Amendment

On 30 April 2021, the Africa region proposed an amendment **to the Minamata Convention to remove special exemptions for mercury in lighting products by 2025.** The proposal focused on compact fluorescent lamps, linear fluorescent lamps (LFLs) for general lighting purposes, cold cathode fluorescent lamps (CCFL) and external electrode fluorescent lamps (EEFL) for electronic displays.

Mercury-added products	Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)
Compact fluorescent lamps with an integrated ballast (CFL.i) for general lighting purposes that are ≤ 30 watts	2024
Linear fluorescent lamps (LFLs) for general lighting purposes, (a) Triband phosphor ≤ 60 watts; (b) Halophosphate phosphor ≤ 40 watts	2025
Cold cathode fluorescent lamps (CCFL) and external electrode fluorescent lamps (EEFL) for electronic displays of all lengths.	2024

Rallying Support for the Amendment

- **CLiC's campaign focused on bringing in all other regions to support the ALA.**
- **Identified local partners** to conduct market assessments & other customized evidence to on LED feasibility and availability.
- **Facilitated bi-lateral engagement** to de-risk support for the amendment and build a coalition of supportive governments.



Accomplishments

- Over 15 months, developed a coalition of governments that supported the African Lighting Amendment.
- At Minamata COP4, **137 parties agreed to phase out CFLs by 2025**.
- Over 15 months, we developed many allies, and we are now deeply engaged in the Minamata Convention community of practice & related COPs.
- Advanced the first national and sub-national policies to ban fluorescents.
  - The EU announced a law in February 2022 that will phase out all compact fluorescent and linear fluorescent lamps by August 2023, the first market in the world to do so.
  - In Vermont, CLiC partners forced implementation of an existing law that phases out CFLs, then worked to get H.500 signed into law by Governor Phil Scott, making Vermont the first state in the US to ban all four-foot linear fluorescent lamps. These two policy actions will remove well over 90% of fluorescent lighting from Vermont by 1 January 2024.
  - In California, our partners worked with Assembly Member Ash Kalra to introduce AB 2208, a landmark bill that sets phase-out dates for CFLs and LFLs. In September 2022, California Governor Gavin Newsom signed the bill into law.

Key Lessons

- **More concerted outreach in the reluctant countries should happen early in the campaign –** the campaign should give more focus on the reluctant countries because the allies are already on board.
- **Understand the rules of engagement within the United Nations frameworks** to engage constructively in the decision-making process (albeit as observers). NGO coalitions play a very important role in this process.
- **Map out reluctant and ally countries –** mapping can be achieved through direct government engagement or fielding insights from other experts. Direct outreach is important to address government concerns and strategize ahead of negotiations
- **Identify how regions/countries make decisions** – some regions, like the EU, Africa, and to a great extent, the GRULAC region vote as a bloc. While others, like the Asia Pacific region, are not as unified in their approach.
- **Prepare evidence in advance –** governments tend to conduct internal and external consultations to determine their position approximately 3 months prior to the COP. Key components of the evidence base and supporting materials must be ready in advance to focus the last 100 days on engaging with as many governments as possible, presenting key findings and discussing opportunities on their terms and for their market and political landscape.

