

明日のために、今行動を

No action today, no cure tomorrow



20 March 2016, Tokyo
Takeshi KASAI
Director, Programme Management,
WHO Western Pacific Region



World Health
Organization

Western Pacific Region

Health Security and Emergencies

Key message ・ ポイント

- 薬剤耐性菌の問題は、昨日の我々の行動が起こした今日の問題であり、明日の治療のため、今行動が必要な地球規模課題。
- 増加の要因は、一つではなく、保健部門を超えて政府全体一民間一国民の行動が必要であり、特に保健と漁業畜産部門の行動は不可欠。
- *この問題を理解するための「想像力」と未来のために行動を起こすための「決意」が必要*

なぜWHOは憂慮しているのか？

- 薬剤耐性菌による感染症の治療は、より困難で高額、またその成績も必ずしも良くない
- 国境を超えて、薬剤耐性菌が増加している
- 抗菌薬の使用量も増加しており、新興国を中心に今後さらに増加が予測される
- 新しい抗菌薬の市場への投入が減少している

藥劑耐性結核: A man-made disaster

- Drug-resistance created through inappropriate treatment
- Patients have to undergo toxic and costly treatment for two years or more
- Treatment outcome is poor with high mortality
- 5-year survival rate of XDR-TB: 23%



COST OF DIAGNOSIS AND TREATMENT



TIME FOR TREATMENT



TREATMENT OUTCOME



薬剤耐性菌による死亡の推計

European Union population 500m

25,000 deaths per year

2.5m extra hospital days

Overall societal costs
(€ 900 million, hosp. days)
Approx. €1.5 billion per year



Source: ECDC 2007

Thailand population 70m

>38,000 deaths

>3.2m hospital days

Overall societal costs
US\$ 84.6–202.8 mill. direct
>US\$1.3 billion indirect



Source: Pumart et al 2012

United States population 300m

>23,000 deaths

>2.0m illnesses

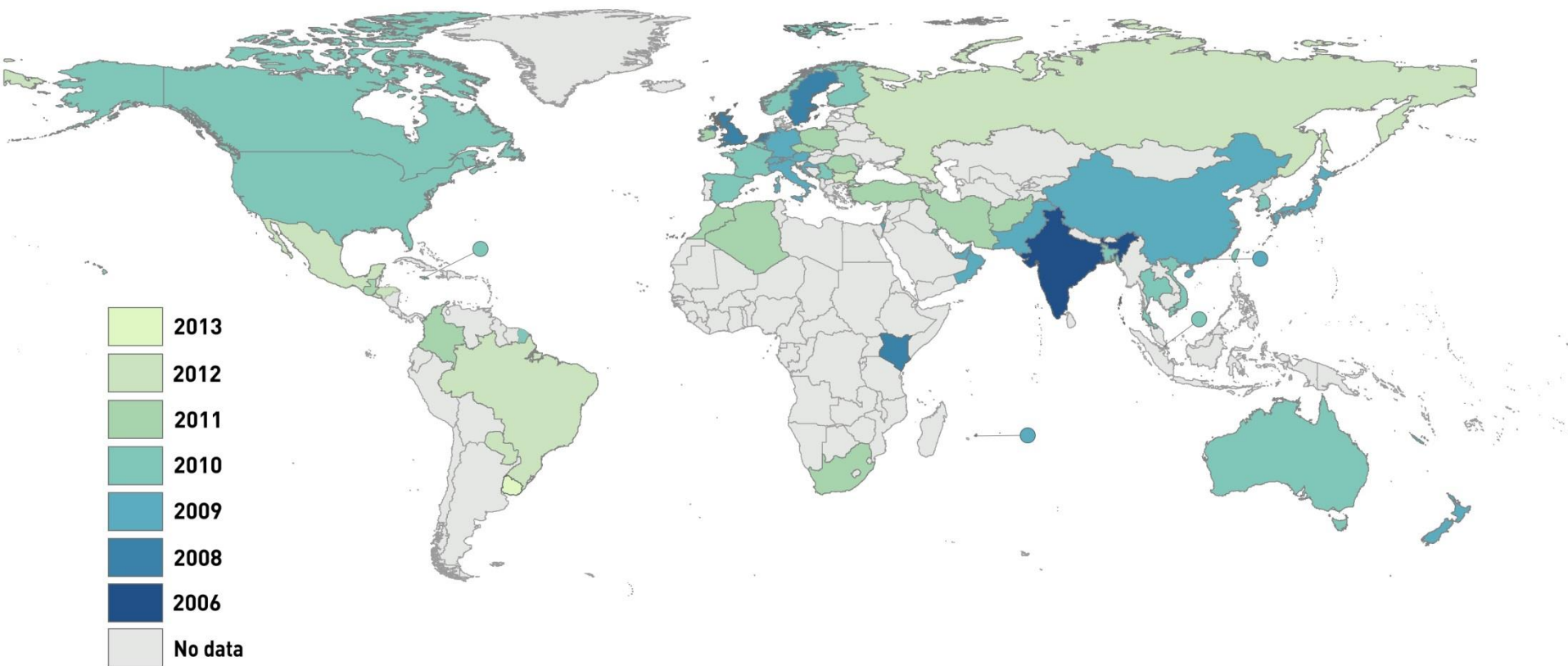
Overall societal costs
Up to \$20 billion direct
Up to \$35 billion indirect



