



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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New updates in this issue:

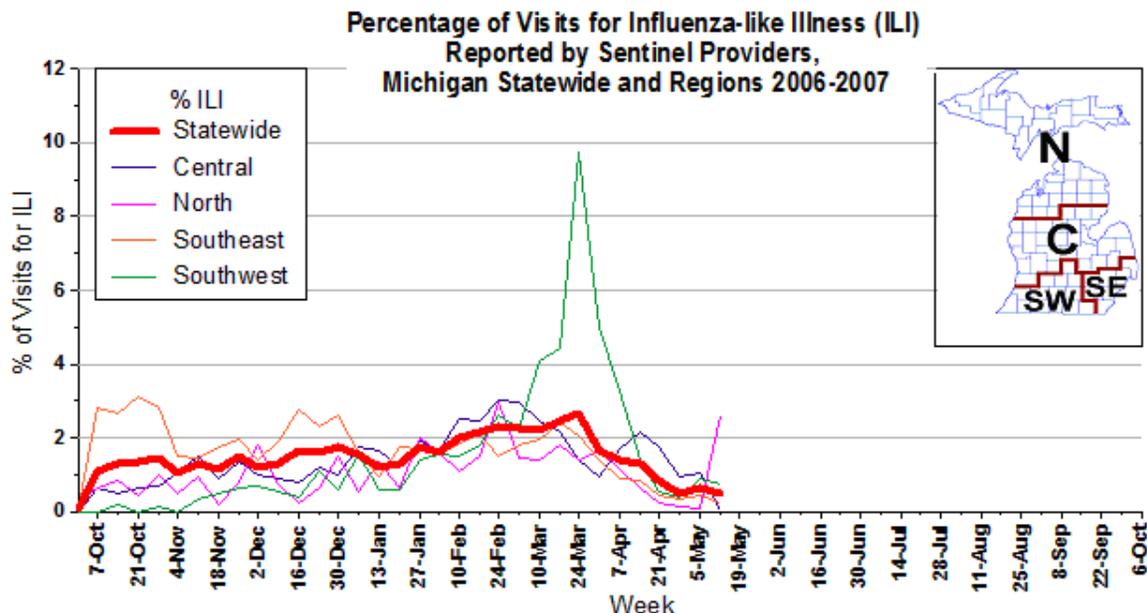
- **Michigan Surveillance:** Overall activity continues to decline; sporadic cases continue to be reported.
- **National Surveillance:** Activity continues to decrease; majority of states are at sporadic activity levels.
- **Avian Influenza:** 1 human death in Indonesia; poultry outbreaks in Vietnam and Bangladesh.

Michigan Disease Surveillance System: Last week saw a decrease in individual influenza reports, with aggregate flu-like illness reports remaining steady. These indicators are expected to continue to fluctuate at baseline levels until next fall.

Emergency Department Surveillance: Emergency department visits due to constitutional and respiratory complaints have leveled off from their recent downward trends and remain steady compared to last week. Reported levels are consistent with levels from this time last year. Five constitutional alerts in Regions 1(1), 3(1), 5(2) and 7(1) and no respiratory alerts were generated last week.

Over-the-Counter Product Surveillance: OTC product sales activity remained steady or decreased slightly last week. Chest rubs and adult cold relief liquids decreased in sales, while remaining indicators held steady at the previous week's levels. The indicators levels are comparable to those seen in the previous year, except for the adult and pediatric cold relief liquid, which is holding about 1-2% below its percentage of total sales for this time last year.

Sentinel Surveillance (as of May 17): During the week ending May 12, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained at a low level, 0.5% of all visits. This represents 27 cases of ILI out of 5510 total patient visits; twenty-two sentinels provided data for this report. The proportion of visits due to ILI decreased in the Central (0.1%), Southeast (0.2%), and Southwest (0.7%) regions, but increased to 2.6% of all visits in the North. This increase was reported by one large pediatric practice; clinical specimens on incident cases have been requested. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage and recommend year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of May 17): For the 2006-2007 influenza season, there have been 156 culture-confirmed cases from the MDCH Lab:

- 69 A:H1N1 (Southeast (22), Southwest (21), Central (16), North (10))
- 31 A:H3N2 (North (12), Southeast (12), Central (4), Southwest (3))
- 3 A:H3 N pending (3 Central)
- 53 B (Central (17), Southeast (17), Southwest (12), North (7))

All influenza B cultures have been B/Malaysia, except for five B/Shanghai results from the Southeast region. Submissions to MDCH BOL have decreased dramatically, with five new positive results last week.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

Influenza-Associated Pediatric Mortality (as of May 17): For the 2006-2007 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan. MDCH and CDC are currently investigating a possible influenza-associated pediatric mortality in the Southeast region from March.

