



ASIA CLEAN ENERGY FORUM 2024

Accelerating the Clean Energy Transition and Ensuring Energy Security and Affordability – **Time for Urgent Action Now**

3–7 JUNE 2024



# Asia-Pacific Perspectives on Clean Cooking

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**ACEF 2024 DDW: Electrifying Cooking**

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# Context

## Clean cooking: Sustainable Development Goal 7

### ■ Energy access

Target 7.1: “By 2030, ensure universal access to affordable, reliable and modern energy services.”

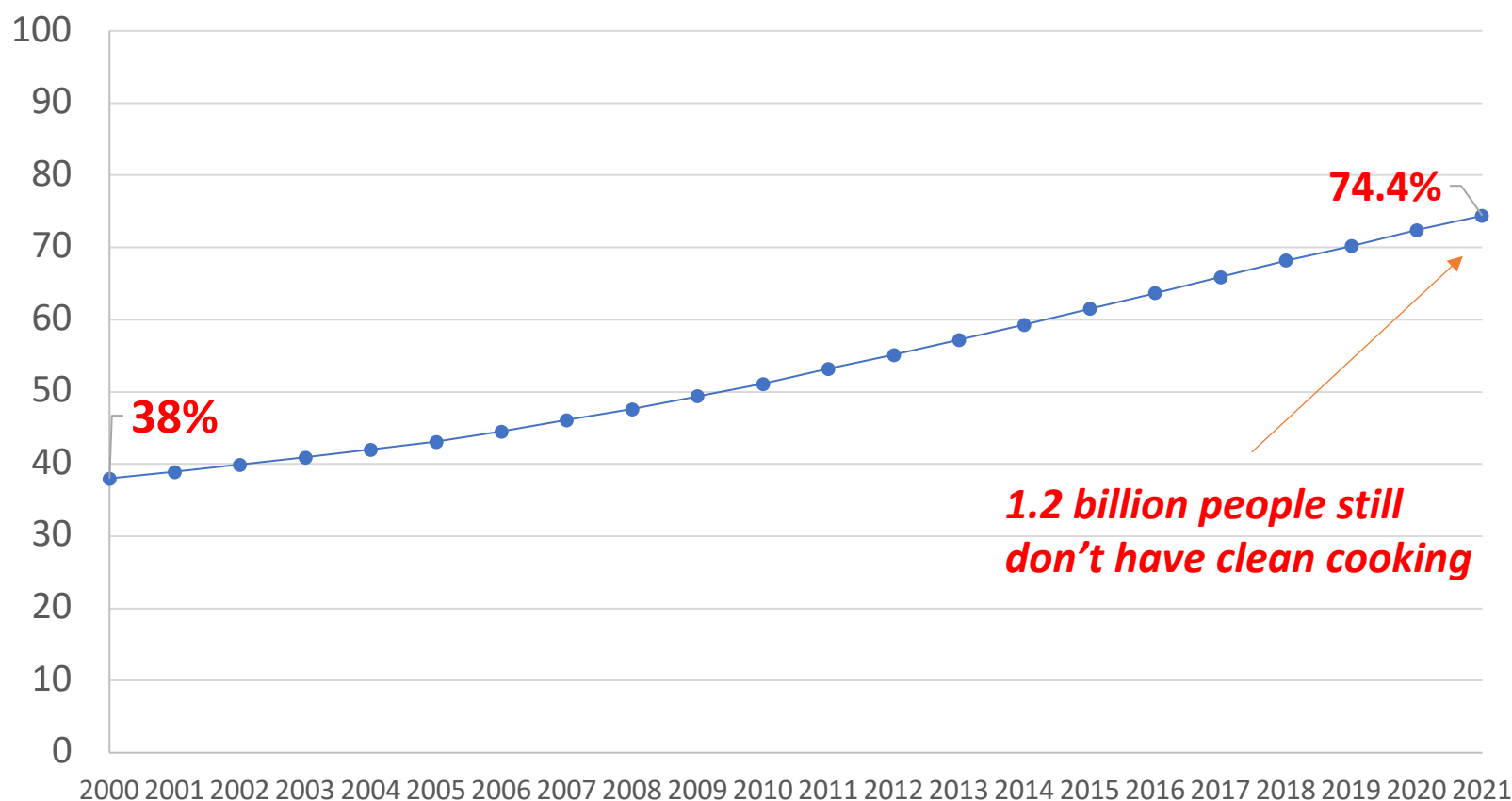
Indicators:

- (a) The proportion of population with access to electricity; and
- (b) The proportion of the population with primary reliance on clean cooking fuels and technologies.