Source: US CDC 2013

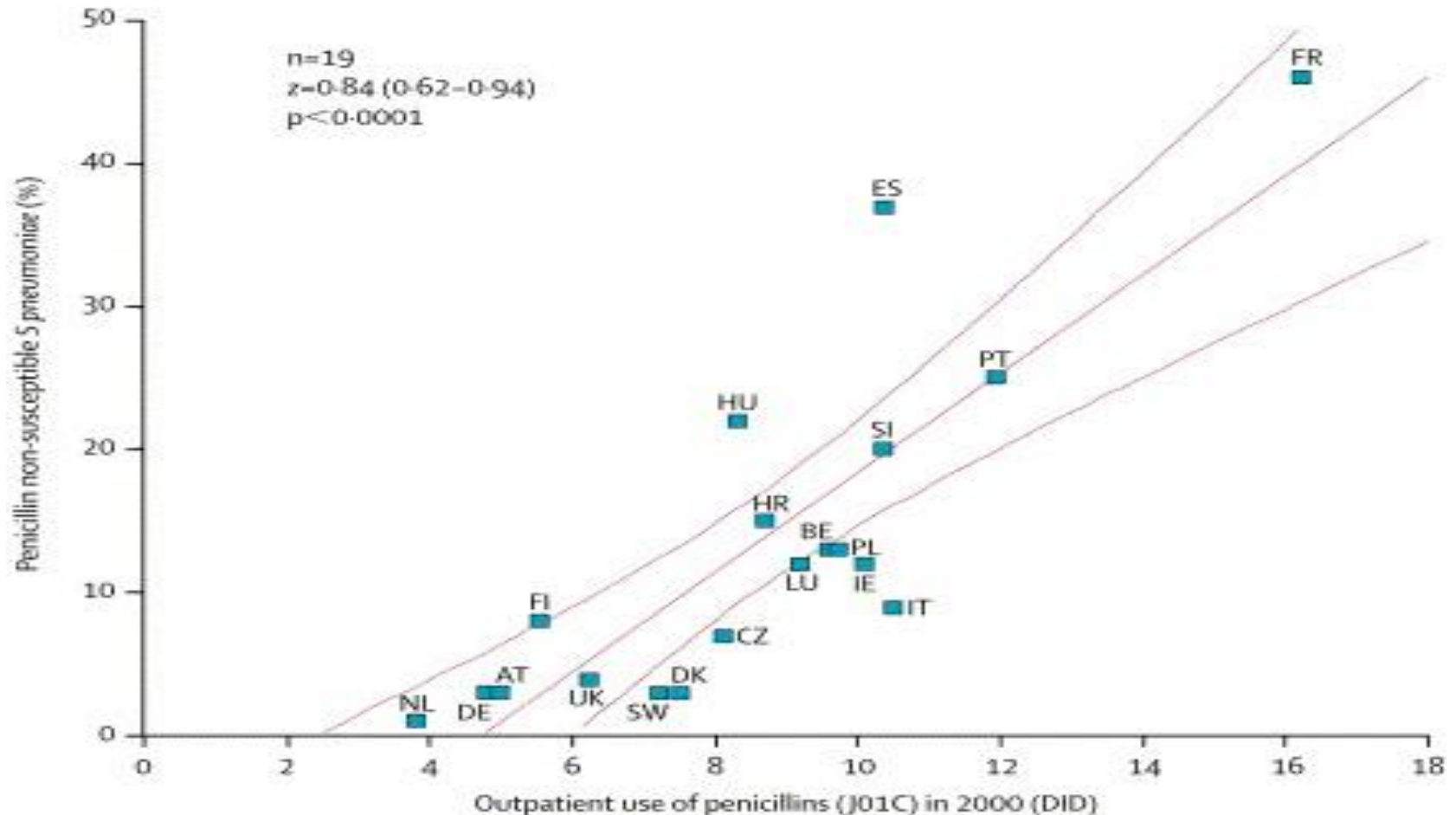
薬剤耐性菌の割合は世界で増加中

International dissemination of New Delhi metallo- β -lactamase (NDM) —producing Enterobacteriaceae



Alan P. Johnson¹ and Neil Woodford
Journal of Medical Microbiology (2013), 62, 499-513

抗菌薬の使用量と薬剤耐性菌の関係



Goossens et al, The Lancet Volume 365, Issue 9459 2005 579 - 587

世界各地で増加する抗菌薬使用量 (保健部門)