***Reminder: The CDC has asked all states to continue to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child less than 18 years of age resulting from a clinically compatible illness confirmed to be influenza by an appropriate laboratory or rapid diagnostic test, but also unexplained death with evidence of an infectious process in a child. Refer to http://www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. It is important to immediately call or fax information to MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of May 17): There has been one report of an influenza A outbreak from a Central region extended care facility for the 2006-2007 influenza season. Investigations for two possible facility outbreaks, one each from the Southwest and Central regions, were unable to confirm influenza as the cause of these outbreaks.

National (CDC, May 11): During week 18 (April 29 – May 5, 2007), influenza activity continued to decrease in the United States. Data from the U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories indicated a similar percentage of specimens testing positive for influenza during week 18 compared to week 17. The percentage of visits for ILI to sentinel providers decreased during week 18 and was below the national baseline for the seventh consecutive week. One state reported regional influenza activity; five states reported local influenza activity; the District of Columbia, New York City, and 31 states reported sporadic influenza activity; and 13 states reported no influenza activity. The number of jurisdictions reporting widespread or regional influenza activity decreased from three for week 17 to one for week 18. The percent of deaths due to pneumonia and influenza has remained below baseline levels for the entire influenza season to date.

During week 18, WHO and NREVSS laboratories reported 1,140 specimens tested for influenza viruses, 117 (10.3%) of which were positive: five influenza A (H1) viruses, 53 influenza A (H3) viruses, 28 influenza A viruses that were not subtyped, and 31 influenza B viruses.

Since October 1, 2006, WHO and NREVSS laboratories have tested a total of 167,431 specimens for influenza viruses and 22,733 (13.5%) were positive. Among the 22,733 influenza viruses, 18,061 (79.4%) were influenza A viruses and 4,672 (20.6%) were influenza B viruses. Five thousand nine hundred one (32.7%) of the 18,061 influenza A viruses have been subtyped: 3,828 (64.9%) were influenza A (H1) viruses and 2,073 (35.1%) were influenza A (H3) viruses. Among specimens tested for influenza during the most recent three weeks (April 15 – May 5, 2007), on a regional basis, only the New England, South Atlantic, and Pacific regions reported >10% of specimens testing positive.

The woman had been suffering from fever and respiratory problems when she was hospitalized on May 8, 2007. Surya Dharma of the North Sumatra health agency said on Sunday that the woman, who was 4 months pregnant, had been in contact with dead fowl.

Three out of the 5 chickens her family had and 2 pigeons died suddenly 2 weeks ago, said the official. The family burned the dead birds but ate the remaining chickens. "The family slaughtered the rest of the chickens, cooked and ate them," Dharma said by telephone, adding that a team had been sent to investigate whether anyone else in the family could have been infected.

International, Human (WHO, May 16): WHO can now confirm 15 additional cases, including 13 deaths of human infection with H5N1 avian influenza that occurred in Indonesia from the end of January 2007 up to the present and has [updated its table](#) of confirmed human cases accordingly.

Testing for H5N1 influenza virus infections is not done routinely by many laboratories and among the laboratories that do test for H5N1, experience and levels of diagnostic capacities can vary. ([see WHO criteria](#)) WHO had previously required external confirmation of laboratory results from Indonesia, but following a formal on-site assessment of the capacity of national laboratory in Jakarta to diagnose H5 avian influenza viruses, WHO will now accept the results from the national laboratory, in collaboration with the Eijkman Institute without further external confirmation.

The assessment was carried out by a WHO team of virologists and laboratory scientists from the WHO Collaborating Centre in Tokyo, Japan, the national influenza centers of India and Thailand, the WHO Regional Office for South-East Asia and the WHO Country Office of Indonesia.

The following additional cases of human infection with H5N1 avian influenza have been confirmed. Seven of these cases had exposure to sick or dead poultry; the source of infection is unknown for eight cases.

