

hence the currently defined disease burden has been depicted. At the same time it is necessary to consider ways of approaching the ideal of rapid on-site laboratory confirmation of all cases in future, so that species specific therapy can be instituted early. Rational drug policy development in the region is dependent thereon. This need would suggest the usefulness of considering diagnostic technology on a regional basis as an integral part of a regional drug policy to slow the spread of multi-drug resistant malaria.

Population mobility throughout the region is a reality. It will increase rather than diminish. The magnitude alluded to here suggests that this is a major factor in spread of drug resistant malaria that requires focused attention in terms of diagnostic and disease management strategy. Mapping trans-border movement in more detail might be able to assist in monitoring the process more effectively.

The concerted outcome of carefully planned extension of the present regional databases to more frequent analyses and the integration of disease data with other inputs, would be to build a dynamic process of regional information flow that can contribute in very concrete terms to improved malaria management. The desirable goal is the institution of a regional malaria surveillance system based on frequently updated quantitative, geographically defined databases leading to collaborative action. Extension then to other high priority communicable diseases should surely follow.

## Appendix 1

### Country administrative unit area codes

#### Cambodia

ID	Province / City	8	Kandal	16	Ratanakiri
1	Banteay Meanchey	9	Koh Kong	17	Siem Reap-Oddar
2	Battambang	10	Kratie	18	Sihanoukville
3	Kampong Cham	11	Mondulkiri	19	Stung Treng
4	Kampong Chhang	12	Phnom Penh	20	Svay Rieng
5	Kampong Speu	13	Prea Vihear	21	Takeo
6	Kampong Thom	14	Prey Veng	22	Oddar Meanchey
7	Krong Kaep	15	Pursat	23	Kampot

#### China – Guanxi

ID	County / City	30	Lai Bin	60	Bo Bai
1	Nan Ning	31	Rong An	61	Bai Se
2	Yi Ning	32	San Jiang	62	Tian Yang
3	Wu Ming	33	Rong Shui	63	Tian Dong
4	Liu Zhou	34	Jin Xiu	64	Ping Guo
5	Liu Jiang	35	Xin Cheng	65	De Bao
6	Liu Cheng	36	Ling Chuan	66	Jin Xi
7	Gui Lin	37	Qian Zhou	67	Na Po
8	Yang Suo	38	Xing An	68	Ling Yun
9	Lin Gui	39	Yong Fu	69	Le Yie
10	Wu Zhou	40	Guan Yang	70	Tian Lin Xian
11	Cang Wu	41	Long Sheng	71	Long Lin
12	Bei Hai	42	Zi Yuan	72	Xi Lin
13	He Pu	43	Ping Le	73	He Chi
14	Ping Xiang	44	Li Pu	74	Yi Zhou
15	Heng	45	Gong Cheng	75	Luo Cheng
16	Bin Yang	46	Yin Xi	76	Huan Jiang
17	Shang Lin	47	Teng	77	Nan Dan
18	Long An	48	Shao Ping	78	Tian Er
19	Ma Shan	49	Meng Shan	79	Feng Shan
20	Fu Sui	50	He	80	Dong Lan
21	Chong Zuo	51	Zhong Shan	81	Ba Ma
22	Da Xin	52	Fu Chuan	82	Du An
23	Tian Deng	53	Yu Lin	83	Da Hua
24	Ning Ming	54	Gui Gang	84	Qing Bei District
25	long Zhou	55	Gui Ping	85	Shang Si
26	He Shan	56	Ping Nan	86	Gang Kou District
27	Lu Zhai	57	Rong	87	Ling Shan
28	Xiang Zhou	58	Bei Liu	88	Pu Bei
29	Wu Xuan	59	Lu Chuan		

**China –Hainan**

<b>ID</b>	<b>County / City</b>	7	Hai Kou	14	San Ya
1	Bai Sha	8	Le Dong	15	Tong Zha
2	Bao Ting	9	Lin Gao	16	Tun Chang
3	Chang Jiang	10	Ling Shui	17	Wan Ning
4	Cheng Mai	11	Qiong Hai	18	Wen Chang
5	Ding An	12	Qiong Shan	19	Dan
6	Dong fang	13	Qionq Zhong		

