



# National Institute of Hygiene and Epidemiology International Cooperation, 2008

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Assoc. Prof. Nguyen Tran Hien, MD., MPH., PhD  
Director

National Institute of Hygiene and Epidemiology, Viet Nam

# HISTORY

- **1926: Hanoi Pasteur Institute was founded as a component of the Indochinese Pasteur Institute system.**
- **3 October 1946: Hanoi Pasteur Institute was handed over to the Vietnamese Ministry of Health and was renamed Vietnam Institute of Microbiology.**
- **25 March 1961: Hanoi Institute of Hygiene and Epidemiology**
- **30 November 1998: National Institute of Hygiene and Epidemiology**



# FUNCTIONS

- 1. Conducting scientific research in epidemiology, medical microbiology, immunology and molecular biology; developing new vaccines and biological products for human;**
- 2. Providing postgraduate training and retraining**
- 3. Supporting and supervising the network of preventive medicine nationwide.**
- 4. Directing some national health programs: EPI, HIV surveillance, Dengue**
- 5. Advising and making proposals to the Ministry of Health on strategies and measures of preventive medicine to limit and eliminate infectious diseases;**
- 6. To provide services for preventive medicine & sciences and technology**



# THE ORGANIZATION OF NIHE

## BOARD OF DIRECTORS

Scientific Committee

### TECHNICAL DEPARTMENTS

Dept. of Epidemiology

Dept. of Bacteriology

Dept. of Virology

Dept of Immunology and Molecular Bio.

Dept. of HIV/AIDS

Dept. of Biosafety

Dept of Medical Entomology and Zoonoses

National EPI Office

Dept. for Training and Research Management

Dept. for Community Health and Preventive Medicine Network Coordination

Center of Experimental Animals

Center for Preventive Medicine Services

International Center for Biomedical Research

### ADMINISTRATION & LOGISTIC DEPTS

Administration Dept.

Personnel Dept.

Planning Dept.

Material and Medical Equipment Dept.

Finance & Accounting Dept.

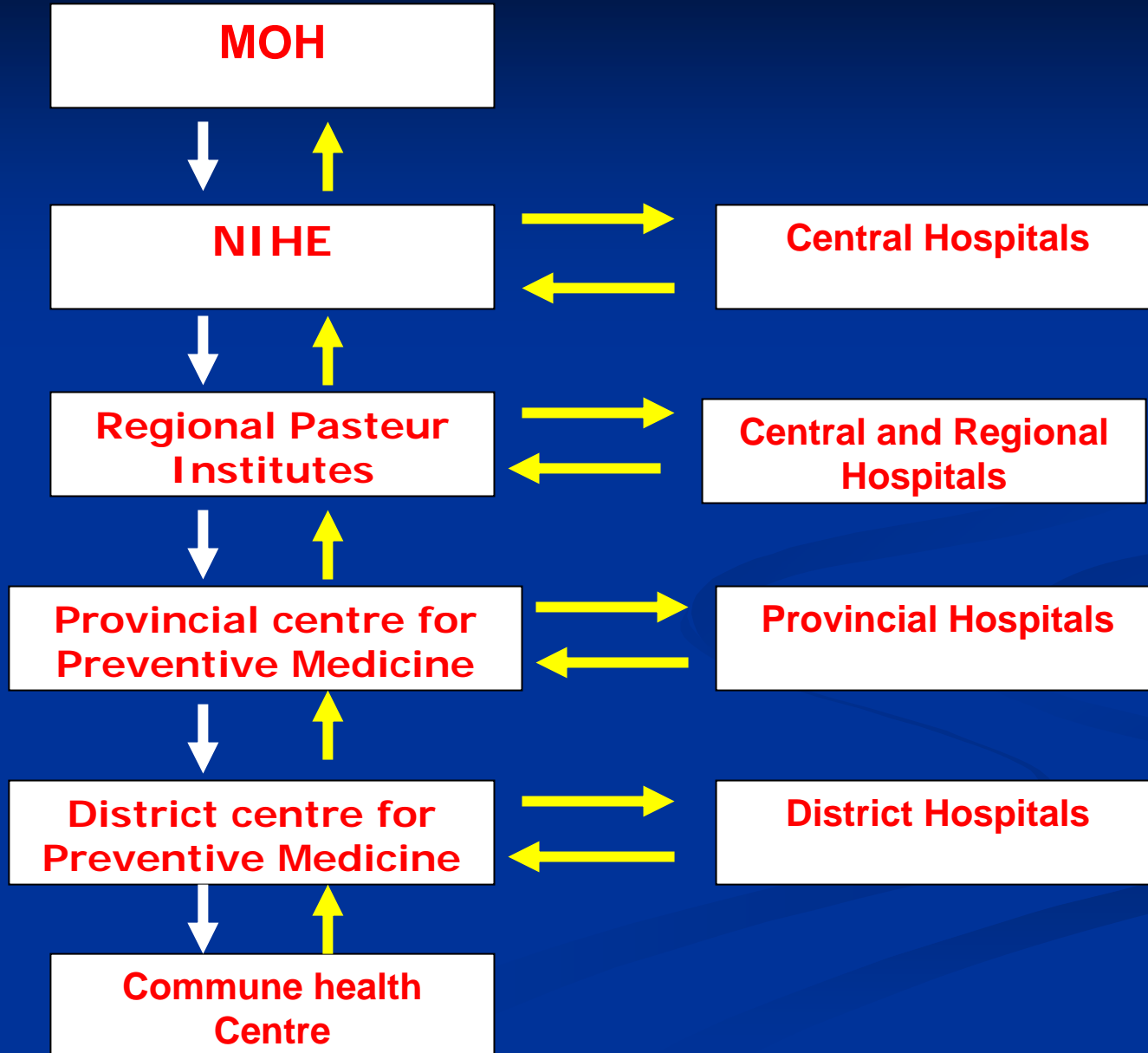
Information Technology Dept.

International Cooperation Dept.

# PERSONALS

<b>Level</b>	<b>NIHE</b>
<b>Professor</b>	<b>4</b>
<b>Assoc. Prof.</b>	<b>16</b>
<b>Medical Doctor</b>	<b>32</b>
<b>Master</b>	<b>37</b>
<b>Bachelor</b>	<b>90</b>
<b>Other</b>	<b>16</b>
<b>Official Total</b>	<b>195</b>
<b>Contracted</b>	<b>115</b>
<b>TOTAL</b>	<b>310</b>

# COMMUNICABLE DISEASE SURVEILLANCE SYSTEM



# DISEASE PATTERN IN VIETNAM

- **In the past ten years, largely due to public health efforts, a number of major infectious diseases in Vietnam has been remarkably reduced.**
  - **The morbidity and mortality associated with poliomyelitis, tetanus, cholera, typhoid, shigellosis, pertussis, meningitis, diphtheria, measles, mumps, hepatitis, plague, rabies and malaria have significantly decreased.**
  - **Poliomyelitis was eradicated in the years 2000 and neonatal tetanus was eliminate in 2005.**
- **However a number of infectious diseases such as HIV/AIDS, tuberculosis, dengue, viral encephalitis, diarrheas ... remain major public health problems.**
- **Vietnam seem to be a hot country for the emergence of new infectious diseases which include SARS and avian influenza.**

