

HIV Drug Resistance Surveillance and Monitoring in the Southeast Asia Region

Padmini Srikantiah, MD MPH

HIV/AIDS Unit

WHO- Regional Office for Southeast Asia



The HIV epidemic in Southeast Asia

- **Estimated 3.6 million persons living with HIV (PLHIV) in the region**
- **Five countries account for >99% of disease burden**
- **Concentrated epidemic – IDUs, MSM, sex workers and their clients**

Country	Estimated number of PLHIV	% adult population infected with HIV
Bangladesh	7,500	<0.1
Bhutan	<500	<0.1
DPR Korea	0	0
India	2,500,000	0.36
Indonesia	193,000	0.14
Maldives	<100	<0.1
Myanmar	242,000	0.7
Nepal	70,000	0.5
Sri Lanka	4,000	<0.1
Thailand	562,000	1.1
Timor-Leste	<100	<0.1



Source: National AIDS Programme, Ministry of Health, SEAR countries, 2006-2007

HIV treatment scale-up in SE Asia

- **Estimated 1 million PLHIV in need of antiretroviral therapy (ART)**
- **Approximately 250,000 persons receiving ART in public sector**
- **Large-scale expansion of government sponsored ART programs in region since 2004**
 - **First-line therapy: standard NNRTI-based regimen**



Factors that may affect the development of drug resistance in the region

- **ART has been available in private sector for over 10 years in several countries**
 - **Receipt of non-standard regimens**
 - **Availability of protease inhibitors, other “salvage” drugs**
- **PMTCT scale-up is ongoing**
- **Initiation of second-line therapy in some countries**



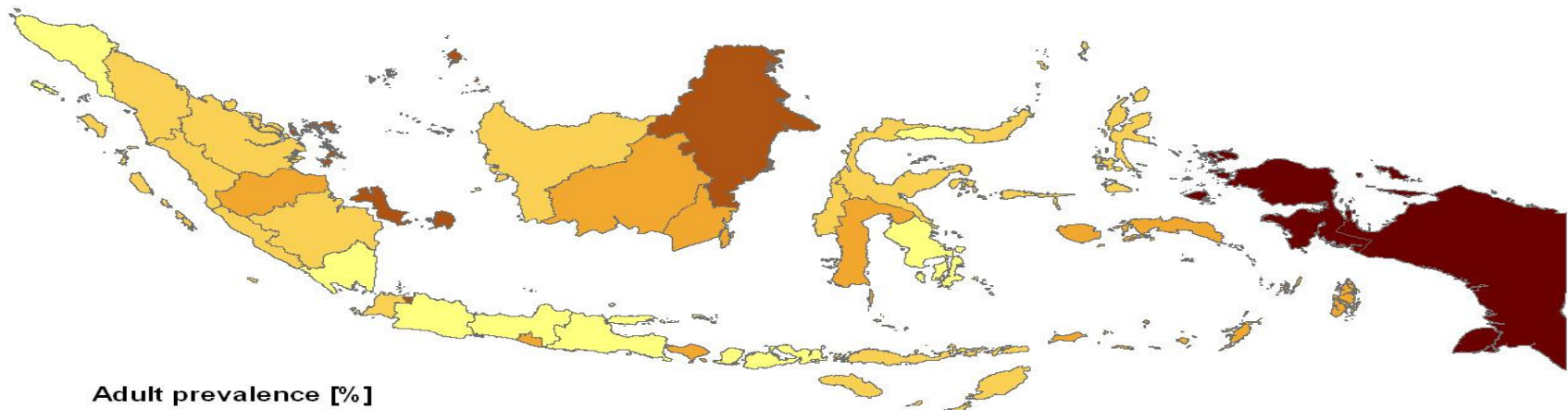
Assessment of HIV drug resistance: regional strategy and progress

- **Implementing a standardized monitoring and evaluation system to generate early warning indicators**
 - **Planned for five high burden countries**
- **National HIV drug resistance working groups**
 - **Already established in India, Indonesia, Thailand**
 - **Planned for Myanmar in 2009**
- **HIV DR laboratory assessment**
 - **Completed in India, Indonesia, and Thailand**
 - **One lab accredited since 2007, likely more in 2008**
- **Assessment of HIV drug resistance**
 - **Threshold surveys completed**
 - **Monitoring surveys underway or planned**



HIV DR assessment: Indonesia

- **Threshold survey to measure transmitted HIV drug resistance completed among IDUs in Jakarta**
 - Sequencing completed at laboratory in Australia
 - Data and sequence quality assurance analysis underway
- **Monitoring survey (Pilot) initiated in 2008 in Jakarta**

