Integration of medical service provision and nature conservation worldwide 1980–2022: collaborative evidence mapping of 43 projects across 22 countries

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Fig 1. Left: Wanang Conservation Area clinic, Papua New Guinea. Right: Conservation Through Public Health, Uganda.

1. Background

Biodiversity protection is fundamental to human wellbeing,[1] and, in turn, serving human health in medically underserved areas can sometimes strengthen conservation.[2] We have collaboratively mapped the evidence on projects worldwide that are, or have been, providing health services with the intention of producing conservation outcomes in addition to health improvements. This exercise was started by some of us involved in integrated health and conservation projects in Papua New Guinea,[2] Indonesia,[3] and Uganda.[4] Our collaboration has now widened to include contributors from 46 organizations worldwide.

2. Methods

Scoping indicated many NGO projects are never published in the academic literature. To avoid missing such interventions we asked conservation staff worldwide to contribute data online or through zoom calls. Advertising to join the collaboration was through formal networks (International Union for Conservation of Nature, Planetary Health Alliance, etc.), professional contacts, funders, and a call in *The Lancet Planetary Health*.[5] Additionally, data and literature were synthesised from libraries and datasets of collaborators at Population Reference Bureau, Sussex Sustainability Research Programme, and Ecological Levers for Health. We collected data on settings, dates, backgrounds, funders, and theories of change, human health and conservation components, outcomes and metrics, and key lessons learned.

3. Summary findings

Distribution and intervention type

- 43 projects from 22 countries fitted inclusion criteria. Approximately half had not been published in the collected literature, with data only available through direct submission by collaborators.
- The most represented regions were Sub-Saharan Africa with 27 projects, followed by South-East Asia (five), and South Asia (five) (fig 2).
- Tropical wet forest was by far the most common habitat, followed by tropical dry forest, coral reefs, and tropical grasslands (fig 3).

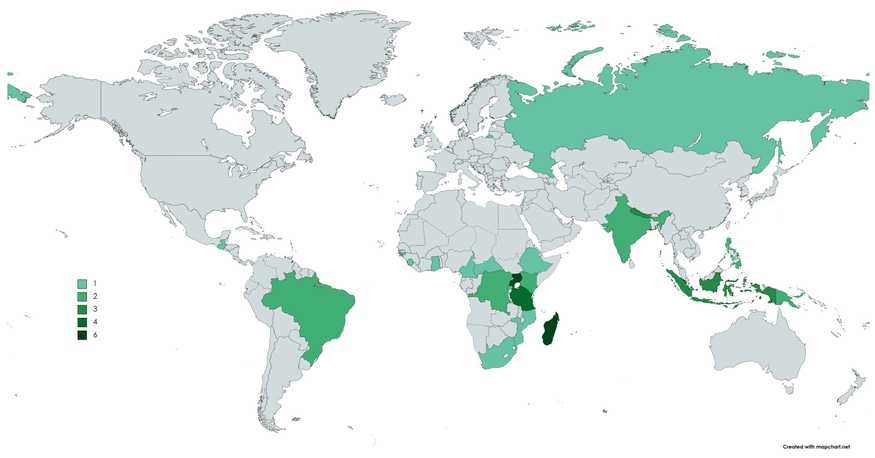

Fig 2. National-level distribution of included projects.

- Projects ranged from basic health interventions bolted on to pre-existing conservation programmes to generate goodwill (e.g., vaccination rounds bordering parks), to complex schemes driven (and funded) by concerns for human welfare as much as conservation.
- Making family planning methods available was marginally the most common health service provided, but most such projects also delivered other medical interventions (fig 3).
- Multiple projects operate primary care clinics, one has built a district hospital. In addition to medical provision, most projects included 'conceptual links'[6] to support health by preserving health-related ecosystem services.

