

Challenges and Opportunities for Collaboration in Infectious Disease in Nepal: Experience from Kathmandu University

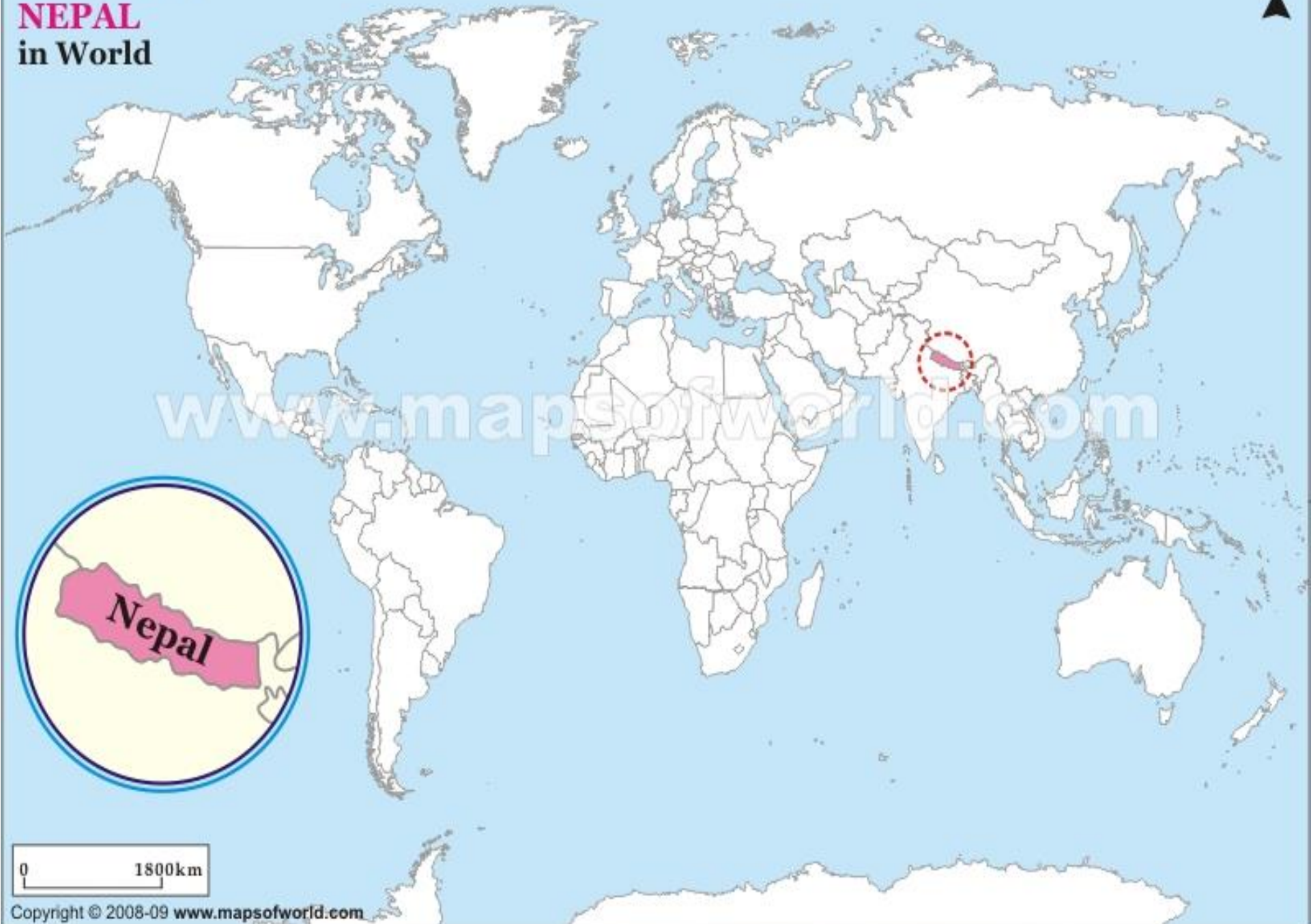


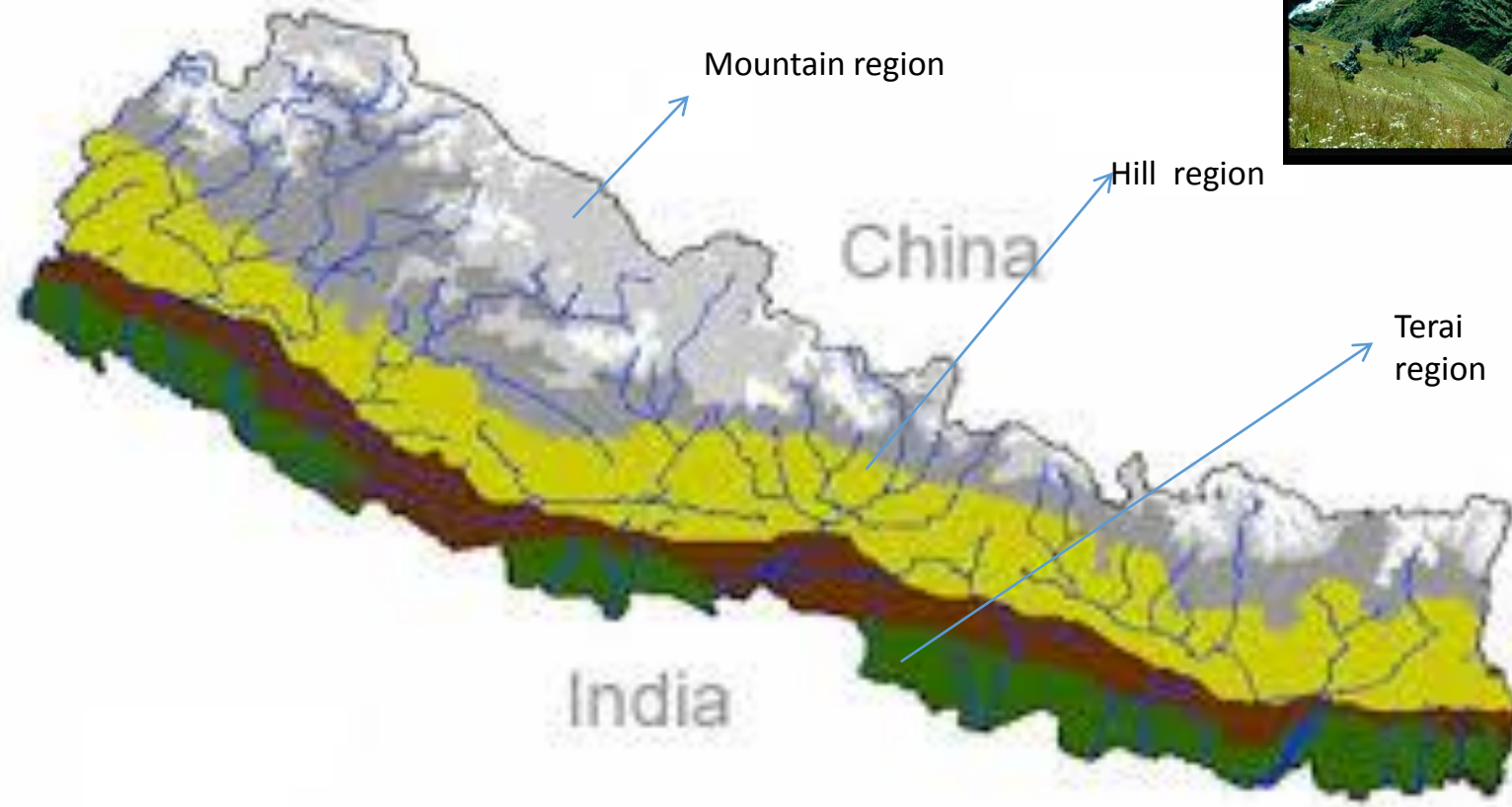
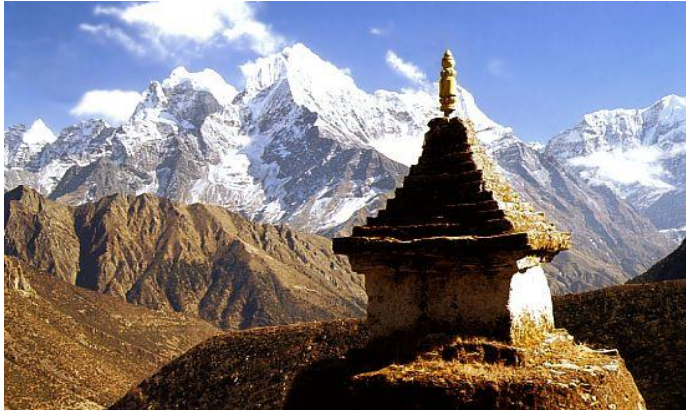
Dr Dipesh Tamrakar