# DISEASE PATTERNS VIETNAM

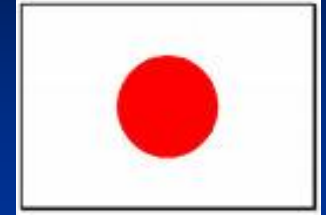
- SARS outbreak occurred for only two and half months (from 23 Feb. to 8 Apr. 2003) it caused 5 deaths among 63 patients, (case fatality rate of 7.9).
- From late 2003 until now, avian influenza H5N1 has caused:
  - endemic among poultries, more than 40 million being slaughtered.
  - 5 waves of human avian influenza epidemics. To date, a total of 56 of 106 human cases have resulted in death (case-fatality rate of 47%).
- Non-communicable diseases such as cancer, cardiovascular, diabetes, injury are increasing
- As in many developing countries with limited resources, expertise and infrastructure, Vietnam is facing many challenges to carry out significant “translational research” in the area of infectious diseases
  - for a better understanding of disease pathogenesis and
  - for the development of new diagnostics and biological products for treatment and prevention.

# International Cooperation, 2008

- In 2008, Total of 32 projects/programs have been implemented by NIHE, included:
  - 7 new projects
  - 25 continuous projects from last year
  - 4 projects completed
- Total budget for all projects accounted for 41 millions USD.
  - 50% ODA funding
  - 50% from International Centers/Organizations/Universities/Centers, NGOs

# Foreign Governments

- Government of Japan
- Government of United States
- Government of Denmark
- Government of Ireland
- Government of Luxembourg
- Government of France



# International Organizations



# International Institutes/Universities



# **Focuses of International Cooperation, 2008**

# National Expanded Program Immunization

Strengthening the Cold Chain in the Framework of EPI (Luxembourg Gov)

5 in 1 vaccine trial project (GAVI)

Formative research for informing the introduction of HPV vaccine in Vietnam (PATH)

Immunization services support (GAVI)

Second shot of Measles vaccine program (GAVI)

Evaluation of different HPV vaccine delivery strategies in Vietnam (PATH)

Setting of pilot model of Japanese Encephalitis Disease surveillance in Vietnam (PATH)

Additional Measles vaccination campaign for 22 mountainous provinces (WHO)

# Implement supplementary Measles vaccination campaign for 22 mountainous provinces funded by WHO (8/2007-12/2008)

- *Long-term objective:*

- To eliminate measles by 2010 with measles morbidity of  $< 1/1,000,000$  population according to WHO standards

- *Short-term objectives:*

- To ensure 3,881,320 children in 209 districts being vaccinated against measles in campaigns, reaching 95%.
- To ensure safe injections and quality vaccine

## 2. Setting up a pilot surveillance system of Japanese encephalitis in Thai Binh and Binh Duong provinces funded by PATH (2008-2009)

- Set up a suitable surveillance model of JE in Thai Binh and Binh Duong provinces in 2 years: 2006-2007
- Reinforce the laboratory system for JE surveillance purposes
- From surveillance model of JE in these two provinces, lessons learned will be drawn to help JE surveillance model dissemination throughout the country scale.
- Help EPI in term of seeking opportunities to support JE immunization expansion

### **3. Immunization Services Support funded by GAVI (2008-2011)**

- Immunization coverage for adequate 7 types of vaccine ( BCG, diphtheria , pertussis, tetanus , Hep B , measles ) reach more than 90% for children under 1 year of age on the district level in 2010 .
- Strengthening all activities of AEFI surveillance system
- Improving the immunization in practice and service management among health workers at all levels

## **4. Implement the second doses Measles vaccine in EPI funded by GAVI (2008-2010)**

- To ensure children under 6 years old in 64 provinces/city received the second doses measles vaccine reaching 95% from funded by GAVI in period 2007-2009.
- To ensure safe injections and quality vaccine

# 5. Strengthening the cold chain in the framework of EPI funded by Luxembourg Government (2007-2010)

- General objectives
  - Improving the capacity in management and cold chain operation in order to maintain the immunization service quality in EPI, Viet Nam
- Specific objectives
  - Supply the equipments to guarantee the vaccine storage for total 64 provinces/ cities
  - Training the using and maintenance capacity to health workers who are in charge of cold chain via the provincial EPI of management , storage and cold chain

# **NIHE-PATH HPV VACCINE PROJECT**

# OBJECTIVES

## Phase 1: Formative research (2006-2007)

1. To generate information developing communication strategies and materials for different target groups in the community to support a positive environment for individual acceptance of HPV vaccine .
2. To provide recommendations for advocacy strategy development to policy makers, authorities and social organizations toward providing HPV vaccine.
3. To inform the design of an appropriate delivery strategy for vaccine for effectively testing in the demonstration project.
4. To evaluate alternative dosing schedules for HPV vaccination in term of immunogenicity and reactogenicity and other related issues, in order to increase flexibility in future design of the delivery strategy to meet the existing socio-cultural and economic condition of Vietnam.

# OBJECTIVES

## Phase 2: Demonstration Project (2008-2010)

- The primary goal of the HPV vaccine demonstration project in Vietnam is to demonstrate how existing delivery systems can be adapted to successfully provide HPV vaccine to young adolescents

# HPV PROJECT ACTIVITIES

Formative research for  
informing the introduction  
of HPV vaccine in Vietnam

**Objective 1**

**Activity 1**  
Socio-cultural  
research

**Objective 2**

**Activity 2**  
Policy  
environment  
Review

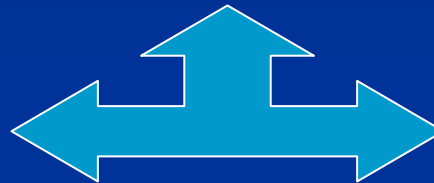
**Objective 3**

**Activity 3**  
Assessment of  
health service  
delivery system

# HIV/AIDS

Monitoring and Evaluating  
HIV/AIDS program (WB)

Enhance Public Health  
Capacity for HIV  
Prevention and  
Care Activities  
in Vietnam (CDC)



Strengthening health care,  
counseling, support to  
HIV patients in community  
Based prevention activities  
(GF)

Investigation prevalent  
HIV and STI in ethnic  
monitory group  
(WB)

HIV/AIDS  
prevention in Vietnam (WB)

Integrated Biological and  
Behaviors  
surveillance (FHI)



# NIHE-CDC COLLABORATION ON HIV/AIDS

1. Upgrading HIV laboratories, QA&QC
2. Incidence studies
3. Validation and improving the HIV sentinel surveillance
4. Drug resistance surveillance
5. Integrated Biological and behavior surveillance
6. Monitoring and evaluation of HIV/AIDS programs

**Integrated behavioral and biological  
survey (IBBS)  
2008–2009**

Supported by  
Family Health International (FHI)

# Objective

- Provide information on HIV behavioral and biological indicators among high risk groups (IDU, CSW and MSM), in order to plan for intervention programs in 10 provinces Hanoi, QuangNinh, Hai Phong, Nghe An, Yen Bai, Da Nang, Dong Nai, HCMC, Can Tho and An Giang..