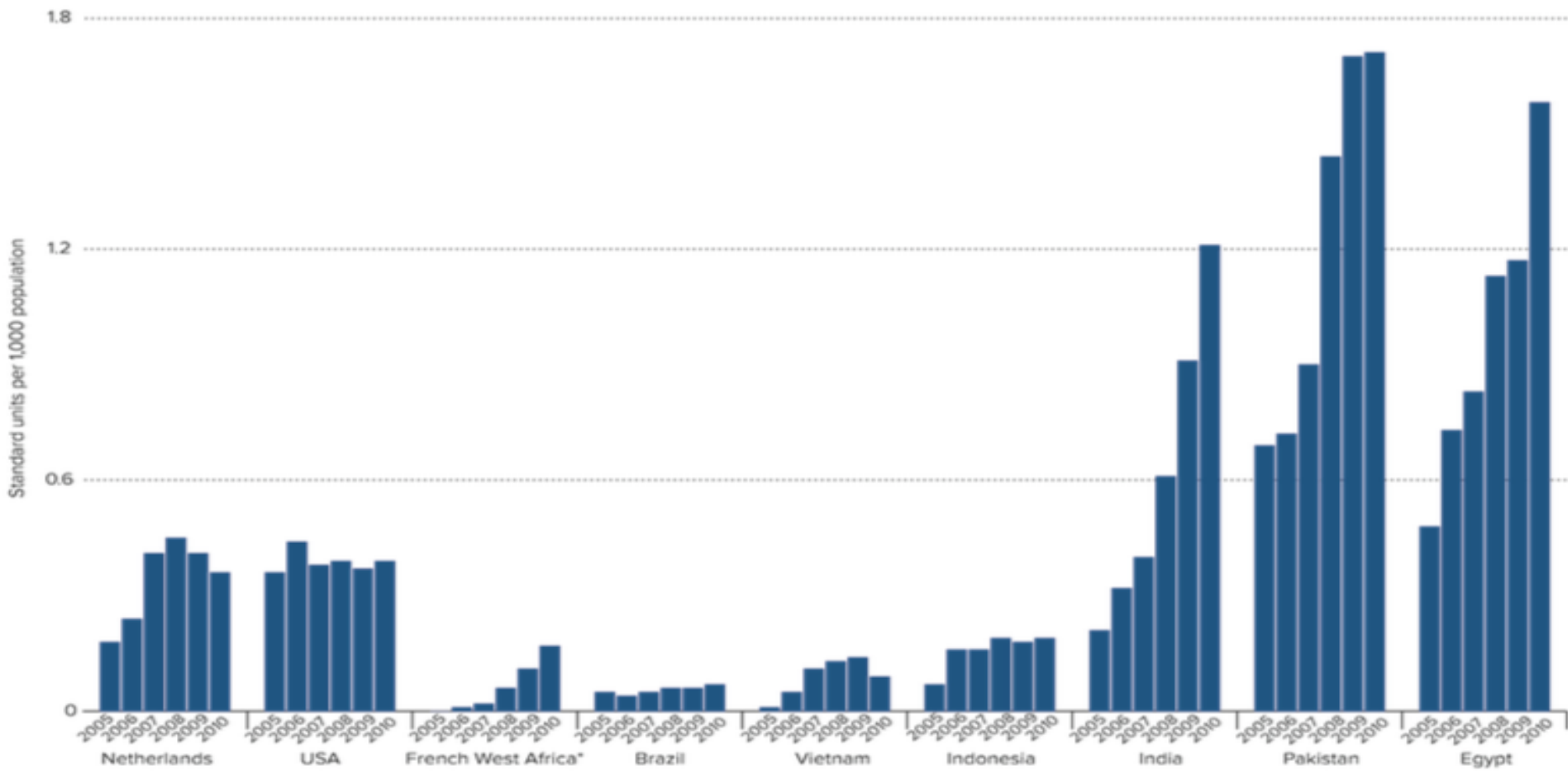
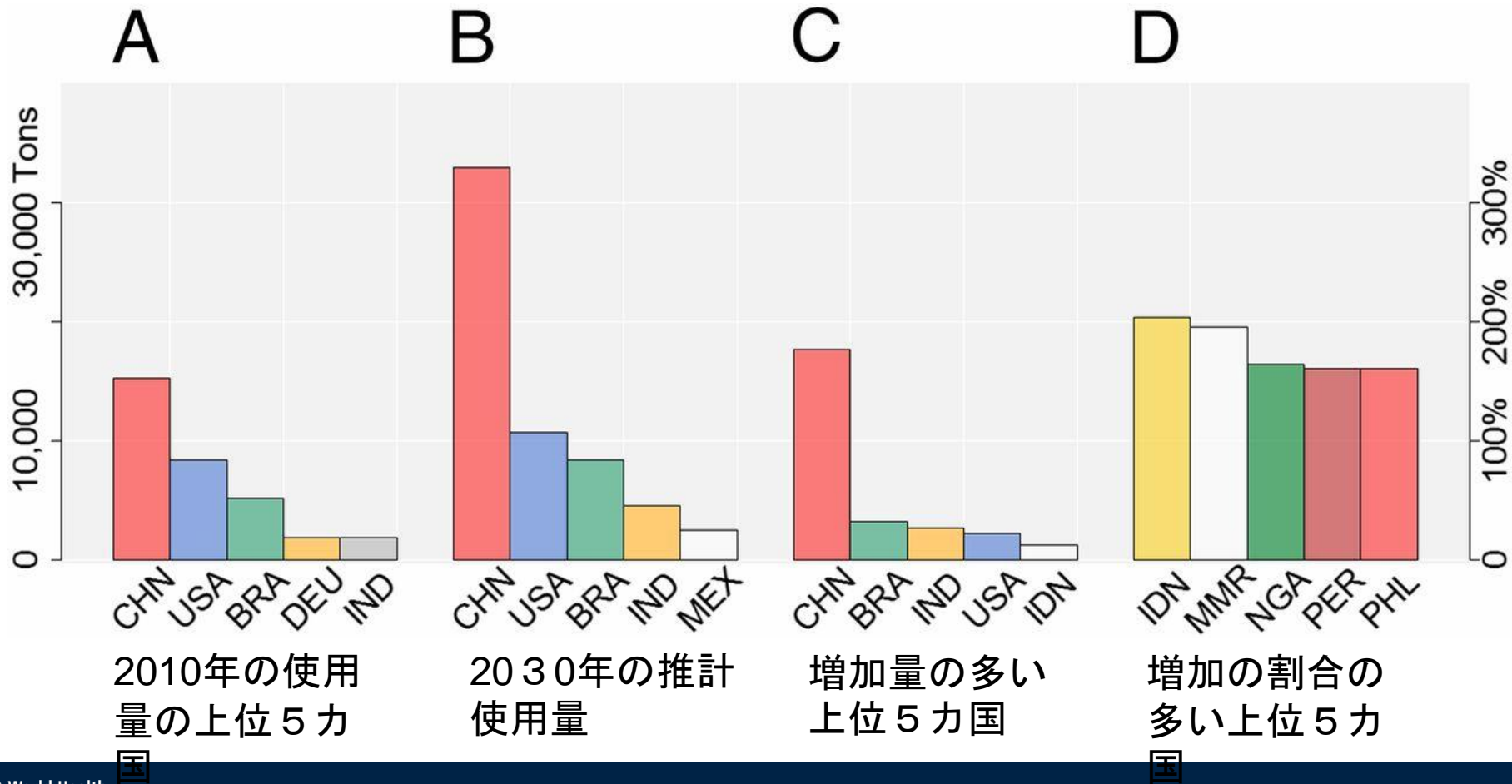


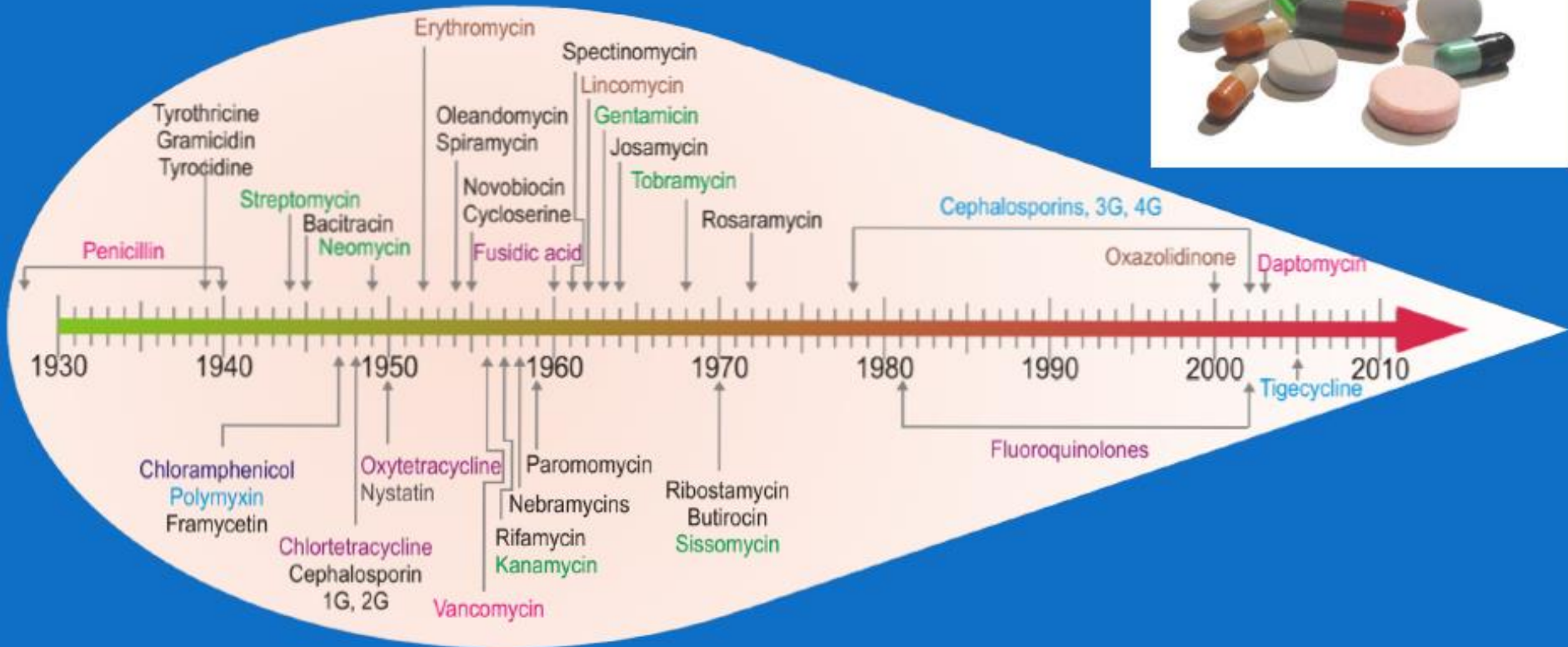
FIGURE 2-2: Carbapenem retail sales in selected countries, 2005–2010 (per 1,000 population)