NAMASTE



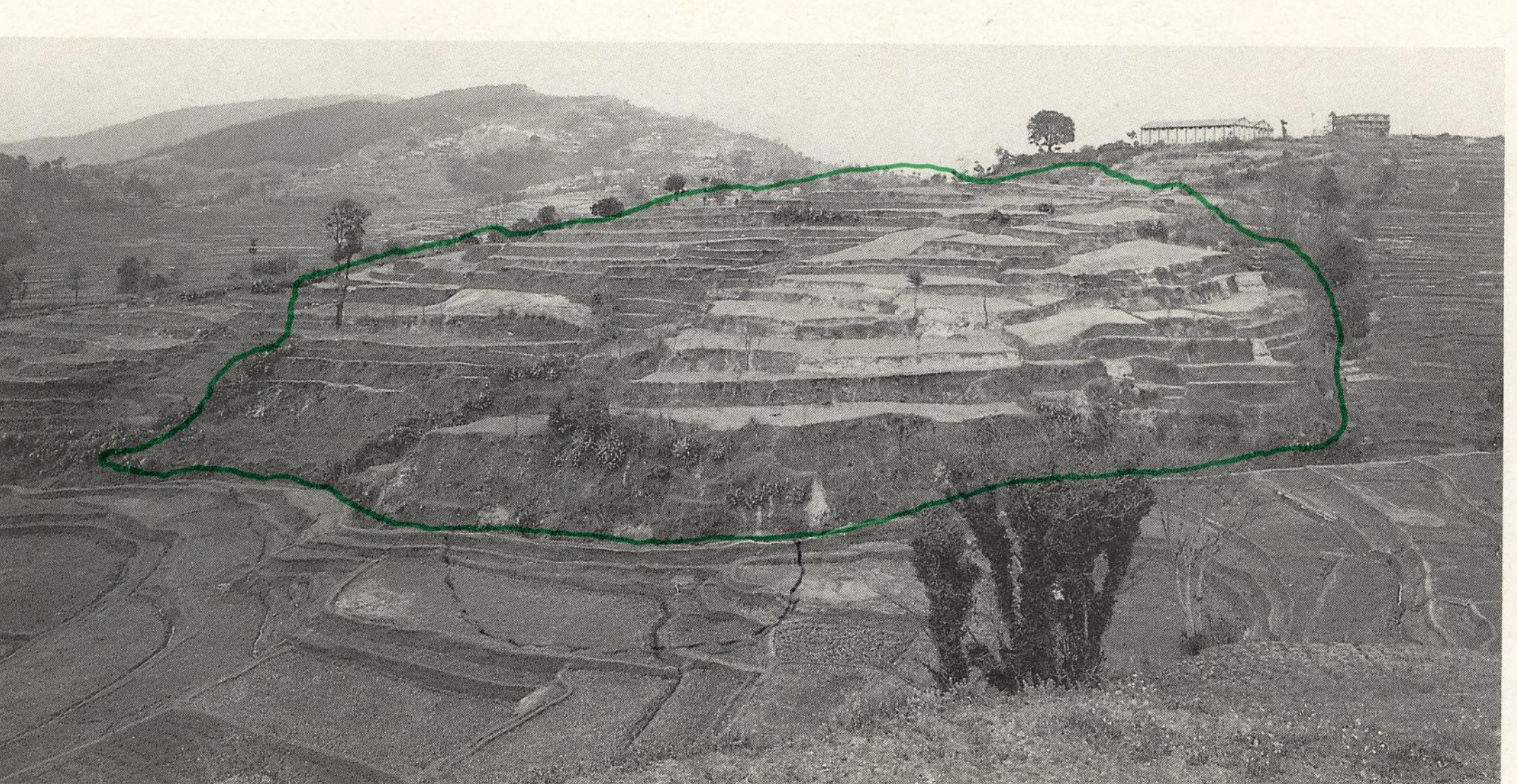
**Location of
NEPAL
in World**

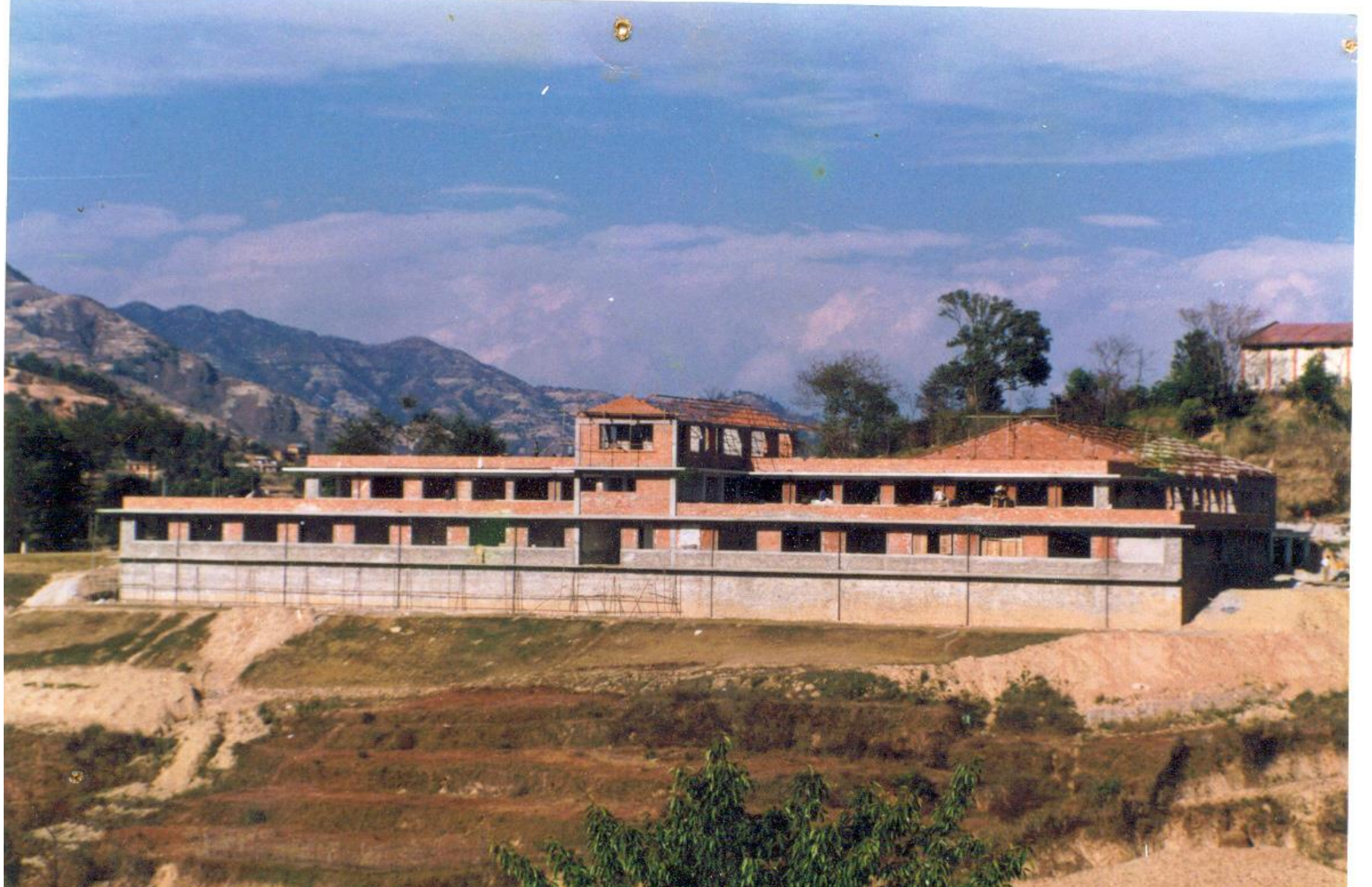




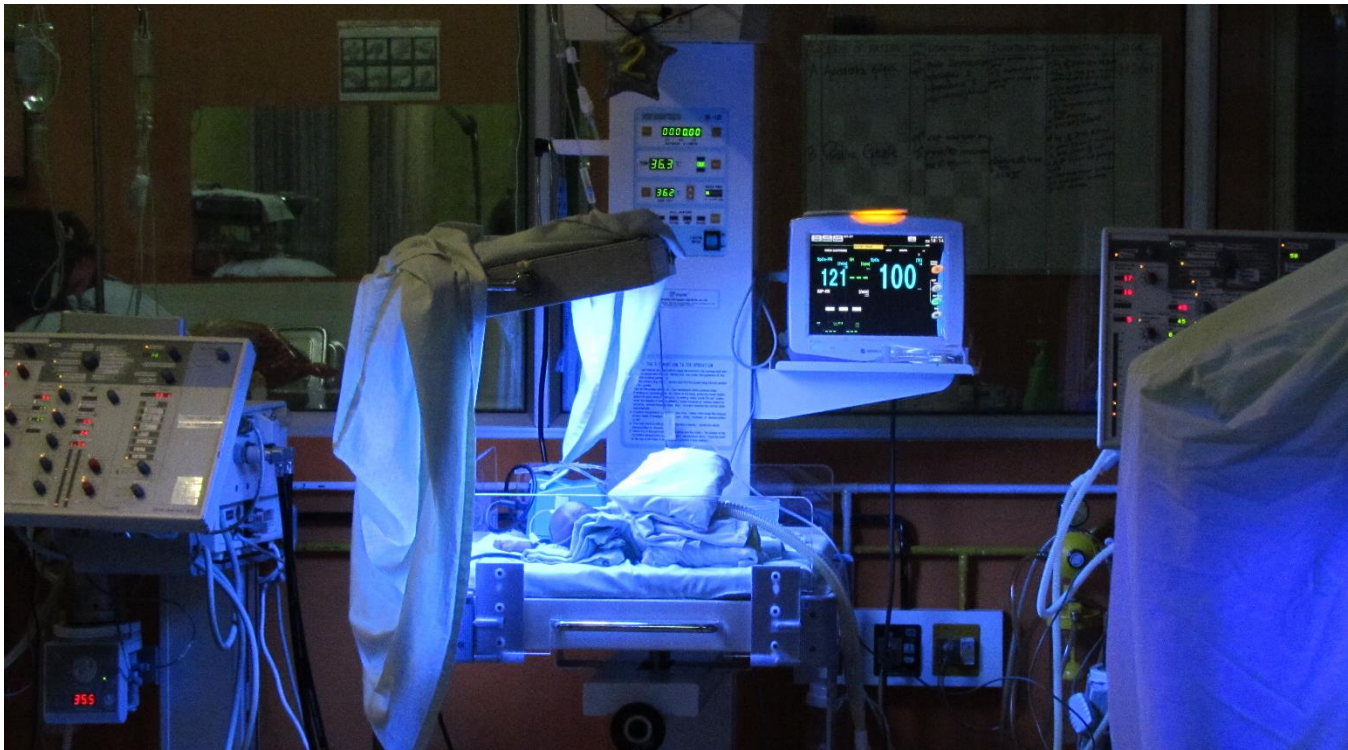


Dhulikhel Hospital- Kathamndu University Hospital





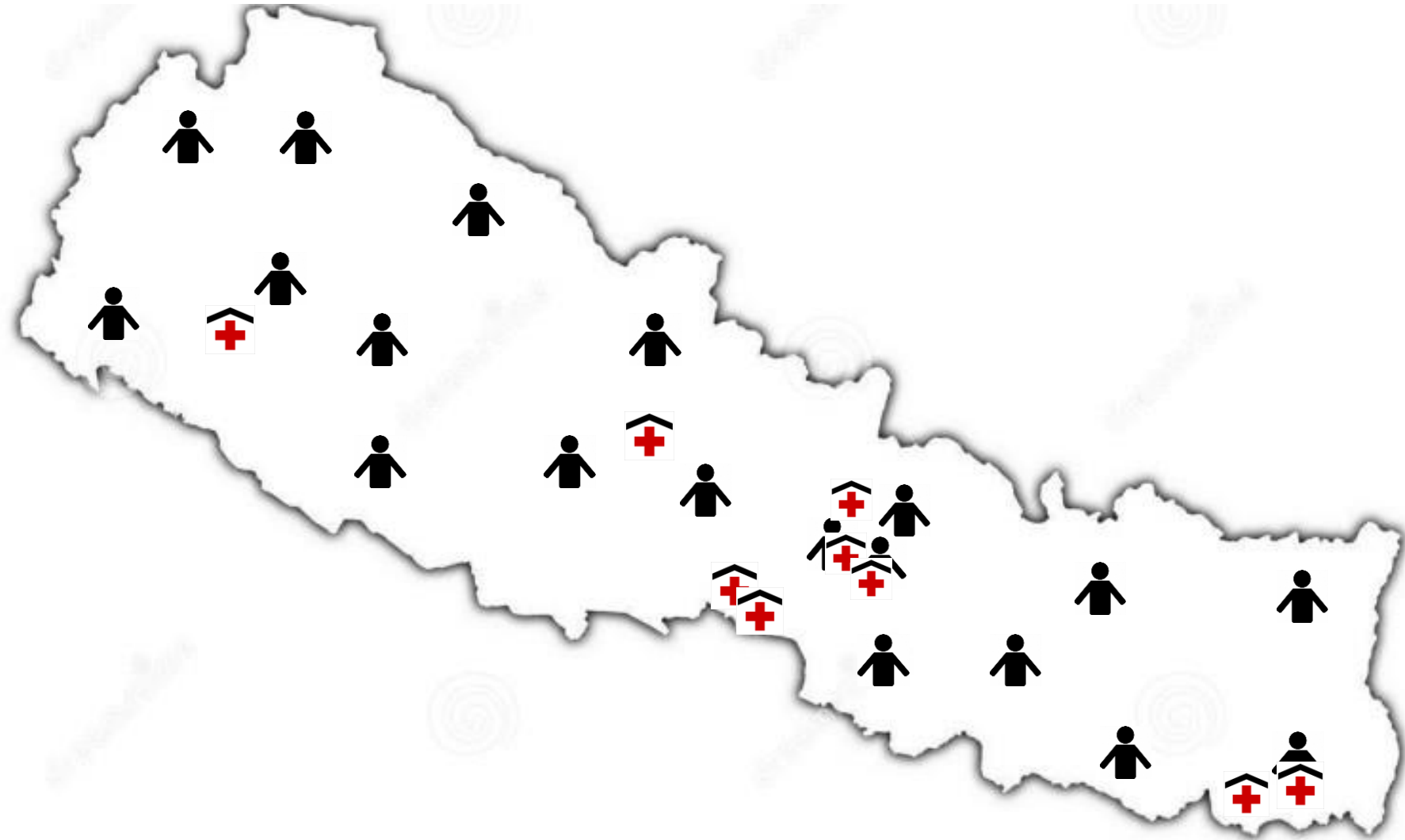














Dhulikhel Hospital
Department of Community
Programs















धुलिखेल अस्पताल
सलम्बु स्वास्थ्य केन्द्र
साम्तीफेदा-३, काभ्रे