**HIV/AIDS Prevention  
Project in Vietnam  
2005-2011**

Supported by  
World Bank (WB)

# Objective

Control HIV prevalence in community under 0.3% until 2010, enhance people's knowledge and attitude on HIV transmission prevention through effective intervention action programs in 20 provinces of the project.

**Project for Strengthening Care,  
Counselling, Support to People living  
with HIV/AIDS and community based  
HIV interventions in Vietnam  
2008-2012**

Supported by  
Global Fund to fight HIV,  
Malaria and Tuberculosis

# Objective

Establish convenient medical and social environment for people living with HIV/AIDS to access to care, counseling and support services, in order to alleviate discrimination;  
Decrease HIV/AIDS effect to the social and economic development, prevent HIV transmission in the community

# Emerging and re-emerging diseases, Enhancing capacity

Strengthen capacity building on Laboratories Testing for NIHE (PI)

Regional communicable Diseases control (ADB)

Strengthening the infrastructure and capacity of the NIHE on diagnosis (Iris Aid and AP)

Development, application of new methods for rabies diagnostic in NIHE (NIID)

Bac Giang acute syndrome of Encephalitis and Arbovirus (PI)

The improvement of safety laboratory for NIHE (Japan Gov)

Surveillance and investigation of Epidemic situation in southwest Asia (PI)

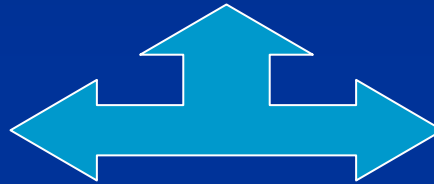
Capacity development for NIHE to control and re-emerging infectious diseases in Vietnam (Japan Gov)

Study emerging and re-emerging infectious disease in Vietnam: Enhancing capacity (Nagasaki Univ)



# Avian Influenza

Collaborative research on  
seasonal and  
Avian Influenza (Oxford Univ)



Development of  
Influenza Surveillance  
Network in Vietnam (CDC)

Strengthening monitoring  
and preventing on  
influenza pandemic (CDC)

**NATIONAL PROGRAM OF  
INFLUENZA SURVEILLANCE  
IN VIETNAM  
2006-2010**

**Supported by CDC/WHO**

# General objective

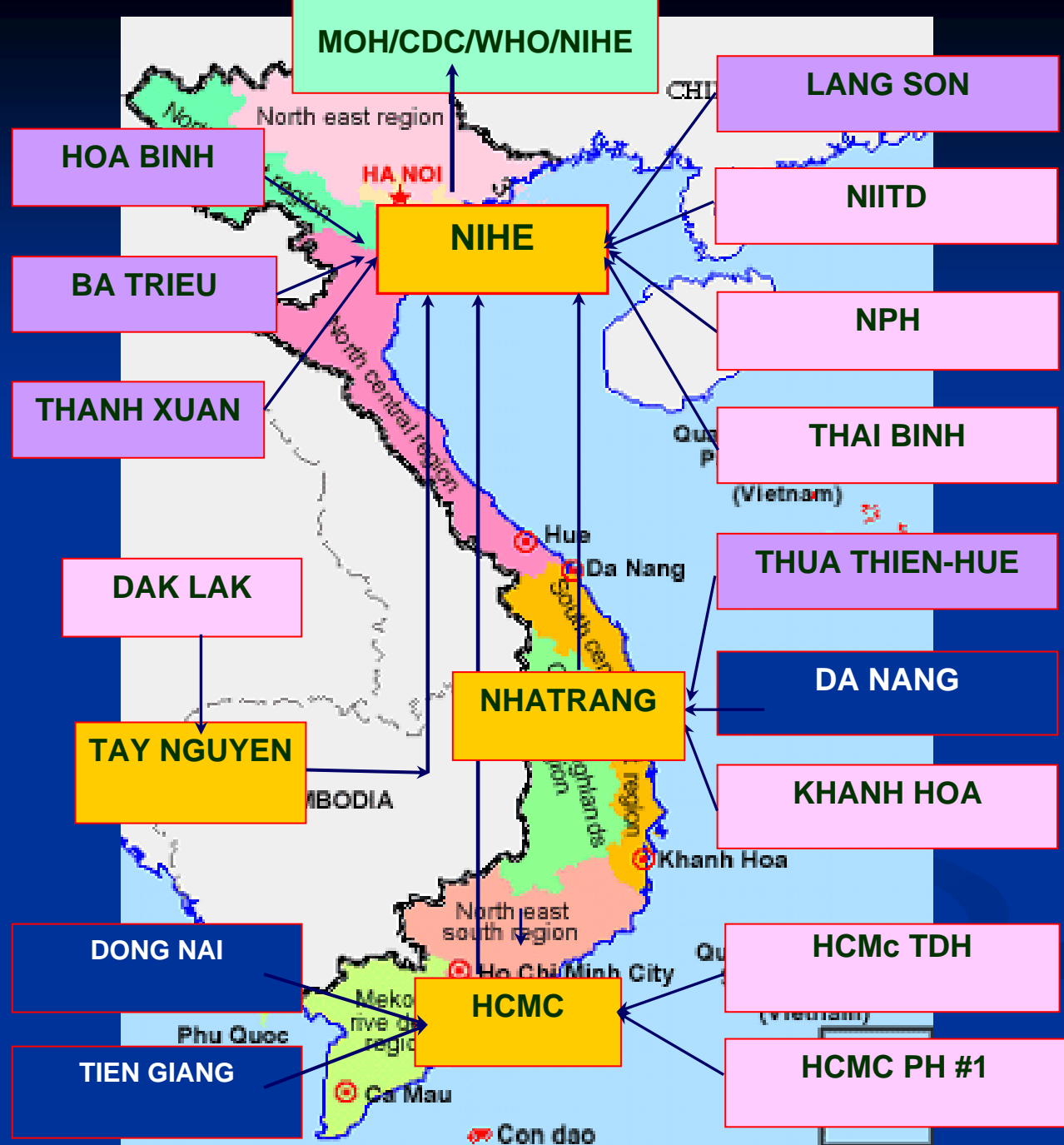
- **To obtain necessary epidemiological and virological information to guide influenza prevention and control policies and activities; Gradually establish the nationwide influenza surveillance network in Vietnam**

# Specific Objectives

1. **Improve the quality of data on the impact and seasonality of influenza in Viet Nam and rapidly detect outbreaks of influenza**
2. **Monitor influenza virus strains circulating in Viet Nam**
3. **Contribute to national influenza prevention and control**
4. **Contribute to global influenza surveillance and the selection of influenza virus strains for influenza vaccines**

# National Influenza Sentinel Surveillance 2006-2007

Organizational network of 4 regional public health laboratories and 15 sentinel sites



# **Collaborative research on seasonal and avian influenza**

**2007-2009**

**Supported by  
Oxford University**

# OBJECTIVES

## ■ MAIN OBJECTIVE:

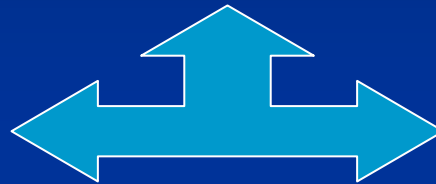
- To study the behavioral, environmental and biological determinants of H5N1 infection, the host immune response to H5N1 infection and to describe the epidemiology and transmission dynamics of seasonal and avian influenza.

