



# HEALTHY COMMUNITIES : HEALTHY ECOSYSTEM

A case study from Terai Arc Landscape Nepal

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# Evolution of Conservation in Nepal

**Era**

**Approach**

**Focus**

**2000**



Landscape level conservation for maintaining ecological integrity

**Ecological and ecosystem integrity and sustainable livelihood**

**80s and 90s**



Integrated Conservation and Development through declaration of BZs and CAs



People participation

**60s – 80s**



Establishment and management of PAs for in-situ conservation

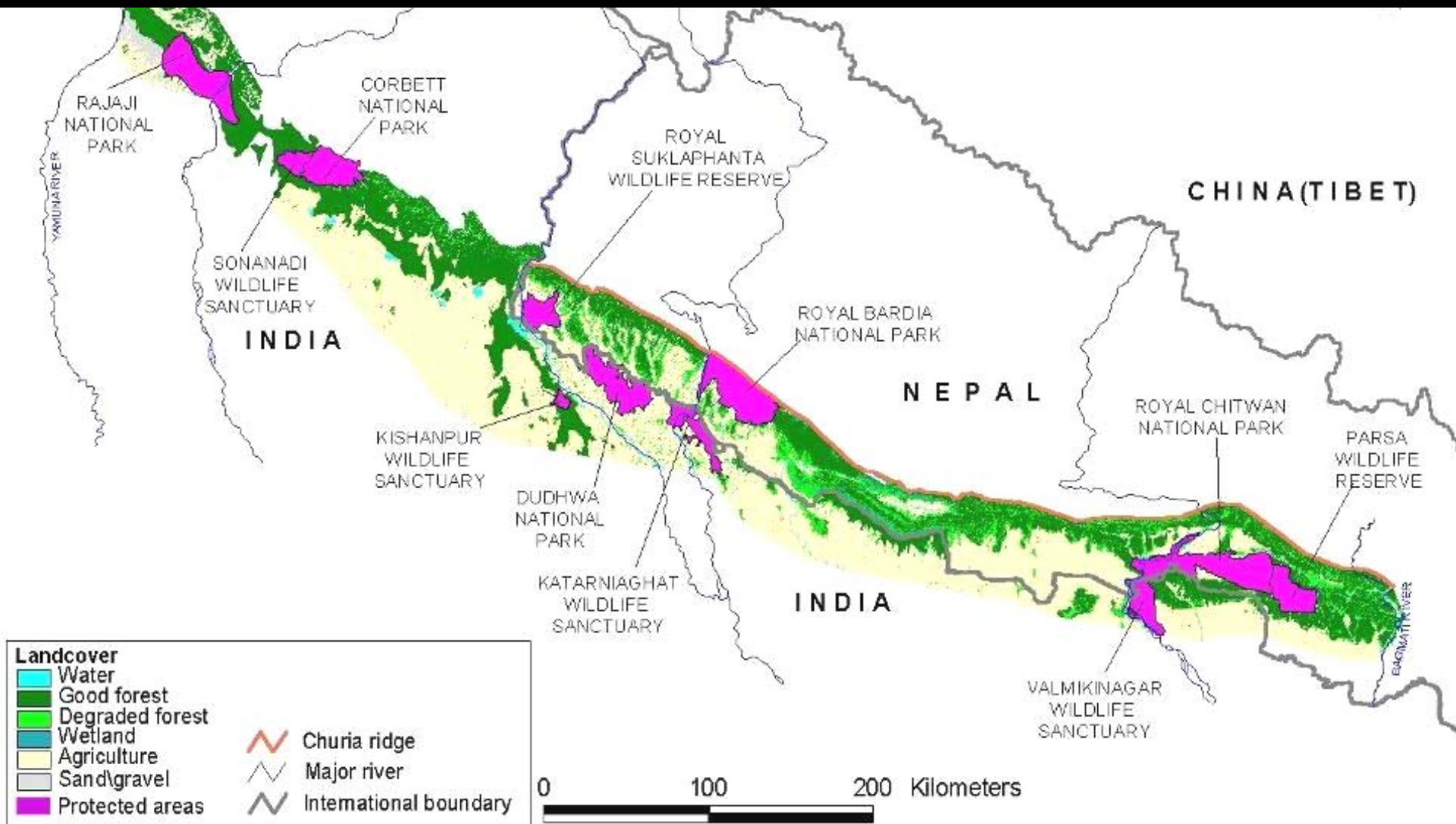


Large mammalian species





# Terai Arc Landscape





# Significance



## Biodiversity

**412 rhinos**

**340-350 tigers**

**120 elephants**

**3 Ramsar sites**

**2 World Heritage sites**



## Economy

**“Rice bowl”**

**\$3.2 M timber revenue**

**\$1.4 M ecotourism**

**Trade backbone**



## Livelihoods

**6.7 Million People**

**4.5 Million Cattle**

**60% owns <1 ha**

**80% forest dependent**

















# Root Causes and Threats to Environmental Degradation and Biodiversity Loss

## DIRECT CAUSES

Forest Conversion

Overgrazing

Forest Fires

Excessive Extraction of Timber

Excessive Extraction of Fuel wood

Poaching and Human Wildlife Conflict

Degradation of Churia Watershed



Forest Management

A photograph showing a person in a forest, possibly a guard or a worker, standing near a tree.