निः शुल्क मोतियाबिन्दु

शल्यक्रिया शिविर

बैशाख १२ र १३ गते

लिखेल अस्पताल मानेखर्क स्वास्थ्य केन्द्र
सिन्धुपाल्चोक





Bahunepati HC



Baluwa HC



Dapcha HC



Bolde HC



Dhunkharka HC



Kattike Deurali HC



Hindi HC



Chhatre Deurali HC



Manekharka HC



Godamchaur HC



Salambhu HC



Kharikhola HC



Yangrima School Clinic

Public Health
and
Community Development
Programs



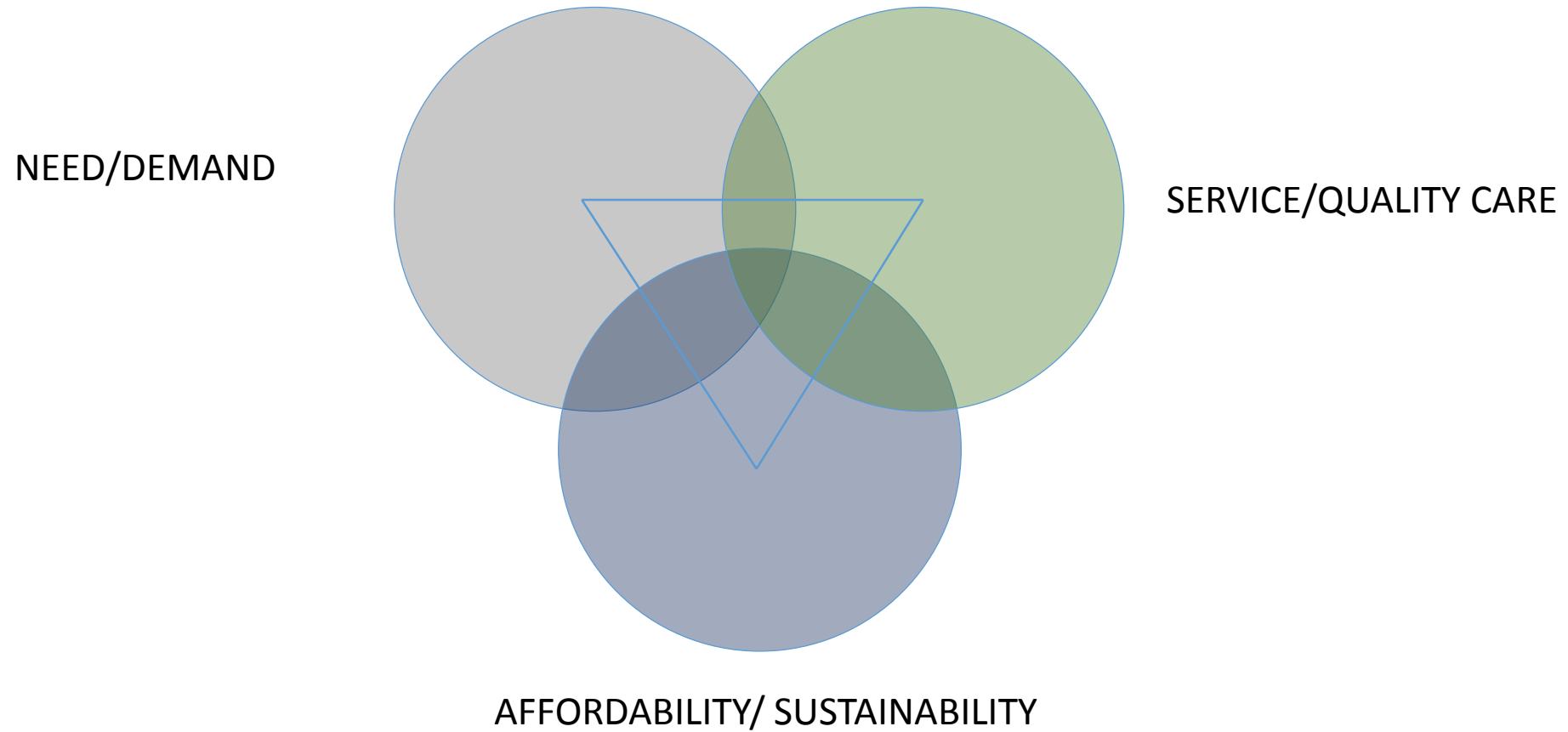
THE MICROFINANCE EXPERIMENT







A MODEL OF HEALTH INSURANCE FOR RURAL NEPAL



Academic Program

- Students placement
 - Community diagnosis
 - Community interventions
 - School Health Program
 - Family Health Exercises
- Interns placement
 - Primary health care
 - Public health program





Global Health Programs

- Clerkships
- Structured GH training programs
- Research
- Internship
- Joint fellowship/training programs