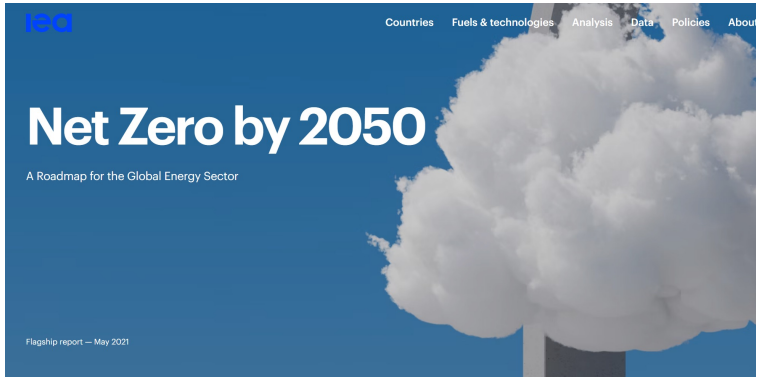
Evidence-Base

Strategy

- Provide governments with the evidence they need to support a fluorescent phase-out.
- The Evidence Base Workstream provided key talking points and compelling information to secure policy-maker support
- Global evidence and tools for policy-makers:
  - Energy savings potential of a lighting market transition to LED – global benefits and MEPSY tool
  - Sustainable Development Goals – CLiC alignment
  - Market Transformation Toolkit – approach to sustainably shift the lighting market
  - Global lighting association rebuttal – addressing issues of compatibility and safety
- National evidence:
  - Policy snap-shot on energy, lighting, appliances and efficiency
  - Market data – local collection of price and performance of fluorescent and LED retrofits.

Demonstrating Global Benefits & Alignment

- Developed a global lighting market model and quantified the cumulative campaign benefits: **3.5 gigatons of CO2** avoided, **232 tonnes of mercury**, **$1.3 trillion dollars in energy bill savings**
- **Mepsy** - an online tool for calculating national-level benefits of a Minamata Amendment fluorescent phase-out
- Published a paper on the eight Sustainable Development Goals supported by the phase-out



40+ Customized National Analyses

- Cost benefit analysis based on local data collection
- Policy summary – mechanisms in place for advancing efficiency, waste & chemicals reduction
- Forecasted national benefits

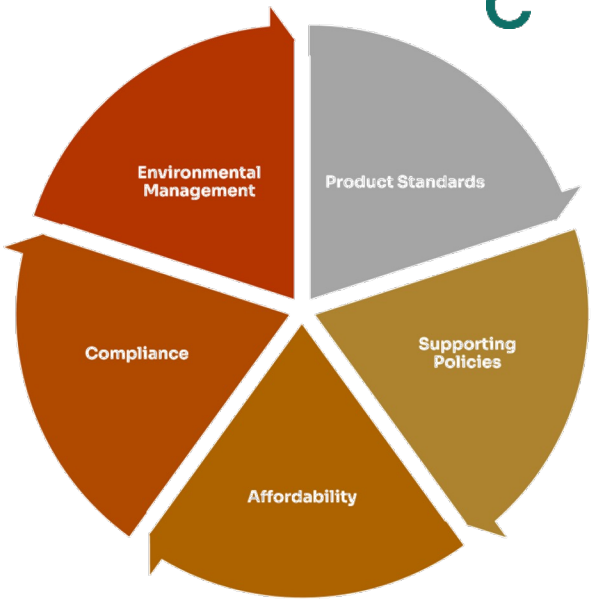
Read the global report here.

LAMP TYPE	TYPICAL HOUSEHOLD COMPACT FLUORESCENT LAMP (CFL)	REPLACEMENT LED	TYPICAL WORKPLACE T8 LINEAR FLUORESCENT LAMP (LFL)	REPLACEMENT LED
Watts for equivalent light	15W	7.5W	32W	15.5W
Energy efficiency	Low	High	Low	High
Typical lifespan*	4.8 years	10.3 years	5.5 years	13.7 years
Yearly electricity cost*	$3.04	$1.52	$13.51	$6.55
Contains mercury	Yes	No	Yes	No

Market Toolkit & Global Lighting Industry

- Developed a five-part **market transformation toolkit**, to support policy-makers making the transition to mercury-free LED lighting:
  - Lighting standards – minimum energy and performance
  - Supporting policies – labelling, communications, information
  - Affordability – financing, bulk procurement, utility investment
  - Compliance – market protection, testing, level playing field
  - Environmental management – end of life recovery and safe disposal

- **Responded** to Global Lighting Association attack on the African Lighting Amendment – correcting mis-information, misleading and contradictory statements and claims by industry



Key Lessons

- **Deliver national-level data** – delegates at the COP flipped through the 111-page global reports to look for their country and the payback periods in their currency; next time prepare profiles for 75 Parties
- **Provide compatibility assurance** – strengthen response around the information available on compatibility – both operating in existing fixtures and equivalence of illumination.
- **Address safety** – questions on safety persisted, and for CFLni there are no IEC safety standards, thus developing better resources, guidance from alternative safety standards (e.g., UL) and documenting case studies will be important
- **Address waste management concerns**– switching to LED solves the problem of new mercury lamps; however, governments sought advice for what to do when the installed fluorescent stock reaches end of life

Communications & Advocacy

Strategy

Innovative communication methods to educate people on the risks of fluorescents and benefits of LEDs.

