



# MI FluFocus

## Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology  
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Michigan Department  
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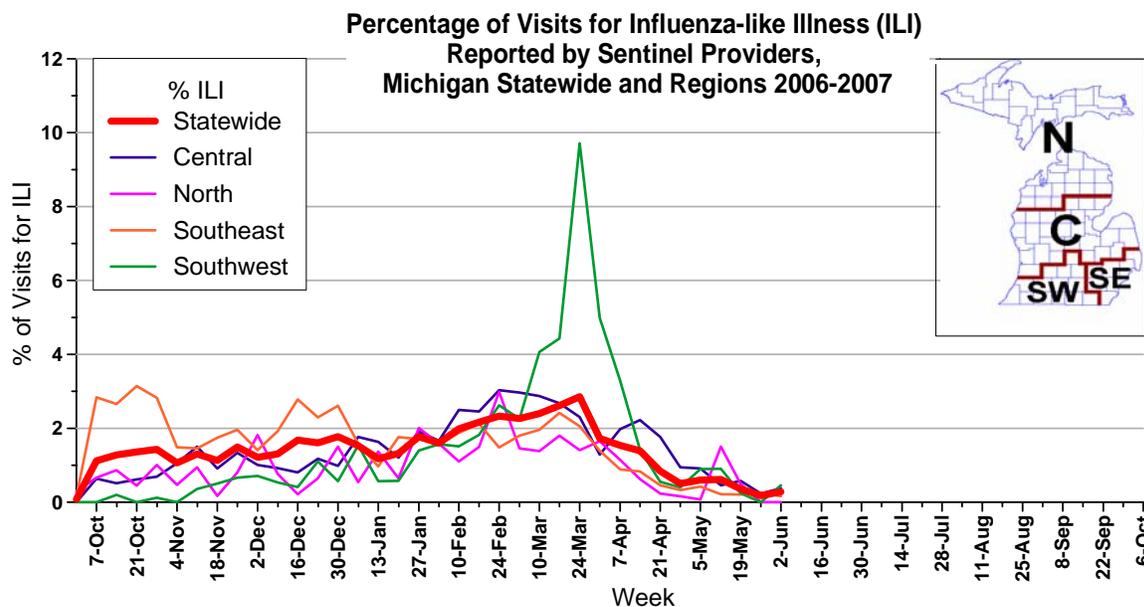
### New updates in this issue:

- **Michigan Surveillance:** No confirmed individual influenza reports; aggregate counts are at baseline.
- **Avian Influenza:** New human deaths due to H5N1 in China and Indonesia; low pathogenic H7N2 outbreak in Wales appears to be over.

**Michigan Disease Surveillance System:** The last week saw both individual influenza and aggregate flu-like illness reports holding steady near the previous week's levels. These indicators are expected to continue to fluctuate at baseline levels until next fall.

**Emergency Department Surveillance:** Emergency department visits due to constitutional complaints increased slightly last week while respiratory complaints decreased slightly. Reported levels are consistent with levels from this time last year. Four constitutional alerts in Regions 1(1), 2N(1), 3(1) and 7(1) and one respiratory alert in Region 5 were generated last week.

**Sentinel Surveillance (as of June 7):** Sentinel Surveillance (as of June 7, 2007): During the week ending June 2, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained at low a low level; 0.3% of all visits. This represents 10 cases of ILI out of 3558 total patient visits; eighteen sentinels provided data for this report. The proportion of visits due to ILI remained at a low level in the Central (0.4%), North (0.0%), Southeast (0.2%), and Southwest (0.5%) regions. 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](mailto:potterr1@michigan.gov) for more information.

**Laboratory Surveillance (as of June 7):** For the 2006-2007 influenza season, there have been 157 culture-confirmed cases from the MDCH Lab:

- 69 A:H1N1 (Southeast (22), Southwest (21), Central (16), North (10))
- 34 A:H3N2 (North (12), Southeast (12), Central (7), Southwest (3))
- 54 B (Southeast (18), Central (17), Southwest (12), North (7))

All influenza B cultures have been B/Malaysia, except for five B/Shanghai results from the Southeast region and one B that is untyped.