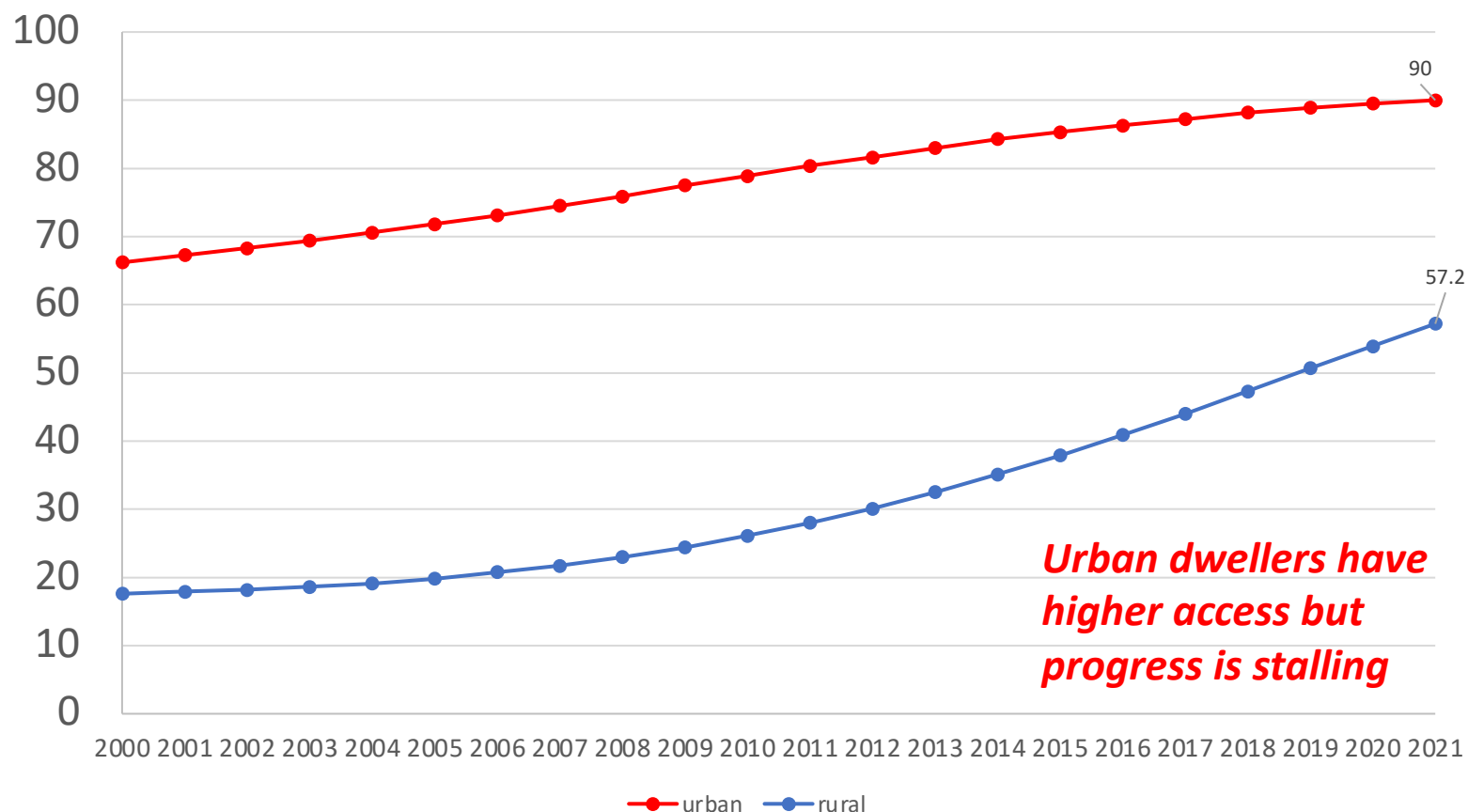
# Clean cooking in Asia and the Pacific: the region is not on target.....

**% population with access to clean cooking**



# Clean cooking in Asia and the Pacific: Urban-rural divide exists.....

Urban vs. Rural



# Clean cooking in Asia and the Pacific: .....a matrix of challenges

**Technical** – multitude of technologies that vary by feedstock, application and national context

**Economic** – fragmented markets, limited ability to pay, lack of viable business models, limited public finances, key benefits are not monetized.

**Policy** – low visibility of clean cooking problem, responsibility divided across ministries.



# Why electric cooking?

**Technical** – modular technology, high efficiency, high reliability, versatility.

**Economic** – low operating cost, carbon credit opportunities, utilize domestic electricity surpluses, most populations unserved by clean cooking already have electricity.

**Policy** – replicability, link to emissions reduction through RE and EE, applicability for wider population.



*Image courtesy: [www.ajummery.com.np](http://www.ajummery.com.np)*

# Electric cooking challenges

- Can electric cookstoves adapt to all cultural styles of cooking?
- Upfront costs.
- Local repair and maintenance.
- Clustering of loads in time and space— leading local distribution network capacity limitations.



