



Integrating Education and Action for One Health
Afghanistan | Bangladesh | Bhutan | Nepal

Outputs and Impacts of One Health Capacity Building Programmes in Asia

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Funded by Implemented by In Collaboration with



Integrating Education and Action Approach

- Collaborative One Health capacity-building programs developed and delivered in South Asia in partnership with Government institutions, Universities & NGO.
- “Education into action” approach focussed on infectious disease epidemiology and biosecurity.
- Funded by European Union and World Bank



Building Regional One Health Capacity

Towards a Transdisciplinary Approach



Level 1

Working from separate disciplinary bases to address common problems

Multi-disciplinary



Level 2

Working together but from separate disciplinary bases to address common problems

Inter-disciplinary



Level 3

Working together to create a shared conceptual framework drawing together theories, concepts and approaches to address common problems

Trans-disciplinary

Integrating Education and Action Approach

Combines university education, engagement & applied learning

Two-year *One Health Epidemiology Fellowship Program* delivered to cohorts of medical doctors and veterinarians in-country:

- **Study together** in a Master's degree program in epidemiology and biosecurity (MPH, MVM, MSc)
- **Engage within local collaborative frameworks to conduct:**
 - **Situation assessments and collaborative field research** focused on priority zoonoses
 - **Economic evaluations of disease control policies**
- **Develop novel zoonotic disease outbreak scenarios** for training in-country personnel
- training One Health trainers
- **National and regional workshops and symposia**



Strengthening collaborative frameworks in-country

Postgraduate Education: of in-country cohorts

- Joint education of human, animal and wildlife health professionals to Master's degree level
- Delivered in the target countries in collaboration with local institutions
- Teaching One Health epidemiological approaches to zoonotic disease detection, investigation, management & policy
- Learning together builds foundational knowledge, mutual understanding and enduring relationships



Builds One Health Foundation

Practical Action: Collaborative Applied Epidemiology

Focussed on priority zoonoses - Using a collaborative approach to:

- Situation assessments
 - Searching for and summarising available information
- Design and implementation of applied epidemiological field research projects
 - Research to address critical gaps
- Applied operational training for the wider collaborating groups
- Broaden engagement through national and regional workshops and symposia

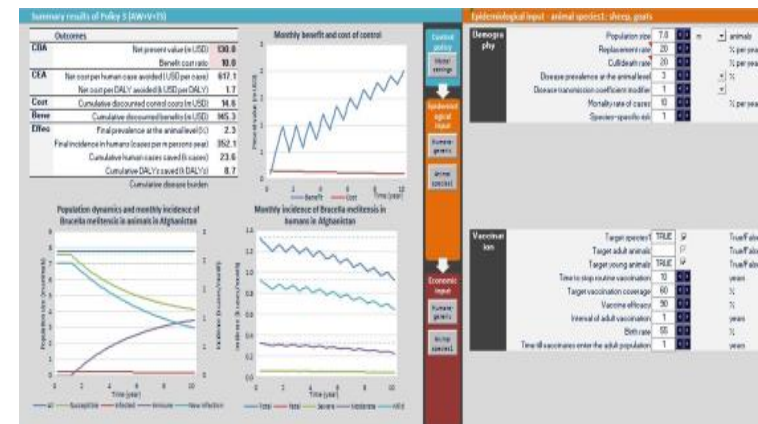
Country	Disease 1	Disease 2	Disease 3	Disease 4
Afghanistan	Brucellosis	Q fever	Rabies	Toxoplasmosis
Bangladesh	Avian influenza	Nipah virus	Anthrax	Crimean Congo Haemorrhagic fever
Bhutan	Rabies	Scrub typhus	Hydatidosis	Avian influenza
Nepal	Brucellosis	Japanese encephalitis	Porcine cysticercosis	Zoonotic visceral leishmaniasis



Builds Practical One Health Experience

Practical Action: Economics & Policy Evaluation

- Integrates all aspects of the program
- Structured One Health approach to zoonotic disease control economics and policy evaluation
- Focus on reducing the impact of zoonotic diseases on human and animal populations
- Developed supportive tools for use in-country
 - Templates for design, evaluation, reporting and recommendations
 - HandiTools, HandEcon