世界各地で増加する抗菌薬使用量 (漁業・畜産業)

(A) Largest five consumers of antimicrobials in livestock in 2010.



抗菌薬：黄金時代を経て徐々に枯渇？！



どのような行動を起こさなければならないのか



- 普及啓発
- サーベイランス
- 感染拡大の防止
- 適切な抗菌薬使用
- 研究開発の促進

Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.



Over-prescribing of antibiotics



Patients not finishing their treatment



Over-use of antibiotics in livestock and fish farming



Poor infection control in hospitals and clinics



Lack of hygiene and poor sanitation



Lack of new antibiotics being developed

保健医療をとりまく状況の変化／Evolving landscape



人口構成の変化／Changing demographics



急速な都市化／Urbanization and globalization



技術進歩／Rapid improvements in technology



情報化／Huge increases in access to information



格差拡大／financial crises; Poverty; Inequality



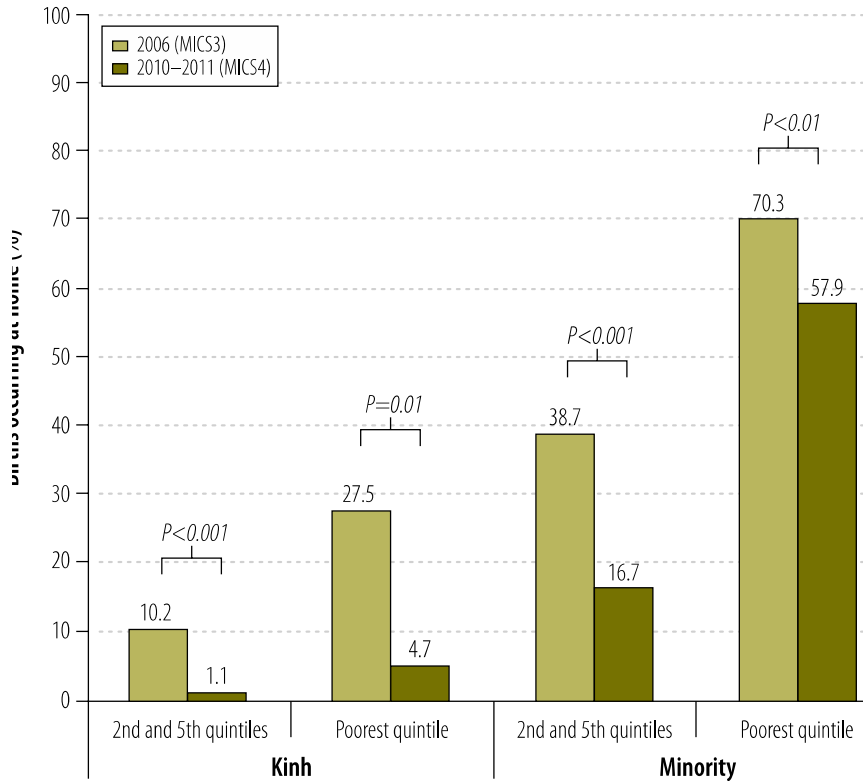
気候変動／Climate change



感染症／New threats and diseases

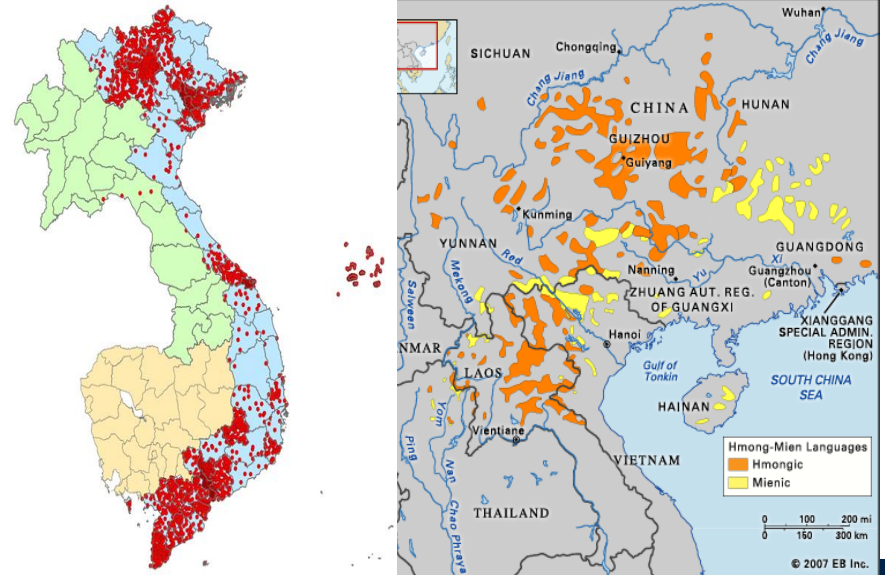
少数民族の住む僻地

Reach those hard to reach



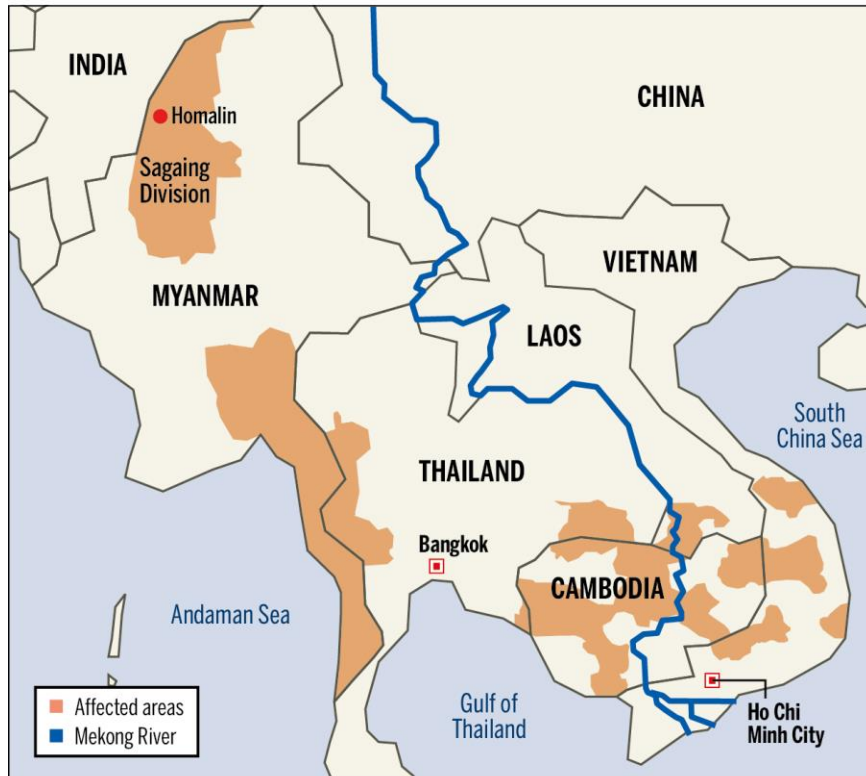
MICS, Multiple Indicator Cluster Survey.

Note: Pearson's χ^2 test was used to detect differences between groups.