School of Public Health

2. M.Sc. in Public Health (Global Health)

S.N.	Lecture	Credit Points
Year 1, Semester 1	Basic Concept in Public Health I	3 Cr
	Basic Concept in Public Health II	3 Cr
	Epidemiology I	3 Cr
	Biostatistics I	3 Cr
	Epidemiology II	3 Cr
	Biostatistics II	3 Cr
	Health Education and Health Promotion	2 Cr
	Recent Advances in Public Health	1 Cr
	Data Analysis and Statistical Software Usages	-
Year 1, Semester 2	Intro to Research Methodology	3 Cr
	Proposal Writing and Scientific Communications	2 Cr
	Social and Behavioral Science and Ethics in Health	2 Cr
	Health System and Public Health Planning (National and International)	2 Cr
	Qualitative Research Method	2 Cr
	Environmental and Occupational Health	3 Cr
	Community Oriented Health Practices	2 Cr
	Communicable Diseases	2 Cr
	Non-communicable Diseases	2 Cr

1. MSc. in Public Health – Epidemiology

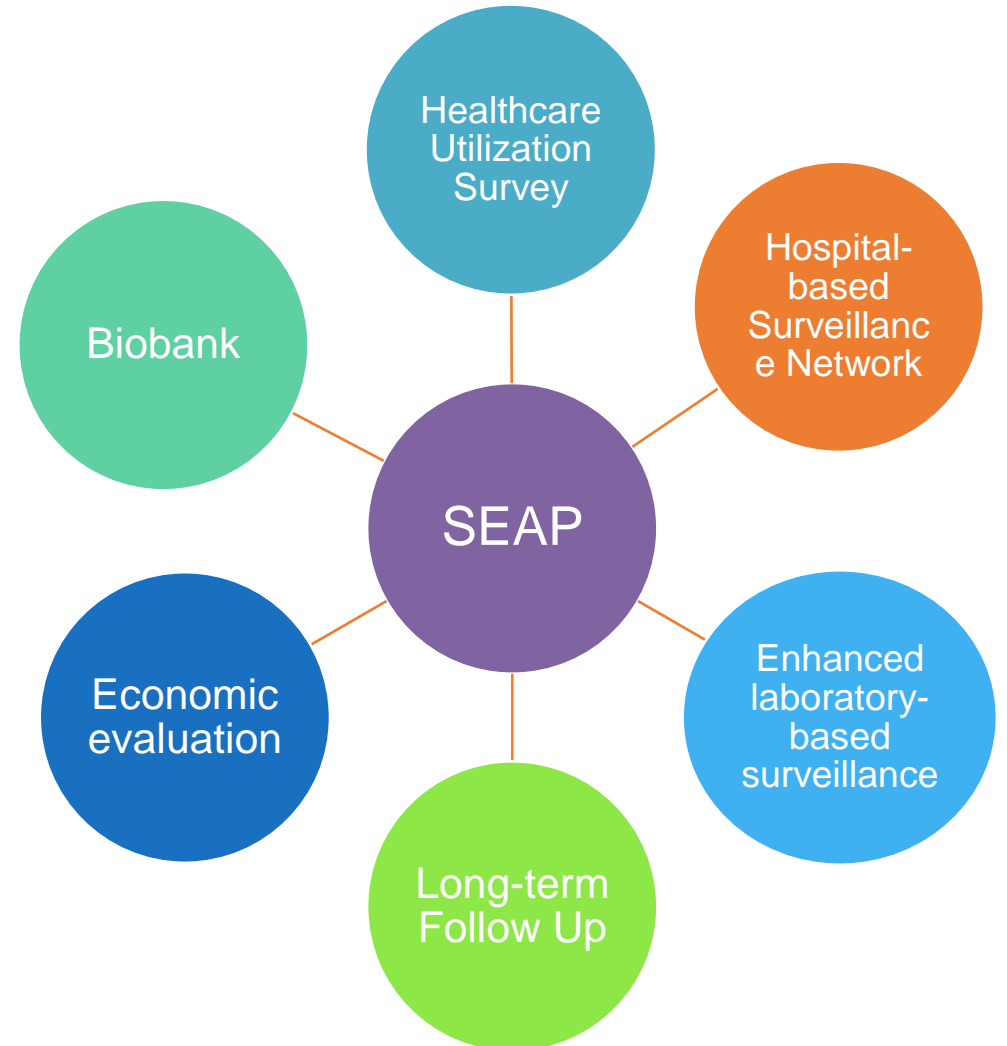
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	Biostatistics II	3 Cr
	Health Education and Health Promotion	2 Cr
	Recent Advances in Public Health	1 Cr
	Data Analysis and Statistical Software Usages	-
Year 1, Semester 2	Introduction to Research Methodology	3 Cr
	Proposal Writing and Scientific Communications	1 Cr
	Social and Behavioral Science; Ethics in Health	2 Cr
	Health System and Public Health Planning (National and International)	2 Cr
	Qualitative Research Method	2 Cr
	Environmental and Occupational Health	3 Cr
	Community Oriented Health Care Practice	2 Cr
	Communicable Diseases	2 Cr
	Non-communicable diseases	2 Cr

