

**Note: updated information indicated in red**

## Overview

*Situation:* Human cases of low pathogenic avian influenza subtype H7N9 caused by a variant virus with pandemic potential

*Country affected:* China; **four provinces**

*Confirmed human cases:* **9 cases, 3 deaths**<sup>1</sup>

*Animal cases:* unknown, poultry infected with H7 may not show clinical signs, making the disease recognition difficult

*FAO actions:* liaise with Chinese authorities and partners, monitor situation, explore and assess virus characteristics

## Disease situation

- **On 3 April, Zhejiang Province reported two new cases, bringing the total to nine. One patient had travel history to Jiangsu province** (see provincial map of China below).
- On 2 April 2013, authorities reported an [additional four human cases](#) in **Jiangsu Province**.
- On 31 March 2013, authorities reported to the World Health Organization (WHO) [three confirmed human cases of H7N9](#) influenza of avian origin occurring in two provinces (Shanghai and Anhui).
- All three affected provinces are adjacent to one another.
- Epidemiological links are being investigated between these seven cases, and a potential family cluster is being explored.
- From information available, four of the confirmed cases had suspected contact with poultry; additional epidemiological investigations on the other cases are on-going.
- The source of infection remains unknown.
- Clinical signs include fever and cough, followed by severe pneumonia.
- Chinese authorities are recommending the public take routine care to prevent transmission of respiratory infections and to pay special attention to avoid direct contact with sick or dead poultry and livestock.

## Characteristics of the variant H7N9 virus

*According to the genetic sequence of the viruses:*

- This virus would be classified as low pathogenic avian influenza (LPAI) in poultry and a new virus subtype found in humans.
- The virus is a reassortant virus between different avian viruses: H7 and H9N2.
- Sequence analysis indicates the virus has a potential for transmission from avian to human and between humans, but this needs to be further investigated.
- Preliminary analyses indicate that this virus seems sensitive to most antivirals. Further analysis of potential resistance to antivirals is on-going.
- There are 7 candidate human vaccines available for H7 viruses from WHO collaborators. Evaluation of vaccines is on going

## Background

### Domestic and wild birds

- Subtype H7 can be either low pathogenic or highly pathogenic avian influenza.
- H7 virus subtypes in poultry have been widely reported across the globe in poultry and wild birds. The latest reported outbreak in China was in ducks in 2011.

<sup>1</sup> Chinese media reporting 4 April 2013 an additional, unconfirmed death.

- All H5 and H7 viruses are notifiable to the World Organisation for Animal Health (OIE) regardless of the species where identified.

### Humans

- No previous cases of H7 in humans have been reported in China (or Asia) prior to this occurrence.
- Infection with H7 viruses is rare in humans. Observed symptoms include conjunctivitis and mild respiratory symptoms. Netherlands reported one fatal case of H7N7 AI in 2003.

### FAO response

- FAO ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- FAO ECTAD China is linking with Chinese animal health authorities to obtain information on the current sampling activities in live bird markets and to evaluate historical H7Nx data (prevalence in animals and unusual disease events).
- FAO ECTAD China will continue to offer support to animal and public health authorities as requested on animal and wild life events.
- Technical coordination with international partners (OIE, WHO and its collaborating centres, laboratories of the OIE/FAO Avian Influenza Network [OFFLU] and FAO Reference Centres) at HQ level is on-going; a teleconference is scheduled for this week (4 April 2013) with human and animal health laboratories on current diagnostic preparedness and capabilities for virological detection and surveillance purposes.

### Important links

- **WHO disease outbreak news:** <http://www.who.int/csr/don/en/>

# A(H7N9) situation update

EMPRES – Animal Health  
05 April 2013 17:00 Rome



## Overview

*Situation: Influenza A subtype H7N9 with pandemic potential*

*Country affected: People's Republic of China*

*Number of human cases: 16 confirmed: 6 deaths*

*Locations: 4 provinces in China, all adjacent (Anhui, Jiangsu, Shanghai, Zhejiang)*

*Animal cases: 1 pigeon (virus strain similar to the human isolates)*

*FAO actions: liaise with China and partners, monitor situation, explore and assess virus characteristics*

## Situation update

### Animals

- On 5 April, the National Avian Influenza Reference Laboratory further detected 19 samples positive for A(H7N9) influenza out of 738 samples received from Shanghai. The positive samples come from chicken, pigeon and environmental sources from three different markets in Shanghai.
- On 4 April 2013, the Ministry of Agriculture (MoA) of the Government of the People's Republic of China reported the first detection of influenza A(H7N9) in a bird (pigeon, agriculture wholesale market in Songjiang District of Shanghai). The virus is highly similar to the viruses found in humans.
- Large scale sampling activities are ongoing in live bird markets, small holder and commercial farms, wildlife and the environment in areas associated with human cases.
- The virus has been temporarily upgraded to a "List 1 animal disease" by MoA, which means it is of high priority and preclude the below-mentioned actions:
  - strict animal disease prevention and control measures at relevant markets; and
  - extending the scale of surveillance on H7N9 virus.
- Authorities have begun strict market management, including culling birds, cleaning and conducting trace back investigations in the Songjiang wholesale market of Shanghai.
- Chinese authorities banned the sale of live birds in three markets in Shanghai and conducted disinfection of the premises.

### Humans

Report date	Cases (Deaths)	Location: Cases (Deaths)	Information on exposure
05-Apr	5 (1)	Shanghai: 3 (1), Jiangsu: 2 (0)	
04-Apr	4 (3)	Zhejiang: 3 (2), Shanghai: 1 (1)	Processing slaughtered chickens, transportation of poultry, on farm exposure
02-Apr	4 (0)	Jiangsu: 4 (0)	Processing slaughtered chickens
31-Mar	3 (2)	Shanghai: 2 (2), Anhui: 1 (0)	Contact with poultry from markets; processing slaughtered chickens
<b>Totals</b>	16 (6)	Shanghai: 6 (4), Anhui 1 (0), Jiangsu: 6 (0), Zhejiang: 3 (2)	

- To date, no epidemiological links have been established between the confirmed human cases.
- From information available, seven of the confirmed cases had direct or potential contact with poultry; additional epidemiological investigations on the other cases are ongoing.
- The route of infection remains unknown.

## Virus Characteristics

- The strain in question is a reassortant H7N9 influenza virus derived from three different avian influenza viruses:
  - the gene of the N protein is from avian H11N9 viruses;
  - the gene of the H protein is considerably divergent from the known H7 virus strains; and

- the genes of internal proteins are from H9N2 viruses.
- This virus has characteristics indicating a higher potential for transmission in mammals.
- Analyses show that this virus is sensitive to oseltamivir [Tamiflu]. Newly isolated viruses should be continuously characterized.
- Current diagnostic protocols are being evaluated. A list of appropriate diagnostic procedures will be shared as soon as possible.