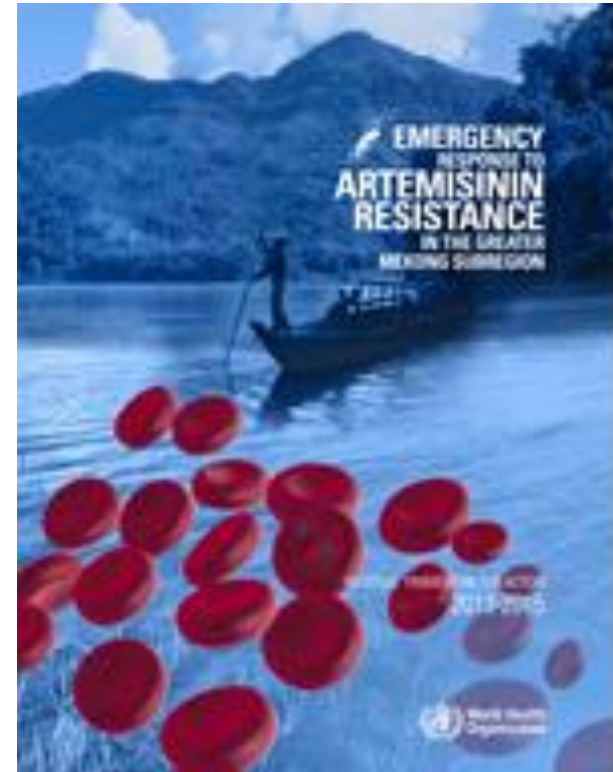


メコン川流域での薬剤耐性マラリアの出現

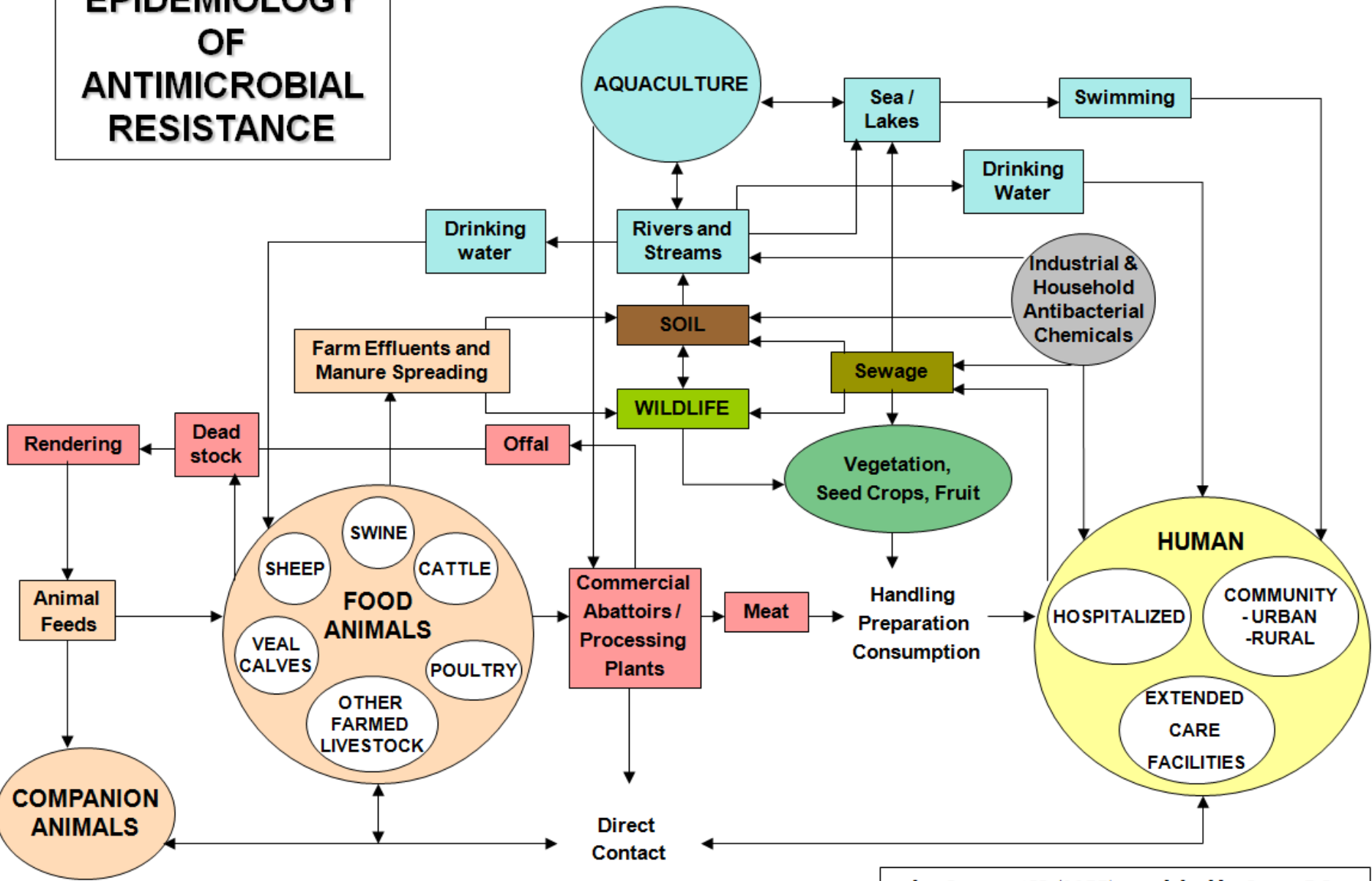
Spreading beyond borders



ST GRAPHICS



EPIDEMIOLOGY OF ANTIMICROBIAL RESISTANCE



after Linton AH (1977), modified by Irwin RJ

我々は高病原性鳥インフルエンザから何を学んだか？

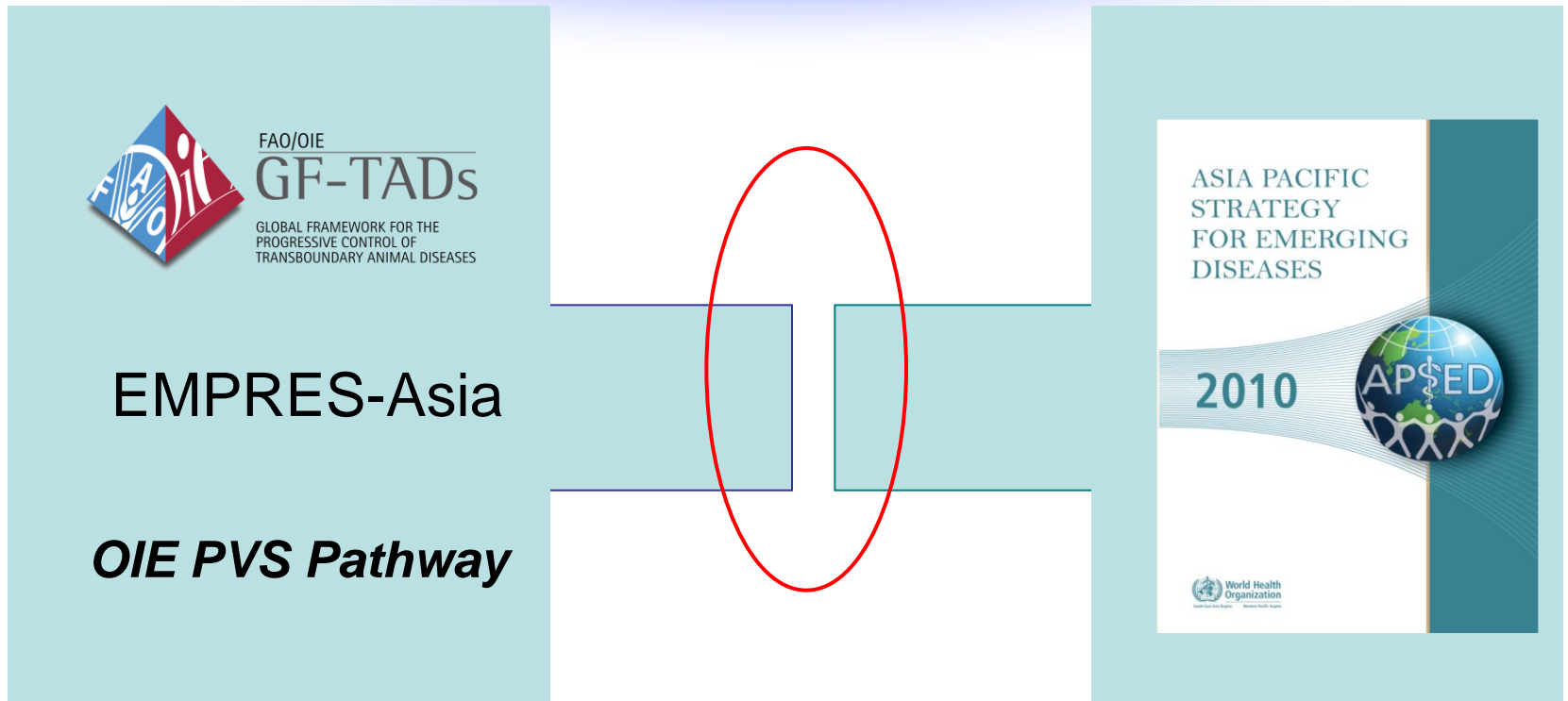
- 一つの部門だけでは、効果的に流行を防ぎかつ封じ込めることはできない。
- 保健部門と畜産部門の連携が不可欠。
- エコシステムを含め、我々には、判っていないことが多い。