RESEARCH AND DEVELOPMENT



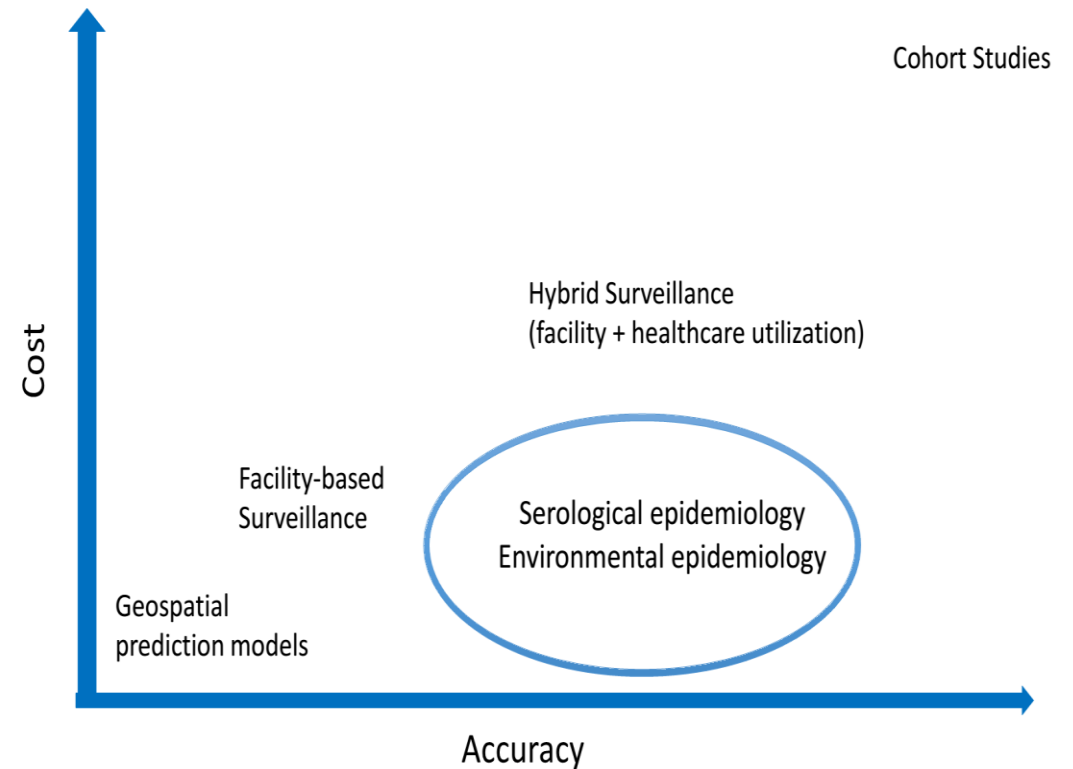
Surveillance of Enteric Fever in Asia (SEAP)

- multi-country, multi-site, prospective study (Bangladesh, Nepal, Pakistan)
 - designed to fill knowledge gaps regarding the impact of enteric fever in Asia
- Similar project in Africa: Severe Typhoid in Africa (SETA) Program
- Both projects funded by the Bill & Melinda Gates Foundation



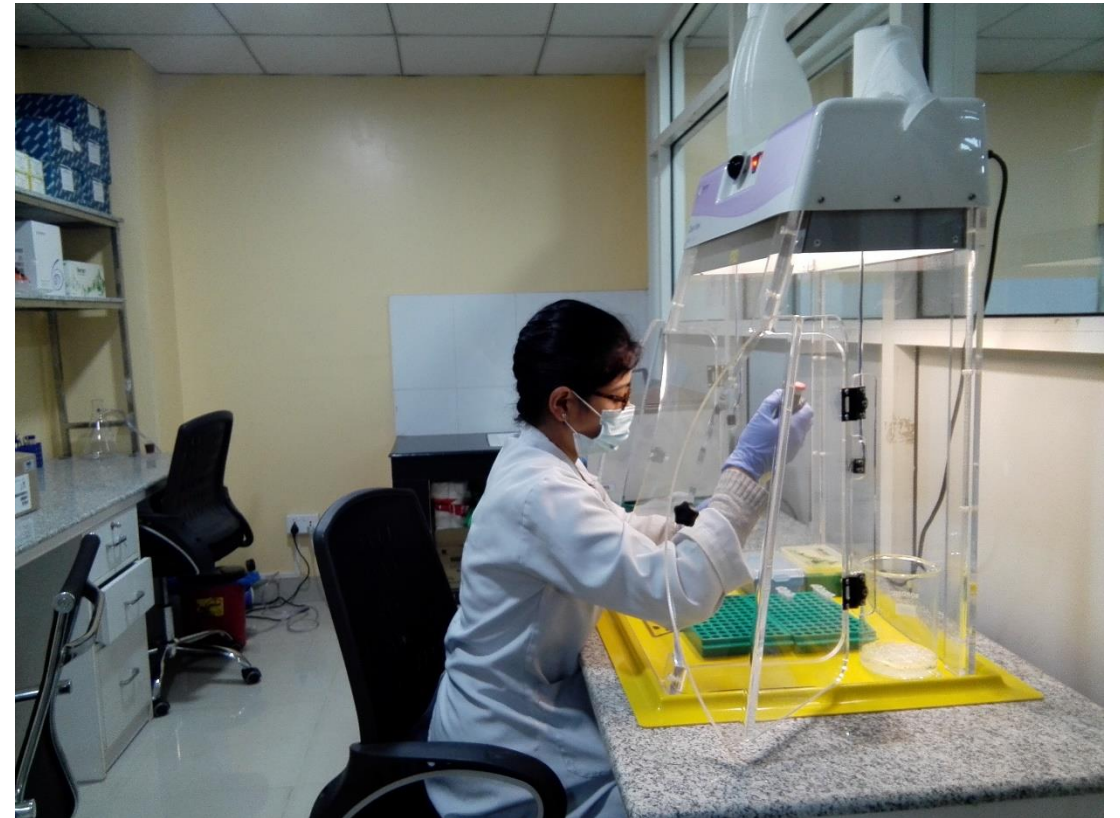
Serological Epidemiology and Environment Surveillance

- add-on studies to the existing surveillance infrastructure of SEAP
- Funded by Bill Melina Gates Foundation



Serological Epidemiology of Typhoid Carriage

- cohort study of 1,500 patients undergoing elective cholecystectomy
- assess the association of anti-YncE with *S. Typhi*/*Paratyphi A* carriage
- assess the potential utility of anti-YncE levels as a test of cure.
- Funded by NIH