## **FAO actions**

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- ECTAD China has established an incident coordination team and is linking with Chinese animal health authorities to obtain information on the current sampling activities in live bird markets
- ECTAD China will continue to offer support to animal and public health authorities as requested on animal and wildlife events.
- FAO organized a teleconference on current diagnostic preparedness and capabilities. Main outcomes were:
  - most routine detection tests for the H7 virus are not expected to detect this new virus;
  - appropriate diagnostic tests have been identified and posted on the OFFLU website;
  - The China Centre for Disease Control (CDC) has agreed to sharing:
    - protocols via public website; and
    - virus isolates with WHO collaborating centres and the animal health scientific community.
- FAO held a teleconference with OIE and WHO on surveillance, risk assessment and communication issues on Friday, 5 April.
- FAO is contributing to risk assessment exercises in countries in the region.
- FAO will publish on its website a press release on the importance of biosecurity with regard to H7N9.
- FAO is re-evaluating protocols for influenza surveillance in domestic and wild animals.

## **Important links**

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>

## Map

### Provinces of China



Source: <http://www.chinapage.com/map/map.html>

# EMPRES – Animal Health H7N9 situation update

06 April 2013 17:00 Rome



## Overview

*Situation:* Human cases of low pathogenic avian influenza subtype H7N9 caused by a variant virus with pandemic potential

*Country affected:* China

*Number of human cases:* 7 confirmed: 2 deaths

*Animal cases:* unknown, poultry infected with H7 may not show clinical signs, making the disease recognition difficult

*FAO actions:* liaise with Chinese authorities and partners, monitor situation, explore and assess virus characteristics

## Disease situation

- On 31 March 2013, Chinese authorities [reported to WHO three confirmed human cases of H7N9 avian influenza](#) occurring in two provinces (Shanghai and Anhui).
- [On 2 April 2013, authorities reported an additional four human cases in Jiangsu Province.](#)
- All three affected provinces are adjacent to one another.
- Two patients out of seven died, the others remain in critical condition.
- Epidemiological links are being investigated between these seven cases, and a potential family cluster is being explored.
- From information available, four of the confirmed cases had suspected contact with poultry; additional epidemiological investigations on the other cases are ongoing.
- The route of infection remains unknown.
- Clinical signs include fever and cough, followed by severe pneumonia.
- Chinese authorities are recommending the public take routine care to prevent transmission of respiratory infections and to pay special attention to avoid direct contact with sick or dead poultry and livestock.

## Characteristics of the variant H7N9 virus

*According to sequence analyses of the viruses indicate that:*

- This virus is low pathogenic in poultry and a new virus subtype found in humans
- It is a reassortant virus between different avian viruses: H7 and H9N2.
- Sequence analysis indicates the virus has a potential for transmission from avian to human and between humans, but this needs to be further investigated.
- Preliminary analyses indicate that this virus seems sensitive to most antivirals. Further analysis of potential resistance to antivirals is on-going.
- There are 7 candidate human vaccines available for H7 viruses from WHO collaborators. Evaluation of vaccines is on going

## Background

### Domestic and wild birds

- Subtype H7 can be either low pathogenic (LPAI) or highly pathogenic avian influenza (HPAI).
- H7 virus subtypes in poultry have been widely reported across the globe in poultry and wild birds. The latest reported outbreak in China was in ducks in 2011.

## Humans

- No previous cases of H7 in humans have been reported in China (or Asia) prior to this occurrence.
- Infection with H7 viruses is rare in humans. Observed symptoms include conjunctivitis and mild respiratory symptoms. Netherlands reported one fatal case of HPAI H7N7 in 2003.

## FAO response

- FAO ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- FAO ECTAD China is linking with Chinese animal health authorities to obtain information on the current sampling activities in live bird markets and to evaluate historical H7Nx data (prevalence in animals and unusual disease events).
- FAO ECTAD China will continue to offer support to animal and public health authorities as requested on animal and wild life events.
- Technical coordination with international partners (OIE, WHO and its collaborating centres, OFFLU laboratories and FAO Reference Centres) at HQ level is ongoing; a teleconference is scheduled for this week with human and animal health laboratories on current diagnostic preparedness and capabilities for this novel virus.

## Media handling / talking points

### On the situation

- A new subtype of avian influenza (H7N9) has been confirmed in humans in China and reported to WHO by Chinese authorities.
- Poultry infected with H7 may not show clinical signs, potentially making disease recognition difficult.
- Chinese authorities quickly released detailed information on the virus to the public.
- Chinese authorities are recommending the public to take routine care to prevent transmission of respiratory infections and to avoid direct contact with sick or dead poultry and livestock.

### On what FAO is doing

- FAO is monitoring the situation closely through its wide network of decentralized offices.
- FAO is liaising with key partners, including the World Health Organization (WHO) and the World Organisation for Animal Health (OIE).
- FAO commends the Chinese authorities' decision to release virus information to the public. This has allowed the scientific community to perform further analysis.
- FAO and the scientific community are currently studying the virus sequence in order to better understand its properties and ramifications.
- FAO has offered to assist Chinese authorities with epidemiological investigations in poultry.
- FAO concurs with the recommendations of Chinese authorities for the public to take routine care to prevent transmission of respiratory infections and to pay special attention to avoid direct contact with sick or dead poultry and livestock.

## Overview

Situation: Influenza A subtype H7N9 with pandemic potential

Country affected: People's Republic of China

Number of human cases: 25 confirmed; 7 deaths. All contacts are under closed medical observation.

Locations: 4 provinces in China, all adjacent (Anhui, Jiangsu, Shanghai, Zhejiang)

Animal cases: since 5 April, the virus has been confirmed in pigeons, chickens, environmental samples and lately in quails

FAO actions: liaison with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication

## Situation update

### Animals

- China Ministry of Agriculture reported official actions, as of 7 April 2013:
  - Continued animal case detection and virus surveillance;
  - Continued, timely, transparent animal information sharing;
  - Continued price monitoring of live birds and products to ensure stability and mitigate losses of poultry industry;
  - published a surveillance plan for animal H7N9 and draft emergency preparedness guideline for animal H7N9
  - established the Steering Group for H7N9 for prevention and control in animals and launched the national emergency mechanism;
  - published “Tips for food safety measures to prevent H7N9 virus” by the National Food Safety Centre;
- On 6 April:
  - Shanghai authorities banned live poultry from other places from entering the city and launched inspections on the roads.
  - Nanjing (Jiangsu Province) authorities banned sales of live poultry at three main poultry trade markets, which account for 90 percent of all poultry in the city; live poultry are banned from entering or leaving Nanjing.
- On 6 April, Hangzhou city in Zhejiang province culled all birds sold in Bin sheng agricultural products market after quail samples had been tested positive. Additionally, 5 of 12 environmental samples (including cages and surfaces, feces, feathers) had also tested positive for influenza A (H7N9). Sales of live birds are temporarily banned.
- Dead sparrows found in Nanjing city tested negative for influenza A (H7N9).
- On 5 April, the National Avian Influenza Reference Laboratory further detected 19 samples positive for influenza A(H7N9) out of 738 samples received from Shanghai. The positive samples come from chicken, pigeon and environmental sources from three different markets in Shanghai.
- Shanghai has closed all live poultry markets since April 5. Nanjing announced on 6 April that the Zi Jing San live poultry market was closed.
- China has officially notified the OIE about positive samples in poultry on 4 and 5 April.
- On 4 April 2013, the Ministry of Agriculture (MoA) of the Government of the People's Republic of China reported the first detection of influenza A(H7N9) in a bird (pigeon, agriculture wholesale market in Songjiang District of Shanghai). The virus is highly similar to the viruses found in humans.
- Large scale sampling activities are ongoing in live bird markets, small holder and commercial farms, wildlife and the environment in areas associated with human cases.
- The virus **continues to be listed as** a “List 1 animal disease” by MoA.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus:  
[http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- **FAO press release and Frequently Asked Questions:**
  - <http://www.fao.org/news/story/en/item/173655/icode/>;
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Map

### Provinces of China



Source: <http://www.chinapage.com/map/map.html>

## Humans

Provincial Ministries of Health have reported five new human cases in Shanghai and Jiangsu provinces.

Report date	Cases (Deaths)	Location: Cases (Deaths)	Information on exposure
08-Apr	5 (1)	*Shanghai: 3 (1) * Jiangsu: 2 (0)	
06-Apr	2	Shanghai: 1 (0) Anhui: 1 (0)	
05-Apr	7 (1)	Shanghai: 5 (1), Jiangsu: 2 (0)	
04-Apr	4 (3)	Zhejiang: 3 (2), Shanghai: 1 (1)	Processing slaughtered chickens, transportation of poultry, on- farm exposure
02-Apr	4 (0)	Jiangsu: 4 (0)	Processing slaughtered chickens
31-Mar	3 (2)	Shanghai: 2 (2), Anhui: 1 (0)	Contact with poultry from markets; processing slaughtered chickens
<b>Totals</b>	25 (7)	Shanghai: 12 (5), Anhui 2 (0), Jiangsu: 8 (0), Zhejiang: 3 (2)	

- To date, no epidemiological links have been established between the confirmed human cases.
- One case in Zhejiang had bought quails in Bin sheng agricultural products market for consumption (see situation in animals for follow-up actions by authorities)

## Virus Characteristics

- The strain in question is a triple reassortant H7N9 influenza virus (H7Nx; H11N9; H9N2):
- Analyses show that this virus is sensitive to oseltamivir [Tamiflu]. Newly isolated viruses should be continuously characterized.
- Current diagnostic protocols are being evaluated. A list of appropriate diagnostic procedures will be shared today or tomorrow.

## A(H7N9) situation update

EMPRES – Animal Health

09 April 2013 17:30 Rome



### Overview

*Situation: Influenza A subtype H7N9 with pandemic potential*

*Country: People's Republic of China*

*Number of human cases: 29 confirmed; 8 deaths.* All contacts are under closed medical observation.

*Locations: 4 provinces in China, all adjacent (Anhui, Jiangsu, Shanghai, Zhejiang)*

*Animal cases: since 5 April virus has been confirmed in pigeon (captive), chicken, quail and environmental samples*

*FAO actions: liaison with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication*

### Situation update

#### Animals

- On 9 April 2013, Chinese authorities confirmed negative H7 results for all 229 tracheal and cloacal swabs taken from areas in Shanghai where migratory birds, captive birds and people congregate. [Species sampled include: waders, sandpipers, shore birds, egrets, other migratory birds and pet birds]
- On 8 April, Shanghai's authorities announced:
  - As of 7 April, the city's disposal centre received more than 100 000 poultry carcasses.
  - The Agriculture Commission of the city is studying the relevant supporting policies to stabilize poultry production to safeguard the farmers.
  - Shanghai entry-exit inspection and quarantine departments have strengthened entry checks of poultry and its products.
  - Between 27 March and 3 April 2013 the price of white feather poultry decreased by 2–8 percent and the price of eggs for consumption increased by 2–6 percent in some provinces (including non-affected provinces) Source: <http://www.chinabreed.com>
- Reported actions of Chinese authorities as of 7 April:
  - continued animal case detection and virus surveillance;
  - continued, timely, transparent animal information sharing;
  - continued price monitoring of live birds and products to ensure stability and mitigate losses of poultry industry;
  - published a surveillance plan for animal H7N9, which includes the division of China's provinces into three surveillance areas:
    - Area 1 – provinces with human infections (vicinity to Shanghai);
    - Area 2 – provinces adjacent to Area 1; and
    - Area 3 – provinces all other provinces
    - Target species: chickens, waterfowl, domestic pigeons, quails, wild birds and pigs. Samples will be taken in live bird markets, slaughterhouses, farms and wild bird habitats.
  - published a draft emergency preparedness guideline for animal H7N9
  - established the Steering Group for H7N9 for prevention and control in animals and launched the national emergency mechanism;
  - published - "Tips for food safety measures to prevent H7N9 virus".
- Live bird markets remain closed in Shanghai. Nanjing announced on 6 April that the Zi Jing San live poultry market was closed.
- The virus continues to be listed as a "List 1 animal disease" by MoA.

## Humans

Report date	Cases (Deaths)	Location: Cases (Deaths)	Information on exposure
09-Apr	4 (0)	Shanghai: 2 (0) Zhejiang: 2 (0)	
08-Apr	5 (1)	Shanghai: 3 (1) Jiangsu: 2 (0)	
06-Apr	2	Shanghai: 1 (0) Anhui: 1 (0)	
05-Apr	7 (1)	Shanghai: 5 (1), Jiangsu: 2 (0)	
04-Apr	4 (3)	Zhejiang: 3 (2), Shanghai: 1 (1)	Processing slaughtered chickens, transportation of poultry, on- farm exposure
02-Apr	4 (1)	Jiangsu: 4 (1)	Processing slaughtered chickens
31-Mar	3 (2)	Shanghai: 2 (2), Anhui: 1 (0)	Contact with poultry from markets; processing slaughtered chickens
<b>Totals</b>	<b>29 (8)</b>	<b>Shanghai: 14 (5), Anhui 2 (0), Jiangsu: 8 (1), Zhejiang: 5 (2)</b>	

- *To date, no epidemiological links have been established between the confirmed human cases.*

## Virus Characteristics

- The strain in question is a triple reassortant H7N9 influenza virus, (H7Nx; H11N9; H9N2 – all of avian origin)
- Analyses show that this virus is sensitive to oseltamivir [Tamiflu]. Newly isolated viruses should be continuously characterized.
- Current diagnostic protocols are being evaluated. A list of appropriate diagnostic procedures are being shared.