**China - Yunnan**

<b>ID</b>	<b>County / City</b>	33	Mou Ding	66	Ma Li Po
1	Kun Ming	34	Nan Hua	67	Ma Guan
2	Cheng Gong	35	Yao An	68	Qiu Bei
3	Jin Ning	36	Da Yao	69	Guang Nan
4	An Ning	37	Yong Ren	70	Fu Ning
5	Fu Min	38	Yuan Mou	71	Si Mao
6	Yi Liang	39	Wu Ding	72	Pu Er
7	Lu Nan	40	Lu Feng	73	Mou Jiang
8	Song Ming	41	Yu Xi	74	Jing Dong
9	Luquan Yizu Miao Zuzhi Xian	42	Jiang Chuan	75	Jing Gu
10	Dong Chuan	43	Cheng Jiang	76	Zhen Yun Count
11	Shao Tong	44	Tong Hai	77	Jiang Cheng
12	Lu Dian	45	Hua Ning	78	Meng Lian
13	Qiao Jia	46	Yi Men	79	Lan Cang
14	Yan Jing	47	Er Shan	80	Xi Meng
15	Da Guan	48	Xin Ping	81	Jing Hong
16	Yong Shan	49	Yuan Jiang	82	Meng Hai
17	Sui Jiang	50	Ge Jiu	83	Meng La
18	Zhen Xiong	51	Kai Yuan	84	Da Li
19	Yi Liang	52	Meng Zi	85	Yang Bi
20	Wei Xin	53	Ping Bian	86	Xiang Yun
21	Shui Fu	54	Jian Shui	87	Bin Chuan
22	Qu Jin	55	Shi Ping	88	Mi Du
23	Ma Long	56	Mi Le	89	Nan Jian
24	Xuan Wei	57	Lu Xi	90	Wai Shan
25	Fu Yuan	58	Yuan Yang	91	Yong Ping
26	Luo Ping	59	Hong He	92	Yun tong
27	Shi Zong	60	Jin Ping	93	Er Yuan
28	Lu Liang	61	Lu Chun	94	Jian Chuan
29	Xun Dian	62	He Kou	95	He Qing
30	Hui Ze	63	Wen Shan	96	Bao Shan
31	Chu Xiong	64	IYan Shan	97	Shi Dian
32	Shuang Bai	65	Xi Chou	98	Teng Chong

99	Long Ling	108	Yong Sheng	117	Wei Xi
100	Chang Ning	109	Huaping	118	Lin Chang
101	Wan Ding	110	Ning Lang	119	Feng Qing
102	Lu Xi	111	Lu Shui	120	Yun
103	Liang He	112	Fu Gong	121	Yong De
104	Ying Jiang	113	Gong Shan	122	Zhen Kang
105	Long Chuan	114	Lan Ping	123	Shuang Jiang
106	Rui Li	115	Zhong Dian	124	Geng Ma
107	Li Jiang	116	De Qing	125	Chang Yuan

### Lao PDR

ID	Province / City	7	Xiengkhuang	14	Savannakhet
1	Phongsaly	8	Xayabouri	15	Saravane
2	Luangnamtha	9	Xayabury	16	Sekong
3	Oudomxay	10	Vientiane Province	17	Champasack
4	Luang Prabaug	11	Borikhamxay	18	Attapeu
5	Houaphan	12	Vientiane Municipal		
6	Bokeo	13	Khammuane		