Sex	Age	Location	Onset date	Hospitalized	Outcome
M	30	West Java	25 Jan 07	31 Jan 07	Recovered
F	16	Central Jakarta	31 Jan 07	5 Feb 07	Recovered
F	20	West Java	2 Feb 07	9 Feb 07	Died 11 Feb 07
F	20	East Java	28 Feb 07	8 Mar 07	Died 19 Mar 07
M	32	East Jakarta	9 Mar 07	13 Mar 07	Died 14 Mar 07
F	22	South Sumatra	10 Mar 07	23 Mar 07	Died 24 Mar 07
M	16	West Java	4 Mar 07	24 Mar 07	Died 25 Mar 07
M	39	East Java	19 Mar 07	24 Mar 07	Died 28 Mar 07
M	14	West Sumatra	15 Mar 07	22 Mar 07	Died 24 Mar 07
F	29	Jakarta	20 Mar 07	23 Mar 07	Died 28 Mar 07
F	23	Jakarta	28 Mar 07	31 Mar 07	Died 1 April 07
F	15	Jakarta	28 Mar 07	30 Mar 07	Died 5 April 07
M	29	Central Java	24 Mar 07	30 Mar 07	Died 5 April 07
F	29	Riau	27 April 07	28 April 07	Died 3 May 07
F	26	North Sumatra	3 May 07	8 May 07	Died 12 May 07

International, Human (Associated Press, May 15): After refusing to share H5N1 avian flu viruses with the World Health Organization for months, Indonesian officials announced Tuesday that their country has resumed sending virus samples to a WHO collaborating laboratory. While Indonesian Health Minister Siti Fadilah Supari would not say how many viruses her country released, a spokesperson for the Geneva-based global health agency confirmed that three samples have been received by the laboratory, based in Japan.

Indonesia has declared over a dozen cases since it stopped sharing viruses at the beginning of the year.

"I am pleased to announce to all of you that Indonesia has resumed sending its H5N1 specimens to the WHO collaborating centre in Tokyo," Supari told the WHO's annual general meeting, the World Health Assembly, in Geneva.

The World Health Organization needs ongoing samples from H5N1-affected countries to monitor the evolution of the virus. That work looks for signs of mutations that might suggest the virus is acquiring the ability to more easily infect people or is becoming resistant to flu drugs such as oseltamivir (sold as Tamiflu).

As well, sample viruses are occasionally used to make trial vaccines. It is that latter function that led to the Indonesian boycott. The country, which is the current hot zone of H5N1 infection, is demanding the opportunity to buy H5N1 vaccine at a price it can afford in exchange for providing viruses to the WHO system.

The WHO has been working with manufacturers in the hopes of setting up a virtual vaccine stockpile that developing countries could draw from if needed. Its senior official for pandemic influenza, Dr. David Heymann, has suggested a stockpile of between 40 million and 60 million doses is being looked at.

But global capacity to make flu vaccine is limited and most if not all manufacturers have already signed contracts promising their output to developed countries which are paying to ensure access to that capacity. Canada, Britain, France and Switzerland are among countries which have signed contracts for first or early access to pandemic vaccines.

WHO Director General Dr. Margaret Chan said in a speech to the World Health Assembly on Tuesday that she is encouraged at the response she is receiving from donor countries and vaccine manufacturers to the notion of a vaccine stockpile. But to date no company or country has publicly announced a contribution of vaccine to the project.

International, Poultry (Xinhua News Agency, May 13): Viet Nam's central Nghe An province, which detected an outbreak among fowls in early May [2007], has faced a new one, a local veterinary official told Xinhua on Sunday [May 13]. On condition of anonymity, an official from the Department of Animal Health under the Ministry of Agriculture and Rural Development said that nearly 1300 out of flocks of 3800 ducks raised by 3 households in Hung Nguyen district, Nghe An, were found dead on May 9, 2007. He added that samples from dead poultry tested positive to bird flu virus strain H5. Earlier, specimens from ducks raised by a household in Dien Chau district, Nghe An, tested positive to H5. Among the flock of 610 ducks, 246 died [between] May 1 and 4.

Nghe An is the only locality in Viet Nam currently [affected] by bird flu, the official said. Bird flu outbreaks in Viet Nam, starting in December 2003, have killed and led to the forced culling of dozens of millions of fowls in the country. Viet Nam is actively vaccinating fowls against bird flu viruses to prevent potential outbreaks, the official said, noting that a total of 111 million poultry in 60 cities and provinces have been vaccinated so far this year [2007].

International, Poultry (The Telegraph (London), May 13): Hungary has admitted for the first time that it may have been the source of the deadly flu virus that caused an outbreak at a British turkey farm. Bognar Lajos, Hungary's deputy chief veterinary officer, conceded that the H5N1 virus could have gone undetected in a Hungarian turkey flock which was sent to slaughter. He said the meat might then have been exported by Bernard Matthews, the British poultry company, to its plant in Holton, Suffolk [England], before the virus infected birds there.