Forest Restoration

A photograph showing a forest landscape with trees and a path.

Alternative Energy

A photograph showing a woman in a kitchen, possibly using a traditional cooking method.

Conservation based Livelihoods

A photograph showing a group of people, possibly a community, engaged in a traditional activity.





# Root Causes and Threats to Environmental Degradation and Biodiversity Loss

## Biological Threats

**Invasive species**  
**Use of Agro- chemicals**  
**Loss or Decline in Wildlife Population**  
**Imbalance in Prey Predator Population**  
**Flash Floods and Soil Erosion**



Habitat Management

A photograph showing a lush green field of tall grass, representing a natural habitat.

Species Management

A photograph showing a herd of elephants in a grassy field, with several people on horseback observing them.

Anti-poaching Operation

A photograph showing two people in a forest, one holding a rifle, representing an anti-poaching operation.

Research/Monitoring

A photograph showing two people in a forest, one holding a camera, representing research or monitoring.





# Root Causes and Threats to Environmental Degradation and Biodiversity Loss

## Cross Cutting Issues

- Population Growth
- Low Agriculture Productivity
- Lack of Off-farm Livelihood Opportunities
- The Struggle for Land
- Inadequate Access to Management of Natural Resources
- Cross Border Issues
- Inadequate conservation awareness

Policy Work

Trans-boundary  
Initiatives

Communication &  
Education

Partnerships





# Healthy Communities : Healthy Ecosystem

## SUCCESSFUL COMMUNITIES

- The four Noble Truths
  - Community Health and Education
  - Economic Empowerment
  - Natural Resource Management
  - Local Governance and Social Sustainability





# Acknowledgements

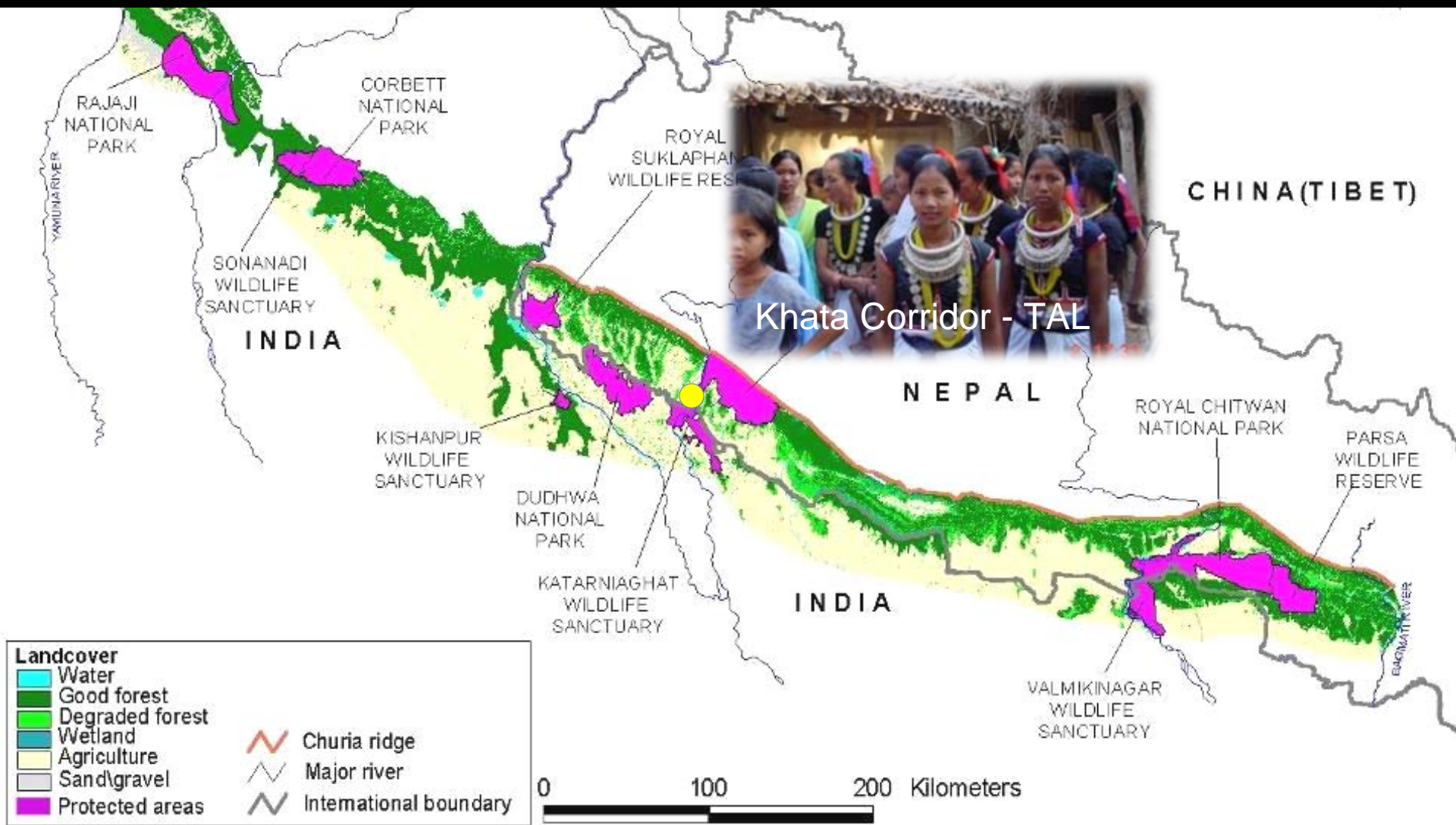
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- We gratefully acknowledge the support of Johnson & Johnson



