National situation and Challenges of Tuberculosis control in Thailand

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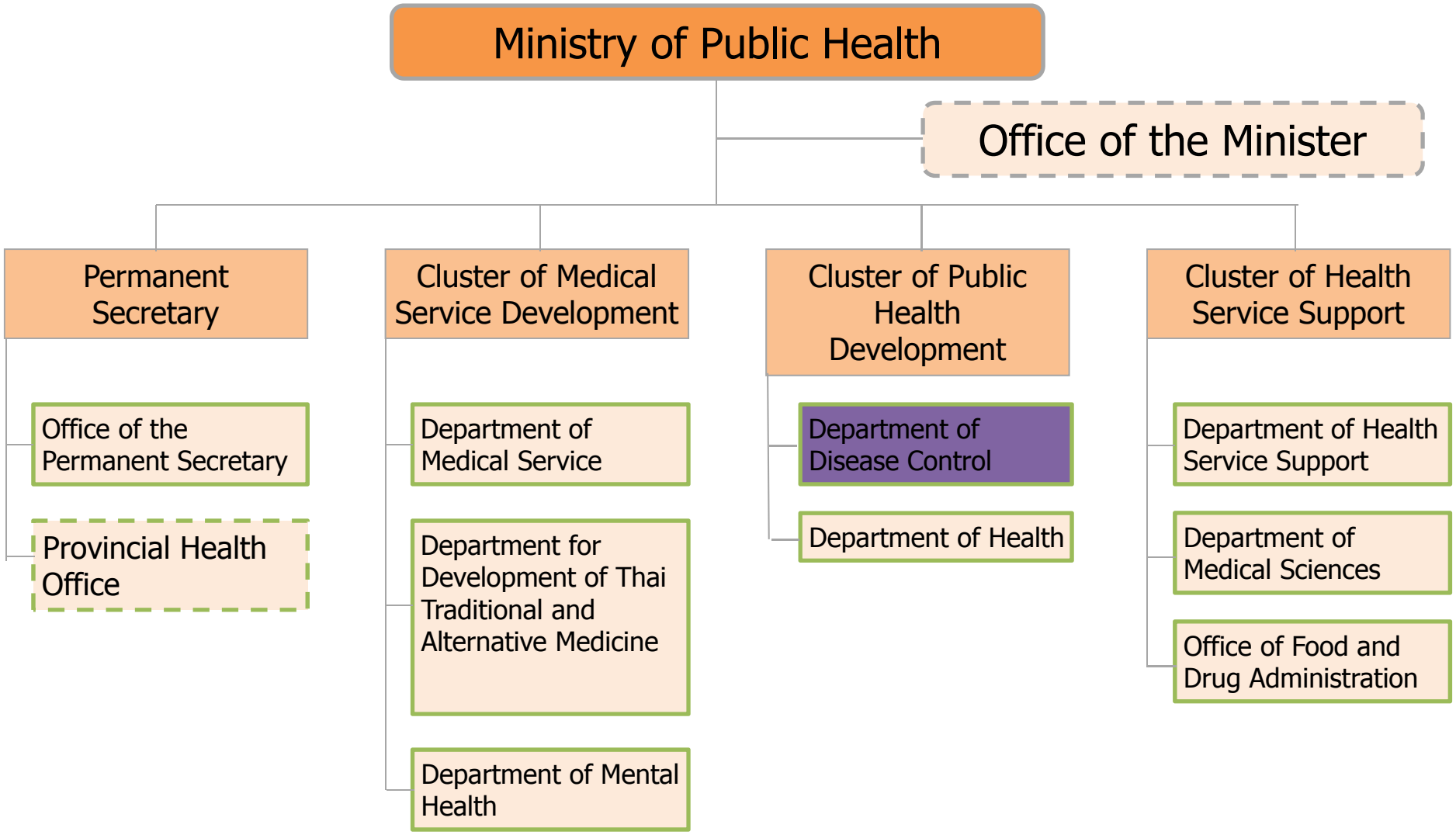
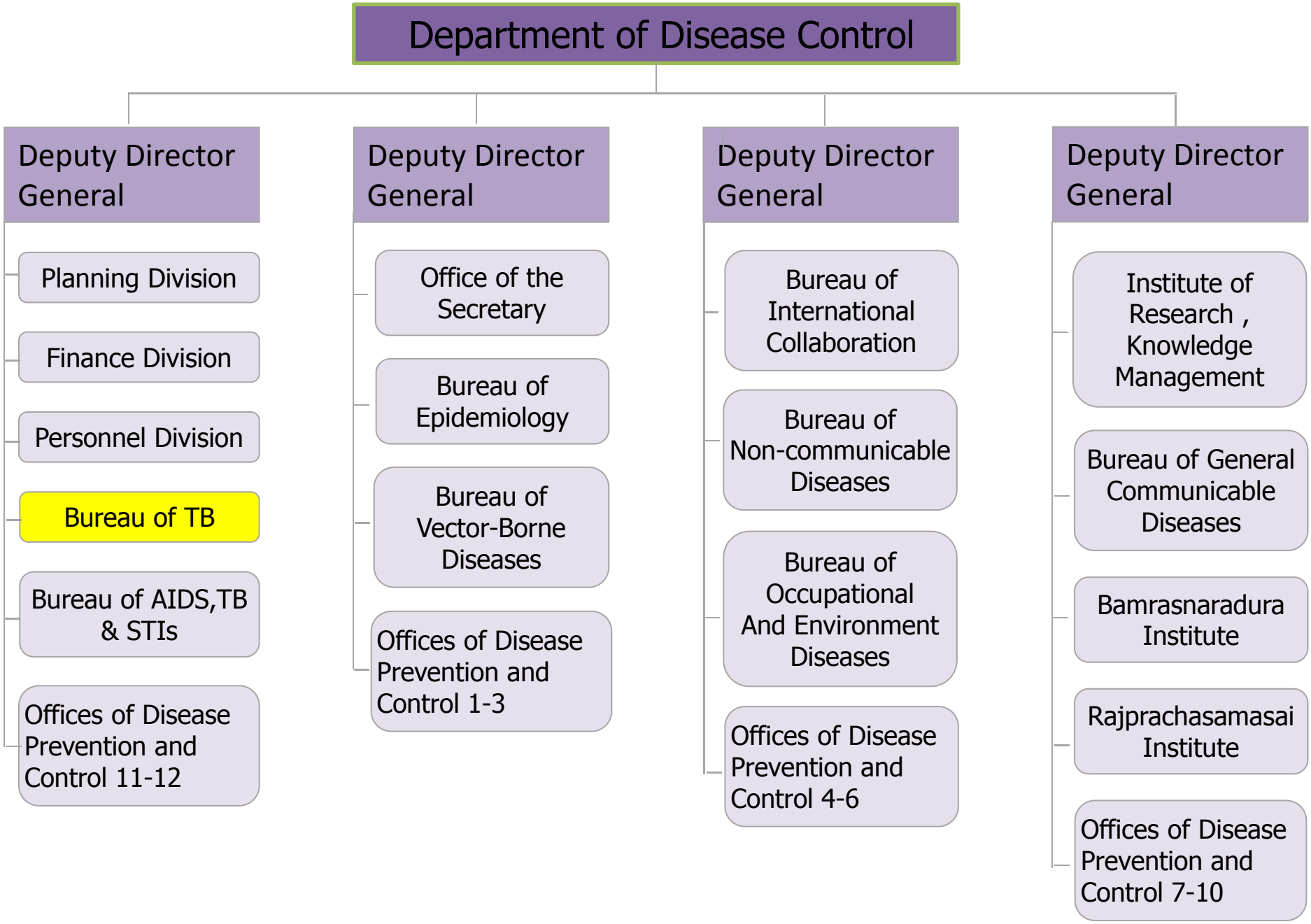
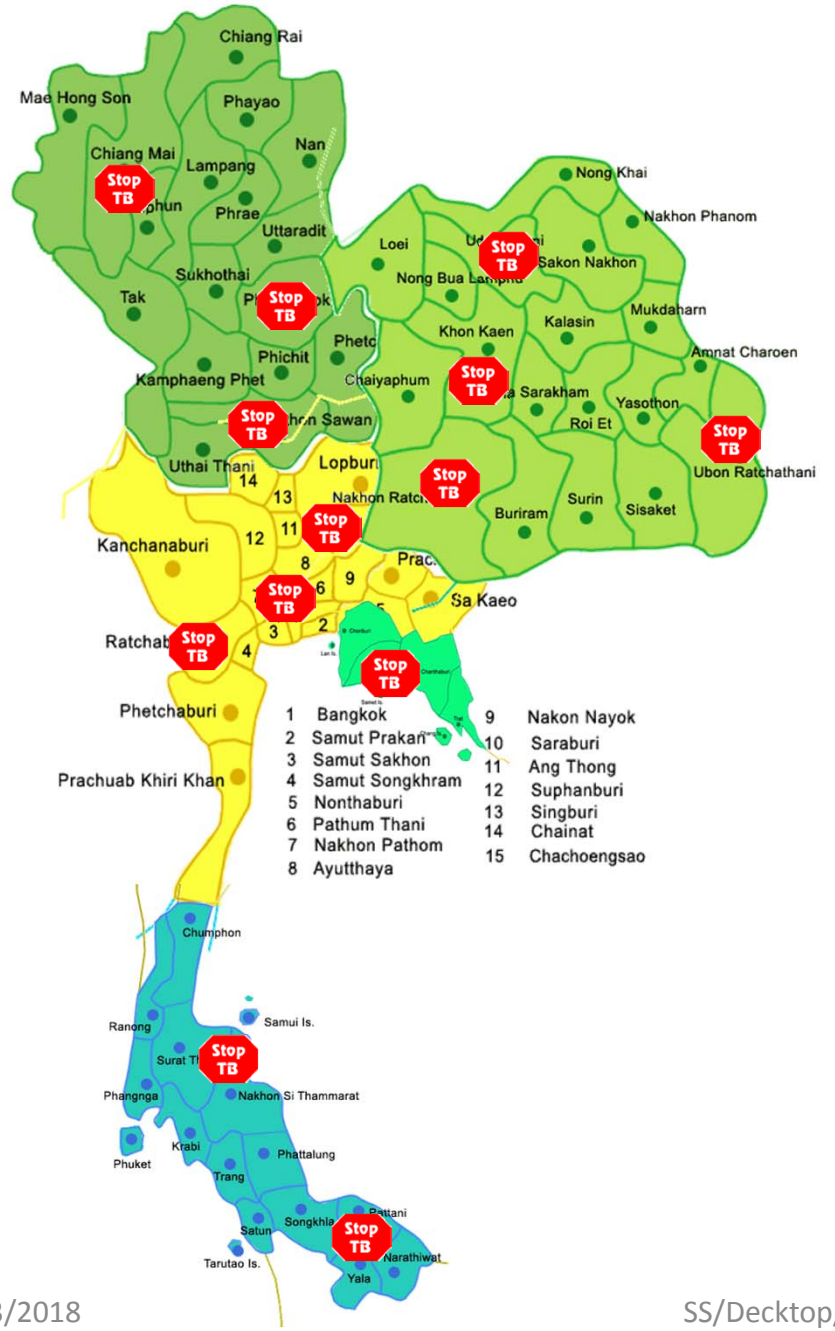
General information

1. Population 68 m (24% urban, 76% rural)
2. No. of Districts/Administrative units
   - 76 provinces and Bangkok (a capital city)
   - 878 districts
3. Other general info (population density, distribution of people, etc)
   - Average 50,000-100,000 pop./district
   - Average TB case notification 20-50 cases/district

Structure of The Ministry of Public Health




Department of Disease Control
Deputy Director General
Planning Division
Finance Division
Personnel Division
Bureau of TB
Bureau of AIDS,TB & STIs
Offices of Disease Prevention and Control 11-12
Deputy Director General
Office of the Secretary
Bureau of Epidemiology
Bureau of Vector-Borne Diseases
Offices of Disease Prevention and Control 1-3
Deputy Director General
Bureau of International Collaboration
Bureau of Non-communicable Diseases
Bureau of Occupational And Environment Diseases
Offices of Disease Prevention and Control 4-6
Deputy Director General
Institute of Research , Knowledge Management
Bureau of General Communicable Diseases
Bamrasnaradura Institute
Rajprachasamasai Institute
Offices of Disease Prevention and Control 7-10



Organization of NTP

Central Level : Bureau of TB

- National TB Program

Regional Level

- Regional TB Program

Provincial Level

- Provincial TB Program
- TB Clinics Provincial Hospital

District Level

- District TB Coordinator
- TB clinic (Community hospital)
- Health Center (Health Post)
- Health volunteer, Community workers

BANGKOK : 50 districts and 152 sub-districts headed by one governor and two councils (Metropolitan and zonal councils)