Image courtesy: Modern Energy Cooking Services (MECS)

# ESCAP's work in clean cooking:

## - A systematic review of interventions

Assess whether clean cooking interventions to date have been successful in:

- (a) increasing users' adoption of clean cooking fuels and technologies (CFTs), and
- (b) improving a subset of long-term health impacts based on the use of CFTs.

Review also examines the comparative effectiveness of various interventions and aims to identify specific challenges in the causal pathway.



# ESCAP's work in clean cooking:

## - Regional Policy Dialogues on Clean Cooking

**Bringing together experts and policymakers to understand the latest developments in the field**

1. 2019, Bangkok Thailand (in person)
2. 2022, Thimphu, Bhutan (hybrid)
3. 2023, Kathmandu, Nepal (hybrid)
4. 2024, Vientiane, Lao PDR (hybrid)



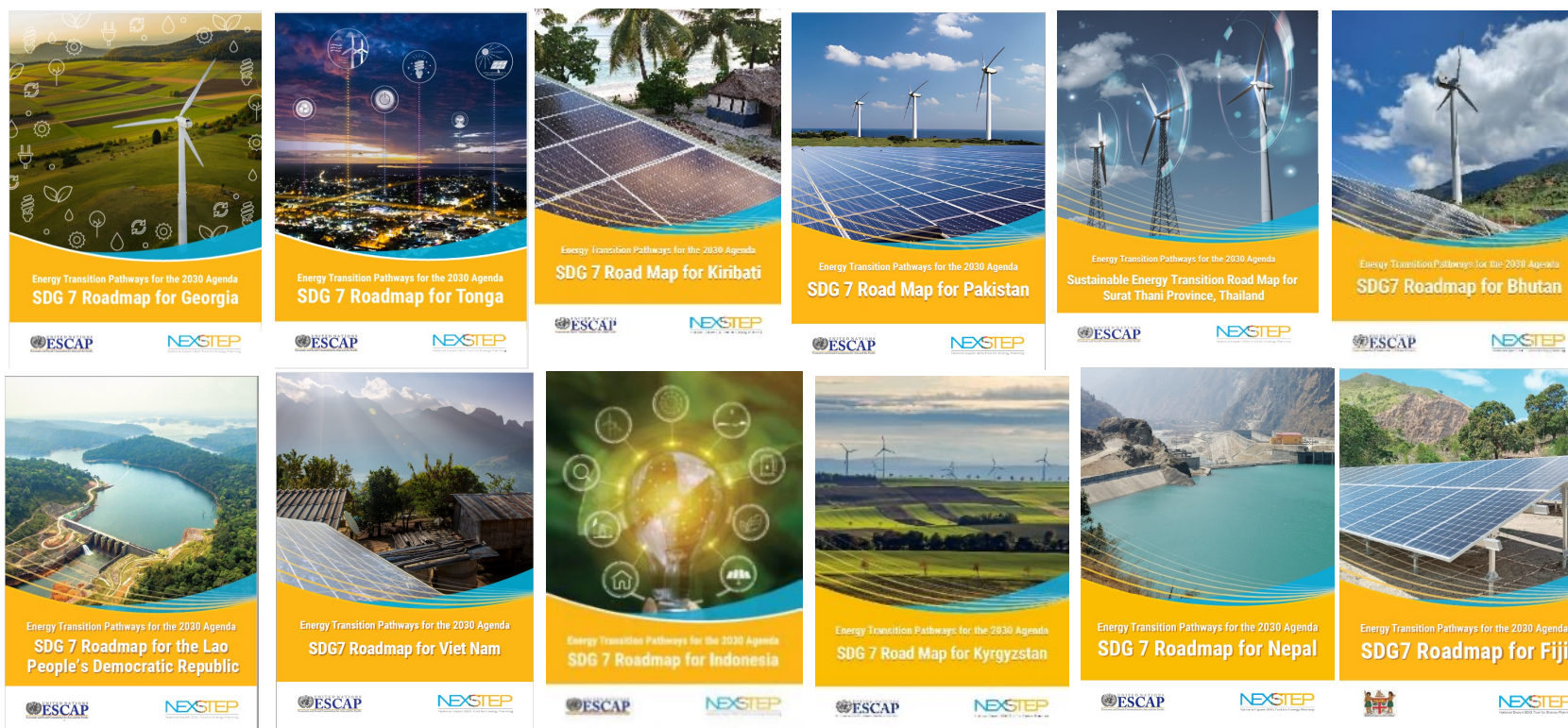
# ESCAP's work in clean cooking:

## -The National Expert Sustainable Development Goal 7 Tool for Energy Planning (NEXSTEP)

SDG 7 Roadmaps include detailed clean cooking analysis and recommendations

### Roadmaps with clean cooking component

- Bhutan
- Nepal
- Pakistan
- Indonesia
- Fiji
- Tonga
- Georgia
- Kazakhstan
- Kyrgyzstan
- Viet Nam
- Lao PDR
- Mongolia
- Thailand
- Micronesia
- Kiribati



# ESCAP's work in clean cooking:

## - NEXSTEP (cont'd)

### Technology options

- Electric stoves
- Improved biomass cookers
- Biogas digesters
- Natural gas and
- LPG

### Criteria

- World Bank Multi-Tier Framework
- Affordability (annualized cost)
- Availability
- WHO Guidelines for emissions
- Contextual factors: culture, energy security etc.