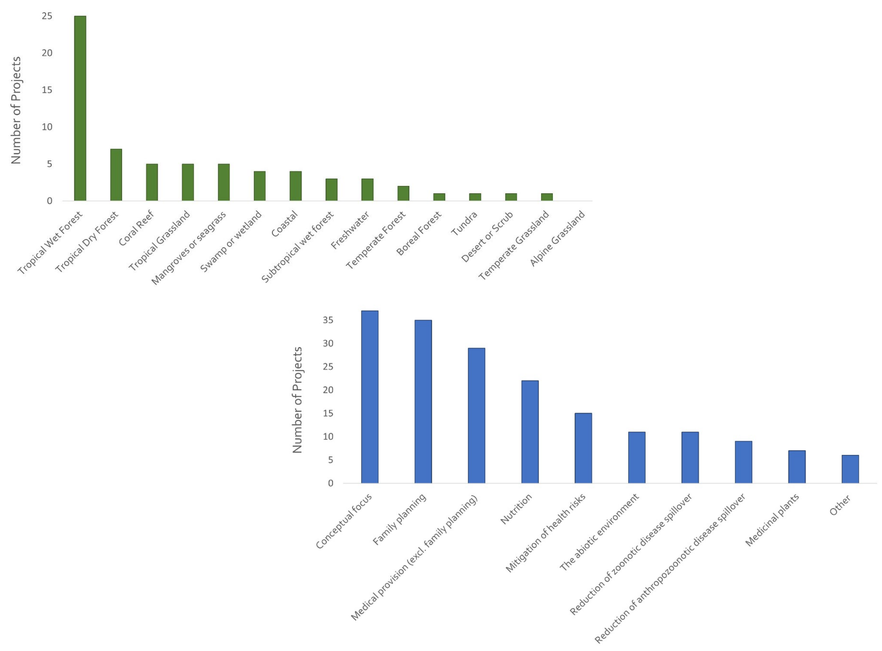

Fig 3. Habitats (top) and types of health intervention (bottom).

Effectiveness and evidence quality

- Good-quality project evaluations have demonstrated that integrating medical provision and conservation can be highly effective. Others are underway.
- However, some projects lacked reliable methods to measure outcomes, or ascertain whether links posited in theories of change between health and conservation components (fig 4) actually held.

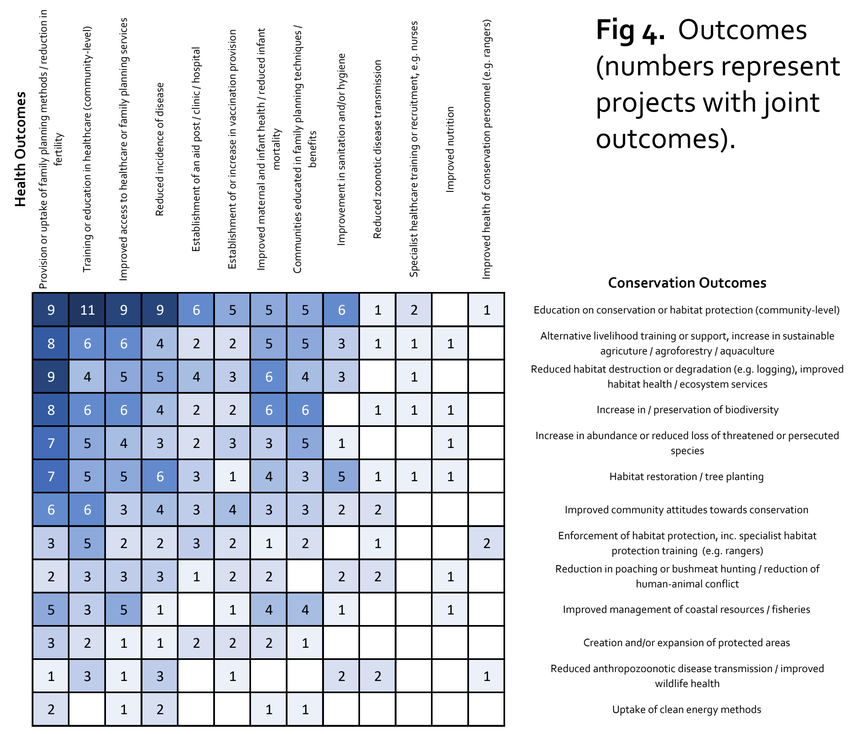

Fig 4. Outcomes (numbers represent projects with joint outcomes).

4. Interpretation and next steps

Synergistic action on conservation and medical provision can be highly effective and the approach is more widespread than literature would indicate. However, funding is usually provided on a siloed basis for either health or conservation, which is a barrier to wider adoption and improved evaluation. To tackle this, funder engagement and development of evaluation guidelines are planned. We will soon be publishing our full results, and intend to repeat mapping every 2–3 years.

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