Despite the admission, Mr. Lajos insisted that ultimately the blame for the British outbreak must lie with Bernard Matthews, which was criticized for shortfalls in its biosecurity in the wake of the scare. Mr. Lajos said: "It is possible that the virus was still in an incubation period in a flock and no symptoms would have been seen. Such a flock could have been sent to slaughter and the meat transported to the UK. The problem was not with Hungary though. The problem was Bernard Matthews and its biosecurity." Until now, officials in the east European country have flatly denied that the virus could have come from Hungary. The Csongrad region of the country, south-east of the capital Budapest, is the area in which 2 goose farms were hit by the virus in January [2007], weeks before the same strain infected a flock of Bernard Matthews turkeys.

A report into the British outbreak by the Department of Environment, Farming and Rural Affairs (Defra) concluded that the most plausible explanation was that the infection had been introduced to Britain through imported turkey meat from Hungary. Britain's poultry industry is still paying the price of the bird flu outbreak. Research by the analysts Nielsen shows turkey sales have fallen by 29 percent over the past 3 months while sales of frozen turkeys are down 33 percent on last year [2006]. The industry is thought to have lost sales worth more than GBP 9.4 billion [USD 18,629,295,598]. Sales at Bernard Matthews have also dropped dramatically, although the company insists the decline has been halted. Last month, the multi-million pound company was paid GBP 600,000 [USD 1,189,199] in compensation by the Government for the 160,000 birds it had to cull as a result of the outbreak.

In Hungary, however, the goose farmers affected by bird flu shortly before the British outbreak say they are still waiting for compensation. In a dingy shed on the Kolos Agro farm in Szentcsanak, Csongrad, Garai Tibor, a farmer, described how just a few months ago it had been full of geese. Now, the only evidence of the 3335 birds that once inhabited his 3 55-yard huts is a small patch of feathers on the ground. "The outbreak has given us a bad name, but I am not angry about that," he said. "It was bad luck that the virus came to our farm. I am angry that we have been blamed for the English outbreak though when they seem to have brought the infection upon themselves. We did nothing wrong, while they had all these problems. How is it they have received all this money?" Mr. Tibor has been forced to lay off 3 workers from the local village and has lost more than 74 million Hungarian forints (GBP 200,000) [USD 403,735].

Under European legislation, member states can have half of any compensation given to farmers hit by bird flu outbreaks paid by the European Commission. A spokesman at the EC said it had received no application for compensation for either of the farms hit by the outbreak. However, Mr. Lajos insisted that between them, the two farms had received about 100 million forints [USD 544,993] from his government. Szekeley Zsolt, who owns the other farm in nearby Derekegyhaz, refused to comment. A spokesman for Bernard Matthews said: "None of the investigations to date has been conclusive about the causes of the outbreak."

International, Poultry (Reuters, May 13): Bangladesh villagers have culled 15,000 more chickens over the last two days at small farms in the north of the country, officials said on Sunday. The chickens were slaughtered after an outbreak of H5N1 virus was detected at a village near Nilphamari, 400 km (250 miles) northwest of the capital, Dhaka.

With the latest cull, some 157,000 chickens have now been slaughtered and 1.5 million eggs destroyed in 11 districts since the virus was first detected at six farms at Savar near Dhaka on March 22, officials said. There have been no reported cases of human infection. Bangladesh has over 125,000 poultry farms producing 250 million broilers and six billion eggs annually. About four million Bangladeshis are directly or indirectly associated with poultry farming.

Michigan Wild Bird Surveillance (USDA, May 11): The final numbers for Michigan's 2006 season were 3099 total samples, of which DNR collected 1090 and USDA-WS collected 2009. Samples consisted of live-captured birds (193), agency harvested birds (378), hunter-harvested (1191), sentinel animals (195), morbidity/mortality events (136), and environmental samples (1006, USDA-WS). 90 Michigan samples have been taken so far for the 2007 testing season (82 from USDA-WS and 8 from DNR).

According to the USDA Wildlife Services weekly Avian Influenza Surveillance report, HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 477 birds or environmental samples tested nationwide. The 2007 testing season will run from April 1, 2007-March 31, 2008. For more information, visit the National HPAI Early Detection Data System website at <http://wildlifedisease.nbio.gov/ai/>.