9 Hospitals

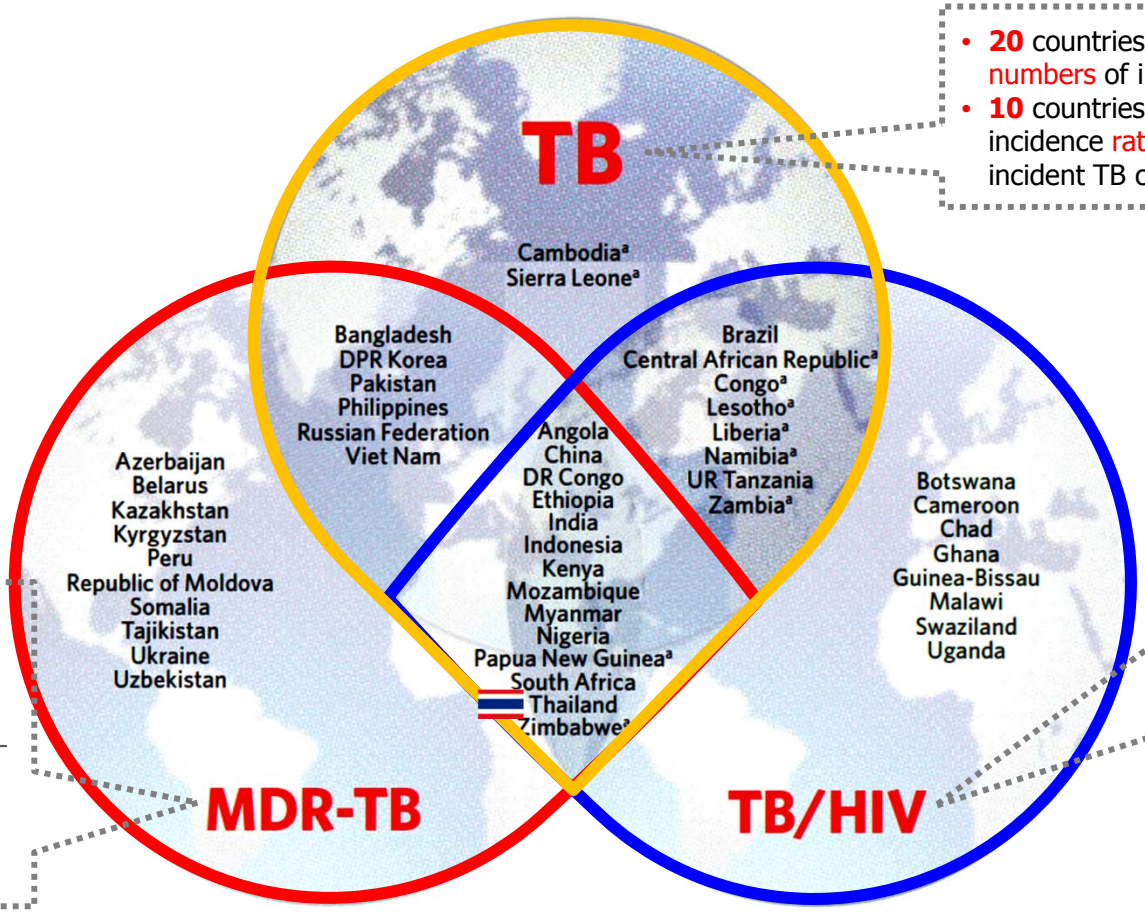
University Hospitals

Military Hospital

Police Hospital

Private Hospitals

WHO ประกาศให้ไทยเป็นประเทศที่มีภาระวัณโรคสูง (TB High-Burden Lists)

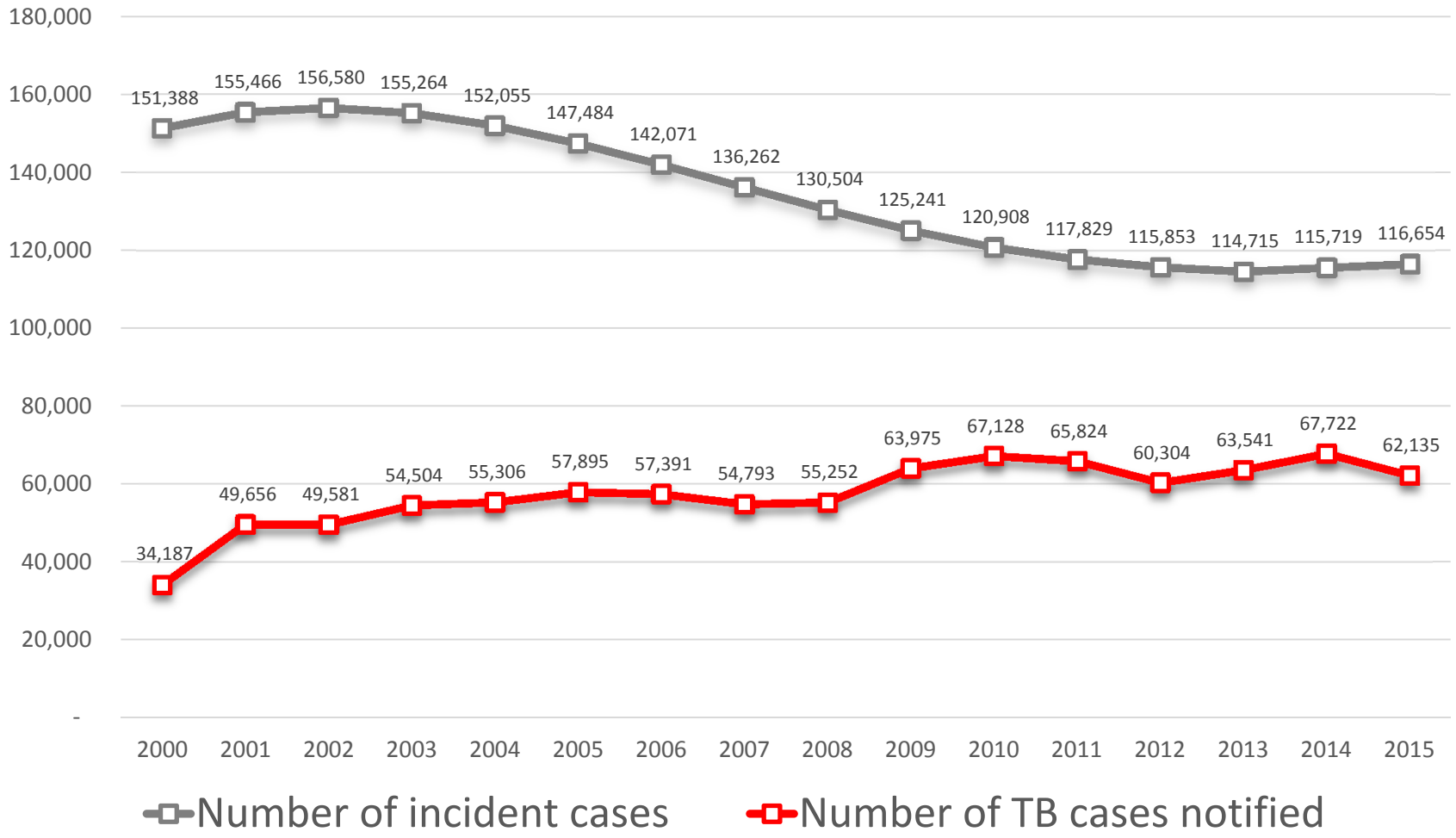


- **20** countries -highest estimated numbers of incident TB cases,
- **10** countries-highest estimated TB incidence rate (>10 000 estimated incident TB cases per year)

- **20** countries-highest estimated numbers of incident MDR-TB
- **10** countries with the highest estimated MDR-TB incidence rate (>1000 estimated incident MDR-TB cases per year)

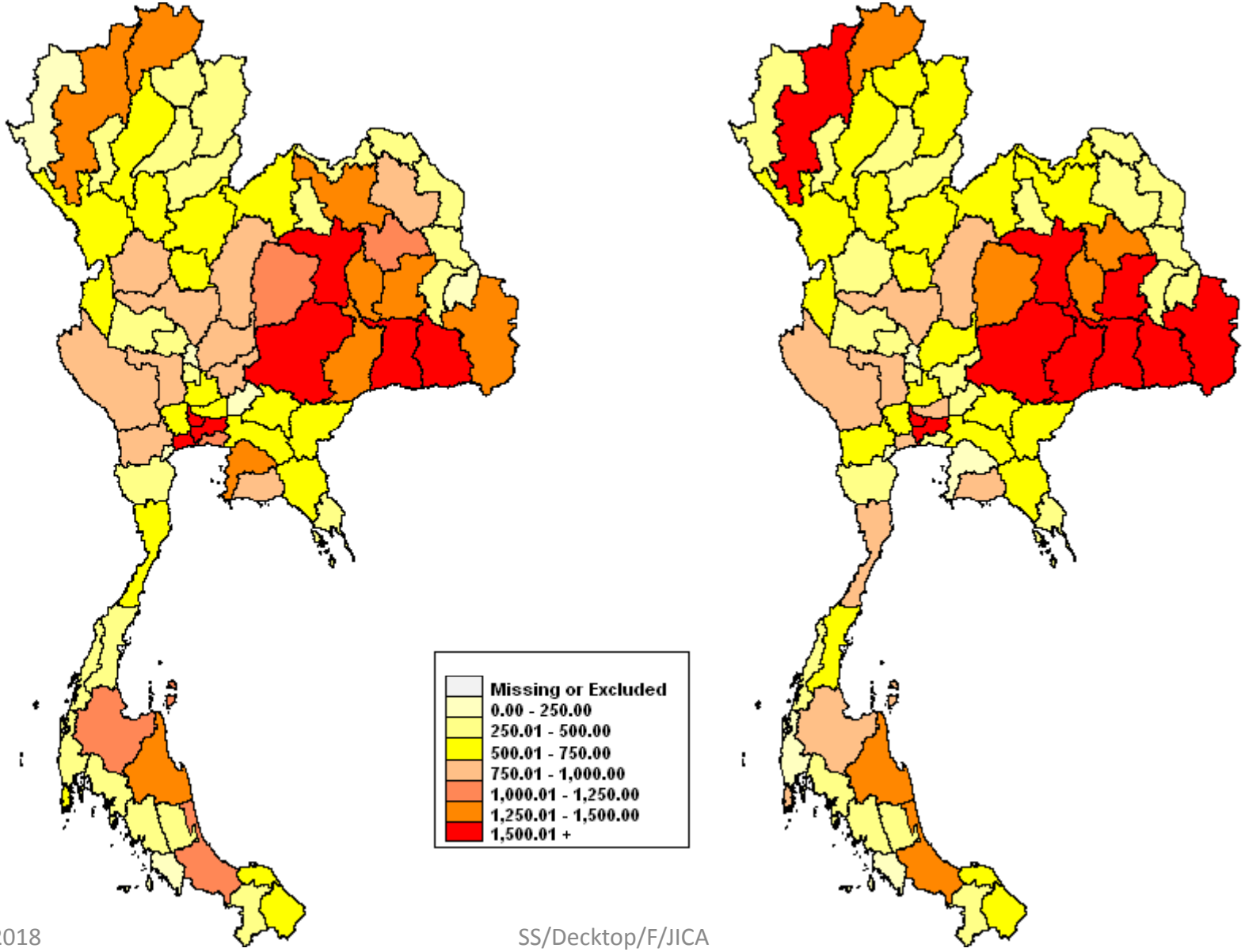
- **20** countries-highest estimated numbers of incident TB cases among people living with HIV
- **10** countries with the highest estimated TB/HIV incidence rate (>1000 estimated incident TB/HIV cases per year).

Number of estimated TB incident and notified cases in Thailand, 2000-2015



Source : Global TB Report 2016,WHO / BTB, DDC, MoPH-Thailand

Number of new and relapse TB cases,2015-2016



TB situation, Thailand

Estimates of TB burden,[a] 2016

	Number (thousands)	Rate (per 100 000 population)
Mortality (excludes HIV+TB)	8.6 (7.2–10)	13 (10–15)
Mortality (HIV+TB only)	3.9 (2.3–5.9)	5.7 (3.4–8.6)
Incidence (includes HIV+TB)	119 (70–180)	172 (102–261)
Incidence (HIV+TB only)	10 (6.1–16)	15 (8.8–23)
Incidence (MDR/RR-TB)[b]	4.7 (3–6.3)	6.8 (4.4–9.2)

Drug-resistant TB care, 2016

	New cases	Previously treated cases	Total number[c]
Estimated MDR/RR-TB cases among notified pulmonary TB cases			2 700 (2 100–3 300)
Estimated % of TB cases with MDR/RR-TB	2.2% (1.5–2.9)	24% (16–32)	
% notified tested for rifampicin resistance	8%	18%	6 889
MDR/RR-TB cases tested for resistance to second-line drugs			499
Laboratory-confirmed cases			MDR/RR-TB: 955, XDR-TB: 13
Patients started on treatment[d]			MDR/RR-TB: 952, XDR-TB: 8

Estimated global tuberculosis burden 2015

- an estimated 10.4 million incident cases of TB
  - 1.0 million (10%) among children
  - 1.2 million (11%) among people living with HIV
- 480,000 new cases of MDR-TB worldwide, and an additional 100,000 rifampicin-resistant TB (RR-TB)
- India, China and the Russian Federation accounted for 45% of the combined total of 580 000 cases.

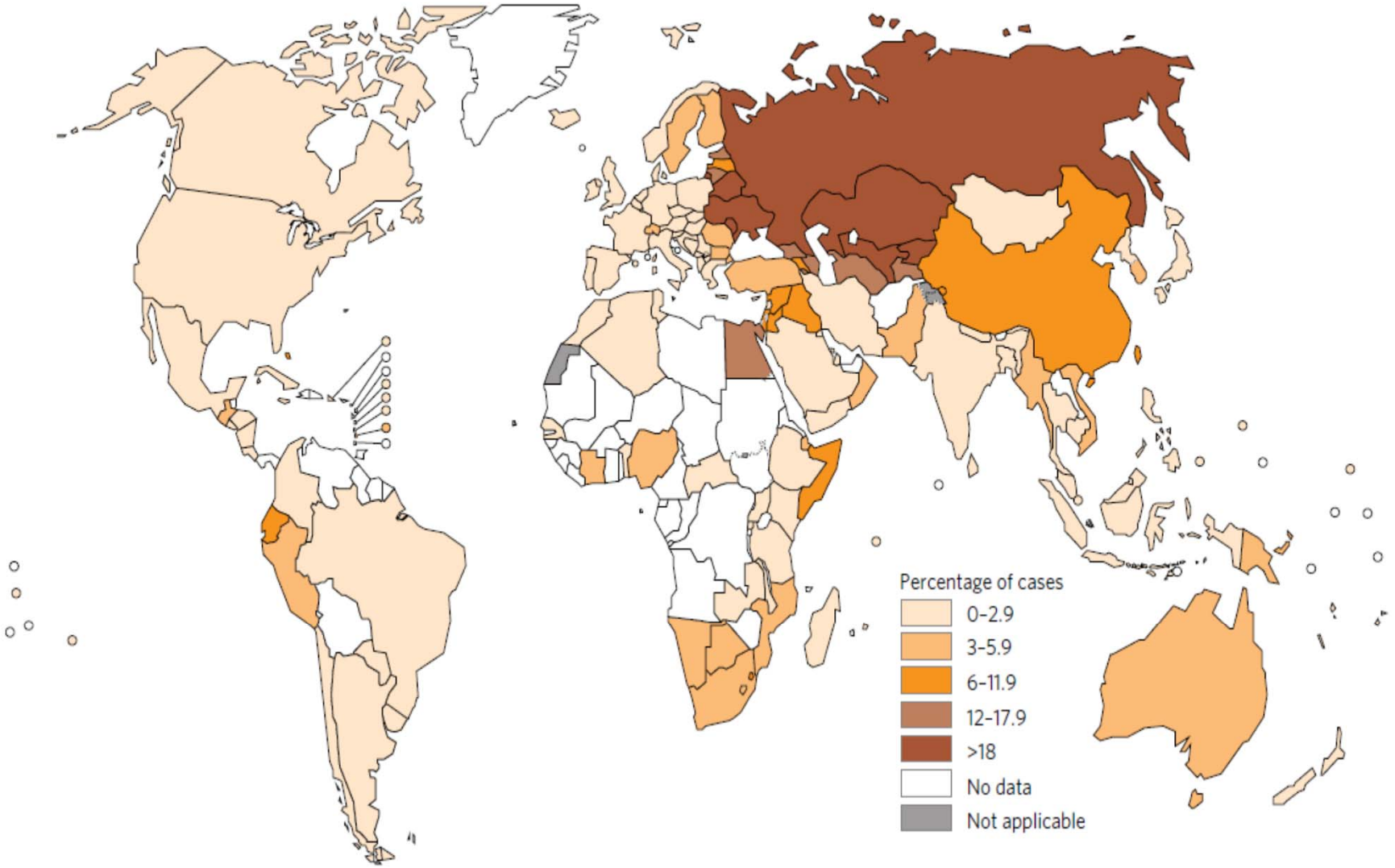
Global TB Report 2016

Global estimates of MDR-TB

- 3.9% (95% CI: 2.7–5.1%) of new cases
  - (Viet Nam 4.1%)
- 21% (95%CI: 15–28%) of previously treated cases
  - (Viet Nam 25%)
- There were about 250 000 (range, 160 000–340 000) deaths from MDR/RR-TB in 2015.
- Globally in 2015, there were an estimated 340 000 (range, 320 000–350 000) MDR/RR-TB cases among notified TB patients.