\*\*\*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 June 7):** 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](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 June 7):** There has been one report of an influenza A outbreak from a Central region extended care facility for the 2006-2007 influenza season.

**National:** For CDC weekly surveillance report archives, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>.

**International (WHO, as of March 29):** Overall influenza activity in the northern hemisphere remained moderate in weeks 8–11. In North America, influenza activity declined in general, while in Europe and some Asian countries and areas, widespread activity continued, with influenza A(H3N2) viruses predominating. Influenza A(H1N1) viruses circulated in the United States and in a few eastern European countries. Influenza B viruses circulated at low levels.

For influenza activity from individual countries, please visit the full WHO article “Seasonal Influenza Activity in the World, 2007” at <http://www.who.int/csr/disease/influenza/update/en/>.

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Weekly reporting to the CDC has concluded for the 2006-2007 influenza season.

## **End of Seasonal Report**

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### **Avian Influenza Activity**

**WHO Pandemic Phase:** Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

**International, Human (WHO, June 4):** The Ministry of Health in China has informed WHO of the country's 16th death from H5N1 avian influenza. The [19-year-old male](#) soldier serving in Fujian province died on June 3<sup>rd</sup>. Of the 25 laboratory-confirmed cases in China, 16 have been fatal.

**International, Human (WHO, June 6):** The Ministry of Health of Indonesia has announced a new case of human infection of H5N1 avian influenza. A 16-year-old female from Kendal district, Central Java province developed symptoms on May 21<sup>st</sup>, was hospitalized on May 25<sup>th</sup> and died in hospital on May 29<sup>th</sup>. Initial investigations into the source of her infection indicate exposure to dead poultry. Of the 99 cases confirmed to date in Indonesia, 79 have been fatal.

**International, Human, H7N2 (WHO, June 4):** Following the confirmation on May 25, 2007 by Health Authorities of the United Kingdom, of influenza A/H7N2 virus infection in four individuals (two in Wales and two in north-west England) exposed to infected poultry at smallholding, Corwen Farm, Conwy, Wales, the National Public Health Service (NPHS) for Wales is continuing with the investigation of the incident and with the implementation of public health measures.

**National, Pandemic Preparedness (OSHA, May 21):** The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) has unveiled new safety and health guidance that will help healthcare workers and their employers prepare for a possible influenza pandemic. *Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers* (available at [www.osha.gov/Publications/OSHA\\_pandemic\\_health.pdf](http://www.osha.gov/Publications/OSHA_pandemic_health.pdf)) was released today by the agency.

A comprehensive resource for healthcare planners and practitioners, the new guidance offers information and tools to assist the industry in preparing for and responding to an influenza pandemic. It includes technical information on infection control and industrial hygiene practices to reduce the risk of infection in healthcare settings; workplace preparations and planning issues; and OSHA standards that have special importance to pandemic preparedness planners and responders in the industry.

**National, Research (University of Iowa press release, May 31):** Veterinarians who work with birds are at increased risk of infection with avian influenza virus and should be among those with priority access to pandemic influenza vaccines and antivirals, according to a study conducted by researchers in the University of Iowa (UI) College of Public Health.

The investigators, led by Kendall Myers, a doctoral student in occupational and environmental health, and Gregory Gray, MD, UI professor of epidemiology, examined blood samples from a group of US veterinarians for evidence of previous avian influenza virus infection. The veterinarians all had occupational exposure to live chickens, ducks, turkeys, geese or quail.

The study showed that, compared with the control group, the veterinarians who worked with birds had significantly higher levels of antibodies in their blood against the H5, H6 and H7 avian virus strains, indicating previous infections with these viruses. The infections were likely due to the mild forms of avian influenza virus that have occasionally circulated among wild and domestic birds in the United States, according to the researchers. The greatest risk factor for infection reported by veterinarians was examining birds known to be sick with influenza.

"Veterinarians and others with frequent and close contact to infected birds may be among the 1st to be infected with a pandemic strain of influenza, Myers said." "They have the potential to spread the illness to their families and communities. Because of this, we suggest that veterinarians should be considered for inclusion on priority access lists for pandemic influenza vaccines and antivirals."

