



# Transformational Change in Energy and Public Health: A Review of Evidence to Inform Climate Investments

## 1. Objectives

This evidence review focuses on systematically displaying evidence on what works in energy and public health intervention in low and middle-income countries. Specifically, it examines the attributes and determinants of transformational change in these two sectors. This review can inform the design and implementation of climate investments and indicate what features may be necessary for a transformational change.

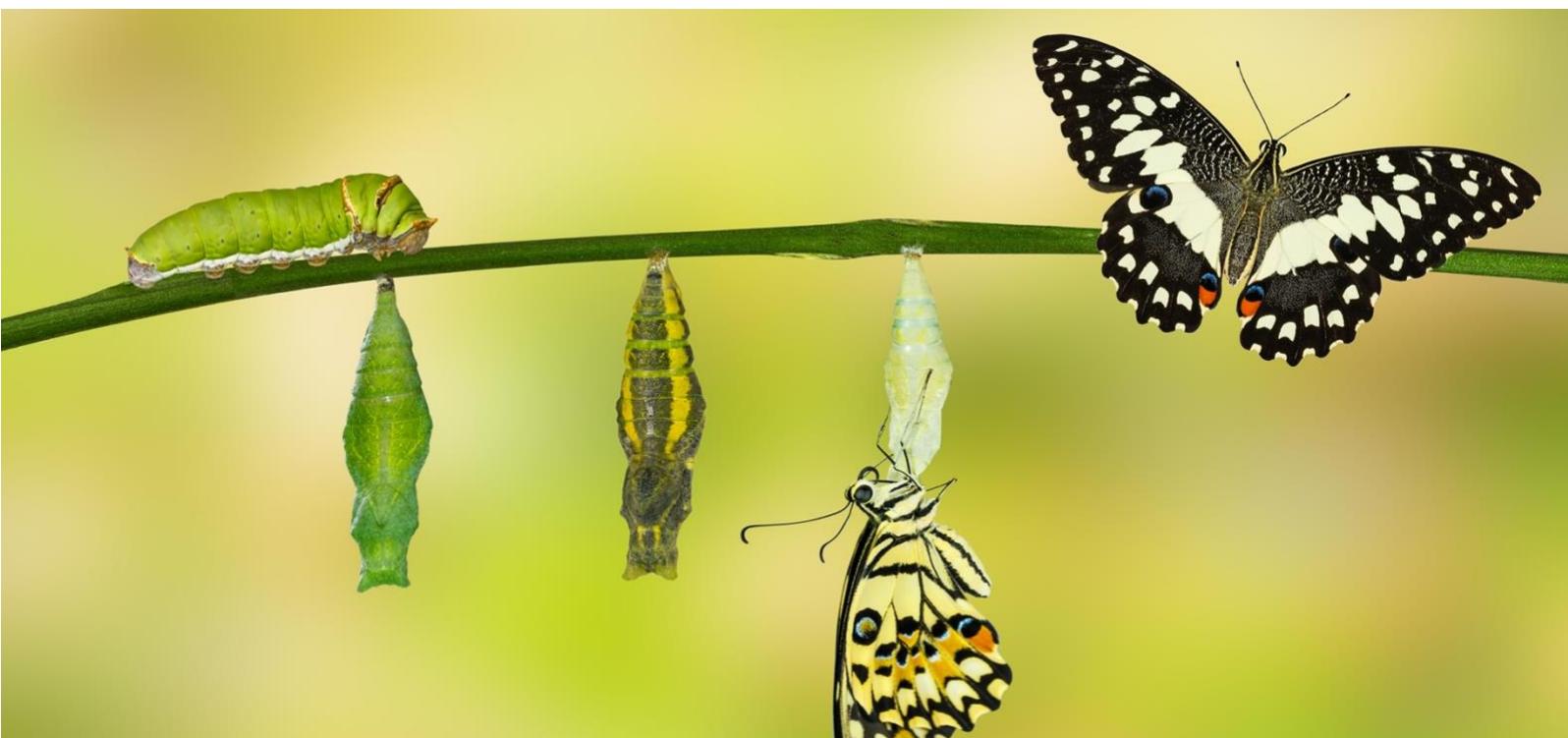
## 2. What are evidence reviews? Why are they useful?