Global Tuberculosis Report 2016

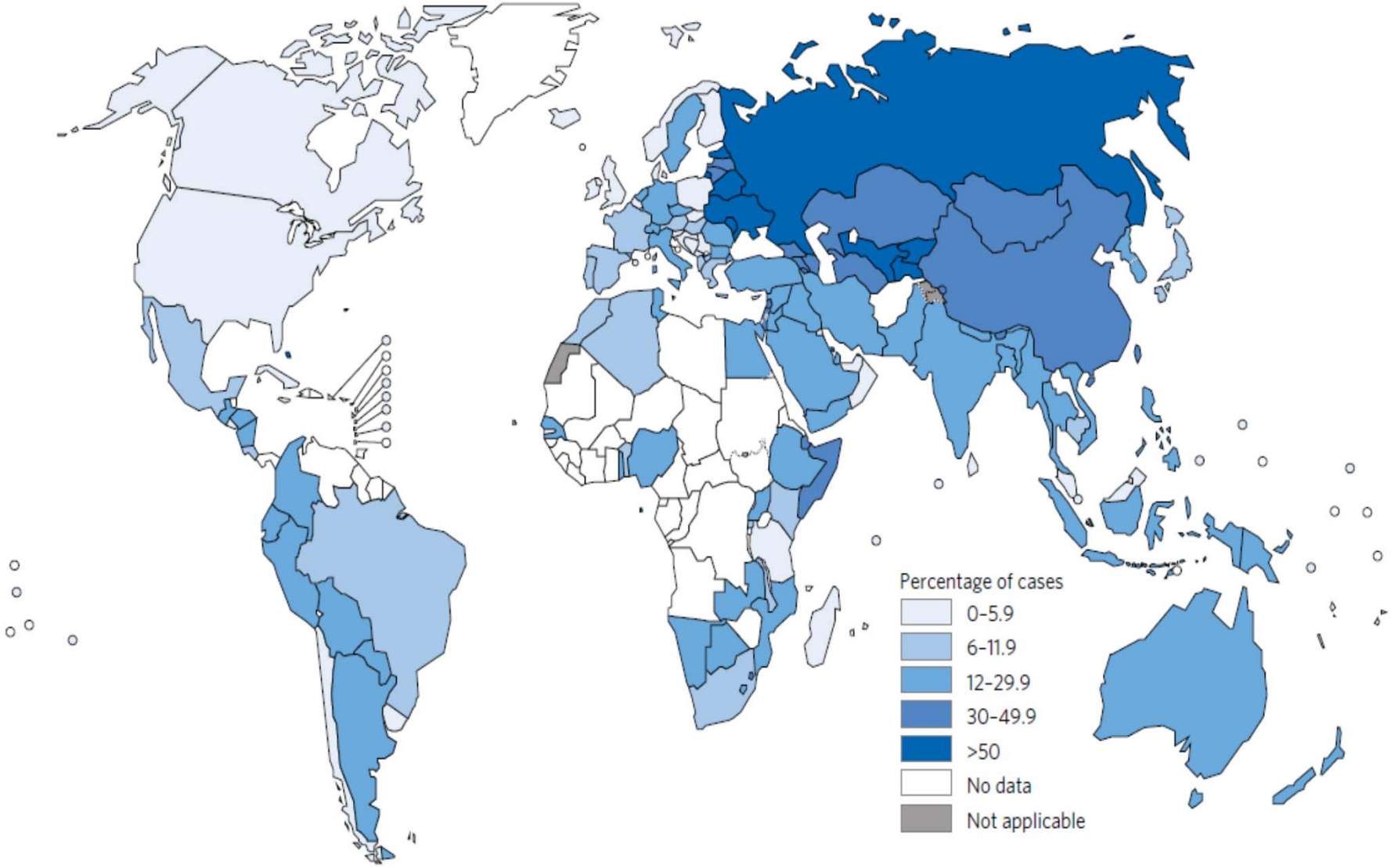
Percentage of new TB cases with MDR/RR-TB[a]



[a] Figures are based on the most recent year for which data have been reported, which varies among countries. Data reported before the year 2001 are not shown.

Global Tuberculosis Report 2016

Percentage of previously treated TB cases with MDR/RR-TB[a]



[a] Figures are based on the most recent year for which data have been reported, which varies among countries. Data reported before the year 2001 are not shown. The high percentages of previously treated TB cases with MDR-TB in Bahamas, Bahrain, Belize, Bonaire – Saint Eustatius and Saba, French Polynesia and Sao Tomé and Principe refer to only a small number of notified cases (range: 1-8 notified previously treated TB cases).

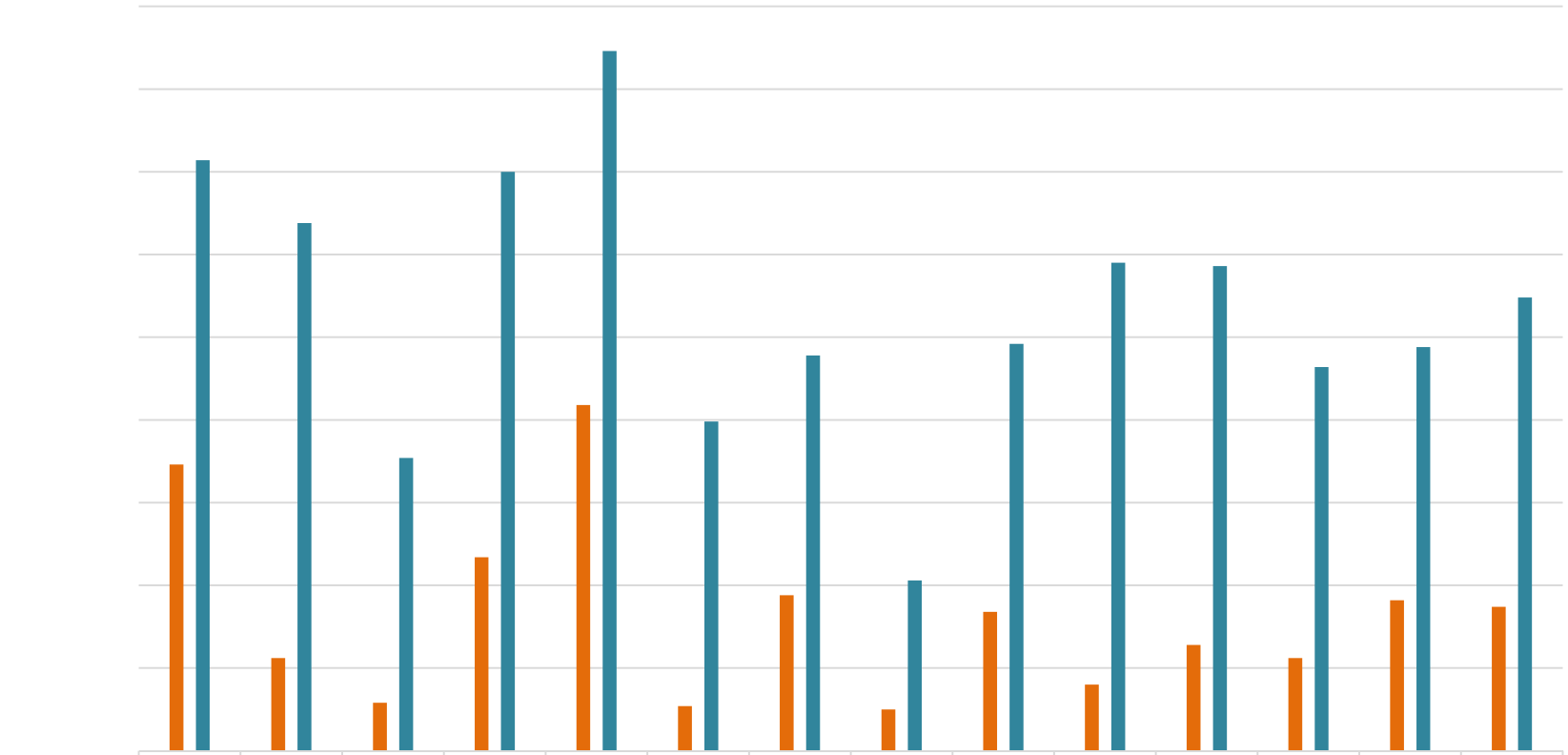
Global Tuberculosis Report 2016

ผลการรักษาผู้ป่วยวัณโรค N+R ที่ขึ้นทะเบียน ปี 2558

	1	2	3	4	5	6	7	8	9	10	11	12	สปคม.	ประเทศ
Success	74.23	82.7	78.58	78.62	79.92	80.04	78.02	78.69	81.79	80.63	79.36	83.4	66.75	78.67
Failure	0.74	1.39	1.08	0.86	1.22	1.05	0.73	0.8	0.64	0.54	1.06	1.02	0.49	0.89
Died	13.58	11.28	11.04	6.38	8.74	7.23	8.06	7.04	6.62	8.93	10.35	7.59	3.08	8.46
LTF	4.21	3.67	3.72	7.19	3.7	6.81	6.21	3.91	5.87	2.95	5.21	4.29	8.44	5.09
TO	5.24	0.65	1.84	5.23	3.61	3.39	6.11	3.11	3.99	6.73	2.96	3.22	5.65	3.98
Not evaluated	2	0.31	3.75	1.71	2.81	1.47	0.88	6.46	1.09	0.23	1.06	0.48	15.6	2.91

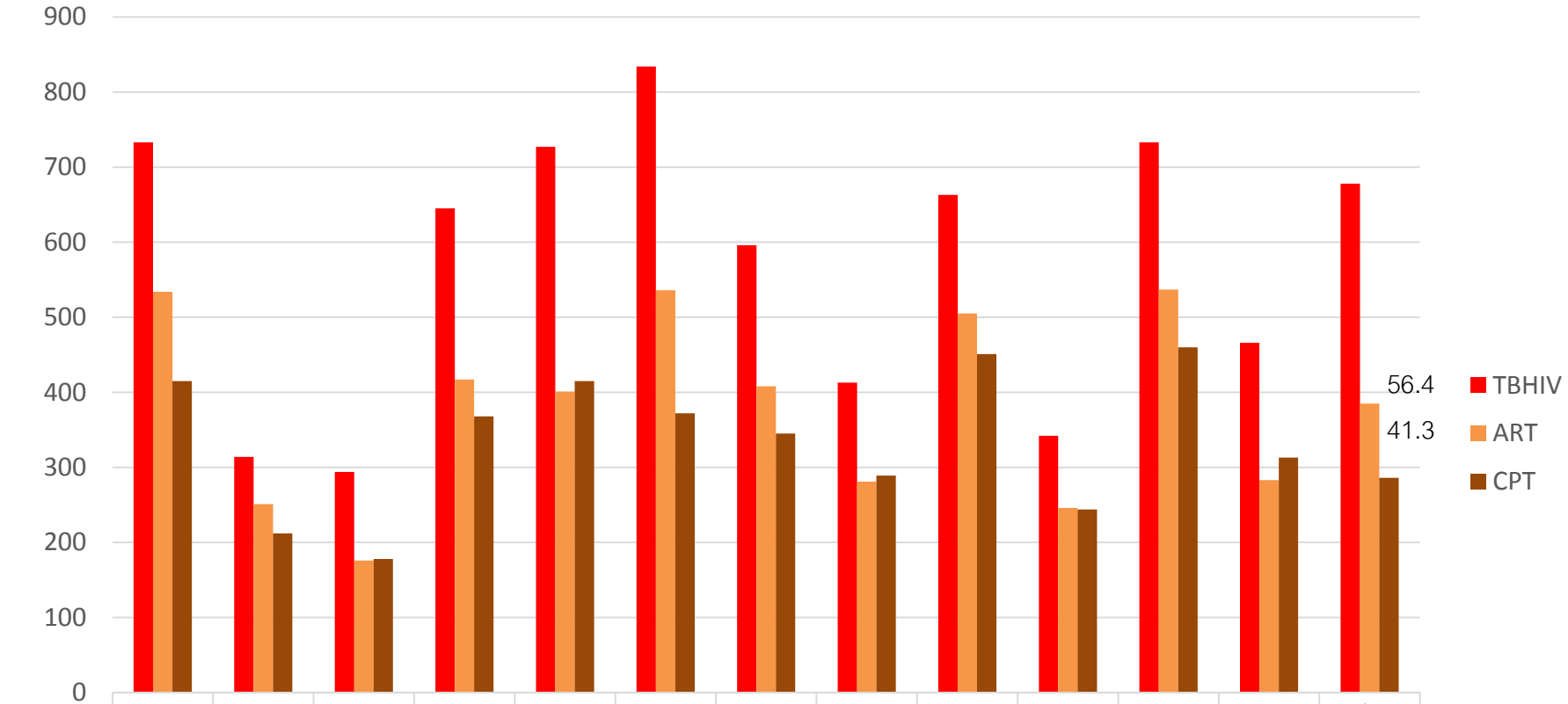
TBCM.240760

ผู้ป่วยวัณโรคที่ได้รับการตรวจ DST ปี 2559



	สคร.1	สคร.2	สคร.3	สคร.4	สคร.5	สคร.6	สคร.7	สคร.8	สคร.9	สคร.10	สคร.11	สคร.12	สปคม.	ประเทศ
New	17.3%	5.6%	2.9%	11.7%	20.9%	2.7%	9.4%	2.5%	8.4%	4.0%	6.4%	5.6%	9.1%	8.7%
Retreat	35.7%	31.9%	17.7%	35.0%	42.3%	19.9%	23.9%	10.3%	24.6%	29.5%	29.3%	23.2%	24.4%	27.4%