Birds are the source of all influenza viruses in all other species, the authors noted in their study, and a better understanding of inter-species transmission of avian influenza is a crucial component in efforts to minimize the effects of the next pandemic. Health authorities worldwide are closely monitoring the H5N1 virus strain that emerged in Asia as a possible source of a pandemic.

"While these avian influenza virus infections in veterinarians were likely mild or subclinical, the story might be very different should aggressive avian influenza strains enter the United States like the H5N1 strains infecting domestic birds in Asia," Gray said. "As federal officials continue to plan for a pandemic event, it is increasingly important to identify the best ways to protect veterinarians and other agricultural workers most at risk for zoonotic diseases."

**International, Poultry (Thanhnie News, June 1):** Quang Nam in the central region became the 16th Vietnamese province to succumb to bird flu, the media reported Thursday [May 31]. In Vinh Nam hamlet in Duy Xuyen district, 370 out of a flock of 400 ducklings raised by a household had been infected May 30, the province's veterinary bureau said. Specimens had tested positive for the H5N1 strain of the virus, it added.

The central Animal Health Department reported a day earlier that 115 ducks had died on a farm in the Mekong Delta city of Can Tho of H5N1. The infected flocks in Quang Nam and Can Tho were not vaccinated against bird flu and animal health workers slaughtered the remaining 685 birds. The number of birds killed by the virus or slaughtered nationwide has risen to more than 50,000 this month.

Local veterinary agencies reported they had culled all fowls in affected flocks, disinfected affected areas, and established quarantine checkpoints around infected areas. The 16 Vietnamese cities and provinces affected by bird flu since the beginning of last month are Quang Ninh, Son La, Nam Dinh, Hai Phong, Bac Giang, Ninh Binh, Bac Ninh, Ha Nam, Thai Nguyen, Thanh Hoa, and Vinh Phuc in the northern region; Nghe An, Quang Ngai, and Quang Nam in the central region; and Can Tho and Dong Thap in the south.

The head of the National Steering Committee for Avian Influenza Prevention and Control on Thursday instructed all local agencies to keep an eye on rural farms and backyard poultry to head off possible bird flu outbreaks. To deal with the worsening situation, Prime Minister Nguyen Tan Dung has called on the health ministry and the Standing Committee of the National Steering Committee for Avian Influenza Prevention and Control to adopt drastic measures to control the disease.

Local governments, medical, agricultural, rural development, border quarantine and preventive medical units have been asked to prepare and supply bird flu kits to local agencies to prevent transmission to humans. The health sector has been warned to remain vigilant when treating patients suspected to be infected with H5N1 by placing them in isolation wards.

On Wednesday [May 30] Minister of Agriculture Cao Duc Phat said the country was on the brink of another bird flu epidemic among poultry after the H5N1 virus had spread rapidly in the past month. Last week Vietnam reported its 1st human case in a year and a half, a 30-year-old man in Vinh Phuc province near Hanoi. Doctors treating the man in Hanoi's Bach Mai Hospital said his condition was improving and that he was now able to breathe without a respirator.

**International, Poultry (BBC News online [edited], June 5):** Health officials say that the outbreak of a mild form of bird flu, which affected 17 people in north Wales, has ended. The 1st case of avian flu was found last month [May 2007], in poultry on a smallholding near Cerrigydrudion, Conwy. At its height, 252 people who may have come into contact with the virus were being monitored.

The National Public Health Service for Wales (NPHS) said there was "no more risk," but investigations would continue into the outbreak and its causes. A 1 km (0.62 mile) restriction zone was put in place around the smallholding at Llanfihangel Glyn Myfyr on 24 May [2007], after the "low pathogenic" H7N2 strain of bird flu was confirmed in chickens that died there. Health officials stressed the disease found was not the more virulent H5N1.

Tests were carried out on people who may have come into contact with the farm and eventually, 252 people were monitored. Of those, 17 people suffering conjunctivitis or a flu-like illness were identified with the bird flu virus. Health officials confirmed on Tuesday [5 Jun 2007], that those who had been in possible contact with infected birds, or who had been ill, were now out of the 7 day incubation period for the flu virus.

Marion Lyons, lead consultant in communicable disease control for the NPHS, said: "There is no more risk of people in North Wales being infected with the virus. The illness people experienced was, for the most part, not serious."