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- ECTAD China has established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis together with local authorities to assist with tracing back and forward activities.
- FAO continues tripartite communication and coordination with OIE and WHO.
- FAO is contributing to risk assessment exercises in countries in the region.
- FAO has updated its [frequently asked questions](#) with additional clarification on food safety issues.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Map

### Provinces of China



Source: <http://www.chinapage.com/map/map.html>

# A(H7N9) situation update

FAO / EMPRES – Animal Health  
10 April 2013 17:00 Rome



## Overview

*Situation: Influenza A subtype H7N9 with pandemic potential*

*Country: People's Republic of China*

*Number of human cases: 33 confirmed; 9 deaths.* All contacts are under closed medical observation.

*Locations: 4 provinces in China, all adjacent (Anhui, Jiangsu, Shanghai, Zhejiang)*

*Animal cases: since 5 April virus has been confirmed in pigeon (captive), chicken, quail and environmental samples*

*FAO actions: liaison with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication*

## Situation update

### Animals

- On 9 April, Shanghai City authorities:
  - inspected all 193 poultry meat processing enterprises in the city;
  - stressed the three bans: no-trade of live poultry within markets; no off-market sales of live poultry at production firms; no live water birds and wild birds trade;
  - dispatched more than 800 staff on nearly 1 000 visits to various markets and poultry trading points. The same staff also visited more than 2 000 poultry-rearing households.
  - received numerous calls of consumers via their emergency hotline: #12315
  - forbid residents from raising chickens, ducks, geese, rabbits and other domestic animals and eating pigeons in accordance with the provisions of Article 36 of the "Shanghai City Appearance and Environmental Sanitation Management Ordinance".
- On 9 April 2013, Chinese authorities confirmed negative H7 results for all 229 tracheal and cloacal swabs taken from areas in Shanghai where migratory birds, captive birds and people congregate. [Species sampled include: waders, sandpipers, shore birds, egrets, other migratory birds and pet birds]
- FAO learned that the Chinese surveillance plan of 7 April specifies a division of China's provinces into three surveillance areas:
  - Area 1 – provinces with human infections and positive animal samples
  - Area 2 – provinces adjacent to Area 1; and
  - Area 3 – provinces all other provinces
  - Target species: chickens, waterfowl, domestic pigeons, quails, wild birds and pigs.
  - samples from at least 30 birds will be taken in live bird markets, slaughterhouses, farms and wild bird habitats, additionally to surface samples in markets. Sample include, blood, and tracheal/cloacal swabs. Additional nasal swabs of pigs will be taken.
  - The plan foresees the following sampling sites:
    - Area 1: All markets, poultry slaughterhouses and 30 poultry farms/villages and 20 pig abattoirs
    - Area 2: Counties will take samples from at least one live bird market, 10 poultry slaughterhouses, 30 poultry farms/villages and 10 pig abattoirs.
    - Area 3: Each prefecture will take samples at least one live bird market, 5 poultry slaughterhouses, 10 poultry farms/villages and 5 pig abattoirs .
- The virus continues to be listed as a "List 1 animal disease" by MoA.

### Humans

Report date	Cases (Deaths)	Location: Cases (Deaths)	Information on exposure
10-Apr	5 (0)	Jiangsu: 2 (0) Shanghai: 2 (0) Zhejiang: 1 (0)	
09-Apr	4 (0)	Shanghai: 2 (0)	

		Zhejiang: 2 (0)	
<b>08-Apr</b>	4 (1)	Shanghai: 2 (1) Jiangsu: 2 (0)	
<b>06-Apr</b>	2	Shanghai: 1 (0) Anhui: 1 (0)	
<b>05-Apr</b>	7 (1)	Shanghai: 5 (1), Jiangsu: 2 (0)	
<b>04-Apr</b>	4 (3)	Zhejiang: 3 (2), Shanghai: 1 (1)	Processing slaughtered chickens, transportation of poultry, on- farm exposure
<b>02-Apr</b>	4 (1)	Jiangsu: 4 (1)	Processing slaughtered chickens
<b>31-Mar</b>	3 (2)	Shanghai: 2 (2), Anhui: 1 (1)	Contact with poultry from markets; processing slaughtered chickens
<b>Totals</b>	<b>33 (9)</b>	<b>Shanghai: 15 (5), Anhui: 2 (1), Jiangsu: 10 (1), Zhejiang: 6 (2)</b>	

- To date, no epidemiological links have been established between the confirmed human cases.
- On 10 April, the @WHO twitter account communicated: “#H7N9 in China: Signs of human-to-human transmission, extension of geographical areas are more noteworthy than a change in number of cases”. FAO raised concerns with WHO over the language, since the content could mislead the public to think human-to-human transmission has been confirmed, which is not the case.
- On 9 April, the Chinese Academy of Sciences' hospital started research on genome expression, bioinformatics and evolutionary genomics; trace back of the virus origin; study of virus mutation and host interactions; pathogenicity mechanisms; immune response; and antivirals.

## Virus Characteristics

- The strain in question is a triple reassortant H7N9 influenza virus, (H7Nx; H11N9; H9N2 – all of avian origin)
- Analyses show that this virus is sensitive to oseltamivir [Tamiflu]. Newly isolated viruses should be continuously characterized.
- Current diagnostic protocols are being evaluated. A list of appropriate diagnostic procedures are being shared.

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- ECTAD China has established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis together with local authorities to assist with tracing back and forward activities.
- FAO continues tripartite communication and coordination with OIE and WHO.
- FAO is contributing to risk assessment exercises in countries in the region.
- FAO has updated its [frequently asked questions](#) with additional clarification on food safety issues.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.

## Important links

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- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Map

### Provinces of China



Source: <http://www.chinapage.com/map/map.html>

# A(H7N9) situation update

FAO / EMPRES – Animal Health  
11 April 2013 17:00 Rome



## Overview

*Situation: Influenza A subtype H7N9 with pandemic potential*

*Country: People's Republic of China*

*Number of human cases: 40 confirmed; 11 deaths.* All contacts are under closed medical observation.