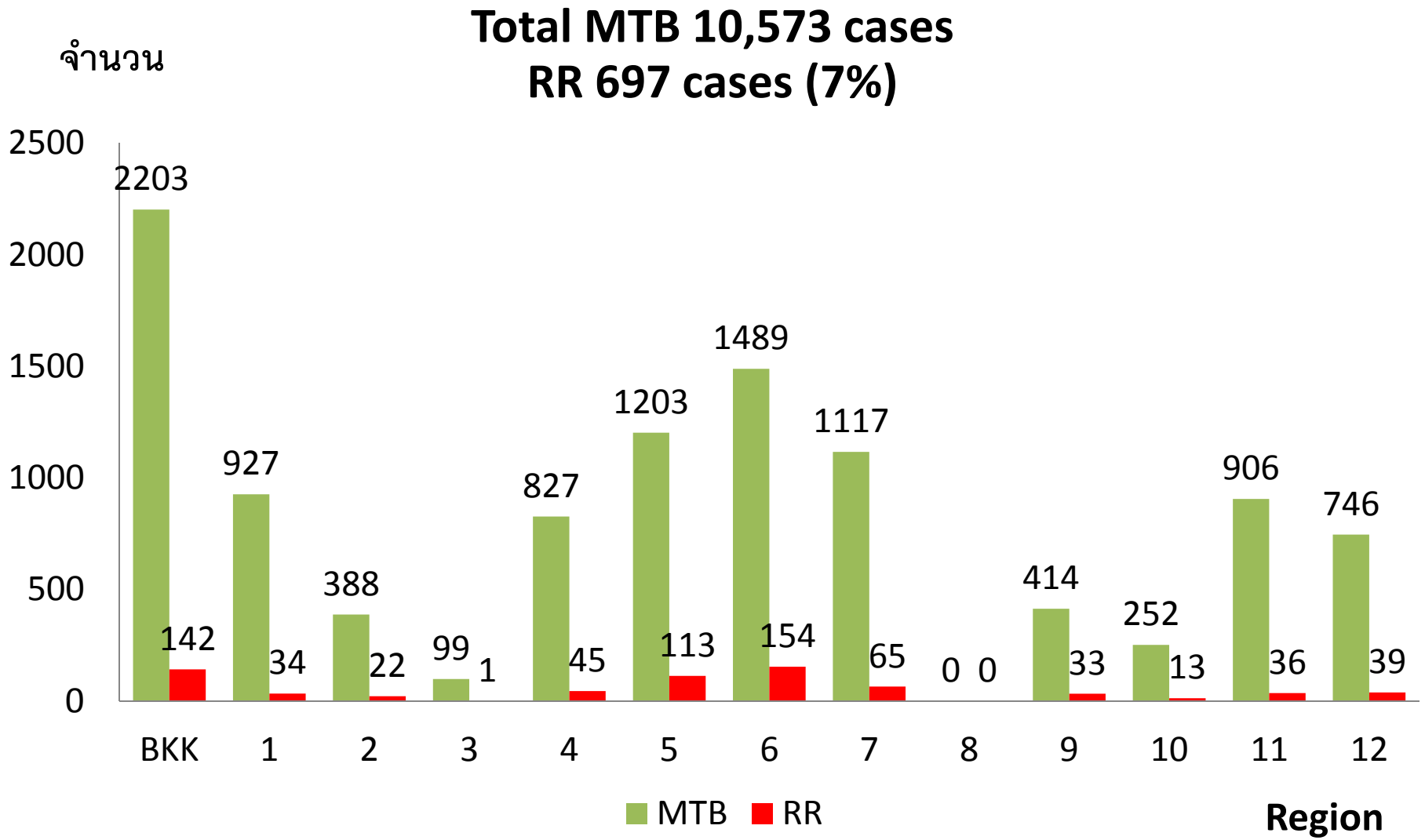
จำนวนผู้ป่วย **TB/HIV** ที่ได้รับ **ART** และ **CPT** ปี 2559



	สคร.1	สคร.2	สคร.3	สคร.4	สคร.5	สคร.6	สคร.7	สคร.8	สคร.9	สคร.10	สคร.11	สคร.12	สปคม.
TBHIV	733	314	294	645	727	834	596	413	663	342	733	466	678
ART	534	251	176	417	401	536	408	281	505	246	537	283	385
CPT	415	212	178	368	415	372	345	289	451	244	460	313	286

ประเทศ	TBHIV=7,438	ART=4,960	CPT=4,348

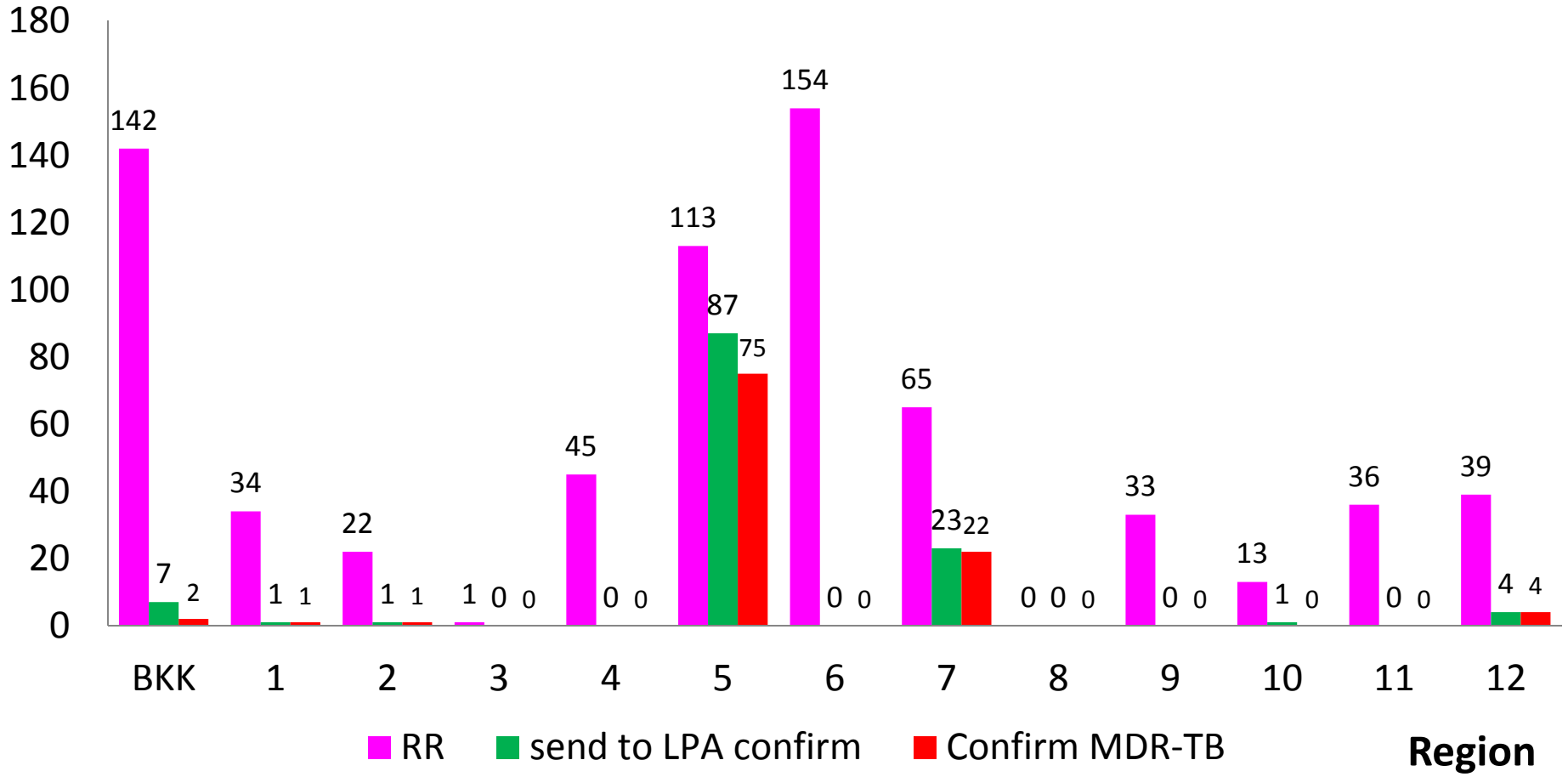
อัตราการตรวจพบ RR ด้วย Xpert MTB/RIF



Data from www.tbnfmthailand.org 01.01.2559 - 31.08.2560

RR confirm MDR-TB

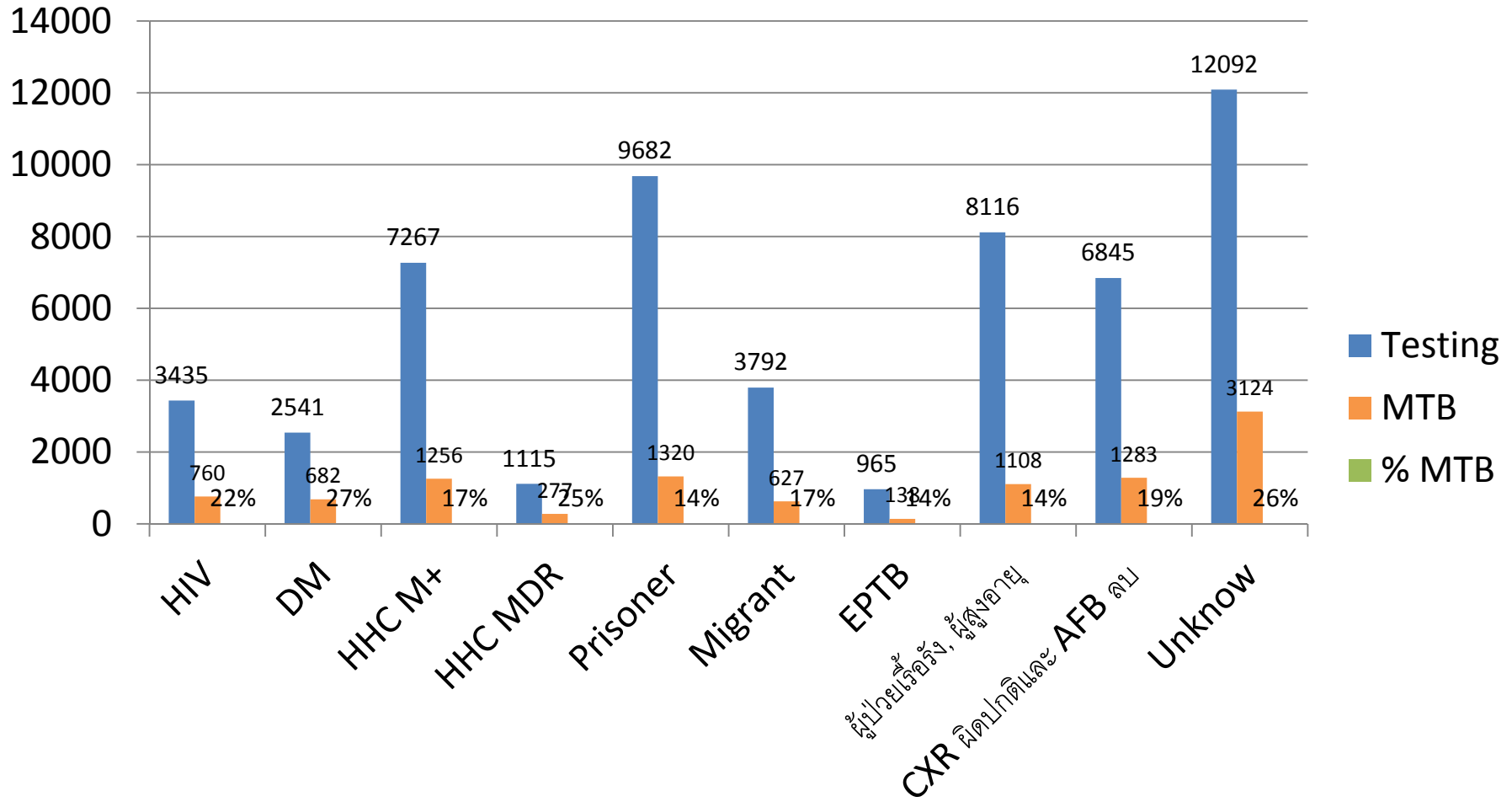
Total RR 697 cases
MDR-TB confirm 105/124(85%)