- Built a brand
- Grew a network of environmental, public health advocates, consumer groups and other stakeholders to support campaign communications activities
- Engaged media on national and global policy decisions and the importance of an accelerated LED transition
- Ran digital campaigns, including #CleanLightingProtects and #EndToxicLighting
- Spearheaded a global petition.

The workstream recruited and **engaged a network of 54 communications partners in 19 countries.**

Developing a Brand

- CLiC outsourced brand development to a consulting partner who created the brand identity, guidelines and website.
- The CLiC website launched the campaign and acted as a central **multi-lingual hub for all materials and evidence related to the campaign**. The website included 4 important components:
  - Background in the campaign and Minamata Convention
  - Benefits of an accelerated LED transition
  - Resources from the Evidence workstream
  - News section to share ongoing updates from the campaign and our partners, as well as media placements around the world.
- In addition to the website, we also developed:
  - **A communications toolkit** for our partners, with draft press release to adapt and social media materials
  - **A partner user agreement** outlining how to communicate about CLiC

Building a Partner Coalition

- Our partners supported the campaign's communication efforts by:
  - Actively **sharing campaign materials** on social media and participating in our digital events,
  - Engaging with their national governments,
  - Supported a **petition that garnered more than 200 signatures** from CSOs and LED companies,
  - Supporting LED hospital retrofit pilots and associated media outreach
  - Collecting market data and supporting lamp testing for the Evidence-Base

Media Engagement

- Over the course of the campaign, CLiC and our partners placed more than 130 articles and opinion pieces in leading news and industry outlets around the world.
- CLiC released more than 120 media pieces, including press releases, articles, reports and thought pieces. We placed and contributed to content in major outlets in every region, including Hindustan Times, Canal Energia, Le Monde, Jamaican Gleaner, The New York Times, and Lusaka Star, and targeted trade journals.

Digital Campaigns

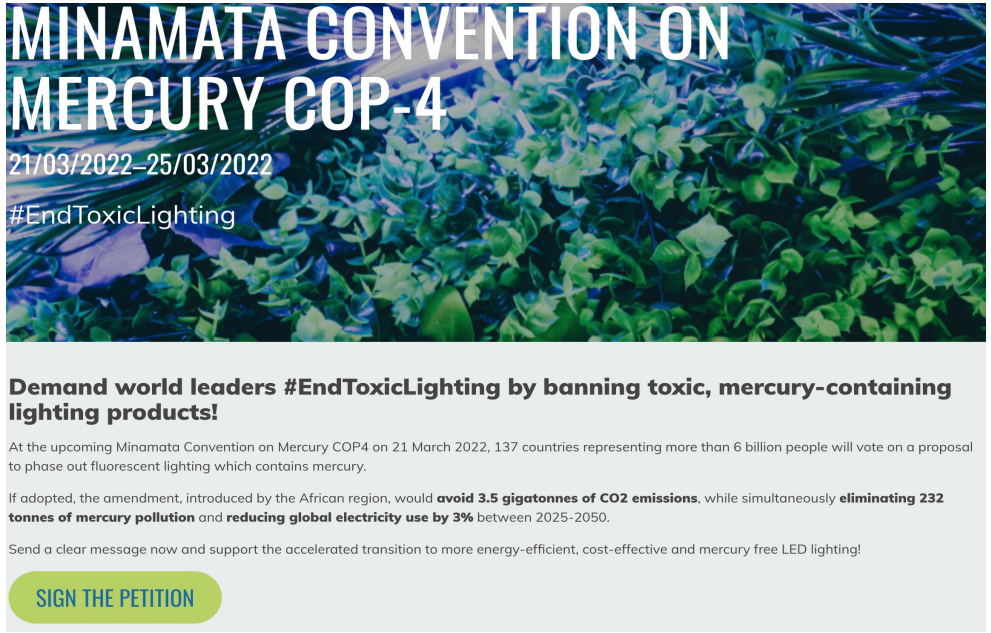
CLiC ran two successful global digital campaigns, #CleanLightingProtects and #EndToxicLighting, that built and leveraged a global communications network of advocates and industry partners – allowing us to reach target audiences around the world. We utilized several digital mediums to disseminate campaign content, including social media platforms, videos, graphics, and virtual events.