*Locations: 4 provinces in China, all adjacent (Anhui, Jiangsu, Shanghai, Zhejiang)*

*Animal cases: confirmed in pigeon (captive), chicken, quail, ducks and environmental samples*

*FAO actions: liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication*

## Situation update

### Animals

- On 11 April, more than 600 chickens were found dead, along a river, near the Lakes region Dongchuan Henan Station of Yington City, in Jiangxi Province. The District Animal Health Authorities investigation found that the dead chickens were discarded near a livestock market of individual traders. Samples were taken and sent to the Jiangxi Provincial Agriculture Department for testing. Results expected in two days.
- **Viet Nam and Hong Kong** have temporarily banned Chinese poultry imports, and airports in Japan have put up notices warning passengers from China to report any flu-like symptoms to medical professionals. Stock prices for mainland poultry-meat producers have plummeted, while pharmaceutical company stocks have surged. <http://www.guardian.co.uk/world/2013/apr/05/bird-flu-shanghai-poultry-market-cull>
- **Japan** has been suspending Chinese poultry imports since 27 January 2004. <http://www.maff.go.jp/aqs/topix/im/hpai.html>
- On 10 April, the Ministry of Agriculture (MOA) emphasized the importance of:
  - implementing sound prevention and control measures;
  - taking active measures to effectively mitigate impacts on the poultry industry; and
  - continuing epidemiological investigations, disease surveillance and international cooperation.
- On 10 April, the MOA reported H7N9 low pathogenic avian influenza detected in live bird markets:
  - **Shanghai City:** 13 positive samples
    - Songjiang - Huhuai market: 8 pigeons out of a more than 20 000
    - Minhang - Jingchuan market: 1 chicken
    - Minhang - Fengzhuang market: 2 chickens and 2 pigeons
  - **Jiangsu Province:** a total of 11 positive samples out of nearly 750
    - Gaoyou - Yinqing market: 8 chickens
    - Gaoyou - Beihai market - 2 chickens from
    - Changshu - Xinzaocun market - 1 chicken
  - **Zhejiang Province:** Huzhou - Zhebei market: 2 duck samples out of more than 600
  - **Anhui Province:** Hefei - Huishangcheng market: 1 duck out of nearly 750 samples
- These animal cases were notified to OIE.
- **More details of the sampling which has been to the OIE:**
  - Chinese animal disease prevention and control center has completed [testing of] 3 175 samples from Focused areas, including: 1 635 samples from 57 farms; 1 222 samples from 19 live poultry markets, 50 environmental samples from three places; and 9 366 wild bird fecal samples. Of these samples, 34 samples were H7N9 avian influenza virus positive. The samples were from the four known infected provinces/city's eight live bird markets: namely 20 samples from Shanghai, 1 from Anhui, 11 from Jiangsu and 2 from Zhejiang; 21 were from chickens, 3 were from pigeons, 3 were from ducks, 7 were from environment. <http://news.sina.com.cn/c/2013-04-12/025926801297.shtml>

- Chinese authorities reported all 160 000 samples collected in Jiangxi Province (Area 2) were negative for influenza A(H7N9).
- From 1 to 6 April 2013, two out of 16 districts in Beijing collected nearly 4 500 samples (including serology). All samples were negative. Samples were collected from:
  - 173 locations, including poultry farms, farming community, backyard farmers, wild bird habitat, parks, zoos, supermarkets, wholesale markets and other key areas; and
  - Chickens, ducks, geese, pigeons, wild birds and pigs were sampled.
- On 10 April, the OIE/FAO network of expertise on animal influenza (OFFLU) posted a summary table of reagents for laboratories.
- Chinese surveillance plan of 7 April divides China's provinces into three surveillance areas:
  - Area 1 – provinces with human infections and positive animal samples
  - Area 2 – provinces adjacent to Area 1; and
  - Area 3 – provinces all other provinces
- The virus continues to be listed as a “List 1 animal disease” by MoA.

## Humans

Report date	Cases (Deaths)	Location: Cases (Deaths)	Information on exposure
12 Apr	2 (0)	Shanghai: 2 (0)	
11 Apr	5 (1)	Jiangsu: 2 (0) Shanghai: 3 (1)	
10-Apr	5 (0)	Jiangsu: 2 (0) Shanghai: 2 (0) Zhejiang: 1 (0)	
09-Apr	4 (0)	Shanghai: 2 (0) Zhejiang: 2 (0)	
08-Apr	4 (1)	Shanghai: 2 (1) Jiangsu: 2 (0)	
06-Apr	2	Shanghai: 1 (1) Anhui: 1 (0)	
05-Apr	7 (1)	Shanghai: 5 (1), Jiangsu: 2 (0)	
04-Apr	4 (3)	Zhejiang: 3 (2), Shanghai: 1 (1)	Processing slaughtered chickens, transportation of poultry, on- farm exposure
02-Apr	4 (1)	Jiangsu: 4 (1)	Processing slaughtered chickens
31-Mar	3 (2)	Shanghai: 2 (2), Anhui: 1 (1)	Contact with poultry from markets; processing slaughtered chickens
<b>Totals</b>	<b>40 (11)</b>	<b>Shanghai: 20 (7),</b> Anhui: 2 (1), Jiangsu: 12 (1), Zhejiang: 6 (2)	

- Using the H7N9 strain provided by China, National Institute of Infectious Diseases, Japan checked the effectiveness of four anti-viral products and confirmed the following can be useful:
- **TamiFlu, Zanamivir, Laninamivir, Peramivir .**
- The institute has been ready with a test kit set; and with the strain, they were able to confirm the validation of the kit. The kit will be ordered and it will be distributed to regional IID and Quarantine offices. <http://www.47news.jp/CN/201304/CN2013041201002350.html>
- The Pudong Shanghai Zhijiang Biotechnology Co., Ltd. (<http://www.liferiver.com.cn>) has successfully developed the H7N9 specific diagnostic reagents. This company is currently the sole supplier of the successful commercial reagent. This fluorescent PCR reagent detects H7N9-specific H7 and N9 gene fragment, differentiates H7N9 from the H1, H3, H5N1, A(H1N1), as well as other common respiratory pathogens, and can be used for clinical pathogenic differential diagnosis of patients with suspected infection. Excerpt from [http://news.ifeng.com/mainland/special/h7n9/content-3/detail\\_2013\\_04/12/24164633\\_0.shtml](http://news.ifeng.com/mainland/special/h7n9/content-3/detail_2013_04/12/24164633_0.shtml)
- To date, no epidemiological links have been established between the confirmed human cases.
- On 10 April, Chinese institutes started development of reagents and human H7N9 vaccine.
- On 10 April, China's Centre for Disease Control announced it has distributed enough reagents to carry out 160 000 laboratory tests in all 31 of the influenza network laboratories in the provinces.
- 8 April: WHO published protocols for real-time reverse transcriptase polymerase chain reaction (RT-PCR) for the detection of influenza A(H7N9) virus .