Data from www.tbnfmthailand.org 01.01.2559 - 31.08.2560

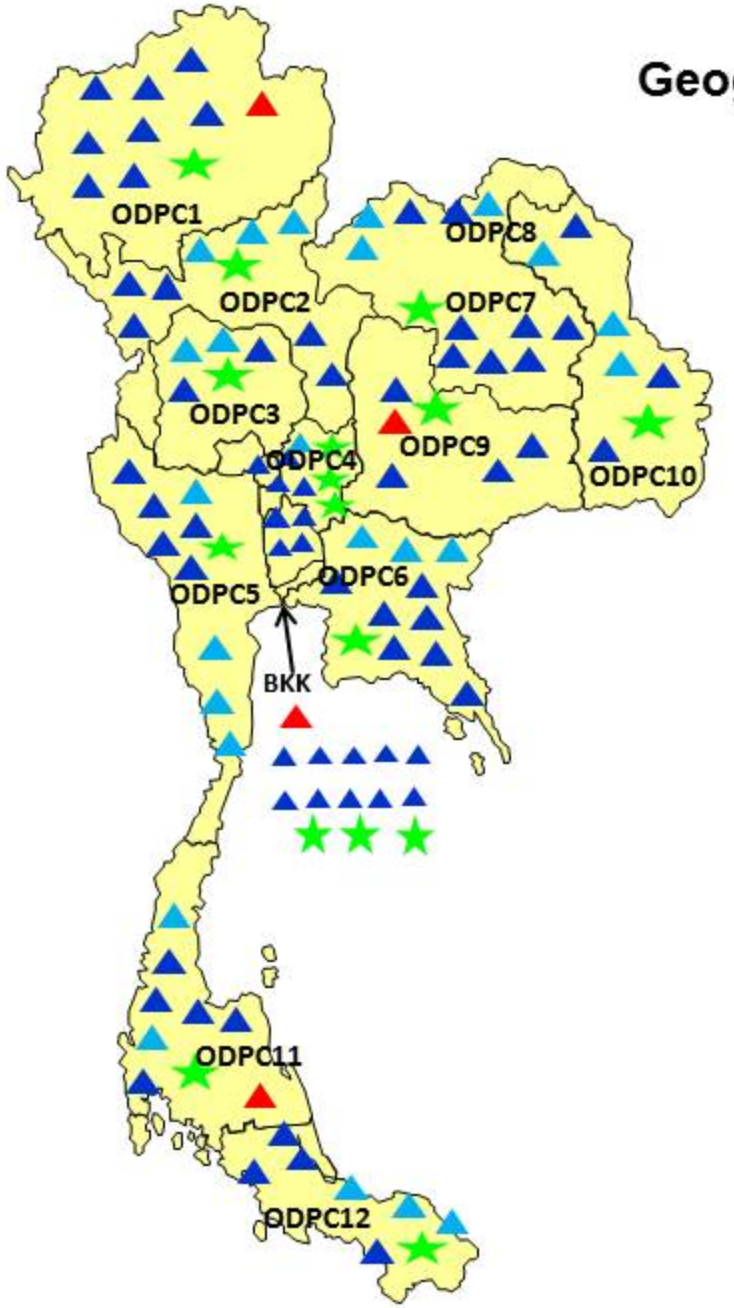
การตรวจด้วย Xpert MTB/RIF แยกประเภทกลุ่มเสี่ยง

Total testing from Xpert online 55,850 cases
MTB 10,573 cases(19%)



Data from www.tbnfmthailand.org 01.01.2559 - 31.08.2560

Geographical location of rapid diagnostics in Thailand



▲ 68 existing Xpert machines

▲ 24 Xpert machines (4 module) in Nov, 2017

▲ 4 Xpert machines (16 module) in Oct, 2017

★ 16 LPA machines at regional and central levels

Shorter MDR-TB Regimen

สูตรยาและระยะเวลาที่ใช้ในการรักษา

Shorter course regimen for MDR-TB treatment 9-11 mo.

ระยะเข้มข้น

- **Kanamycin, Moxifloxacin, Clofazimine,Ethambutol, high-dose Isoniazid, Pyrazinamide และ Prothionamide ให้ทุกวัน เป็นเวลา 4 เดือน การให้ยาระยะเข้มข้นนี้สามารถขยายจาก 4 เดือน เป็น 6 เดือน ในกรณีที่ตรวจเสมหะในเดือนที่ 4 แล้วยังเป็นบวกพบเชื้ออยู่**

ระยะต่อเนื่อง

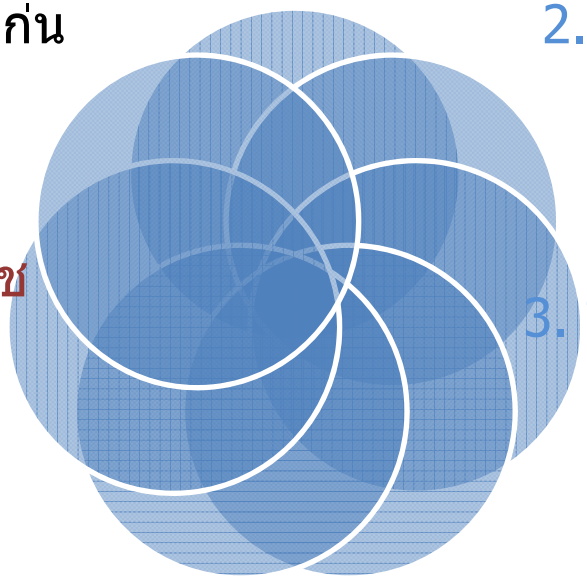
- **Moxifloxacin, Clofazimine, Ethambutol, และ Pyrazinamide ให้ทุกวัน เป็นเวลาอีก 5 เดือน ต่อจากระยะเข้มข้น**

โรงพยาบาล 7 แห่ง ที่เข้าร่วมโครงการ และมีเครื่อง Xpert MTB/RIF

1. สถาบันบำราศนราดูร
จ.นนทบุรี

7. โรงพยาบาลขอนแก่น
จ.ขอนแก่น (7)

2. สถาบันโรคทรวงอก
จ.นนทบุรี (3)



6. โรงพยาบาลมหาราช
นครราชสีมา
จ.นครราชสีมา (3)

3. โรงพยาบาลพระนั่งเกล้า
จ.นนทบุรี (2)

5. โรงพยาบาลมะการักษ์
จ.กาญจนบุรี (_)

4. โรงพยาบาลชลบุรี
จ.ชลบุรี (_)

New sites

สคร. 1 เชียงใหม่ (4 ธันวาคม 2560) 4 sites

1.โรงพยาบาล สันป่าตอง เชียงใหม่
2.โรงพยาบาล ลำปาง
3 taksin
4 nakhonsrithamarat region 11
4 sites

WHO 2016: A shorter MDR-TB regimen

- For patients who
  - rifampicin-resistant or multidrug-resistant TB
  - who have not been previously treated with SLDs
  - resistance to fluoroquinolones and second-line injectable agents has been excluded or is considered highly unlikely
- A shorter MDR-TB regimen of 9-12 months may be used instead of a conventional regimen (conditional recommendation, very low certainty in the evidence)

A shorter MDR-TB vs. Conventional MDR-TB regimens

- Bangladesh(N=493)
- Uzbekistan (N=65)
- Swaziland (N=24)
- Cameroon (N=150)
- Niger(N=65)
- 9 sub-Saharan African countries (N=408)

Rx success in a shorter MDR-TB vs. conventional MDR-TB regimens

Resistance pattern	*Shorter MDR-TB regimen*		*Conventional MDR-TB regimen*	
	N	% (95% CI)	N	% (95% CI)
All cases regardless of pyrazinamide and fluoroquinolone susceptibility	1008/1116	*90.3% (87.8%- 92.4%)*	4033/5850	*78.3% (71.2%- 84%)*
Pyrazinamide resistant; fluoroquinolone resistant	19/28	67.9% (47.6%-84.1%)	81/137	59.1% (50.6%-67.1%)
Pyrazinamide resistant; fluoroquinolone susceptible	90/100	88.8% (47.3%-98.6%)	840/1075	81.4% (71.6%-88.4%)
Pyrazinamide susceptible; fluoroquinolone resistant	12/15	80.0% (50.0%-94.1%)	72/120	64.4% (49.6%-76.9%)
Pyrazinamide susceptible; fluoroquinolone susceptible	121/125	96.8% (77.3%-99.6%)	890/1119	83.5% (75.7%-89.2%)

M/XDR TB strategies and interventions

- Improving access to diagnosis of DR-TB among risk groups.
- Coordinating with Ministry of Social Development and Human Security for financial support to RR/MDR-TB patients.
- Accelerating the use of shorter treatment regimen and new drugs for RR/MDR-TB patients.

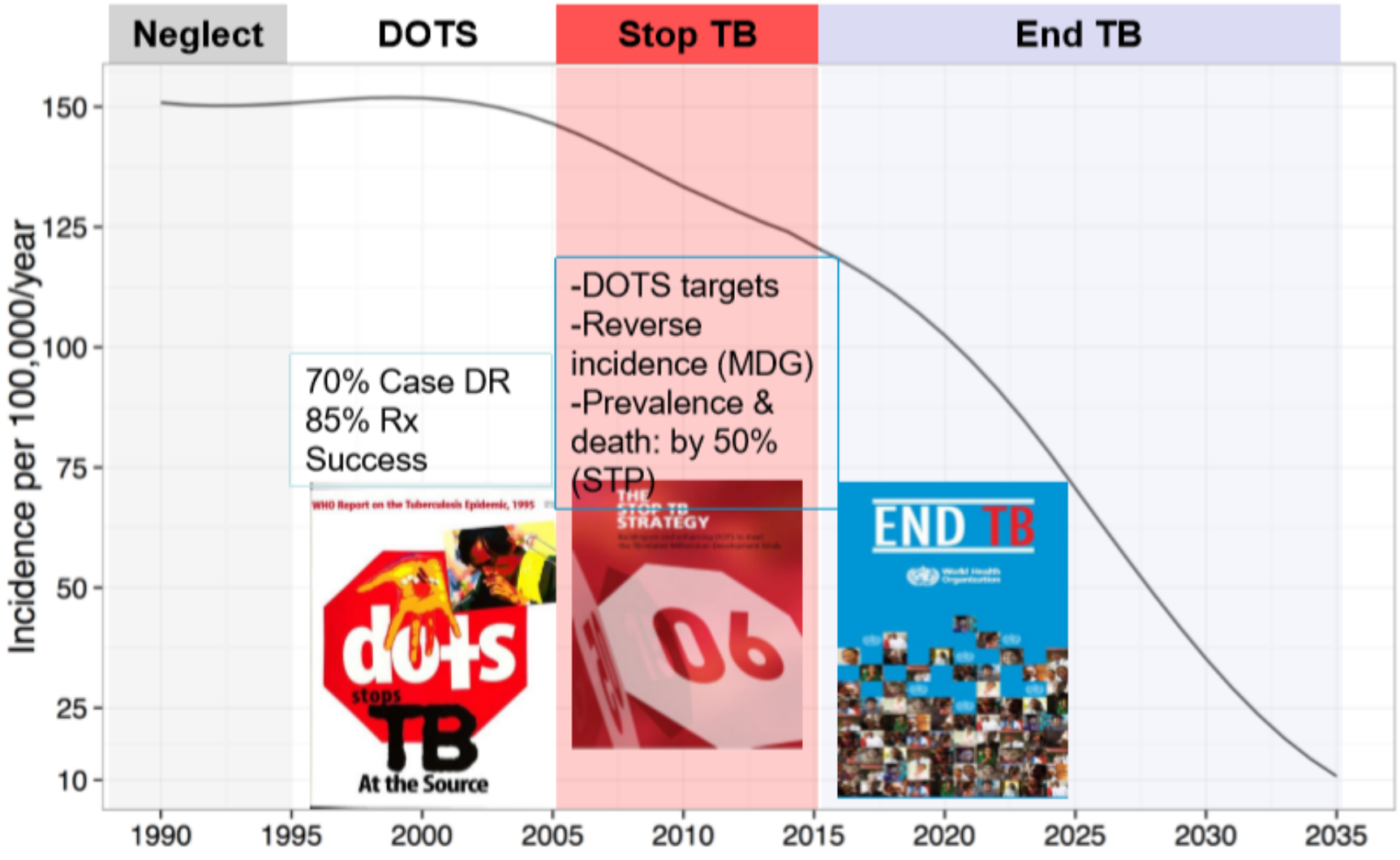
Major specific challenges in reaching the targets for PMDT expansion

- Communication between policy and practice, especially on DR-TB detection among risk groups is not fully implemented at the same level.
- Utilization of PMDT data is limited at sub-country level, leading to slow response to missing reports, low DST coverage or high death rate.
- Experience on programme implementation of shorter treatment regimen or new drugs is limited.
- Involvement of CSO on social mobilization to raise public awareness, reduce stigma or secure funding for patient support is limited.

Key activities to combat drug resistant TB planned for 2017-2018

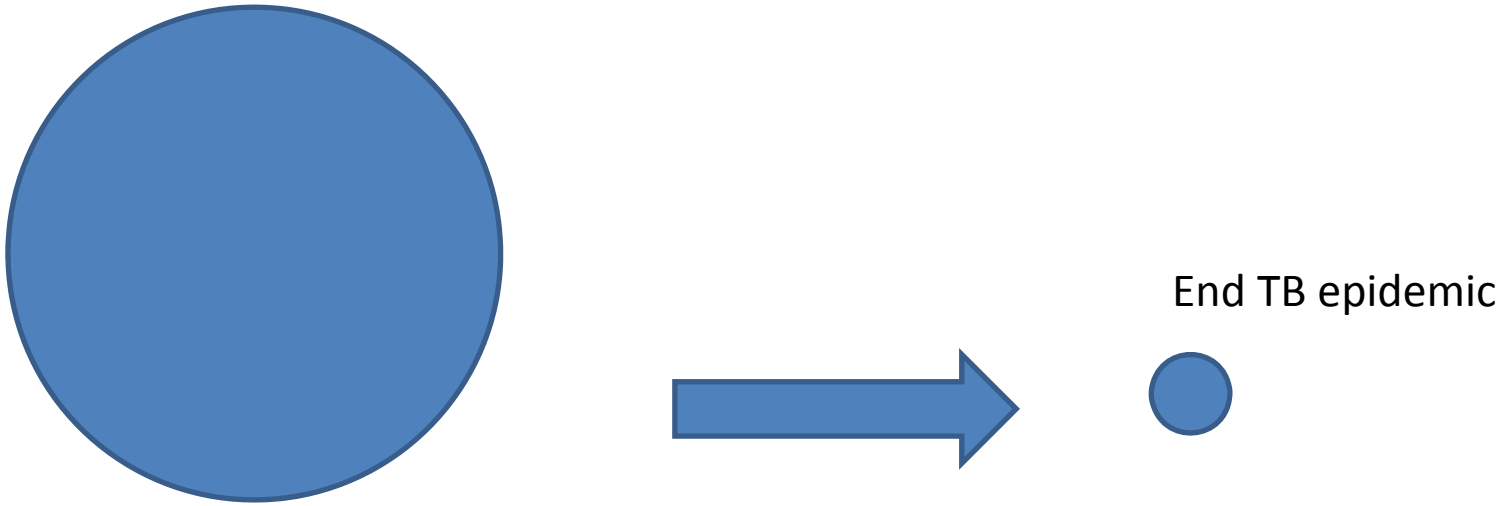
- Identifying areas with low coverage valid DST results so that close monitoring and support can be specific .
- Arranging an MOU between Ministry of Public Health and Ministry of Social Development and Human Security to secure funding for patient support to RR/MDR-TB patients.
- Developing guidelines and system to implement shorter treatment regimen and new drugs for RR/MDR-TB patients.