Digital campaign factsheets

- **#CleanLightingProtects** developed deeper linkages between safe lighting technologies, public health, economic development and climate change mitigation, supported by over 30 new partners. The campaign had a potential reach of 62,000. The campaign ran from Sept – Nov 2021.
- **#EndToxicLighting** featured vast array of resources to support the accelerated global transition to LEDs, including reports, regionally focused evidence documents, and press from CLiC and partners. The campaign, more successful than the first, had a 1.4m potential reach. The campaign ran from Feb – March 2022.

Global Petition

- In collaboration with the Climate Action Network, CLASP drafted a petition that was sent to the COP President and Heads of Delegations, **urging them to endorse the African Lighting Amendment and phase out fluorescent lighting by 2025**.
- The petition fell under the **#EndToxicLighting** campaign – we leveraged digital campaign partners and the CAN network to disseminate reach extensive global audiences.
- In just two weeks, **the petition garnered 268 signatures** from climate and environment advocates, healthcare networks, youth groups, lighting industry representatives and energy experts from across the world.
- **Climate Action Network** built a pledge webpage that continues to garner support from a wide base of supporters. CLiC will leverage these advocates to support the next phase of the campaign.



Key Lessons & Next Steps

- **Build a communications network early** – reach across relevant sectors (health, energy, chemicals, consumers, utilities)
- **Engage national/regional-level media consultants** – lead international media engagements with influential consultants across continents, languages, and cultural contexts to support robust outreach and elevated public engagement.
- **Leverage digital campaigns to bring diverse partners into the network** – Utilize accessible campaigns to engage partners with concrete, low effort asks in the #CleanLightingProtects and #EndToxicLighting digital campaigns through toolkits and other digital materials.
- **Demonstrate the co-benefits of technology transition** – emphasize the net benefits of switching to LEDs at the crossroads of cost, health, and planet.
- **Engage media at key points in policy processes to apply strategic pressure on governments to raise ambition** – Publicly launch impactful research and conduct media engagement around legislative processes, driving decisions to accelerate fluorescent phase out dates.
- **Translate materials in advance** – Streamline translation processes to ensure no partners are left out of communications efforts due to language barriers.

Industry Engagement

Strategy

- Industry Engagement **brought together LED manufacturers, distributors, associations, and other vital stakeholders** to prove market readiness for the global transition to clean, cost-effective LED lighting, and the LED industry's ability to meet increased demand.
- Industry Players joined the Coalition by signing the Industry Pledge that signaled their commitment to **the phase-out of the manufacture, sale, distribution, and/or installation of fluorescents as per the African Amendment proposal.**
- **CLiC aimed to recruit an anchor industry partner from every region**. We worked with industry experts to reach out to LED companies, reputable organizations convened industry webinars, and we placed thought pieces in industry news outlets like the Edison Report – a digital magazine focused on the latest lighting trends, and arc – a leading international magazine in architectural lighting design.

Accomplishments

- Early in campaign, CLiC received endorsement from Shuji Nakamura, inventor of the blue light LED and winner of the Nobel Prize for Physics in 2014. His support was critical in signaling the legitimacy of the industry coalition and facilitated many stalled conversations.

"The technological advancements in LED lighting over the past decade have far surpassed even the most advanced mercury-containing fluorescent bulbs. With the proposed amendment to the Minamata Convention and implementation of national-level regulations to phase-out fluorescent lighting by 2025, countries can accelerate the transition to LED lighting technology to benefit people and the planet."