- On 11 April, the WHO twitter account provided two clarifying tweets to rectify the 10 April message:
  - *We will be watching for signs of H7N9 human-to-human transmission - we have not seen any confirmed instances so far*
  - *If we see sustained H7N9 human-to-human transmission or geographical spread that would be something worth noting*

## **Virus Characteristics**

- The strain in question is a triple reassortant H7N9 influenza virus, (H7Nx; H11N9; H9N2 – all of avian origin)
- Analyses show that this virus is sensitive to oseltamivir [Tamiflu]. Newly isolated viruses should be continuously characterized.

## **FAO actions**

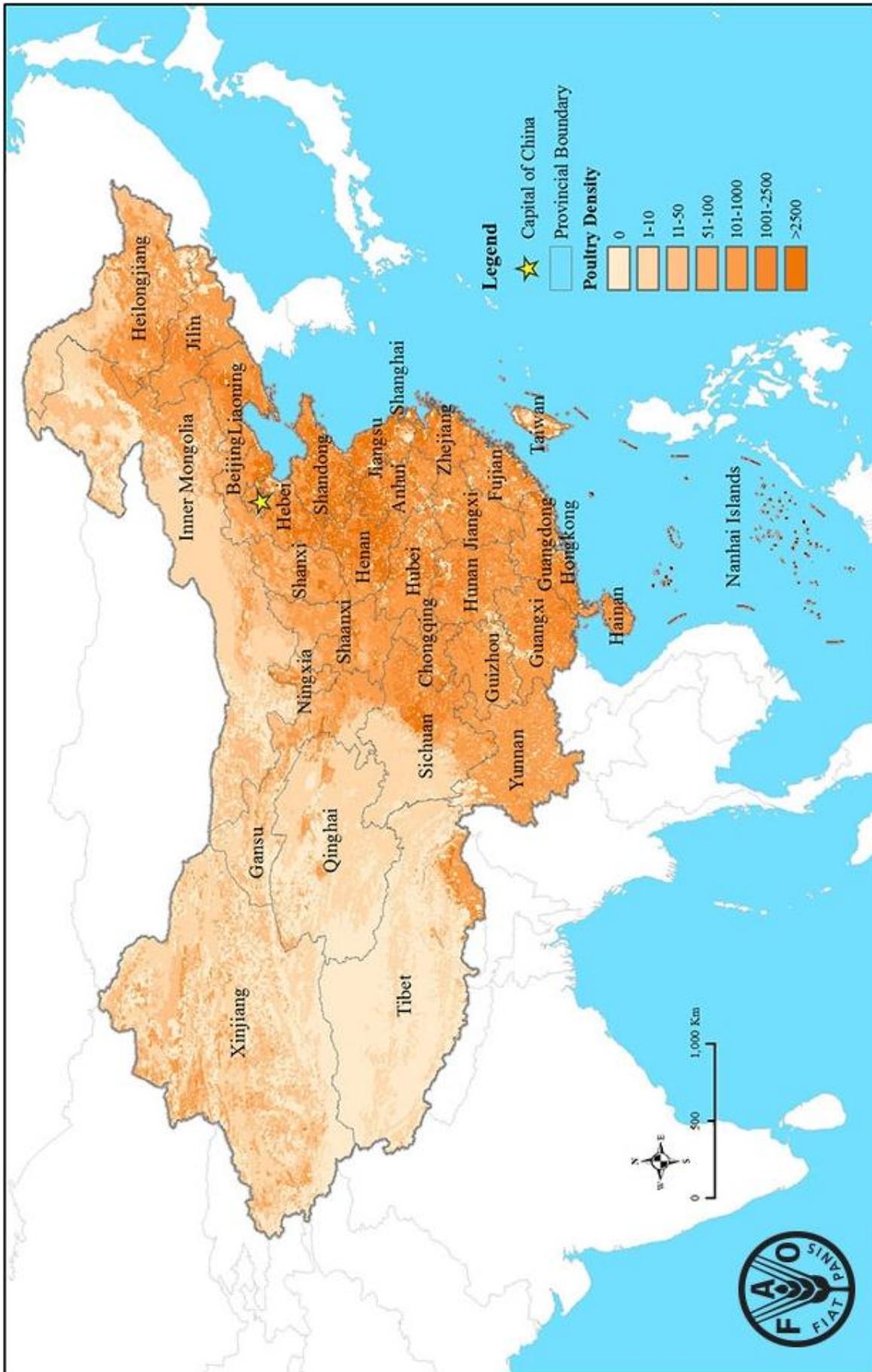
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- ECTAD China has established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO continues tripartite communication and coordination with OIE and WHO.
- FAO is contributing to risk assessment exercises in countries in the region.
- FAO has updated its [frequently asked questions](#) with additional clarification on food safety issues.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.

## **Important links**

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

# Map

## Provinces of China



# A(H7N9) situation update

FAO / EMPRES – Animal Health  
12 April 2013 17:00 Rome



## Overview

*Situation:* Influenza A subtype H7N9 with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 43 confirmed; 11 deaths. All contacts are under closed medical observation.

*Locations:* 4 provinces in China, all adjacent (Anhui, Jiangsu, Shanghai, Zhejiang)

*Animal cases:* confirmed in pigeon (captive), chicken, quail, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- No news

### Humans

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**43 cases (11 deaths)**                      **Shanghai: 20 (7), Anhui: 2 (1), Jiangsu: 12 (1), Zhejiang: 9 (2)**

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For more details please refer to WHO website.

## Virus Characteristics

- The strain in question is a triple reassortant H7N9 influenza virus, (H7Nx; H11N9; H9N2 – all of avian origin)
- Analyses show that this virus is sensitive to oseltamivir [Tamiflu]. Newly isolated viruses should be continuously characterized.
- **A new nomenclature for the virus has been agreed upon today by WHO, FAO and OIE: avian influenza A(H7N9) virus.**