Strengthens One Health policy development

Growing a One Health Workforce and Future Leaders

Outputs to date

- **Completed three capacity building programs** funded by the European Union and World Bank in South Asia, China and Mongolia since 2010
- Each **2–4 years in duration**
- **108** public health, animal health and wildlife health professionals **graduated to date.**
- **Impacts extended to 2,200 participants** involved in zoonotic disease investigations, policy evaluation and further training across the region



Success factors

Focus on **public sector engagement** through in-country consultation with:

- **Government and regulatory authorities** to promote awareness of the program and its objectives and to gain necessary permissions and support
- **Universities and qualifications authorities** re program recognition and approvals
- **Capable organisations in the public health, animal health and wildlife health sectors** seeking collaboration and advice



Success factors

- **Rigorous selection** of Fellowship Program participants
- **Establish culture of communication and collaboration**, and communicate frequently with all parties by Skype and in-person
- **Create highly interactive** teaching and tutor support
- **Embrace cultural and sectoral differences**



Success factors

- Aim to shift practices from silos towards **inter- and trans-disciplinary approaches**
- Require participants to develop and **practice a collaborative One Health approach** in both academic and applied epidemiology components
- Applied projects provide **practical experience in One Health** project design, budgeting, implementation, data analysis, interpretation and reporting, within the collaborative organisational frameworks in each country



Impacts

Multi-sectoral cohorts of health professionals returned to service across South Asia

- With new knowledge, skills and relationships
- Connected with each other and with government decision makers
- Working together applying inter- and trans-disciplinary epidemiological approaches
- Strengthened capacity to investigate and manage endemic and emerging zoonotic diseases using a One Health approach



Growing a One Health Workforce and Future Leaders

Impacts

- **Graduates recognised** and have risen to senior positions in national governments and international agencies (WHO, FAO, OIE) where they're applying their knowledge and skills
- Programs and graduates have **supported development of national One Health strategies and operational frameworks** in the target countries
- **Senior policy directors** from the human health, animal health and wildlife sectors **have engaged** with:
 - One Health concept and cross-sectoral zoonotic disease control policies, based on sound epidemiology, economic analysis and a One Health approach
 - One another, both within and between countries, building relationships and foundations for cooperation

Growing a One Health Workforce and Future Leaders

Impacts

- Collaborative relationships strengthened between key government sector institutions, universities and NGO working on zoonotic disease control in each country.
- Much greater understanding amongst these groups of how One Health approach can improve research outcomes and zoonotic disease control
- New zoonotic disease control policies have been introduced based on policy recommendations made, eg for scrub typhus control in Bhutan
- Scenario based training now used for in-service training of district human & animal health officials responsible for disease reporting and outbreak investigation

EU Results Oriented Monitoring

“The project is **highly relevant to the needs of the target governments**, fighting the ‘silo effect’ between key Ministries and sectors, and strengthening collaborative relationships within and between countries. All players display strong commitment to the One Health agenda and the project.”

“The implementation mechanism is appropriate; **quality is very high** and the project **contributes to the national and international One Health agenda.**”

“Project in itself is **sustainability oriented** through its emphasis on capacity building, cutting edge science, innovative tools and relationship building.”

Ex-post Program Evaluation

- National stakeholders in each country reported **strong positive impacts on applied skill base and collaborative attitudes**
- **Strongly expressed need to continue to build much-needed critical mass of One Health professionals** educated together, to the level achieved in this program

Relevance	83%
Effectiveness	86%
Efficiency	84%
Impact	82%
Sustainability	71%
Overall	81%

Summary

- The Master's degree program **builds in-depth knowledge**, strong **cross-sectoral relationships** and **powerful motivation** amongst cohorts and participants
- Cohorts of Fellows **serve as key resources** within the collaborative frameworks
- **Collaborative frameworks expand capacity-building** to a wider network of individuals and institutions in each country **through the applied program components** including national and regional workshops



Summary

- Regional workshops further **expand engagement, relationships and knowledge-sharing**
- Stakeholders report that **cohorts** trained in this way **perform very effectively on their return to service**
- **Joint education** of professionals from different sectors **is an effective way of building understanding and trust** between disciplines, breaking down barriers and misconceptions between the medical and veterinary professions.
- **“One health, one thinking “**



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