The NPHS added investigations would continue into the outbreak and how it occurred. There will also be further testing of the people who had symptoms and a report into the outbreak will be published. Dr Lyons added: "There will be lessons to be learned from this outbreak. These include scientific lessons with the possibility of an addition to the body of knowledge about bird flu. They also include practical lessons for the handling of other outbreaks and for the management of a flu pandemic."

**International, Poultry (Associated Press, June 6):** The virulent H5N1 strain of bird flu has been detected outside Kuala Lumpur, one year after Malaysia was declared free of the disease, the government said Wednesday. A statement released by the Department of Veterinary Services said 60 birds were reported Saturday to have died within three days in Paya Jaras Hilir village in Selangor state, which surrounds Malaysia's main city, Kuala Lumpur.

Tests on Tuesday confirmed they had died of H5N1, Ramlee Rahmat, deputy director-general of public health, told The Associated Press. The Health Ministry was actively monitoring people in the area, he said, but so far no one had symptoms of bird flu, including fever. "There is no need to panic. It has happened before. We're taking the same steps now \_ as per our action plan," he said. "There is nothing unusual."

Authorities have started slaughtering chickens and fowl in Paya Jaras Hilir and in three nearby villages, the statement said.

Malaysia was officially declared free of bird flu in June 2006, three months after the last outbreak of the H5N1 strain was detected in chickens in a northern village.

Health officials are monitoring the area and the virus seems to have been contained, the government statement said, adding it was an isolated incident and not a cause for concern. Bird flu has killed at least 188 people since H5N1 started ravaging Asian poultry flocks in late 2003, according to the World Health Organization. There have been no fatalities in Malaysia.

Prime Minister Abdullah Ahmad Badawi said officials will have to "take whatever measures to prevent it from spreading." It is "important that immediate measures are taken," he said.

Neighboring Singapore suspended poultry and egg imports from Selangor state "as a precautionary measure with immediate effect," the city-state's Agri-Food and Veterinary Authority said in a statement. Poultry imports from the disease-free zones of Johor, Malacca, Negri Sembilan and Perak states will not be affected by this suspension, it said.

Malaysia supplies 3.6 million poultry and 83.7 million eggs per month to Singapore. Imports from Selangor constitute only about 6 percent of the poultry and 1 percent of the egg imports from Malaysia, the statement said.

**International, Wild Bird (AFP Newsbrief, June 1):** A starling has tested positive for the deadly H5N1 bird flu virus in Hong Kong, agricultural officials said Friday [June 1]. Authorities said the bird, found dead last week in a densely populated central area, was confirmed with the killer strain by laboratory tests. They warned of personal contact with wild birds and live poultry. It was the 16th wild bird that has been found dead in Hong Kong this year with H5N1, which has killed almost 200 people and ravaged poultry flocks worldwide since 2003.

Biologists believe local species of wild birds found dead with the virus could have picked it up from contact with infected flocks in mainland China. Hong Kong was the scene of the world's first reported major bird flu outbreak among humans in 1997, when 6 people died.

**National Wild Bird Surveillance (USDA, June 7):** Four ruddy turnstone ducks from Sussex and Kent counties in Delaware have preliminarily tested positive for low-pathogenic "North American" strain of H5N1 avian influenza according to the National HPAI Early Detection Data System website. These were live birds that were collected by the USDA and Delaware Department of Natural Resources and Environmental Control. Confirmatory testing at the National Veterinary Services Laboratory is underway.

**Michigan Wild Bird Surveillance (USDA, June 7):** For the 2007 testing season, 116 Michigan samples have been taken so far (108 from USDA-WS and 8 from DNR).

