

Policy Brief No 11 of 2025

HARNESSING INTEGRATED POPULATION-HEALTH-ENVIRONMENT APPROACHES TO ACHIEVE KENYA'S 15 BILLION TREE AGENDA

Overview:

Kenya's ambitious plan to plant 15 billion trees by 2032 presents a transformative opportunity to simultaneously address climate change, ecosystem degradation, population pressures, and declining health outcomes. Evidence from Kenya's Population Situation Analysis demonstrates that population dynamics, environmental sustainability, and health outcomes are interconnected. Integrated Population-Health-Environment (PHE) approaches offer a cost-effective, scalable, and people-centred pathway to restore ecosystems, expand tree cover, strengthen climate resilience, and improve livelihoods particularly in vulnerable rural, peri-urban, and informal settlement contexts.

Background:

Kenya's growing population, rapid urbanisation, and climate change are increasing pressure on land, forests, water resources, and sanitation systems, while worsening food insecurity, disease burden, and climate risk. Kenya is already water-scarce, heavily reliant on rain-fed agriculture, and experiencing rising temperatures and declining forest cover. While strong policies exist, including Constitution of Kenya (2010), Climate Change Act (2016), Kenya National Population Policy for Sustainable Development (2023), and National Climate Change Action Plan (2023–2027) among others, implementation remains largely sectoral and fragmented. As a result, tree-growing, health promotion, population management, and climate adaptation efforts often operate in isolation, limiting impact and sustainability.



PHE recognizes the complex connection between people, their health, and the natural resources upon which they depend

Key Findings:

- Rapid population growth is a major driver of deforestation, land degradation, water scarcity, and waste pollution, weakening ecosystems that are critical for health and livelihoods.
- Climate shocks (droughts, floods, heat stress) are

outbreaks, displacement, and poverty, particularly among women, children, and informal settlement populations.

- Forest cover continues to decline, despite conservation efforts, reducing benefits that forests provide for climate stability, protection of water sources and livelihoods.
- Integrated PHE interventions, such as PHE Model Homes and facility-based Adopt-A-Fruit-Tree initiatives, demonstrate that healthier families are more likely to conserve resources, plant and protect trees, and adopt sustainable livelihoods.
- PHE initiatives remain project-based and limited in scale, due to inadequate; policy mainstreaming, financing, and awareness among planners and implementers.

Implications

Failure to integrate PHE actions will:

- Undermine the 15 Billion Tree Agenda, as tree planting without community ownership, health security, and livelihood incentives risks low survival rates.
- Lead to Loss and Damage due to rising lakes as a result of climate change with immense adverse social, economic, cultural, and environmental impacts and legal challenges.

Table 1: Extent of the Rift valley lakes as mapped from the Kenya Topographic sheets and Landsat Images of 2010, 2014 and 2020.

| S/N | Lake/Dam | Toposheet (km ²) | 2010 Extent (km ²) | 2014 Extent (km ²) | 2020 Extent (km ²) | Change (2020–2010) | % Change | Change (2020–Normal) | % Change from Normal |
|--------------|-------------|------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------|-------------|----------------------|----------------------|
| 1 | Turkana | 7,485.48 | 7,947.85 | 8,064.09 | 8,265.07 | 317.22 | 3.99 | 779.59 | 10.41 |
| 2 | Logjiipi | 129.88 | 183.46 | 178.43 | 190.93 | 7.47 | 4.07 | 61.05 | 47.00 |
| 3 | Baringo | 128.08 | 159.49 | 221.77 | 268.06 | 108.57 | 68.07 | 139.98 | 109.29 |
| 4 | Bogoria | 34.35 | 34.79 | 40.5 | 43.25 | 8.46 | 24.32 | 8.9 | 25.91 |
| 5 | Solai | 5.74 | 9.54 | 13 | 13.61 | 4.07 | 42.66 | 7.87 | 137.11 |
| 6 | Nakuru | 40.04 | 45.01 | 56.82 | 68.18 | 23.17 | 51.48 | 28.14 | 70.28 |
| 7 | O' Bolossat | 18.2 | 39.81 | 50.39 | 52.16 | 12.35 | 31.02 | 33.96 | 186.59 |
| 8 | Elmenteita | 21.24 | 21.54 | 22.78 | 22.97 | 1.43 | 6.64 | 1.73 | 8.15 |
| 9 | Naivasha | 135.32 | 154.16 | 164.86 | 193.48 | 39.32 | 25.51 | 58.16 | 42.98 |
| 10 | Magadi | 141.09 | 148.09 | 150.9 | 153.3 | 5.21 | 3.52 | 12.21 | 8.65 |
| 11 | Victoria | 3,971.37 | 4,030.22 | 4,421.32 | 4,572.7 | 542.48 | 13.46 | 601.33 | 15.14 |
| 12 | Turkwel Dam | 18.97 | 22.97 | 31.68 | 59.27 | 36.3 | 158.03 | 40.3 | 212.44 |
| Total | | 12,129.76 | 12,796.93 | 13,416.54 | 13,902.98 | 1,106.05 | 8.64 | 1,773.22 | 14.62 |

2010, 2014 and 2020 data are based on GIS Landsat8 Satellite imagery of 28m spatial resolution

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Implications:

- Escalate healthcare costs, disease outbreaks, malnutrition, and climate-related mortality, threatening progress toward Universal Health Coverage (UHC).
- Intensify water scarcity, food insecurity, conflict, and displacement, with disproportionate impacts on poor and marginalised communities.
- Result in higher long-term public expenditure on disaster response, health care, and ecosystem restoration compared to preventive, integrated approaches.

Recommendations:

1. Mainstream PHE integration within the 15 Billion Tree Programme, County Integrated Development Plans, Climate Action Plans and Land-use planning to support tree survival, ecosystem restoration, and improved health and livelihoods.

Lead Agency: NCPD. **Others:** Min. of Environment, Climate Change & Forestry (MoECCF), National Environment Management Agency (NEMA), Ministry of Health (MOH), Council of Governors (COG), Kenya Forest Service (KFS), Ministry of Public Works, Housing and Urban Development (MoPWHUD).

2. Scale-up proven community-based PHE models, such as PHE Model Homes, school-based Adopt-A-Tree, and community nurseries, as delivery platforms for tree growing, health promotion, WASH, clean energy, nutrition, and climate-resilient livelihoods, in degraded landscapes:

Lead Agency: NCPD, **Others:** County Government PHE Depts., MOH, MOE, KFS, Min of Water & Sanitation (MoWSI)

3. Strengthen multi-sectoral coordination by aligning policies, financing, and integrated data systems across population, health, environment, water, agriculture, and education sectors to optimise investments, and accelerate delivery of Kenya's 15 Billion Tree Agenda and quality-of-life outcomes.

Lead: The Presidency (NGAO) **Others:** NCPD, TNTEP, KNBS, MoECCF, MOH, NDMA, COG

Conclusion:

Achieving 15 billion trees by 2032 is not only an environmental target, it is a population, health, and development imperative. Integrated PHE approaches offer Kenya a practical pathway to grow trees that survive, communities that thrive, and ecosystems that sustain life. By investing in people alongside nature, Kenya can accelerate climate action. safeguard public

References

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This Policy Brief is based on the Kenya Population Situational Analysis Report 2025.

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NCPD is a semi-autonomous government agency that formulates and promotes population policy and coordinates related activities for sustainable development in Kenya.

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