## FAO actions

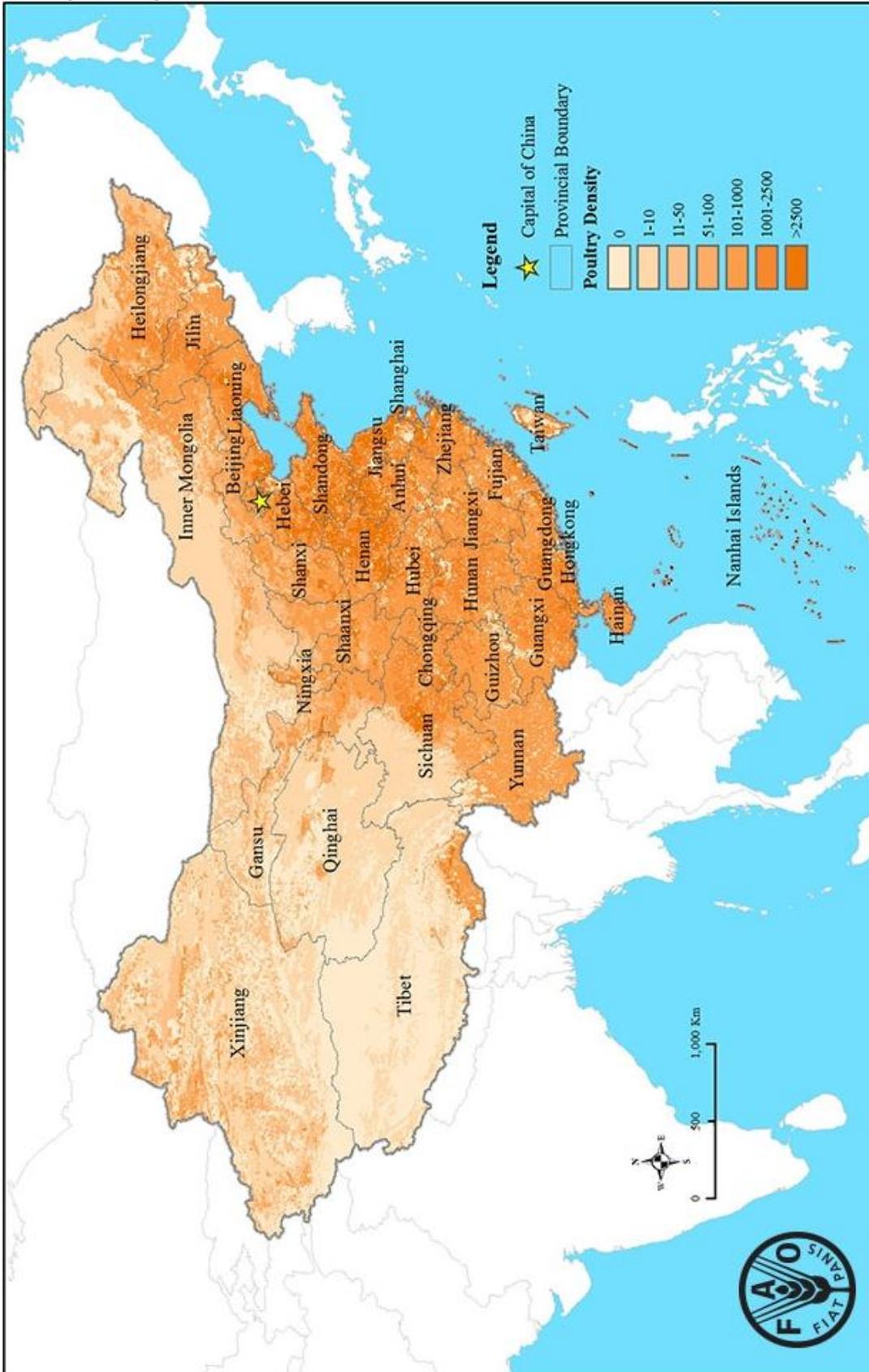
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface)
- ECTAD China has established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO has updated its [frequently asked questions](#) with additional clarification on food safety issues.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.
- **FAO HQ will host an expert meeting on epidemiology of H7N9 to discuss risk analysis and surveillance methodologies on 17 and 18 April**
- **Viet Nam: FAO ECTAD is working closely with WHO and national authorities in-country to discuss preparedness and will attend the ministerial level meeting, entitled "Implementing guidelines of the prime minister on H7N9 control and prevention" on 13 April 2013.**

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Map

### Poultry density in China



# H7N9 situation update

FAO / EMPRES – Animal Health  
15 April 2013 17:00 Rome



## Overview

*Situation:* Influenza A subtype H7N9 with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 62 confirmed; 13 deaths; 1 without symptoms. All contacts are under closed medical observation. 1 contact is H7N9 positive without showing clinical signs.

*Locations:* 6 provinces in China. (Anhui, Jiangsu, Shanghai, Zhejiang, Shanghai, Henan, Beijing)

*Animal cases:* confirmed in pigeon (captive), chicken, quail, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **The Beijing case (i.e. 7 year old girl) had contact with poultry.** Her parents engaged in the live poultry trade and recently bought poultry from Tianjin (i.e. 120 km south of Beijing). Tianjin has not yet reported any cases. Authorities took bird and environmental samples from the poultry supplier and from farms Tianjin; all results are negative.
- Chinese authorities are **continuing rigorous control measures** (e.g. culling of poultry in affected areas; closure of live bird markets and trade bans). Shanghai established central slaughtering points as a service to poultry producers.

### Humans

- Total: **62 cases (13 deaths) + 1 asymptomatic**
- Geographic breakdown (deaths in parentheses): Shanghai: 24 (9); Anhui: 2 (1); Jiangsu: 17 (1); Zhejiang: 16 (2); Beijing 1 (+ 1 asymptomatic); Henan: 2
- Four year old boy and neighbour to the Beijing case tested positive but does not show clinical signs.
- WHO published a risk assessment on 13 April:  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13)
- For more details please refer to WHO website.

## Virus Characteristics

- No changes to previous updates.