Evolution of WHO strategies and targets



WHO : End TB Strategy

เป้าหมายลดอัตราอุบัติการณ์วัณโรค



126 ต่อ แสน

(2013)

10 ต่อ แสน

(2035)

การทำงานแม้จะเน้นเรื่อง ค้นหารายงานครอบคลุม และรักษาให้หายแล้ว ในระดับโลกยังกำหนดตัวชี้วัดให้ใช้ติดตามความก้าวหน้าอื่น ๆ ด้วย

Global priority indicators and targets for monitoring the implementation of the End TB Strategy

All countries should aim to reach these targets at the latest by 2025.

Treatment coverage
Number of people that developed TB, and were notified and treated, out of the total estimated number of incident cases in the same year (%).

≥ 90%

TB treatment success rate
Number of TB patients who were successfully treated out of all notified TB cases (%).

≥ 90%

Preventive treatment coverage
Number of people living with HIV and children who are contacts of cases who were started on preventive treatment for latent TB infection, out of all those eligible (%).

≥ 90%

TB affected households facing catastrophic costs
Number of TB patients and their households that experienced catastrophic costs due to TB, out of all TB patients (%)

0%

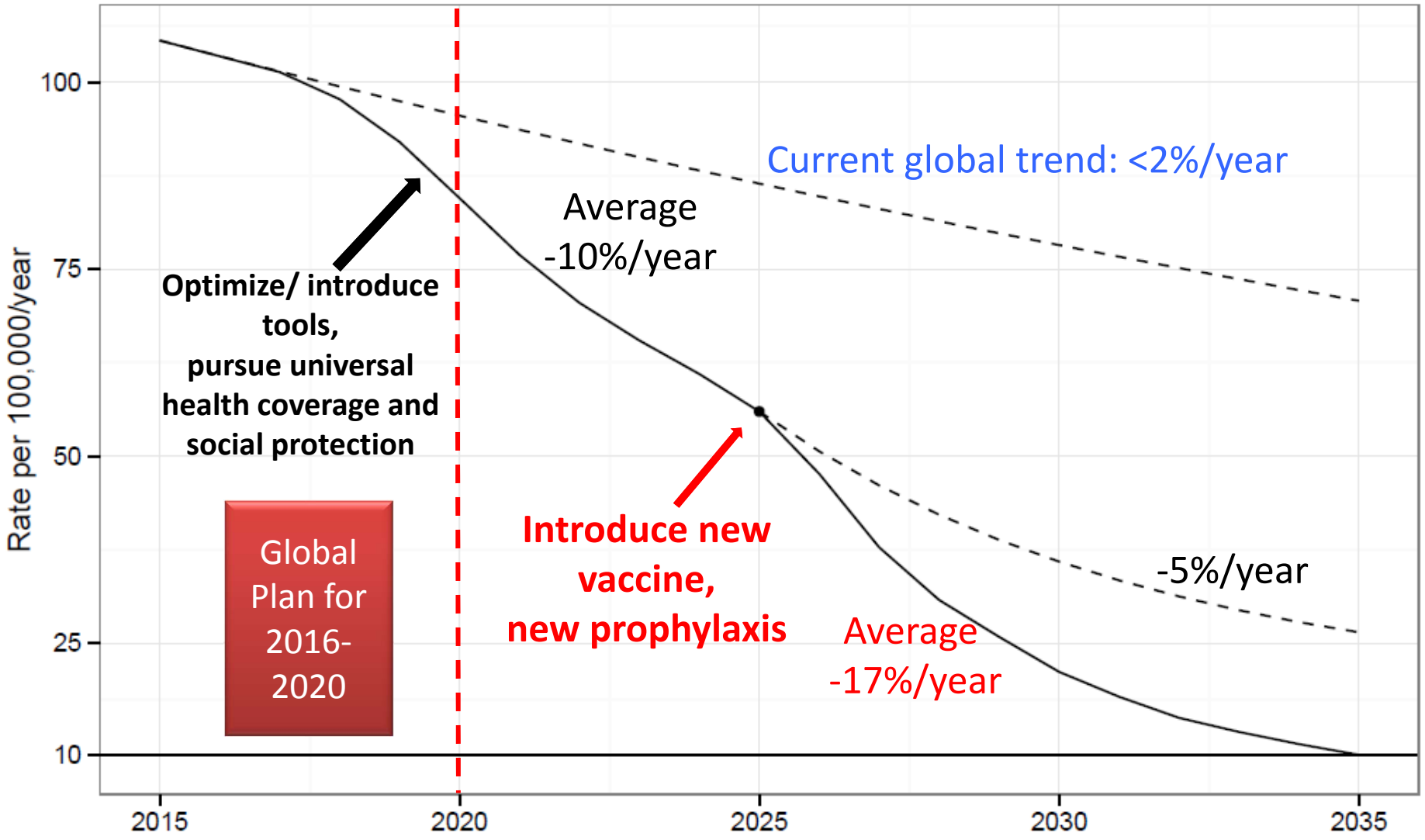
Uptake of new diagnostics and new drugs
Number of TB patients who were diagnosed using WHO-recommended rapid tests, out of all TB patients (%).

Number of TB patients who were treated with regimens including new TB drugs, out of those eligible for treatment with such drugs (%).

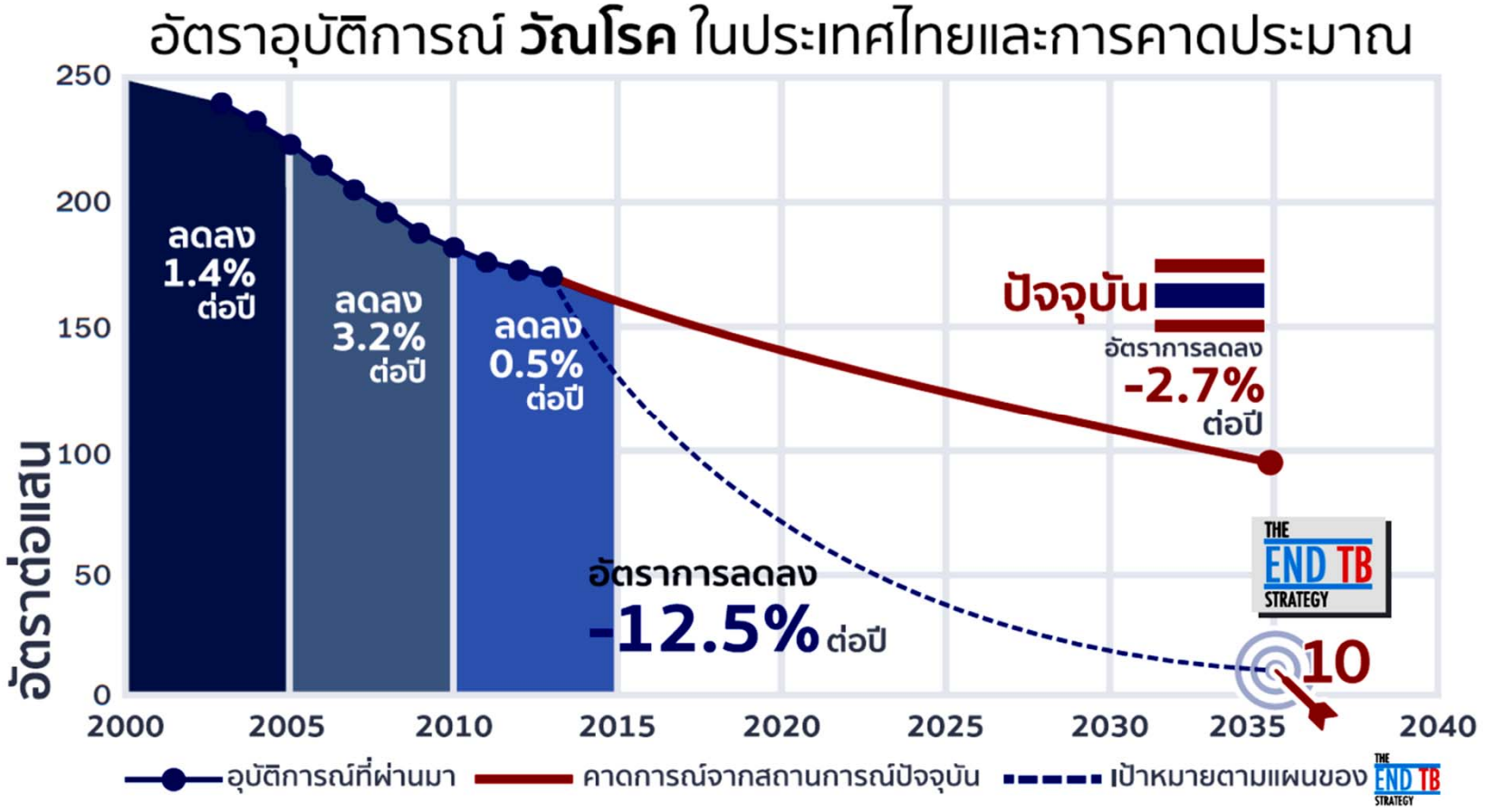
≥ 90%

Stop TB Partnership
The Global Plan to Stop TB
2016-2020

A need to accelerate TB incidence decline to target levels



ประเด็นปัญหา “อุบัติการณ์วัณโรคของประเทศไทยลดลงน้อยมากที่ผ่านมา”

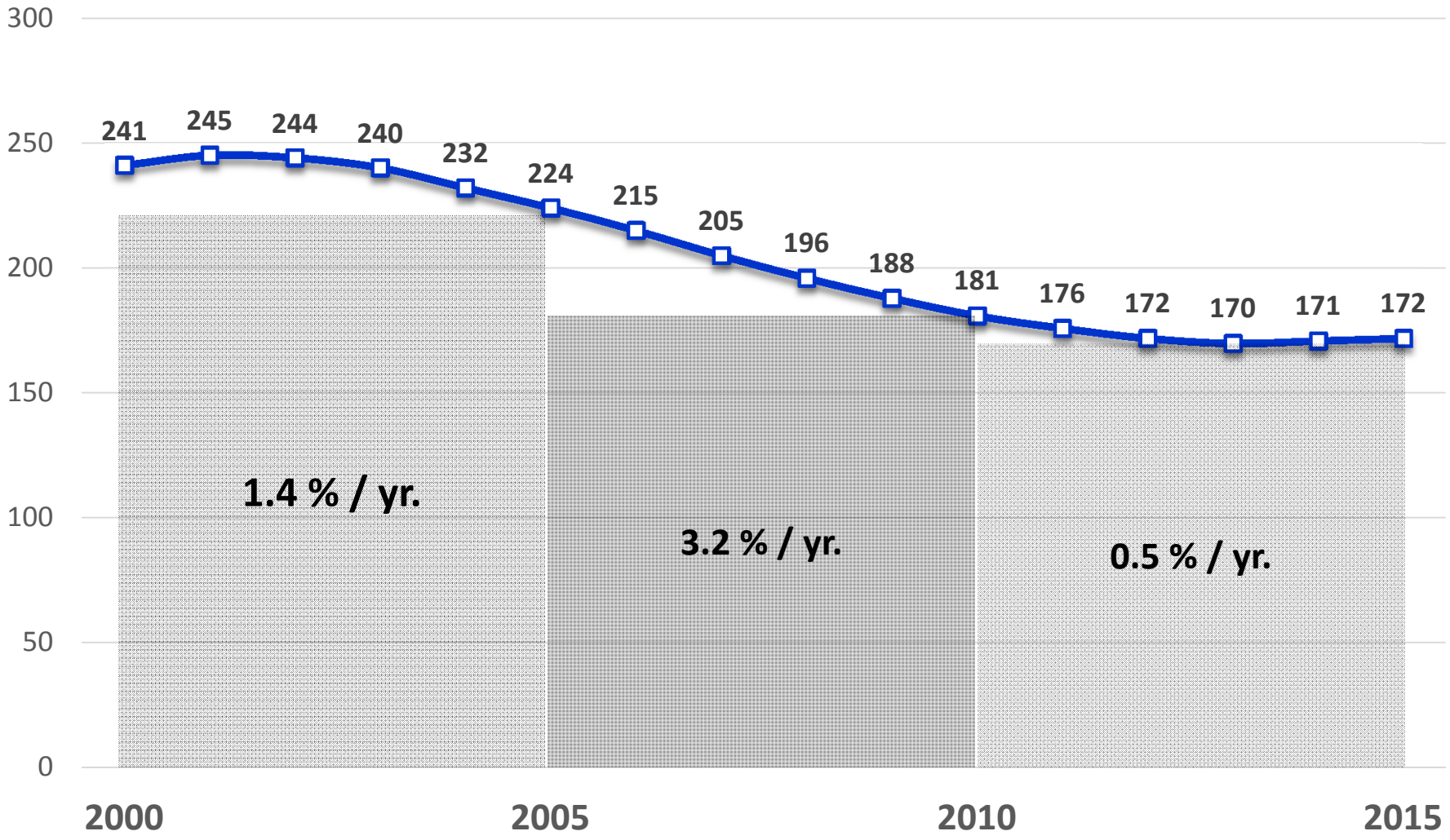


Estimated TB incidence 2014, and Case detection in selected countries

Country	Number	Rate (per 100,000)	Case detection (% coverage)
Thailand	120,000	171	59%
Myanmar	200,000	369	70%
Cambodia	60,000	390	72%
Laos PDR	13,000	189	34%
Viet Nam	130,000	140	77%
Indonesia	1,000,000	399	32%
Malaysia	31,000	103	78%