According to the National HPAI Early Detection Data System website, HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 888 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](mailto:VagaskyS@Michigan.gov) with any questions regarding this newsletter or to be added to the weekly electronic mailing list.**

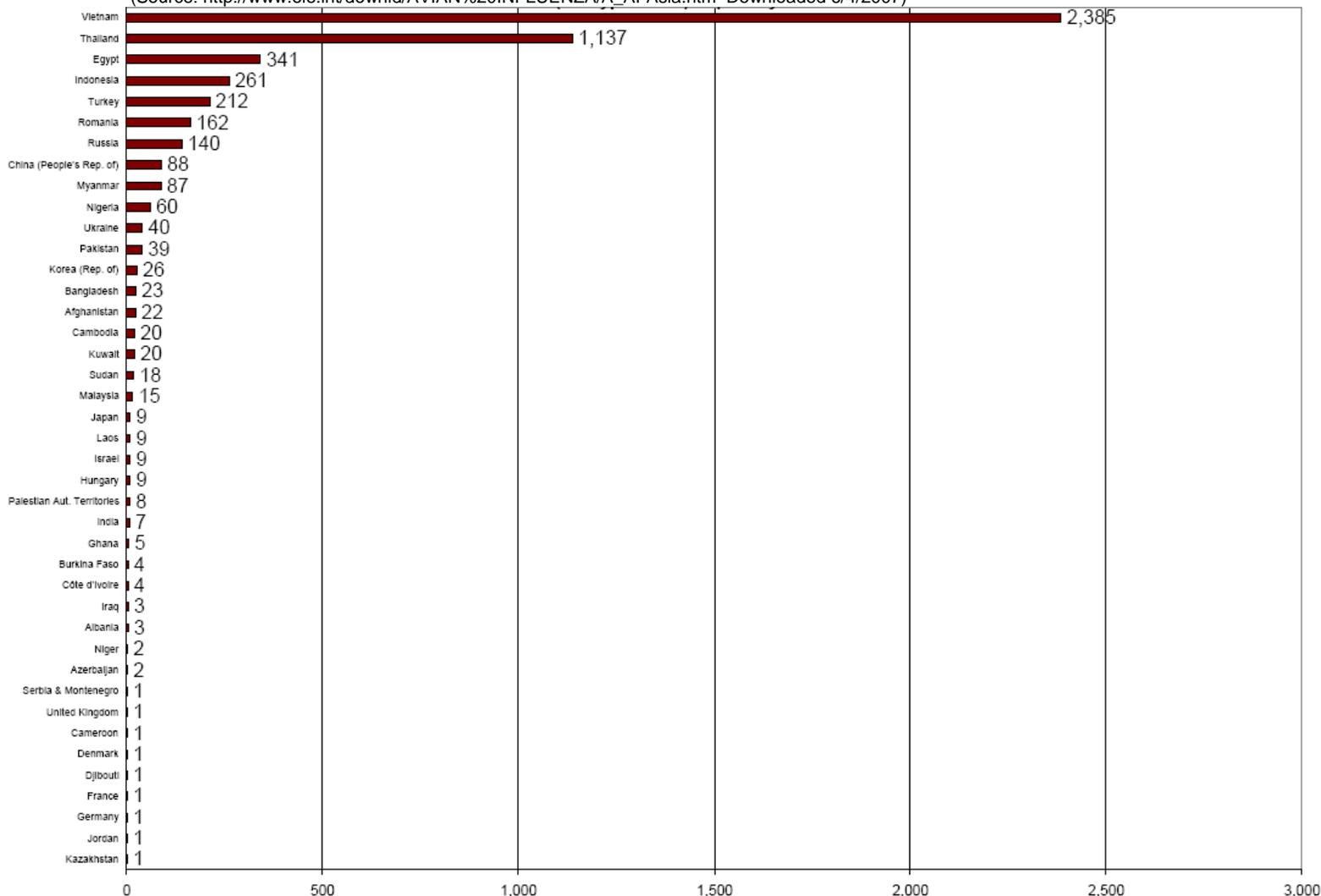
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**Table 1. H5N1 Influenza in Poultry (Outbreaks up to June 2, 2007)**

(Source: [http://www.oie.int/downld/AVIAN%20INFLUENZA/A\\_AI-Asia.htm](http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm) Downloaded 6/4/2007)



**Table 2. H5N1 Influenza in Humans (Cases up to June 6, 2007)**

([http://www.who.int/entity/csr/disease/avian\\_influenza/country/cases\\_table\\_2007\\_06\\_06/en/index.html](http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2007_06_06/en/index.html) Downloaded 6/6/2007)

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	25	16
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	99	79
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	310	189