Photo: courtesy to FAO

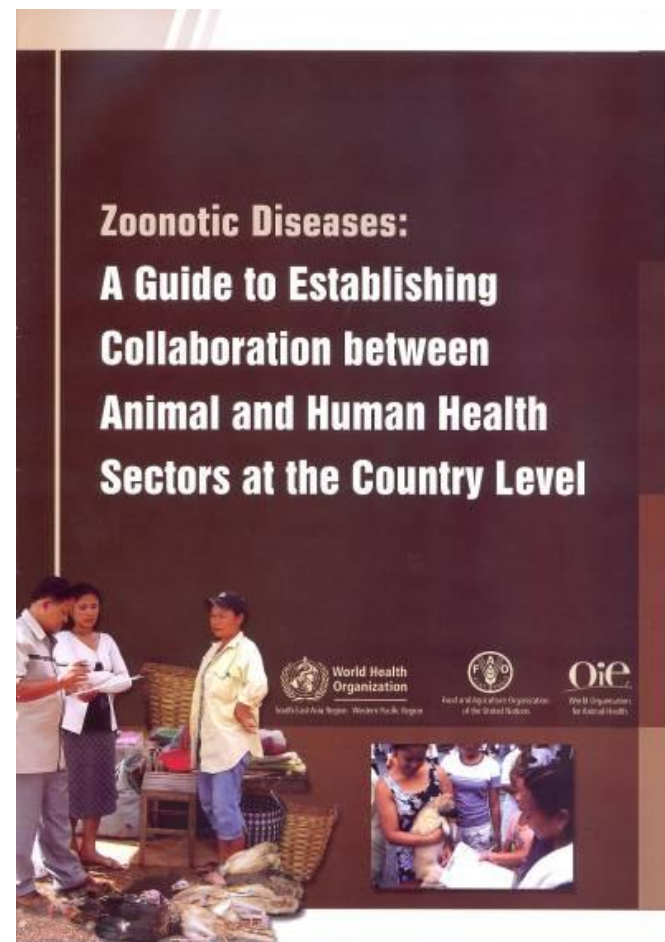
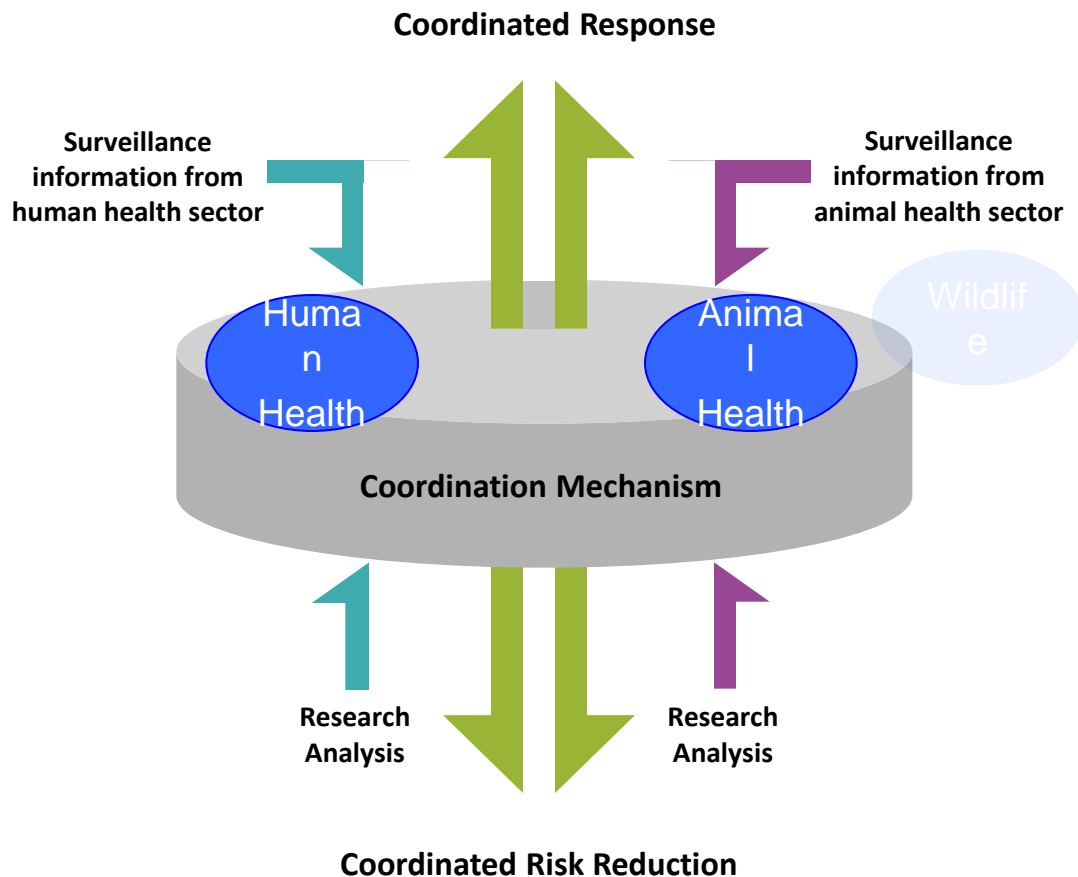
One Health

One Health

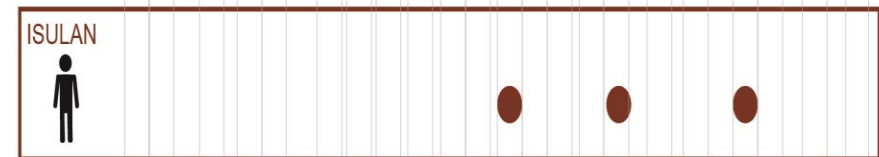
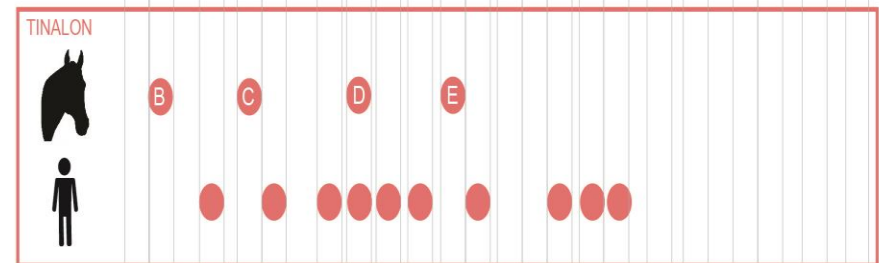
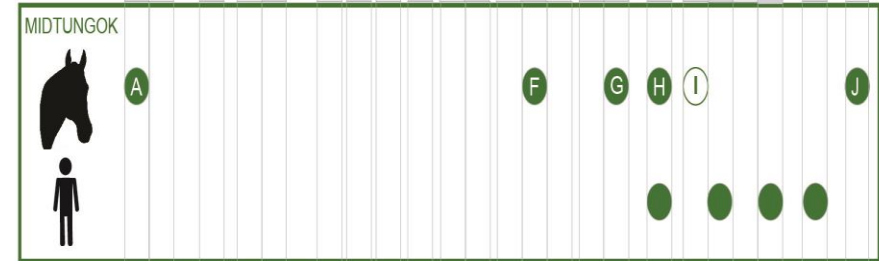
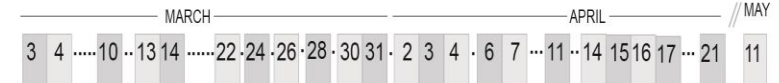
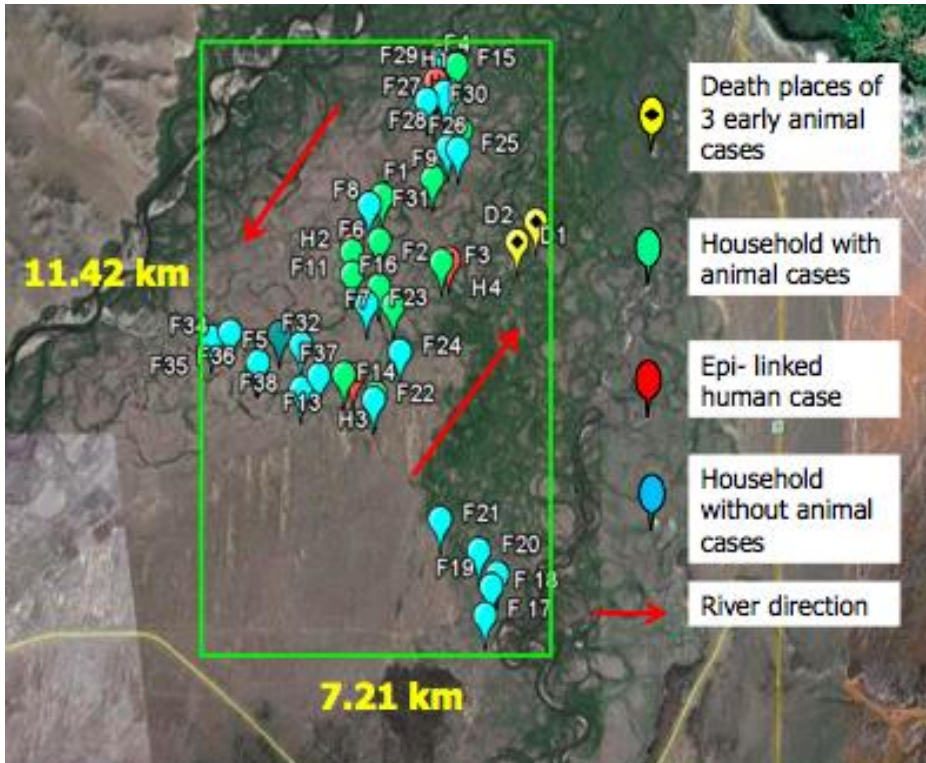