Source: Global TB Report 2015, WHO

อุบัติการณ์วัณโรค(ต่อแสน ปชก.)ของประเทศไทย



โลกกำหนด “ยุทธศาสตร์ยุติวัณโรค”

BETTER Care and Prevention

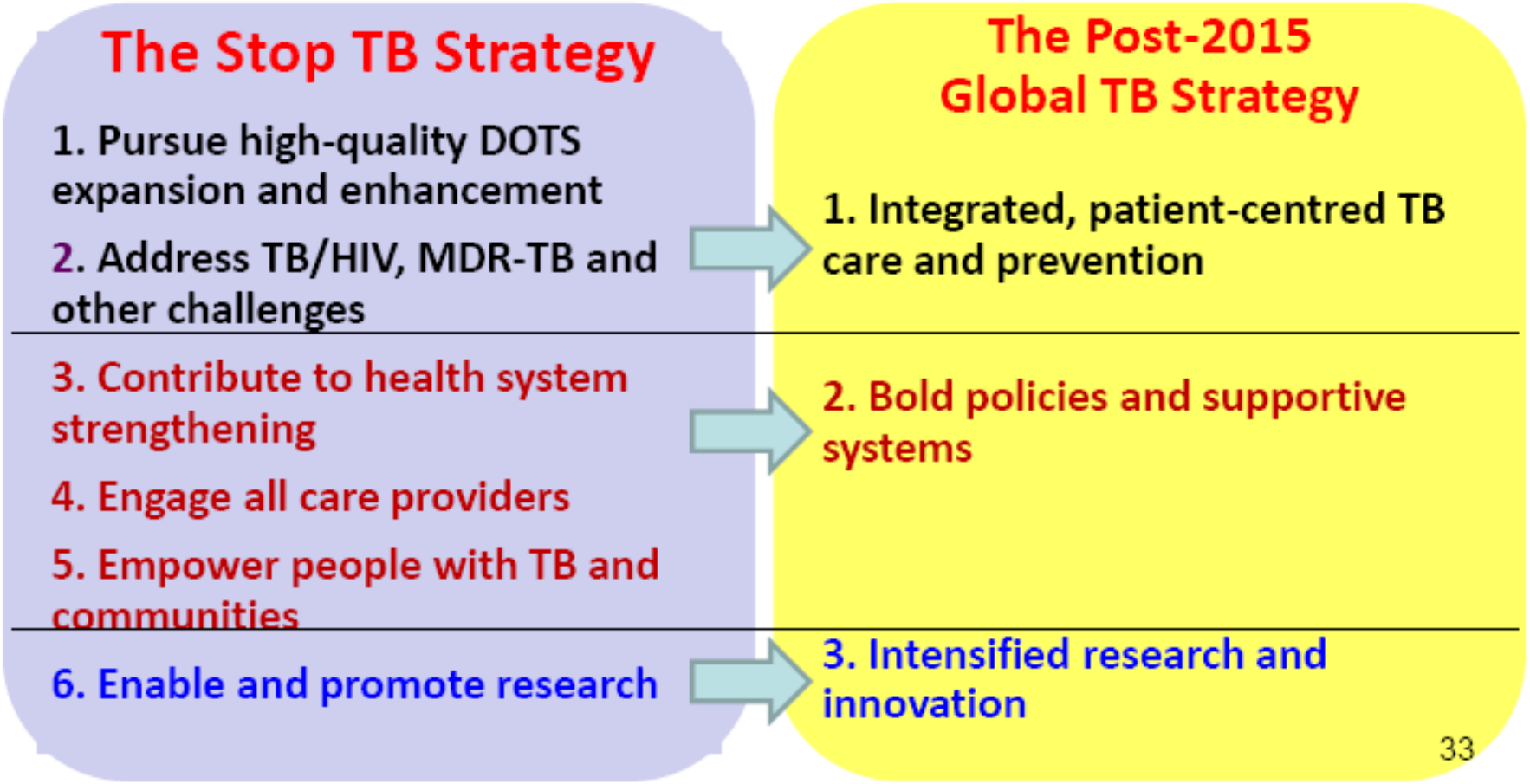
BOLDER Policy

BIGGER Investment

แผนยุทธศาสตร์ควบคุมวัณโรคของโลก

DRAFT POST-2015 GLOBAL TUBERCULOSIS STRATEGY

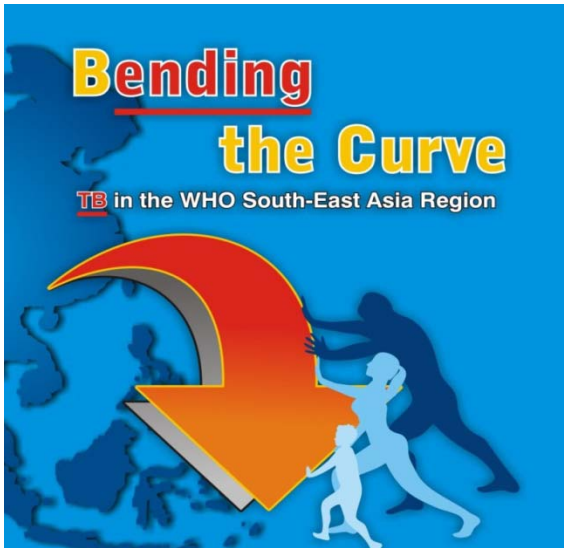
- **Linkage of 3 Pillars and Stop TB Strategy**



Delhi call for action to end TB

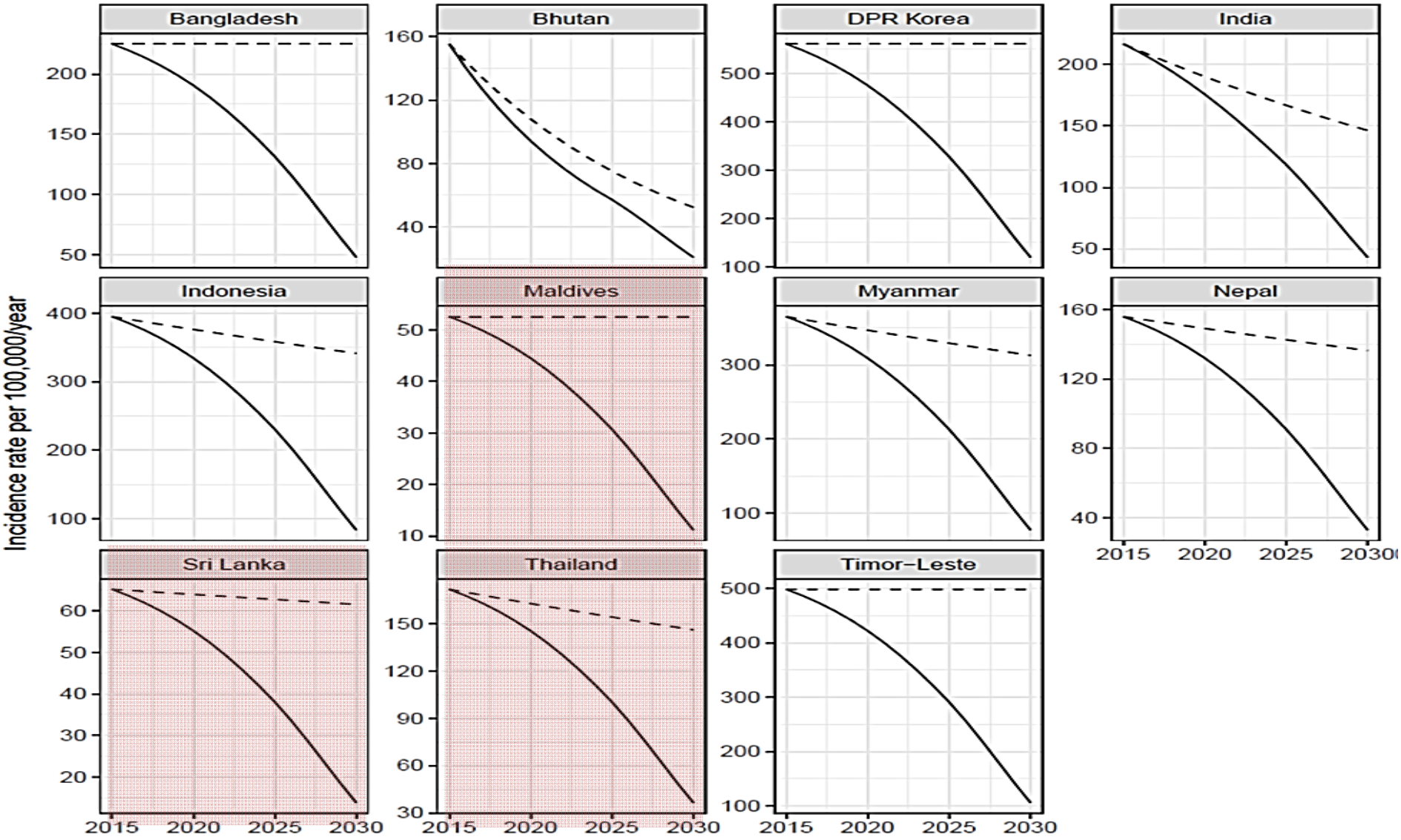
World Health Organization
Regional Office for South-East Asia

CDS end in sight
End 3 diseases & NTDs
Fostering Collaboration,
Research & Laboratories

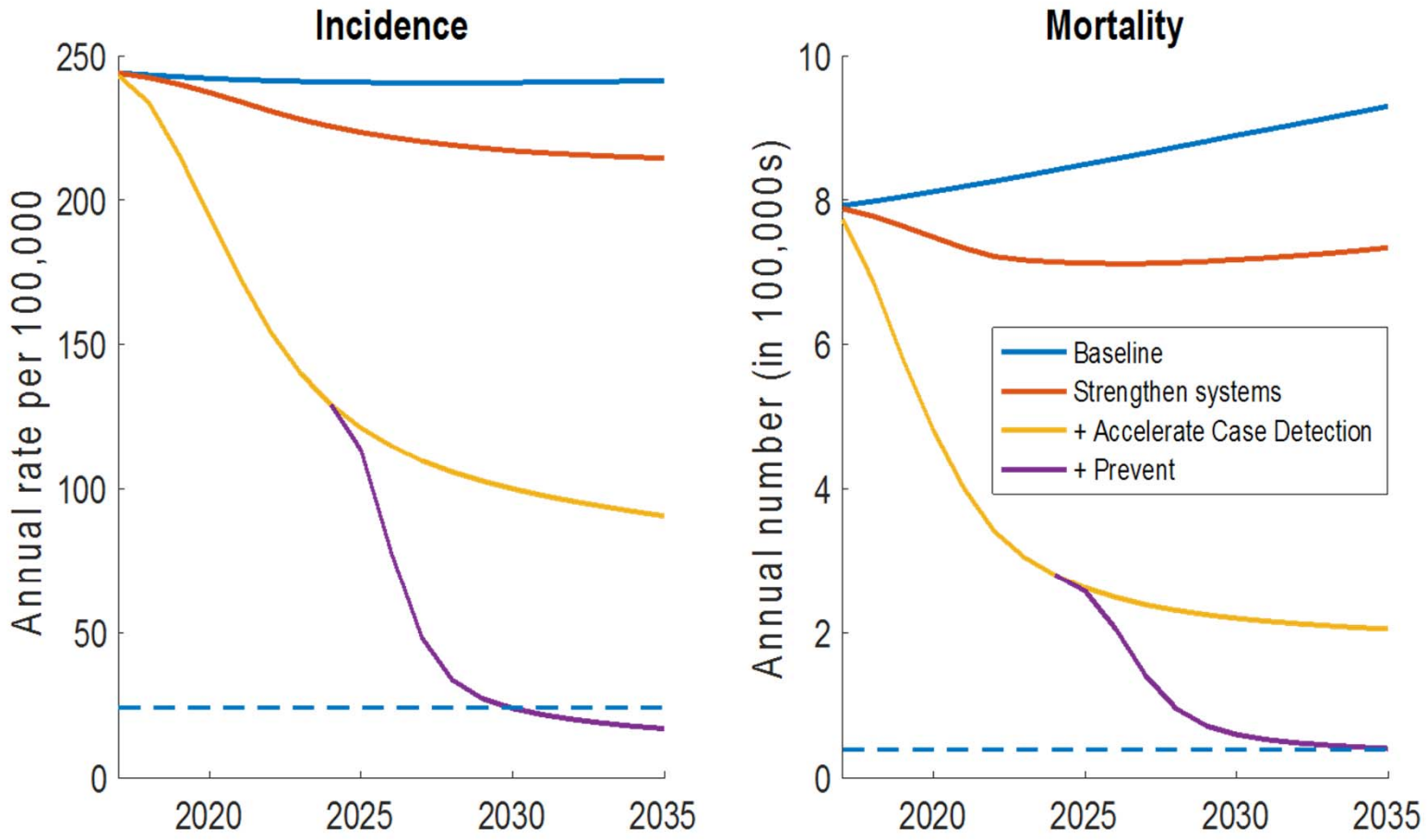


We can do it !!