## ■ SPECIFIC OBJECTIVES

- To investigate if host genetic factors are associated with susceptibility to influenza A/H5N1 infection.
- To study the profile of the antibody response in confirmed H5N1 cases by testing for influenza A/H5 specific antibodies in recovered H5N1 patients.
- To generate human monoclonal antibodies with neutralizing activity against H5N1 viruses using B-cells from recovered H5N1 patients.
- To measure H5N1 virus specific and cross reactive T cell responses to influenza A/H5 peptides in recovered H5N1 patients using an interferon-gamma Elispot assay.
- To map human H5N1 cases against geophysical features, population and poultry density and poultry outbreaks in order to identify and map risks for human H5N1.
- To study the transmission dynamics, the immunological correlates of protection and the clinical outcomes of seasonal influenza in a community cohort.

# Vector borne diseases

Community Based  
Biological Dengue Vector  
Control in Vietnam  
(Pasteur Paris)



Evaluate the insecticide  
resistance of dengue vectors

Modifying mosquito  
population age structure  
to eliminate Dengue transmission  
project (AFAP)

# **Community Based Biological Dengue Vector Control in Vietnam**

**2007-2010**

**Supported by  
Pasteur Institute of Paris**

# Project Goal

- **The goal of the project is to reduce DF/DHF increase and to improve the quality of life in four project communes**
- **The project aims to achieve a rapid, short-term reduction in vector population and facilitate long-term dengue control through improved preventative practices and interventions on mosquito breeding sites.**

# Project Objectives

- **To build the local leadership and capacity for surveillance, diagnosis and integrated control of DF/DHF**
- **To reduce mosquito populations through low-cost community-based activities**

**Reduce dengue risk in rural water  
supply and sanitation project areas in  
Cuu Long River Delta Provinces**

**2006-2010**

**Supported by  
AFAP, AusAID**

# Objectives

## ■ Long term objectives:

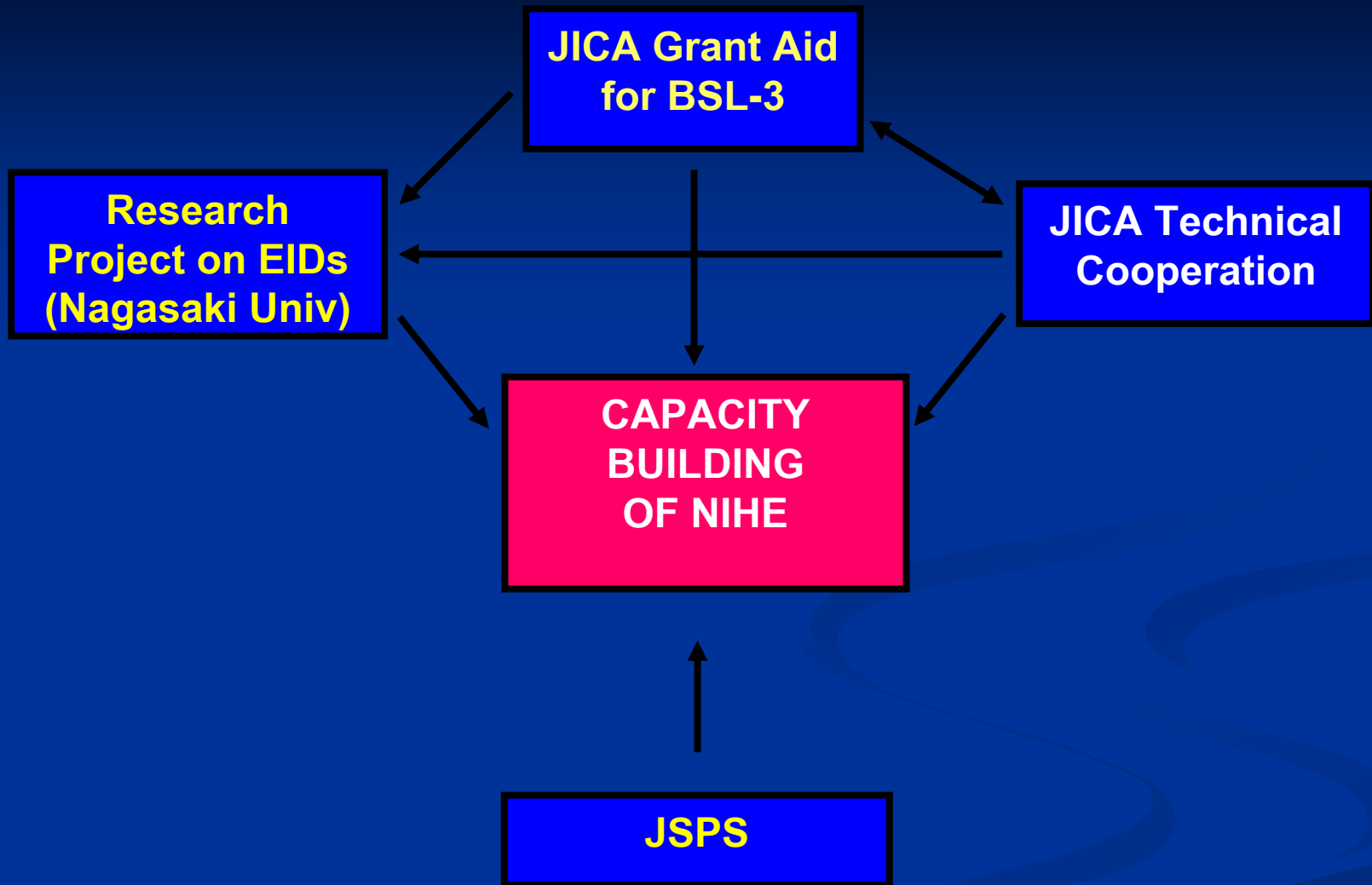
- To improve the health of people in Cuu Long river delta provinces of Vietnam by reducing the risk of dengue transmission related to water supply infrastructure

## ■ Short term objectives

- Enable community in which water supply related to dengue risks exist to implement appropriate water management practices to mitigate this risk
- Enable national dengue program to collaborate with support CERWASS agencies and affected communities to monitor and address water related dengue risks
- Enable CERWASS agencies to address water supply related dengue risk during the infrastructure planning, design and construction

# **NIHE-JAPAN COLLABORATION PROJECTS**

# VIETNAM-JAPAN COLLABORATION PROJECTS



# NIHE-JICA JOINT PROJECT

“Projects for Capacity Development for National Institute of Hygiene and Epidemiology to control emerging and re-emerging infectious diseases in Vietnam”  
in two projects:

- Technical Cooperation Project
- Grant Aid Project

# TECHNICAL COOPERATION PROJECT

## 9/2006-9/2009

### Specific Objectives:

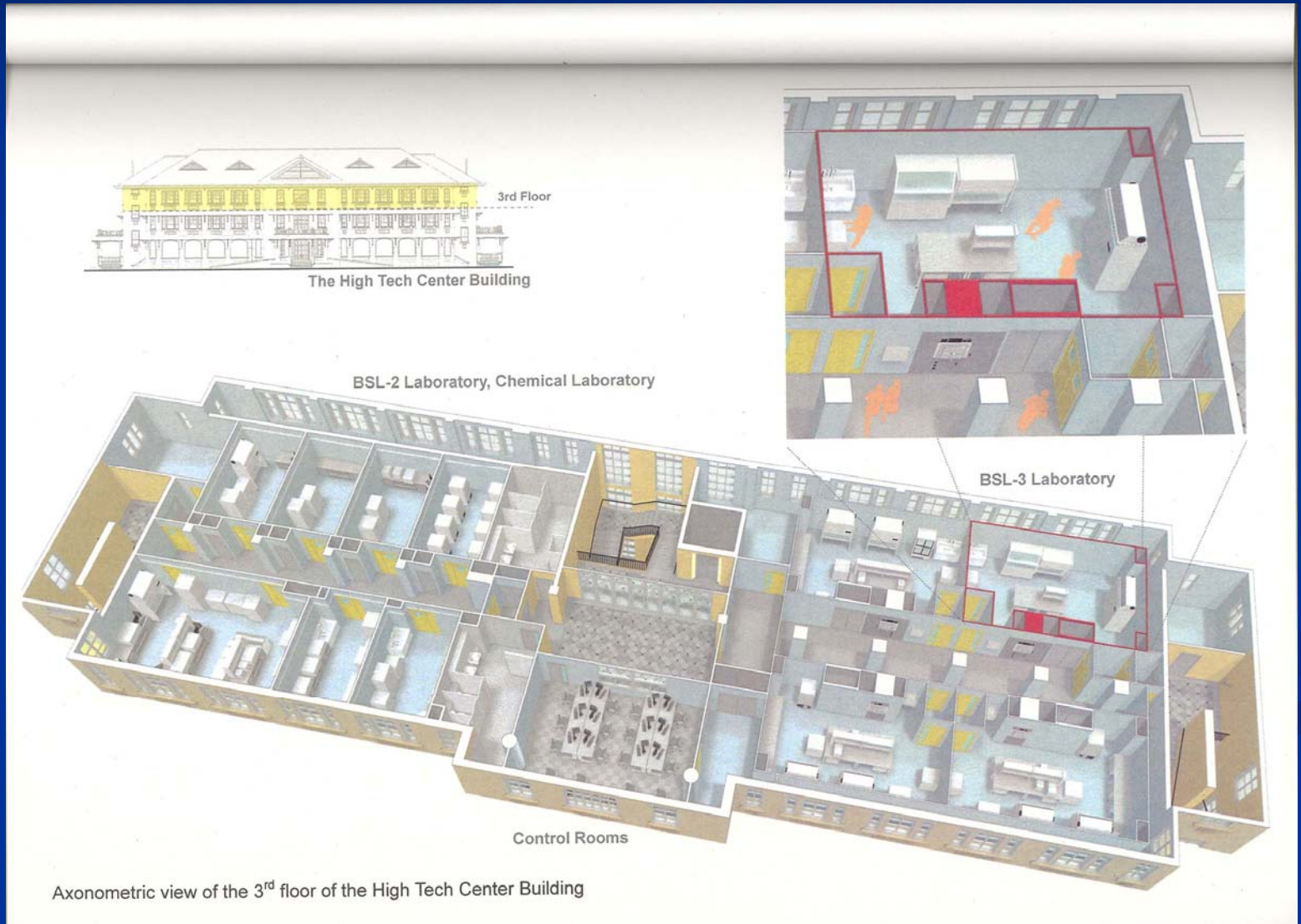
- 1) **Install a mobile BSL-3 at NIHE**
- 2) **Train NIHE staff on operating and maintaining of BSL-3**
- 3) **Train and strengthen capacity of NIHE staff on testing of bio-hazard pathogens at BSL-3.**

# TECHNICAL COOPERATION PROJECT

- Training >300 staff of NIHE and other institutions: NIN, TN-IHE, Technology University, Hanoi University of Science on:
  - biosafety regulation
  - utilization of BSL-3 lab.
  - laboratory sterilization.
- Training in Japan: on biosafety management, experiment with highly hazardous pathogens and operating BSL-3 lab. (5-8 weeks) for 6 NIHE staff.
- Developing Biosafety Regulation in NIHE (issued on 24/7/07).
- Contributing to development of National Biosafety Regulation

# GRANT AID PROJECT

**Objectives:** To install 4 BSL-3 laboratories and related equipment at HighTech Building of NIHE



# The Collaborative Study on Emerging and Re-emerging Infectious Diseases in Vietnam

Japan

**Nagasaki Univ.**

Clinical Trial Research  
Genome Research

International Medical  
Center of Japan  
(IMCJ)

Vietnam

National Institute of Hygiene and Epidemiology (NIHE)

**NIHE-Nagasaki U.  
Friendship Lab.  
(NNFL)**

1. Zoonosis
2. Insect borne
3. Food borne
4. Human to human

Bach Mai Hosp.

5. Influenza (H5N1)
6. TB
7. AIDS

High-Tech Center  
BSL3 Lab. (JICA)

NIMPE

Pasteur Inst.  
of HCMC, NT

Budget:  
2.261.833\$

# **Collaborative Studies on Influenza A /H5N1 with Nagasaki University**

- 1. Construction of human Fab and ScFv libraries and molecular cloning of human anti-influenza virus A/H5N1 monoclonal molecules.**
- 2. Surveillance of avian influenza (A/H5N1) viruses in poultry farms and their surrounding areas.**
- 3. Development of rapid and sensitive loop-mediated isothermal amplification (LAMP) for diagnosis of Influenza virus A/H5N1.**
- 4. Determination of the evolution of influenza A/H5N1 viruses isolated from humans.**

# Other collaborative studies with Nagasaki University Project

- Serological and virological studies on
  - Dengue virus
  - Hantavirus
  - Herpes B virus
  - Japanese encephalitis
  - Nipah virus
  - Rabies
  - Rotavirus
  - SARS-CoV
- Mapping of infestation of dengue vectors and flaviviruses in mosquitoes.
- New control strategy of dengue vectors using repellent Metofluthrine.
- Birth cohort study on infectious diseases in Khanh Hoa province.
- Ecological and microbiological survey on Bats.

**SURVEILLANCE AND INVESTIGATION  
OF EPIDEMIC SITUATIONS IN  
SOUTHEAST ASIA (SISEA)  
2007-2009**

**Supported by AFD and Pasteur Institute Paris**

# BACKGROUND

- long-term scientific and public health partnership in the Institut Pasteur International Network .(IPIN)
- Institut Pasteur and the Institutes of the IPIN in the region (China, Cambodia, Laos and Vietnam) have joined forces in a project entitled Surveillance and Investigation of Epidemic Situations in Southeast Asia (SISEA),
- The specific goal of the SISEA project is to establish a surveillance and investigation program for epidemic situations in China, Cambodia, Laos and Vietnam. It will have the benefit of support and expertise from the other Institutes of the IPIN in the Asia-Pacific region.