To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

Please contact Susan Vagasky at VagaskyS@Michigan.gov with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Contributors

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Table 1. H5N1 Influenza in Poultry (Outbreaks up to May 17, 2007)

(Source: http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 5/17/2007)

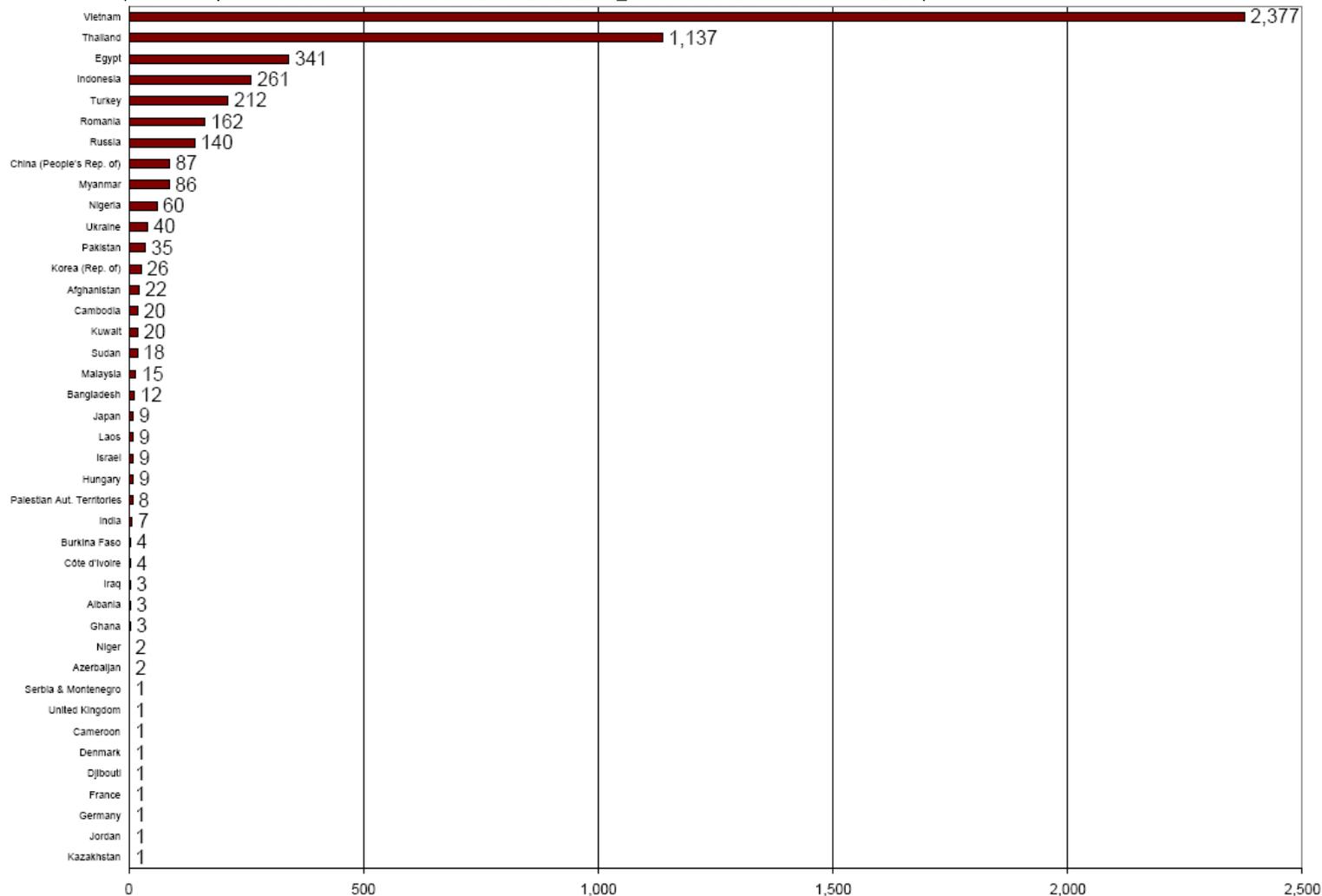


Table 2. H5N1 Influenza in Humans (Cases up to May 16, 2007)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2007_04_11/en/index.html Downloaded 5/18/2007)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		Total	
	cases	deaths										
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	7	7
China	1	1	0	0	8	5	13	8	2	1	24	15
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	16	4	34	14
Indonesia	0	0	0	0	20	13	55	45	6	5	96	76
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	2	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	0	0	93	42
Total	4	4	46	32	98	43	115	79	28	14	306	185