An evidence review is a comprehensive collation, analysis, and presentation of evidence. The review will present evidence in two formats: 1) evidence gap maps (EGMs); and 2) transformational change maps (TCMs). EGMs depict high-quality evidence – or the lack thereof – in a thematic area. They usually use a theory of

change and an evidence framework (with interventions and outcomes). We use EGMs to identify evidence and gaps within each sector. We will subsequently synthesize the evidence of transformational change into TCMs. This will allow us to identify characteristics of transformational interventions.

## 3. The rationale for this evidence review

It is clear that the level of climate finance invested in mitigating global greenhouse gas emissions is insufficient to meet the Paris Agreement's goal of restricting global warming to 1.5 degrees Celsius. Current climate finance flows are also insufficient if the adaptation needs of countries are to be met. This means that climate investments need to be more effective for every dollar committed. For programmes to be transformational, the IEU identified three characteristics that are necessary (but not



necessarily sufficient).<sup>1</sup> These characteristics include:

1. Delivering a large **impact** (i.e. having a large 'effect size')
2. Impacts remain **sustainable over time** (the effects last longer than a year)
3. Operating at a substantial **scale** (i.e. covering a large area and/or affecting many people).

These characteristics are a subset of eight components of transformational change explored in a forthcoming IEU Learning Paper on transformational change.<sup>2</sup>

#### 4. Methods

This evidence review will collate evidence conforming to the following Population, Intervention, Comparison and Outcomes (PICO) criteria:

- **Population:** Interventions must be conducted in low- and middle-income countries. Participants must exceed 12 (energy) or 18 years of age (public health).
- **Interventions:**
  - **Energy sector:** Interventions must take place; 1) at the level of institutional and market systems; 2) through incentives and standards; 3) through "soft" interventions; or, 4) in form of investments into infrastructure
  - **Public health:** Interventions must target behaviour change in: 1) nutritional habits; 2) physical activity; 3) substance abuse; 4) hygiene practices; or, 5) utilization of health care service.
- **Comparison:** Studies must have a clearly defined comparison group for evaluation of the treatment effect
- **Outcomes:**
  - **Energy sector:** Studies must examine: 1) climate change mitigation; 2) resilience of

energy systems; or, 3) labour market co-benefits.

- **Public health:** Studies must examine behaviour change under the following categories: 1) action behaviour; 2) health-seeking behaviour; or, 3) consumption behaviour.

The evidence review will only consider experimental and quasi-experimental designs along with systematic reviews. Studies completed after 1990 in energy and after 2000 in public health will be included.

#### 5. Contribution

This evidence review contributes to the literature on the drivers of transformational change in the following ways:

- The EGMs will plot relevant interventions and their corresponding outcomes. This will illustrate where there is good evidence for transformational change and where there are gaps.
- TCMs will identify areas where there is evidence of scale, depth and sustained change in the energy and public health sectors. Subsequent meta-analyses will help determine if robust evidence for transformational change exists.
- Infographics will illustrate the necessary characteristics of transformational change.

1. See, for example, Transformational Change - the Challenge of a Brave New World. Learning Paper No. 1, 2018. By Jyotsna Puri. Independent Evaluation Unit, Green Climate Fund.

2. See Assessing the Likelihood for Transformational Change at the GCF. Learning Paper, forthcoming. By Jyotsna Puri, Martin Prowse, Emma De Roy and David Huang. Independent Evaluation Unit, Green Climate Fund.

#### Contact the IEU

Tel.: +82 32 458 6450

Email: [ieu@gcfund.org](mailto:ieu@gcfund.org)

Website: [ieu.greenclimate.fund](http://ieu.greenclimate.fund)

Twitter: @GCF\_Eval



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