# Objectives of the SISEA Project

- **The aim of the SISEA project is to:**
  - ✓ **Contribute to improving the detection and treatment of epidemic episodes in Southeast Asia.**
- **The specific objectives of the SISEA project aim to:**
  - ✓ **Establish a program for epidemiological surveillance and investigation of epidemics caused by emerging viruses;**
  - ✓ **Establish a network of laboratories and develop regional coordination in these fields in association with the WHO.**

# Project Components

**The SISEA project will last for four years and will be structured in three components:**

- **Improving the capacities of the reference laboratories and their placement in a network, with special emphasis on aiding the national laboratory in Vientiane;**
- **Improving the epidemic alert on emerging viruses in these countries;**
- **Strengthening the epidemic response networks at the national and regional levels. Relationships between the countries will be developed, and the Institutes will be united in a vast regional network coordinated by the WHO.**

# SISEA PROJECT

**SEVERE RESPIRATORY INFECTION  
AND VIRAL ENCEPHALITIS  
SURVEILLANCE IN SISEA PROJECT**

# PROJECT OBJECTIVES

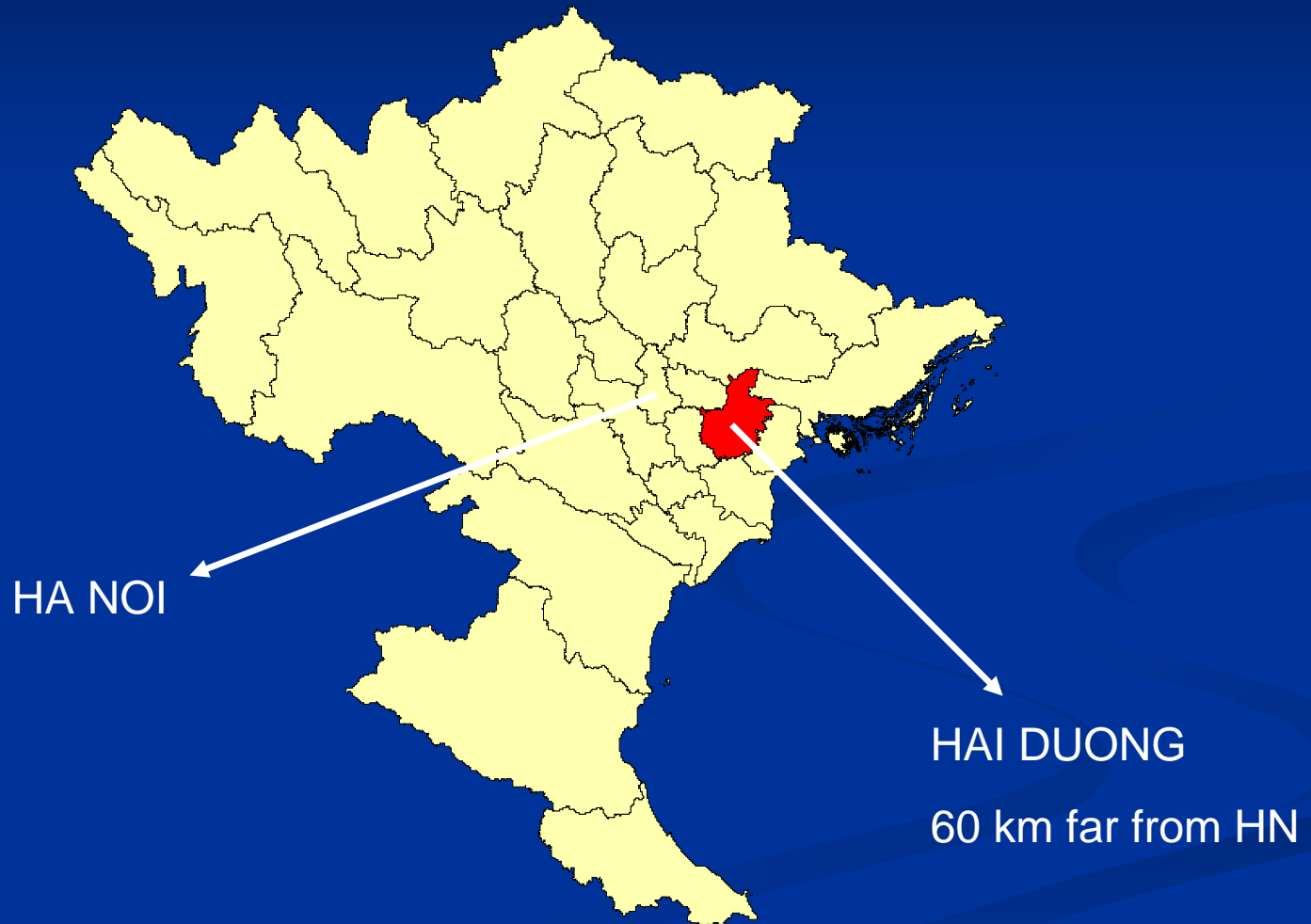
## 1. General objective

**Enhancing the capacity of NIHE on early detection and rapid response to some emerging and re-emerging infectious diseases**