Induction cookstoves



Induction and infra red stoves



Electric pressure cooker

# ESCAP's work in clean cooking:

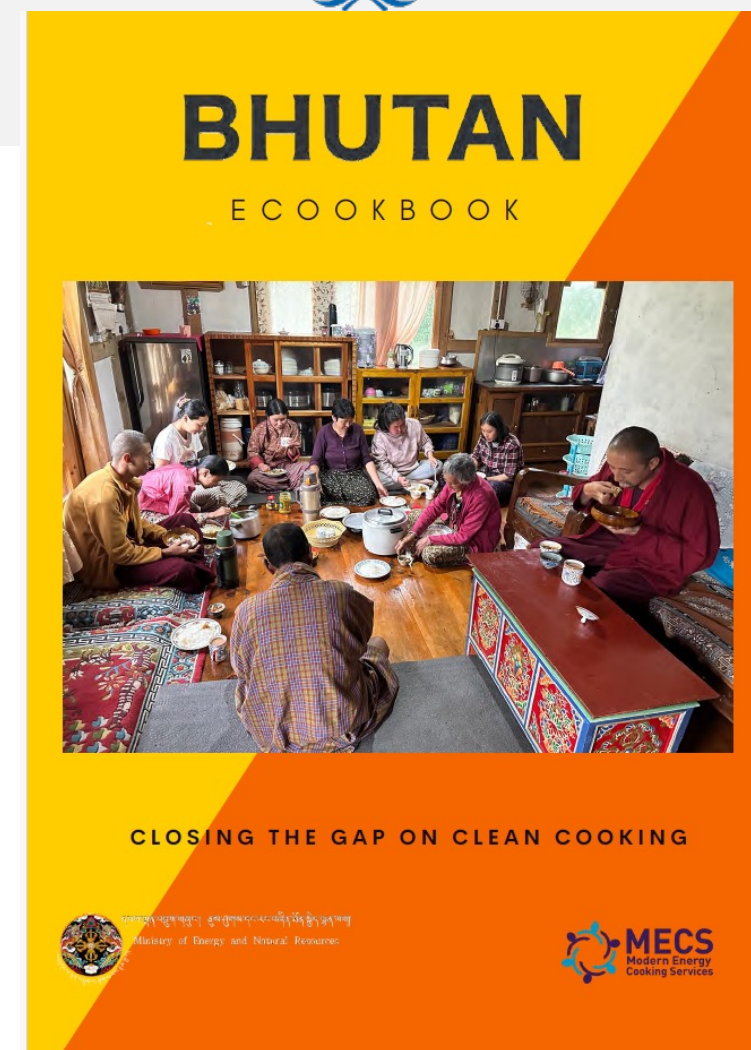
## - Closing the Gap on Clean Cooking in Bhutan

A partnership of Royal Government of Bhutan, ESCAP, MECS and United Nations Capital Development Fund to apply electric cooking technologies to close the remaining clean cooking gap.

**Phase 1** - Identification and trialing of applicable electric cooking technologies and business models.

**Phase 2** – Piloting selected e-cooking technology in 650 households.

**Phase 3** – Scaleup of e-cooking technology across remaining households (several thousand)



E-cookbook developed under the project

# Clean cooking is changing lifestyle in Bhutan

Before



About 13% population (100,000 people) is to be connected by 2030 to clean cooking technologies

Electricity supply in Bhutan is 100% emissions free from large hydropower makes it perfect condition for electric cooking

Internet of Things (IoT) enabled electric cookstoves allow for high-quality monitoring making eligible for carbon finance

Cleaner, safer and sustainable cooking technologies to improve health, environment and lifestyle

After



# Asia-Pacific Clean Cooking Forum 2025

- A regional forum on clean cooking in the Asia-Pacific region planned for 2025
- A platform to bring together policymakers, experts, private sector, financing institutions and donors
  - Develop partnerships to drive rapid uptake of clean cooking in the region and beyond
- Showcase technologies and innovations, share success stories, facilitate fund raising and encourage policy development
- Identify gender and public health aspects



Image courtesy: [www.ajummery.com.np](http://www.ajummery.com.np)

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