### Myanmar

ID	District	21	Maiyphayt	42	Henzada
1	Putao	22	Myingyan	43	Myaungmya
2	Khandi	23	Maisatt	44	Sittwe
3	Myitkyina	24	Meiktila	45	Buthitaung
4	Kathar	25	Minbu	46	Kyaukpyu
5	Bamaw	26	Magway	47	Thantwe
6	Kalay	27	Yamyethinn	48	Dewei
7	Kyaukme	28	Loikaw	49	Myeik
8	Lashow	29	Thayet	50	Kawthaung
9	Phalum	30	Pa-An	51	Yangon Southern
10	Shwebo	31	Taungoo	52	Bago
11	Kunlone	32	Bawlakhae	53	Pyinoolwin
12	Khandi	33	Pyi	54	IMawlamyaing
13	Pakhokku	34	Tharrawaddy	55	Thaton
14	Mandalay	35	Yangon Northern		
15	Taunggyi	36	Ma-U-Pin		
16	Sagaing	37	Kautkayeik		
17	Mintatt	38	Yangon Western		
18	Kyaitone	39	Yangon Eastern		
19	Loilin	40	Pathein		
20	Kvaukse	41	Pyapone		

## Thailand

ID	Province	26	Roi Et	52	Yala
1	Mae Hong Son	27	Mukdahan	53	Narathiwat
2	Chiang Mai	28	Yasothon	54	Chai Nat
3	Lamphun	29	Nakhon Ratchasima	55	Sing Buri
4	Chiang Rai	30	Buriram	56	Ang Thong
5	Lampang	31	Surin	57	Suphan Buri
6	Ta k	32	Si Sa Ket	58	Lop Buri
7	Phayao	33	Prachinburi	59	Saraburi
8	Phrae	34	Chachoengsao	60	Nakhon Pathom
9	Nan	35	Chon Buri	61	Nont aburi
10	Sukhothai	36	Rayong	62	Pathum Thani
11	Uttaradit	37	Chanthaburi	63	Nakhon Nayok
12	Kamphaeng Phet	38	Trat	64	Samut Prakan
13	Phitsanulok	39	Petchaburi	65	Samut Songkham
14	Pichit	40	Prachua Khiri Khan	66	Bangkok
15	Nakhon Sawan	41	Ranong	67	Ayuthaya
16	Uthai Thani	42	Chumphon	68	Nakorn Si Thammarat
17	Kanchanaburi	43	Surat Thani	69	Nong Khai
18	Liei	44	Phangnga	70	Ratchaburi
19	Phetchabun	45	Phuket	71	Sakon Nakhon
20	UdonThani	46	Krabi	72	Samut Sakhon
21	Nakhon Phanom	47	Trang	73	Ubon Ratchathani
22	Chaiyaphum	48	Phatthalung	74	Nong Bua Lam Phu
23	Khon Kaen	49	Satun	75	Amnat Charoen
24	kalasin	50	Songkha	76	Sakao
25	Maha Sarakham	51	Pattani		

## Viet Nam

ID	Province	21	Hoa Binh	42	Gia Lai
1	Ha Noi	22	Hai Duong	43	Dac Lac
2	Ho Chi Minh City	23	Hung Yen	44	Lam Cong
3	Hai Phong	24	Thai Binh	45	Binh Duong
4	Da Nang	25	Ha Nam	46	Binh Phuoc
5	Ha Giang	26	Nam Dinh	47	Tay Ninh
6	Tuyen Quang	27	Ninh Binh	48	Dong Nai
7	Cao Bang	28	Thanh Hoa	49	Long An
8	Lang Son	29	Nghe An	50	Dong Thap
9	Lai Chau	30	Ha Tinh	51	An Giang
10	Lao Cai	31	Quang Binh	52	Tien Giang
11	Yen Bai	32	Quang Tri	53	Ben Tre
12	Bac Can	33	Thua Thien-Hue	54	Vinh Long
13	Thai Nguyen	34	Quang Nam	55	Tra Vinh
14	Son La	35	Quang Ngai	56	Can Tho
15	Phu Tho	36	Binh Dinh	57	Soc Trang
16	Vinh Phuc	37	Phu Yen	58	Kien Giang
17	Bac Giang	38	Khanh Hoa	59	Bac Lieu
18	Bac Ninh	39	Ninh Thuan	60	Ca Mau
19	Quang Ninh	40	Binh Thuan	61	Ba Ria – Vung Tau
20	Ha Tay	41	Kon Tum		