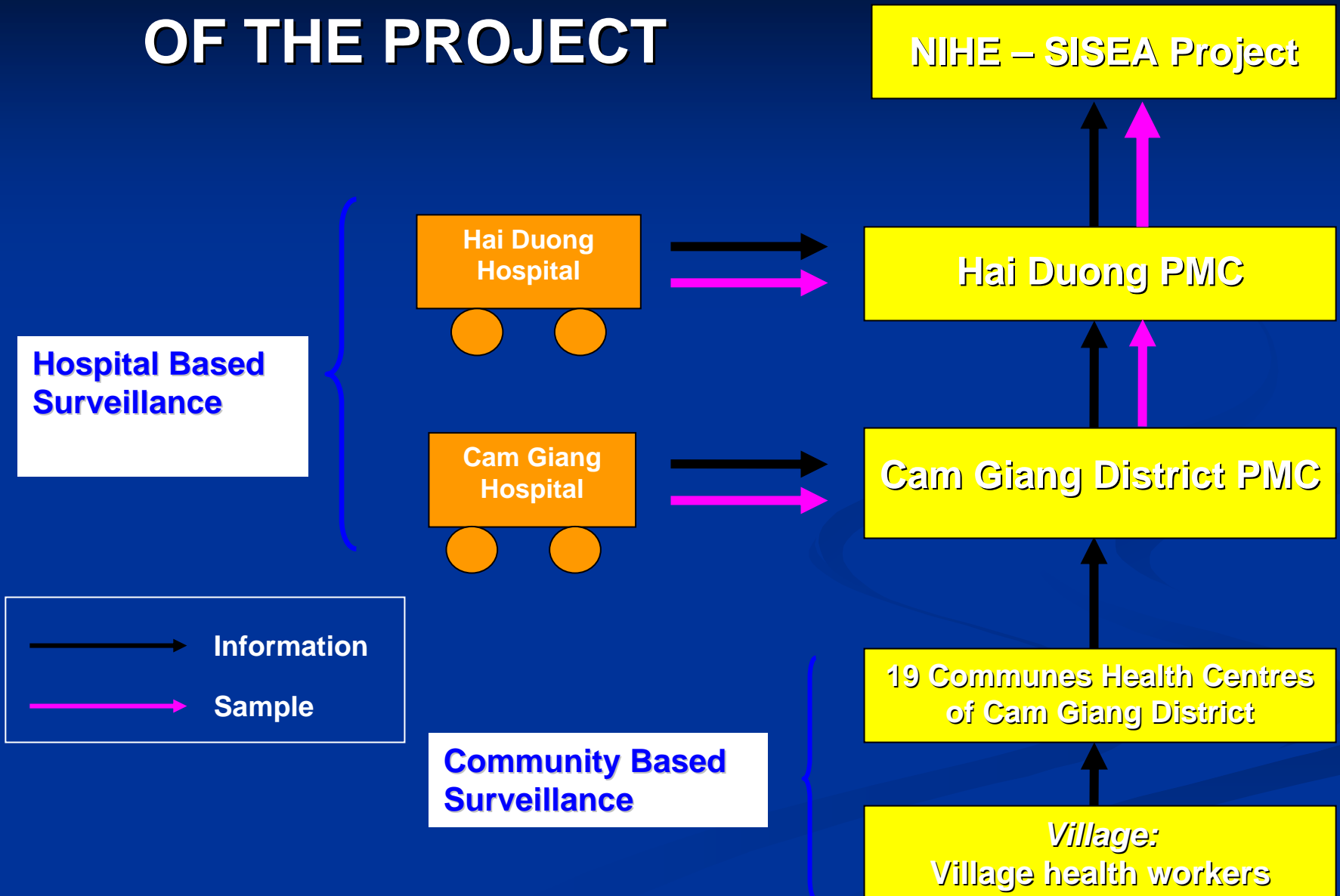
## 2. Specific objectives

- **Enhancing laboratory capacities of NIHE on SARI and VE lab diagnosis**
- **Improving capacity of Hai Duong province on SARI and VE surveillance and investigation.**
- **Identifying epidemiological and virological characteristics of SARI and VE in Hai Duong province.**
- **Strengthening capacity of communicable disease surveillance system at Province and District levels**
- **Encouraging experience exchange on early detection and rapid response to communicable diseases in International pasteur institute network.**

# MAP OF THE FIELD SITE



# STRUCTURE OF THE PROJECT





**THE IRELAND-VIETNAM  
BLOOD BORNE VIRUS INITIATIVE (IVVI)  
2006-2009**

**Supported by The Irish Aid and  
The Atlantic Philanthropies**



# PARTNERSHIP

**The Ireland-Vietnam Blood Borne Virus Initiative (IVVI) is a ground-breaking partnership between:**

- **the National Virus Reference Laboratory (NVRL) at University College Dublin (UCD), Ireland and**
- **the National Institute of Hygiene and Epidemiology (NIHE) in Hanoi, Vietnam;**



# OBJECTIVES

- **To build capacity in the Vietnamese partner as an internationally recognised centre of excellence in epidemiology and diagnostic virology;**



# PLANNED ACTIVITIES

- **Provision of training in diagnostic virology at the NVRL;**
- **Establishment of viral diagnostic faculties with state-of-the-art tools and technology in Vietnam;**
- **Carrying out a focused programme of epidemiological studies at both serological and molecular levels**
- **Establishing and developing health database management system from community level up to central level in the selected provinces**



# IVVI's CONTRIBUTIONS

- **Give evidence to health policy makers and health authorities to help them to design suitable policies to prevent and control blood-borne virus infection in Vietnam, which affects poorer communities throughout the country.**
- **Strengthening of institutional capacity for health-service delivery to the Vietnamese population;**
- **Building of a productive long-term relationship between NVRL and NIHE as well as the development of models of collaboration which will be transferable to other projects and fields.**



Australian Government

AusAID



# ASEAN +3 Emerging Infectious Diseases (EID) Programme Phase I.

# ASEAN +3 EID PROGRAMME

## PHASE I OBJECTIVES AND LOGIC

### Program Goal

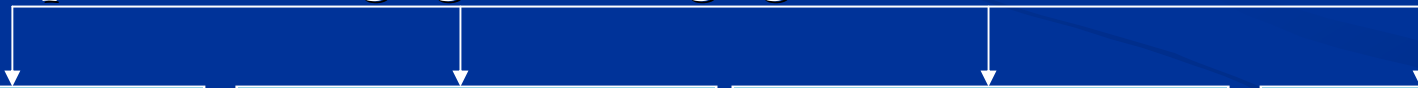


To reduce the economic, social infections that threaten the region and disease burden from emerging and resurging



### Program Purpose

To increase the effectiveness of regional surveillance, early warning and response to emerging and resurging infectious diseases.