UHC approach alone does not guarantee SDG Targets: need focused approach

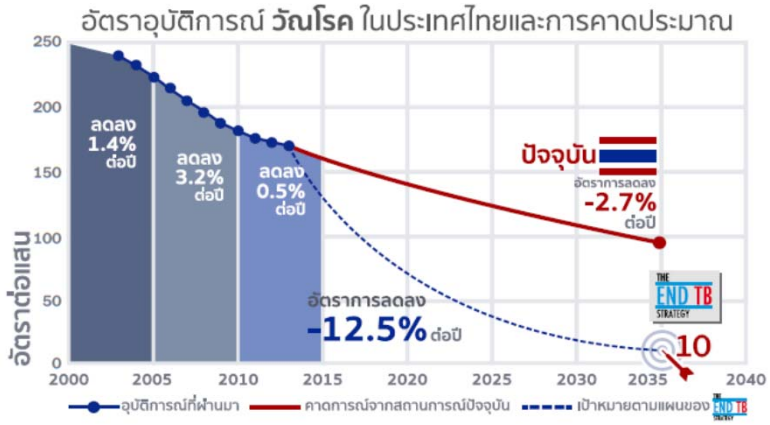


Epidemiological impact



National Strategic Plan

- **The NSP from 2017-2021 was approved by the Ministry of Public Health on 4 May 2016. After the endorsement by the cabinet in April-May 2017, the budget is expected to be secured for five years and National TB Committee will be set up for monitoring the progress of the NSP.**
- **Key components of the NSP include five core strategies, budget plan, operational plan and M&E plan.**



National Strategic Plan, 2017-2021

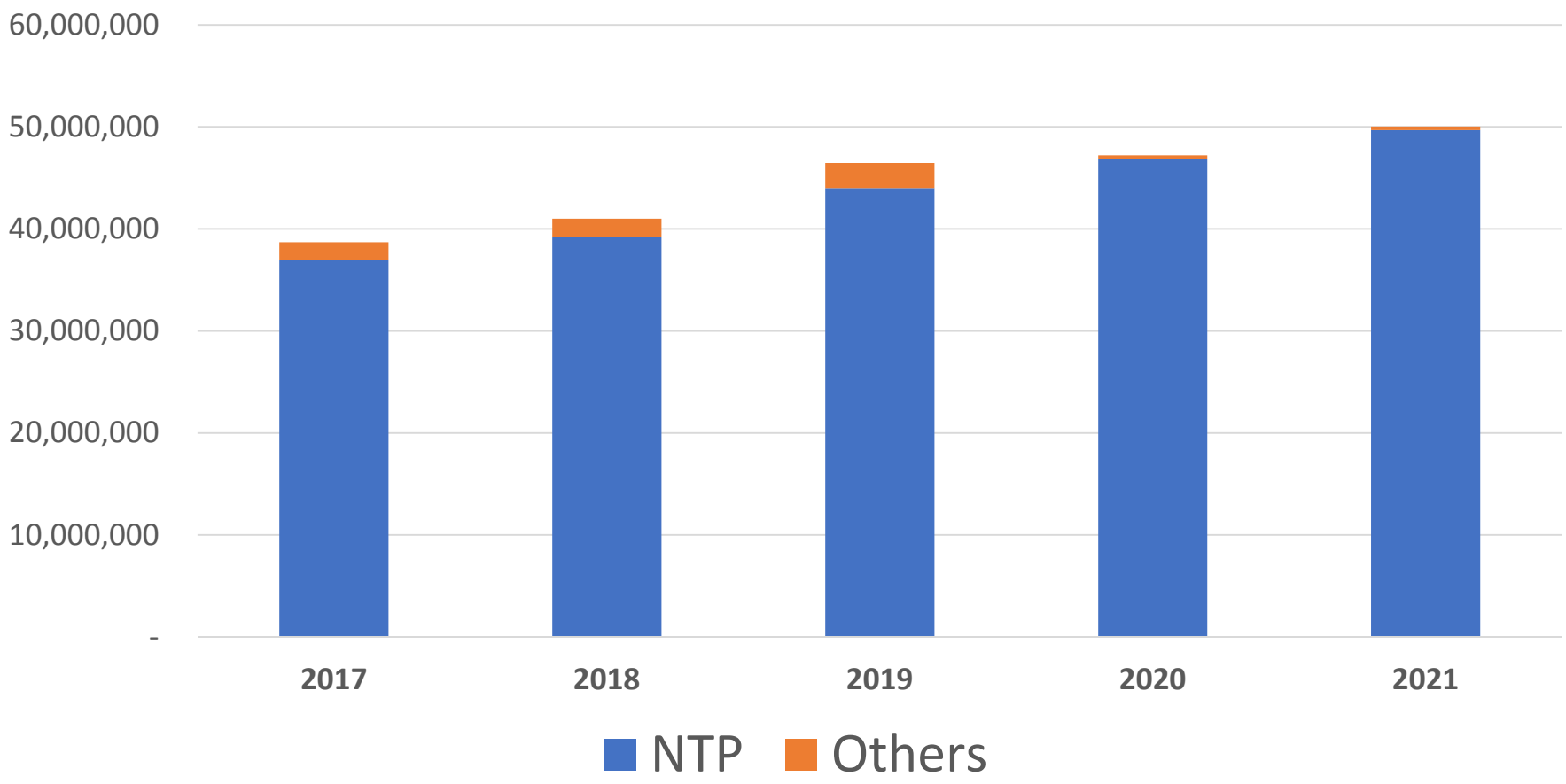
Overall goal	To reduce the incidence of TB from 171 per 100 000 in 2014 to 88 per 100 000 in 2021					
Objective 1 (Access to diagnosis & Treatment)	Target (%)	2017	2018	2019	2020	2021
	Detection	80	82.5	85	87.5	90
Objective 2 (To halve the TB mortality)	Target (%)	2017	2018	2019	2020	2021
	mortality	9	8	7	6	5
Objective 3 (To strengthen HR capacity)	Target	2017	2018	2019	2020	2021
	Trained staff	800	800	800	800	800
Objective 4 (To sustain political commitment)	Target	2017	2018	2019	2020	2021
	The national TB committee report	2	2	2	2	2
Objective 5 (To promote TB research)	Target (%)	2017	2018	2019	2020	2021
	Research budget	4	4	6	8	10

Memorandum of Understanding (MOU)

- **Thai TuRN (Thai Tuberculosis Network)**

Thank you for your attention

Financing of current National Strategic Plan (US$)

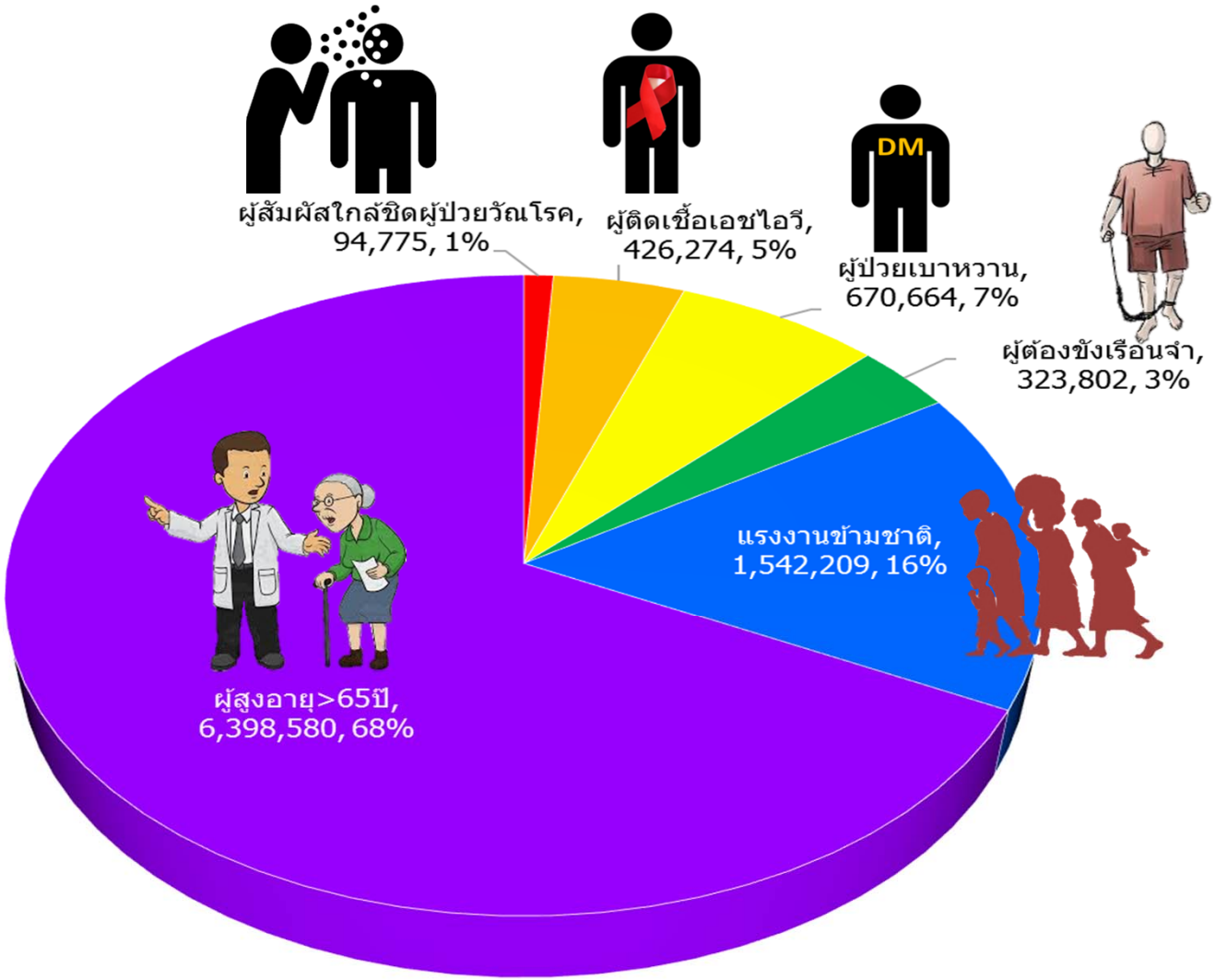


Source : Dept. of Disease Control , MOPH

Operational plan for 2017-2018: main activities

- Increase access to rapid diagnosis for TB among risk groups (i.e., elderly, close contacts, children, prisoners)
- Coordinate with National AIDS Programme for increasing ART coverage to reduce the death.
- Improve capacity of health care team to provide diagnosis, treatment and care for TB patients.
- Appoint the National TB Committee as a mechanism to mobilize resources for TB
- Promote research to guide better implementation.

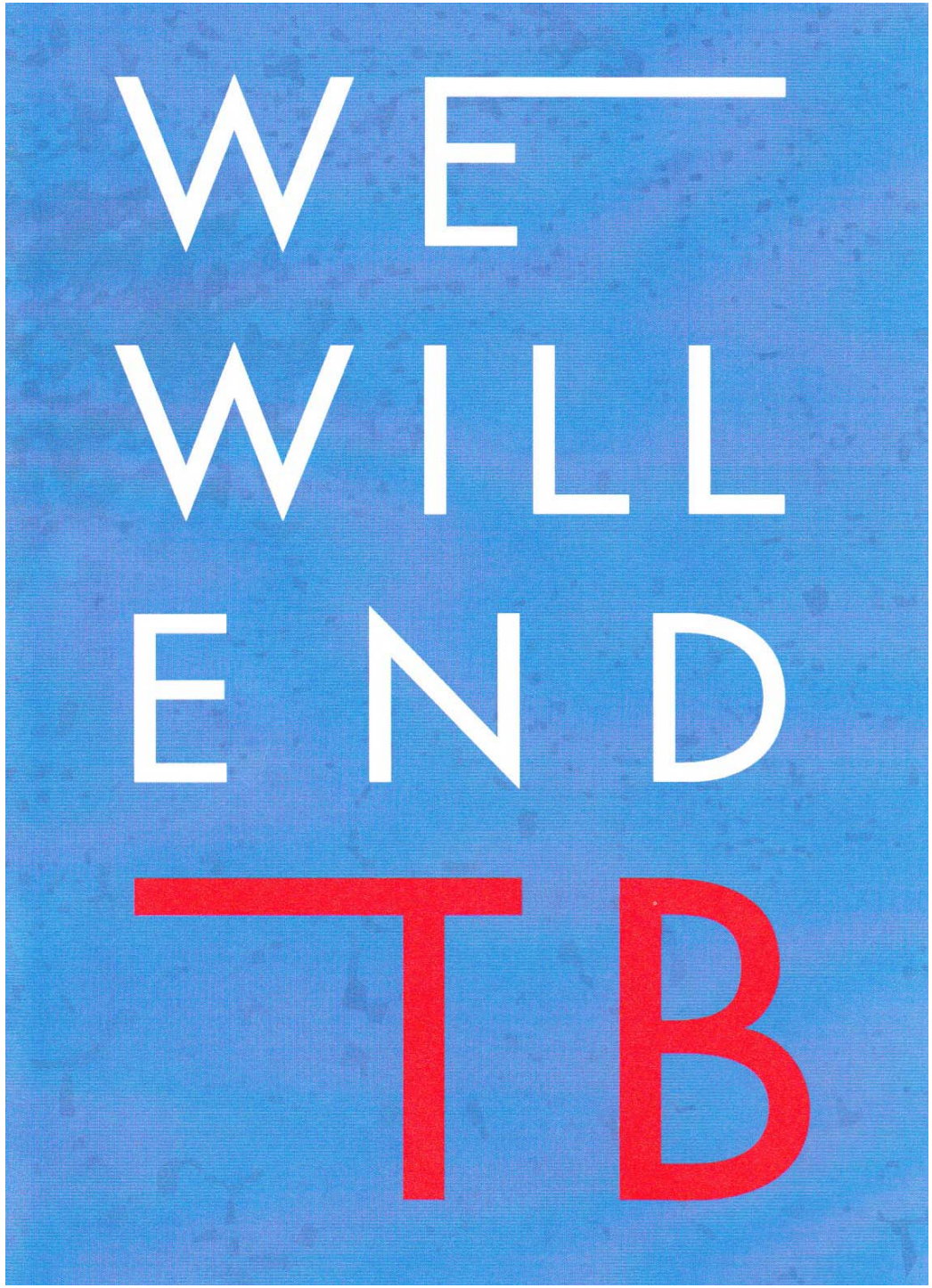
จำนวนกลุ่มเสี่ยงวัณโรคเป้าหมายที่ต้องค้นหาเชิงรุกโดยการคัดกรอง



Challenges Ahead !!!

- ASEAN Economic Community (AEC)
- Increase the success rate
- Case identification among high risk group
- Better monitoring and database

Thank you
for
your attention


WE
WILL
END
TB