Phase III Multicentre, Observer-Blinded, Randomized, Active Controlled, Immune Non-inferiority and Safety Trail of Vi-DT Vaccine

- Four site: Kanti children Hospital, Dhulikhel Hospital, Nepalgunj Hospital, BPKIHS
- Sponsor: International Vaccine Institute

	Age group	N	D0
Group A (6 mo - 45 yrs) 450 participants	6 mo-<2 yrs	150	(25 µg 0.5 mL) (Vi-DT) Test Lot 1
	2- <18 yrs	150	
	18-45 yrs	150	
Group B (6 mo - 45 yrs) 450 participants	6 mo-<2 yrs	150	(25 µg 0.5 mL) (Vi-DT) Test Lot 2
	2- <18 yrs	150	
	18-45 yrs	150	
Group C (6 mo - 45 yrs) 450 participants	6 mo-<2 yrs	150	(25 µg 0.5 mL) (Vi-DT) Test Lot 3
	2- <18 yrs	150	
	18-45 yrs	150	
Group D (6 mo - 45 yrs) 450 participants	6 mo-<2 yrs	150	25 µg 0.5 mL (Typbar TCV®)
	2- <18 yrs	150	
	18-45 yrs	150	
			MMR for age eligible participants

Aetiologies of febrile illness

The Journal of Infectious Diseases

SUPPLEMENT ARTICLE



High Rates of Enteric Fever Diagnosis and Lower Burden of Culture-Confirmed Disease in Peri-urban and Rural Nepal

Jason R. Andrews,¹ Krista Vaidya,⁵ Caryn Bern,² Dipesh Tamrakar,⁵ Shawn Wen,³ Surendra Madhup,⁵ Rajeev Shrestha,⁵ Biraj Karmacharya,⁵ Bibush Amatya,⁵ Rajendra Koju,⁵ Shiva Raj Adhikari,⁶ Elizabeth Hohmann,⁴ Edward T. Ryan,⁴ and Isaac I. Bogoch⁷

Particulars	N (%) (N=4309)
Blood Culture Positive	176 (4.1)
<i>Salmonella typhi</i>	76 (49) (N=176)
<i>Staphylococcus aureus</i>	26(15)
<i>Salmonella paratyphi</i>	22(13)
<i>Escherichia coli</i>	20(11)

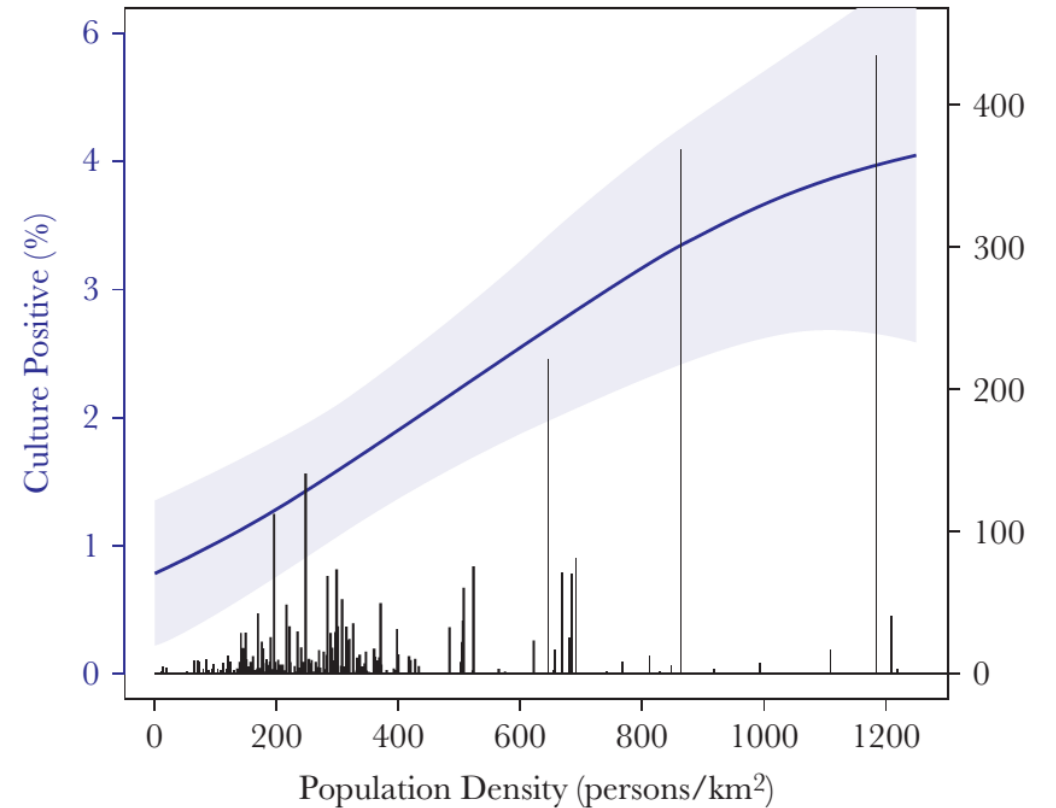


Figure 4. Culture positivity (blue line with shaded 95% confidence intervals) according to population density of the participant's home locality. Number of study participants living in localities for a given population density is depicted by black histogram (right axis). Curve and 95% confidence intervals were produced by a generalized additive model.

Research Opportunities:

- **Undifferentiated febrile illness: emerging disease, potential diagnosis**
- **Climate Change and infectious disease**
- **Clinical Trail**
- **Implementation research**
- **Antimicrobial Resistance**





Potential
challenges

How do we do it?



We can start from small!!



Every step is nothing but a stepping stone



**Over every mountain there is a path,
although it may not be seen from the valley.**

Theodore Roethke

**What is more bothering is not the magnitude of the challenges we face, but rather
the ignorance of the opportunities we have!!**

Thank You