- Professor Shuji Nakamura, Nobel Prize for Physics (2014), Inventor of Blue Light LED

Industry Partners

By COP4, CLiC's Industry Coalition consisted of **53 partners from 20 countries.** The partner network includes:

- Lumileds, a global lighting solutions company with research, development, and manufacturing facilities that employ approx 7,000 people in over 30 countries
- Sahasra, an early innovator of high-quality LEDs, operating a subsidiary of its Indian headquarters in Rwanda
- Renowned manufacturer Panasonic's India Anchorbrand
- The DesignLights Consortium, a non-profit energy efficiency group that maintains a list of over 500,000 high quality LEDs from over 1700 global suppliers for use in North America, and
- Golchha Group Nepal's most prominent business conglomerate.

Market Transformation Pilots

- In the lead up to COP4, the Industry Engagement launched **market transformation pilots in Brazil, Philippines, and Nigeria** to demonstrate that institutional buildings can easily and cost-effectively replace outdated, toxic lighting with energy-efficient LEDs.

Faculdade de Medicina de Botucatu
São Paulo, Brazil

Mary Johnston Hospital
Manila, Philippines

Folarin Coker Staff Clinic Complex
Lagos, Nigeria

Market Transformation Pilots – Results

	Faculdade de Medicina de Botucatu São Paulo, Brazil	Mary Johnston Hospital Manila, Philippines	Folarin Coker Staff Clinic Complex Lagos, Nigeria
Lamps Retrofitted	2200	242	452
Energy Savings (Per year)	116,600 kWh / year	7,260 kWh / year	28,296 kWh / year
Cost Savings (Per year)	49,372 BRL ($9,310 USD)	73,629 PHP ($1,287 USD)	1,766,045 NGN ($4,005 USD)

Key Lessons

- **Anticipate pushback from the private sector**. CLiC hypothesized that activating progressive LED companies would counter pressure from legacy lighting company interests, as the economic and employment benefits of a technology transition are significant. We worked to build a coalition of supportive private sector actors to counter pushback from legacy fluorescent manufacturers and distributors.
- **Most LED companies are not accustomed to participating in what they perceive as government advocacy**, and many didn't want to diverge from positions taken by their national lighting associations. In comparison to NGO and CSO partners, **industry was reluctant to participate in communications activities.**
- Map LED actors by region and share information about the campaign, but **do not depend on industry support or advocacy to support campaign objectives.**
- **CLiC will strengthen our evidence base to demonstrate that fluorescents are no longer economically viable**. We will engage with fluorescent lamp manufacturers to demonstrate the technical feasibility and economic opportunities to transition factories to LEDs.
- Moving forward, we will **seek other champions and influencers,** for example the World Green Building Council and health groups. Other consortiums and coalitions – such as architects, builders, and other private sector actors that work with LEDs – could be potential supporters for the campaign.

COP4 Outcomes & Next Steps

COP4 outcome

- At the Minamata Convention on Mercury COP4 in March 2022, 137 governments adopted an amendment submitted by the African region to phase out compact fluorescent lamps (CFLs) in 2025. This decision will **avoid 261.5 million metric tonnes of CO_2 emissions, prevent 26.2 metric tonnes of mercury pollution, and save consumers and businesses $77.8 billion in lower energy bills (2025-2050).**
- The decision on LFLs was postponed to COP5, which will take place in Geneva in October 2023.

#MakeMercuryHistory
CLiC and partners at COP4 in Bali, Indonesia

Next steps

- **Country & Regional Engagement:** continue to mobilize key partners to raise the ambition to phase out additional fluorescent lamp categories at COP5. We will develop and deepen relationships and support in national/regional regulations to ban fluorescents and transition to LEDs.
- **Evidence-Base:** expand and deliver new evidence, building upon the market data and research reports developed prior to COP4. The overall aim is to give governments the information and assurances they need to form a progressive national opinion.
- **Communications & Advocacy:** advance targeted communications and advocacy to create a sea change of support – this will include increasing common, public knowledge that fluorescents are toxic. We will further cultivate relationships with media and develop a network of communications champions.

Thank you!

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