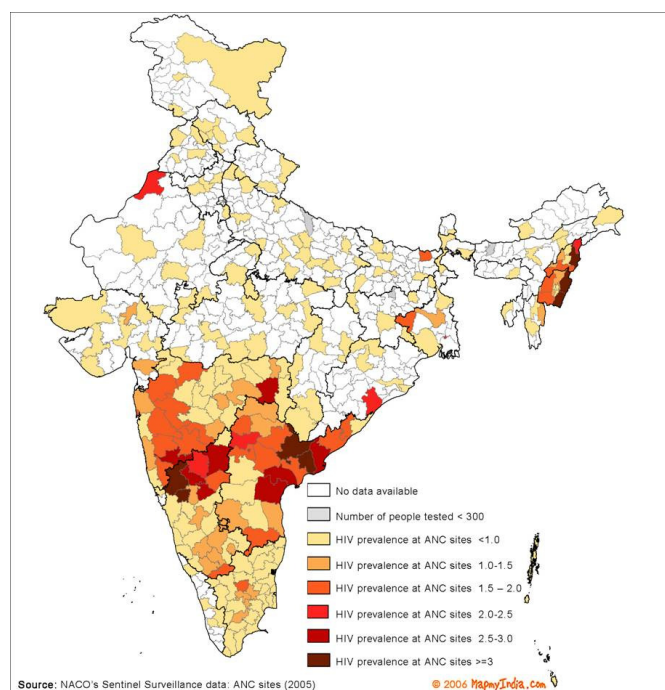


HIV DR planned activities: Indonesia

- **Pilot of Early Warning Indicators (EWIs) collection and analysis initiated in Jakarta in September 2008 (4 sites)**
- **Five-year HIV DR workplan drafted and finalized by national working group in 2008**
 - **Expansion of EWI collection**
 - **Rolling sites for monitoring surveys**
 - **Repeat threshold survey– depending on pilot site results**
- **Work towards accreditation of national reference laboratory**



HIV DR assessment: India



- **Threshold survey to evaluate transmitted resistance in two sites:**
 - **Mumbai VCT: completed in 2007**
 - **<5% transmitted HIVDR detected**
 - **Andhra Pradesh ANC: ongoing**
- **Monitoring survey in two pilot sites**
 - **Mumbai: enrollment and follow-up completed; endpoint data collection November 2008**
 - **Chennai: enrollment completed; follow-up ongoing until March 2009**



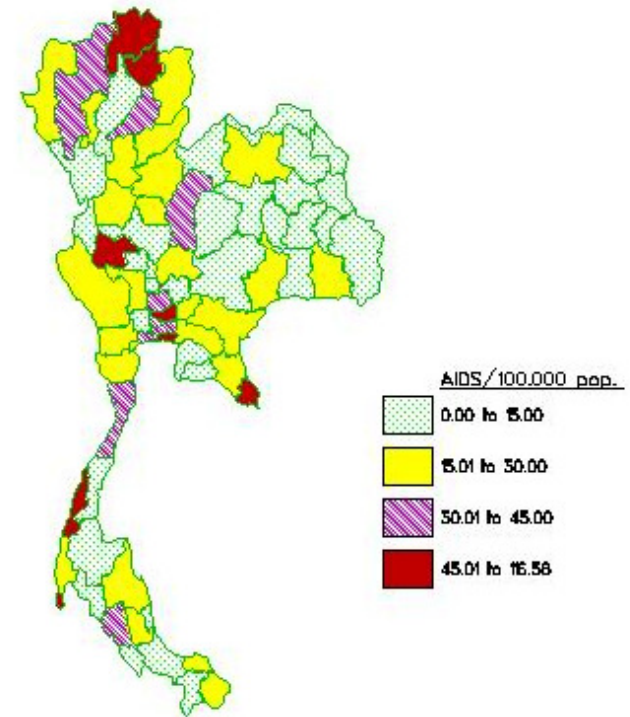
HIV DR Activities: India

- **Laboratory accreditation**
 - **National AIDS Research Institute, Pune: accredited since 2007**
 - **Evaluation of two additional labs conducted in 2008**
- **Collection of EWIs planned in pilot sites in early 2009**
- **Development of five year workplan planned for 2008**
 - **Expansion of EWI collection**
 - **Expansion of monitoring surveys– rolling sites**



HIV DR assessment: Thailand

- **Three threshold surveys completed**
 - VCT clinic (2005)
 - Blood bank (2005)
 - Sentinel surveillance of CSW in multiple provinces (2007)
- **Monitoring surveys planned in three year cycles at representative sites**
- **EWIs being collected in 3 sites**
 - Expansion planned to 24 provinces in next few years



Summary

- **High level commitment to HIV DR prevention and assessment in high burden countries**
 - **Further strengthened as countries begin to contend with treatment failure, second-line ART**
- **Substantial progress in implementing HIV DR assessment strategies**
 - **Implementation of threshold and monitoring surveys at pilot sites**
 - **Increasing importance to expanded collection of EWIs**



Issues and Challenges

- **Sustainability of survey implementation in rolling cycle**
 - Limited human resources and funding
 - Laboratory capacity
- **Long delays in clearance of protocols by national and institutional IRBs**
- **Need to strengthen overall M&E systems and records**
 - Including appropriate assessment of adherence
- **Difficult to implement strategies for HIVDR prevention and assessment in the private sector**
 - Especially an issue for India, with robust private sector