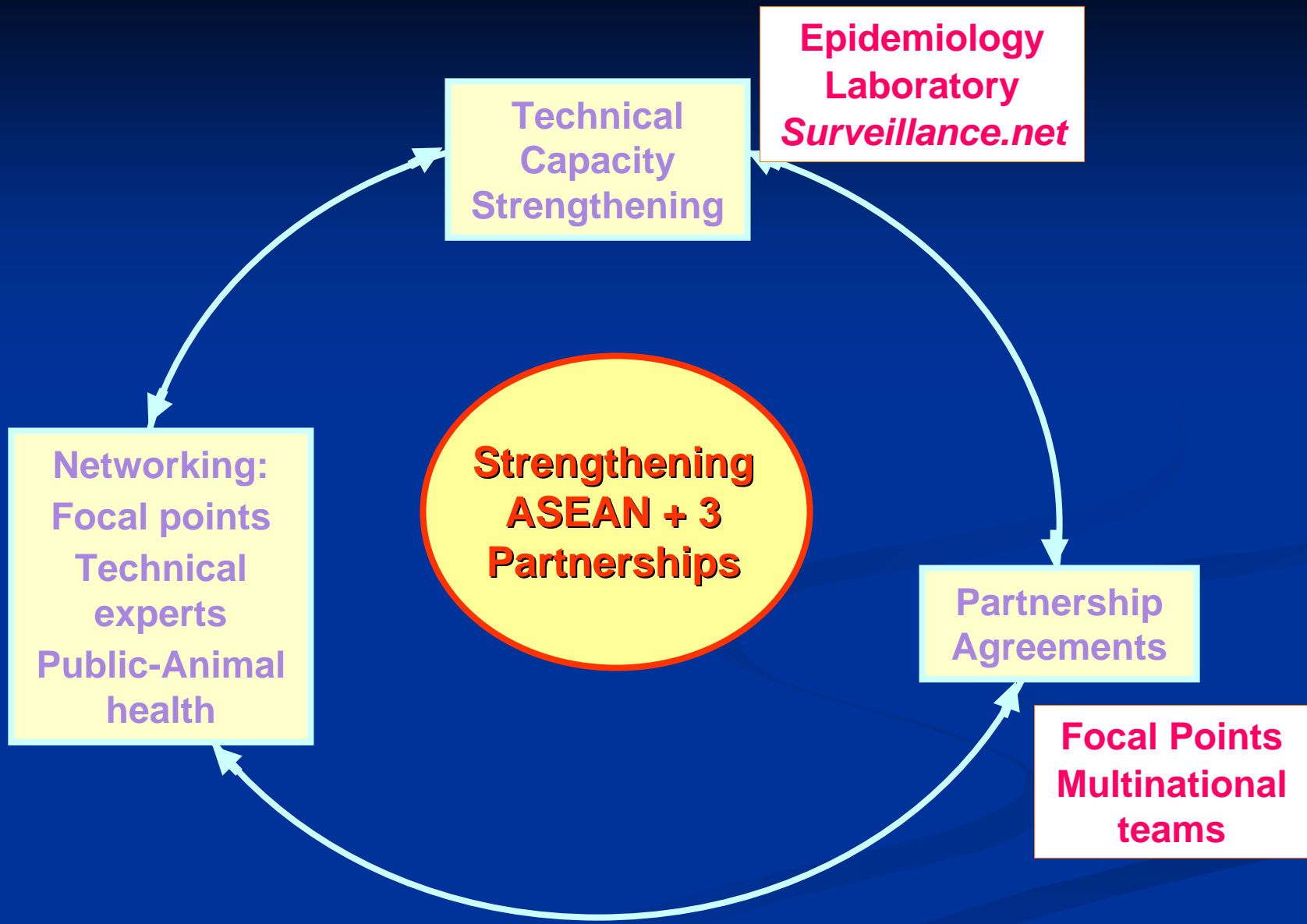


**Component 1:**  
Institutional  
Strengthening

**Component 2:**  
Regional Networking

**Component 3:**  
Laboratory Diagnosis,  
Surveillance &  
Response

**Component 4:**  
Epidemiological  
Surveillance &  
Response



**Water supply, sanitation and  
hygiene promotion in Vietnam  
(SANIVAT)**

**(2007-2011)**

**Supported by  
Denmark Government**

# Overall Objective

- **Contribute to assess community health impacts of the interventions in water supply, environmental sanitation and hygiene in the Rural Water Supply Sanitation – National Target Program II (RWSS-NTPII), at the same time build research capacity for Vietnamese partner institutions**

# Specific Objectives

- To assess health impacts of the interventions in water supply, environmental sanitation and hygiene in Lao Cai province, with a focus of the occurrence of diarrhea, helminth infections in children and food safety in household
- To evaluate community perceptions of the interventions in water supply, environmental sanitation and hygiene in Lao Cai province
- To strengthen research capacity of the Vietnamese partner institutions on the surveillance of gastrointestinal diseases and the detection of foodborne and waterborne etiologies through the impact assessment in Lao Cai province

# Other Collaborative Projects

1. Comparing Two Sci-B-VACTM Batches to Engerix - B Engerix in Health Adults (Sci-gen company)
2. Evaluation of the safety, immunogenicity and compatibility with DPT of investigational Vi-rEPA2 Conjugate Vaccine for typhoid fever (NIH)
3. Comparing Two Sci-B-VACTM Batches to Engerix - B Engerix in Health Adults (Sci-Gen company)
4. Bac Giang Acute Syndrome of Encephalitis and Arboviruses (PI)
5. Efficacy, safety and immunogenicity of Rota Teq among infants in Vietnam (PATH)
6. Assessment of risk factors for faced contamination of household drinking water in Cujut district, Vietnam (Sweden)



# NIHE'S PRIORITIES

# PRIORITIES/NEEDS

- 1. Improve the quality of laboratory activities for rapid detection and research:**
  - **Technical support for standardization, biosafety, quality assurance and quality control (ISO), test kit development...**
  - **Training and exchanging staff on molecular biology and advanced technology, bio-informatic**

# PRIORITIES/NEEDS

- 2. Collaborative research projects: respiratory infections (multiplex kits), encephalitis, dengue fever, HIV subtypes/AIDS, rabies, anthrax, S.suis, Rickettsia, Enteroviruses (EV71), Rubella (CRS surveillance), Cholera...**
- 3. Improve the surveillance system (influenza) with the new technology such as GPS...**
- 4. Improve the communication and information exchange between institutions, including use tele-conferencing**

# **PRIORITIES/NEEDS**

**5. Capacity building on project development and management**

# **Challenges of International Cooperation**



# Principles of collaboration

- **Based on the real need**
- **Bottom-up planning**
- **Collaboration between partners/donors but avoid overlap**
- **Adapt to the local culture: rules, regulations, incentives or financial support for all activities, including gov. staff**
- **Transparent planning, financing and reporting**



# Consideration Issues

- **Long duration for clearance process**
- **NIHE's capacity for project proposal development, planning, implementation, management and reporting → delay project activities**
- **Bidding complicated and long process**
- **Different expense rate, financial mechanism and fiscal year**
- **NIHE's Coordination capacity**
- **Collaboration and networking between projects and partners**
- **Facility maintenance**
- **Activities sustainability**

# **FUTURE PLAN OF NIHE**

# **FUTURE PLAN OF NIHE**

## **“International Center for Bio-Medical Research”**

**Concept paper approved by the MOH, MOST and Government**

### **Objective:**

- To build an international excellent center**
- ✓ **for bio-medical research and training on reemerging and emerging diseases, including communicable and non-communicable,**
- ✓ **with basic and modern sciences and technology,**
- ✓ **which meet the international standards , and**
- ✓ **be a center for international collaboration**



# Missions of the Center

- 1. Identify quickly new pathogens, risk factors, best intervention strategies of emerging diseases by doing high quality advanced research on microbiology, immunology, pathology and epidemiology,**
- 2. Develop biological products, new drugs, vaccines for diagnosis, treatment and prevention of emerging diseases**
- 3. Train and exchange research results through internal and international scientific seminars, workshops, meetings, conferences**
- 4. Advise the Ministry of Health on strategies and measures for prevention and control of emerging diseases.**

# International Center for Bio-Medical Research

International Center for Bio-  
Medical Research

Director

Scientific Advisory  
Committee

No. staffs: 150 -200

Div. Cellular Molecular Biology

- Molecular Microbiology
- Molecular Immunology
- Cellular Immunology
- Molecular Genetics
- Molecular Pathology
- Cellular Biology

Div. Clinical Epidemiology

- Epidemiology
- Clinical Trial Unit (50 beds)

Div. Vaccine and Biological  
Development

- Vaccine & Biologicals
- Nanotechnology
- Pharmacology dynamics
- Production Unit

Div. Molecular Epidemiology  
and Bioinformatics

- Molecular Epidemiology
- Bioinformatics

Div. Training

- Library
- IT unit
- Training & Education center
- Conference center

Core Facility Unit

- BSL3-4
- Proteomics platform
- Genomics platform
- Bio-Imaging
- Animal house

Administration

- Personnel and Logistics
- Procurements
- Accountings
- International Cooperation

# NATIONAL HIGH-TECH PARK