アジア太平洋感染症対策戦略

APSED-Zoonoses



モンゴルとフィリピンの事例



Ching et al. Outbreak of Henipavirus Infection, Philippines, 2014. Emerging Infectious Diseases •

www.cdc.gov/eid • Vol. 21, No. 2, February 2015

アジアは感染症のハイリスク地域

WPRO: Regional event-based surveillance

Reported Events	2008–2009† <i>n</i> = 206	2009–2010 <i>n</i> = 218	2010–2011 <i>n</i> = 357	2011–2012 <i>n</i> = 294	2012–2013 <i>n</i> = 222	2013–2014 <i>n</i> = 246	2014–2015 <i>N</i> = 197
Infectious diseases*	142	174	206	114	71	67	67
Animal H5N1**	35	26	136	86	100	107	33
Disasters and others***	16	9	7	92	50	71	96
Chemical	13	9	8	2	1	1	1

† Fiscal year for TAG (Technical Advisory Group meeting): July–June.

* Excluding animal avian influenza events.

** Based on FAO report since 2012.

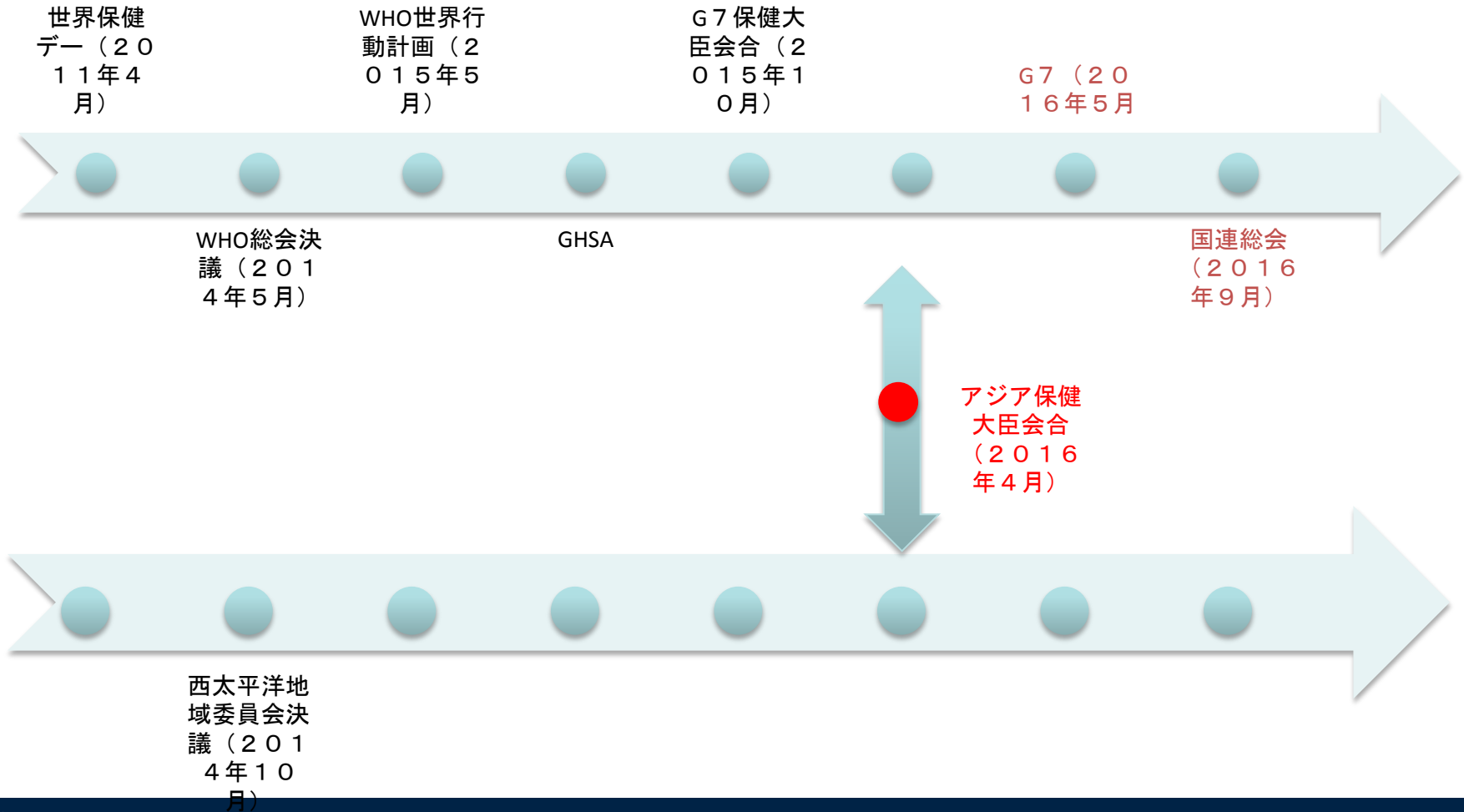
** Others include 'pharmaceutical-related', 'unknown', and 'food-related'; monitoring and reporting of disaster events became formalized mid-2011 and in 2013 became further modified based on the official Centre for Research on the Epidemiology of Disasters (CRED) criteria.

持続可能な開発目標



No body left behind! 誰も取り残されることのない未来に向けて

世界で行動を起こすために



***If you want to go faster, go alone, if you
want to go far, go together.***

アフリカのことわざ

Thank you !

[FAQs: http://www.who.int/csr/disease/coronavirus_infections/faq/en/](http://www.who.int/csr/disease/coronavirus_infections/faq/en/)



World Health
Organization

Western Pacific Region

Health Security and Emergencies