# Terai Arc Landscape







# Baseline

- Villages resource poor; average family - less than 1/2 hectare of land
- Population -18,300; average per capita annual income \$48
- 3 hours walk to nearest clinic; access to family planning limited
- Dysentery, eye infections, pneumonia, typhoid, and diarrhea common
- Risk of HIV/AIDS due to male household members work in India much of yr.
- In home cooking leaves women and children vulnerable to respiratory infections



# Threats and Opportunities







# Improved basic health care facilities and services



- Permanent community managed health clinic with basic clinical tools established in Khata
- An Auxiliary Nurse Midwife (ANM) employed on a full-time basis

- **729** patients received specialist health care
- **2851** patients received general health check ups
- **28** community members trained in first aid, provided with first aid kits and 15 stretchers





# Reproductive health and family planning



- Couples using family planning (temporary and permanent) increased from 4,053 in 2006 to 4,405 in 2008, and the Contraceptive Prevalence Rate increased from 43% in 2006 to 73% in 2008.

- **32** Female Community Health Volunteers trained as advisors in family planning
- **15** youth peer educator groups, each with 20 members, trained in various forms of outreach







# Improved sanitation and safe drinking water



- **172** locally made 'Kanchan' arsenic filters distributed in areas with high level of arsenic

- **44** safe drinking water hand pumps installed in 14 Community Forest User Groups



- **791** Inexpensive latrines were constructed to improve sanitation in the area



# Improved conservation awareness



- More than **4,000** people reached through campaigns and cultural programs on issues of population, health and environment

- Extension material produced and distributed to **375** participants.







# Conservation management



- **136** biogas plants w/toilet attached and **100** Improved cooking stoves reduced vulnerability of women and children to acute respiratory infections
- **712** Metric Tons of fuelwood saved annually reducing pressure on the adjoining forests
- **3 Hrs/day** of women's time and work saved – leaving more time for child care and natural resource management

- Stall Feeding and intro of Improved cattle breed, increased household income and improved child nutrition





# IMPACTS – Population and Health



- Affordable and reliable health services for 18,300 people in remote villages
- Significant increase in contraceptive use and family planning methods
- Improved water, sanitation = reduction of disease
- 20% of the population has access to arsenic free clean drinking water





# IMPACTS - Environment



- Increased forest cover and quality

- Reduction of Human Wildlife Conflict



- Conservation supportive communities



# Lessons Learned

- Integrated PHE programs can have far reaching impacts on the well being of both people and environment
- Building the project on existing community institutions and human resources is cost effective and produces quick impacts
- Multi-stakeholder coordination is a must for sustaining the PHE initiative
- Establishing an endowment fund or formalizing PHE in community forest operation plans will help ensure financial sustainability of the project
- Institutional linkages between the government health program / institutions and PHE initiatives increases program buy-in and sustainability
- A well defined monitoring plan is crucial to measuring impact





# Scaling Up

- Support from USAID and Johnson and Johnson helped in establishing a foundation for the multi-year Population, Health and Environment Alliance and has provided an opportunity to scale up successes and best practices
- WWF recently partnered with USAID's Office of Population and Reproductive Health and Johnson & Johnson in a \$3m, 3 year Global Development Alliance which is supporting scaling up of Population Health and Environment in Nepal, Kenya and Democratic Republic of Congo
- In Nepal, the project is taking results from the Khata corridor, and lessons from other WWF PHE projects in other countries, and is scaling up PHE to the Lamahi bottleneck and Basanta corridor



# THANK YOU

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