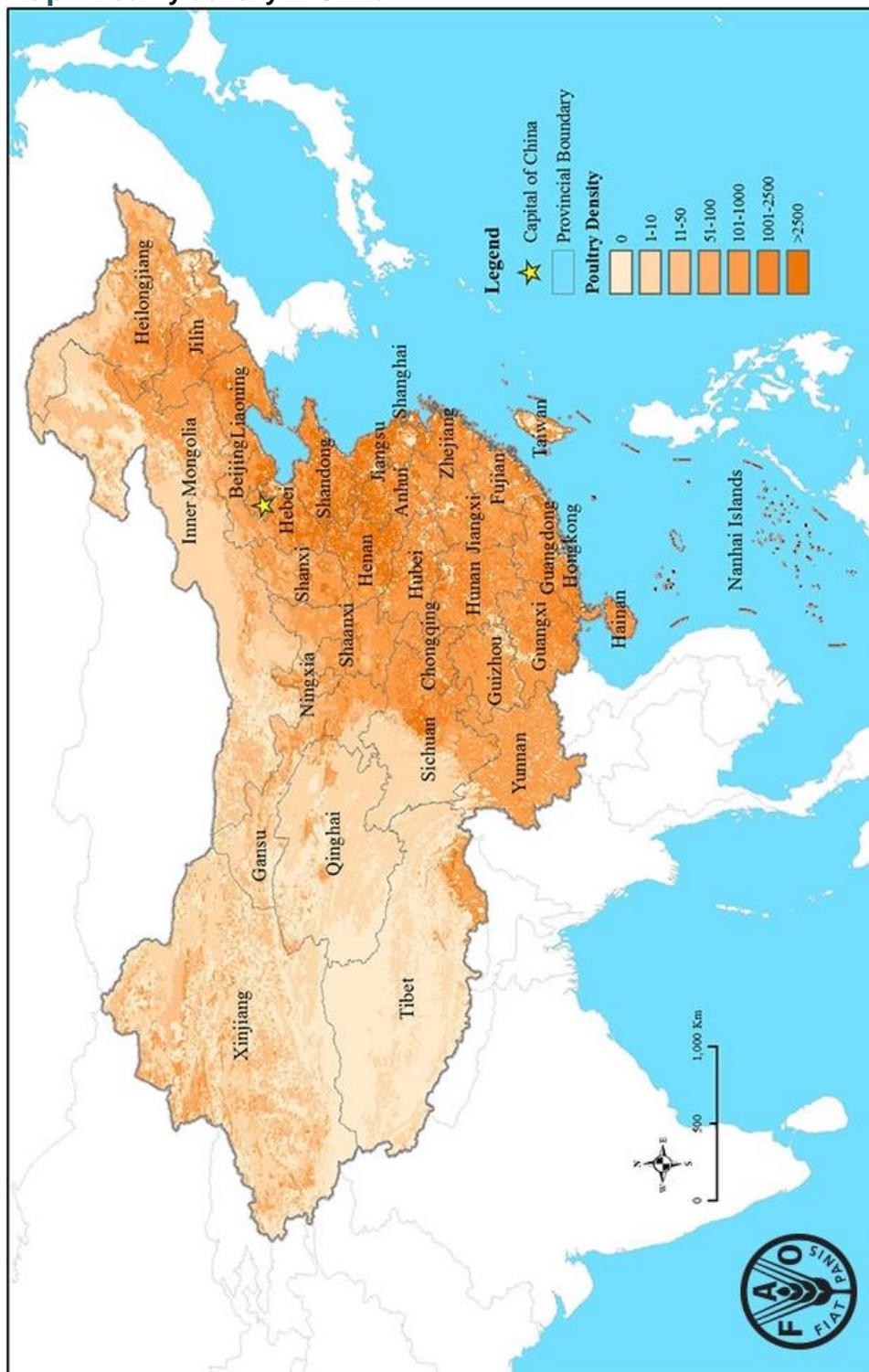
## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- **FAO has updated its [frequently asked questions](#) with additional clarification on food safety issues, wildlife and vaccination.**
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.
- Viet Nam: FAO ECTAD attended the **ministerial level meeting on 13 April 2013**. The Minister of Agriculture stressed the need for preparedness and multisectoral collaboration. He also reminded stakeholders of the continued threat by H5N1 HPAI in the country.
- Indonesia: FAO ECTAD participated in the UN System Pandemic Influenza Workshop
- FAO HQ will host an expert meeting on epidemiology of H7N9 to discuss risk analysis and surveillance methodologies on 17 and 18 April.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Map - Poultry density in China



# H7N9 situation update

FAO / EMPRES – Animal Health  
16 April 2013 18:00 Rome



## Overview

*Situation:* Influenza A subtype H7N9 with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **74 confirmed; 14 deaths;** 1 contact without showing clinical signs. All contacts are under closed medical observation.

*Locations:* 6 provinces/municipalities in China. (Anhui, Jiangsu, Shanghai, Zhejiang, Shanghai, Henan, Beijing)

*Animal cases:* confirmed in pigeon (captive), chicken, quail, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- MOA announced provinces and national avian influenza reference laboratory collected **~85 000 samples**, of which more than half has been tested. Only **39 tested positive** for H7N9 avian influenza virus from Shanghai, Anhui, Zhejiang and Jiangsu provinces.
- Jiangsu and Zhejiang animal disease prevention and control centres sent 12 suspected samples to the National Avian Influenza Laboratory and FAO Reference Centre (at Harbin). **Harbin confirmed 5 samples were positive:**
  - Jiangsu: 1 feral pigeons from Qinhuai District, Nanjing
  - Zhejiang, Huzhou City: 1 chicken from Zhe Bei market and 3 chickens from Dao Chang market, Wuxing District
  - Chinese authorities have sent a **notification follow up report to the OIE:**  
[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=13268](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=13268)
- Chinese Quarantine authorities (AQSIQ) reported that:
  - 5–15 April: nearly 250 000 birds from registered, live poultry farms were exported to Hong Kong and Macao. **Inspection revealed no cases of H7N9.**
  - 14 April: 120 live birds were exported from mainland China and tested in Hong Kong. **Test results were negative for H7 and H5 antigen.**
  - 15 April: AQSIQ offices in Guangdong, Zhuhai and Shenzhen provinces examined 17 poultry batches of nearly 50 000 birds for export to Hong Kong and Macao. **Test results for antigen detection (including H5 and H7) and for antibody were negative.**
- The China Feather and Down Industrial Association reported that **feathers and down** are sterilized by heat during the production process and **will therefore not transmit avian influenza virus**. The Association reassured consumers that feather products are safe for use.

### Humans

- Total: **74 cases (14 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses): **Shanghai: 24 (9); Anhui: 3 (1); Jiangsu: 20 (1); Zhejiang: 21 (2); Beijing 1 (+ 1 asymptomatic); Henan: 2**
- WHO published a risk assessment on 13 April:  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13)
- For more details please refer to WHO website.

## Virus Characteristics

- No changes to previous updates.

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.
- FAO headquarters will host an expert meeting on epidemiology of H7N9 to discuss risk analysis and surveillance methodologies on 17-18 April and link with DO and experts.
- FAO will take **video footage** of the expert meeting (17-18 April; HQ; RAP; China, other) with the possibility of producing documentary, promotional or other communication products on H7N9 and FAO's actions.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Map

### Poultry density in China



# H7N9 situation update

FAO / EMPRES – Animal Health  
18 April 2013 19:30 Rome



## Overview

*Situation:* Influenza A subtype H7N9 with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **87 confirmed; 18 deaths; 1 contact not showing clinical signs.** All contacts are under closed medical observation.

*Locations:* 6 provinces/municipalities in China. (Anhui, Jiangsu, Shanghai, Zhejiang, Shanghai, Henan, Beijing)

*Animal cases:* confirmed in pigeon (*feral and captive*), chickens, quail, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

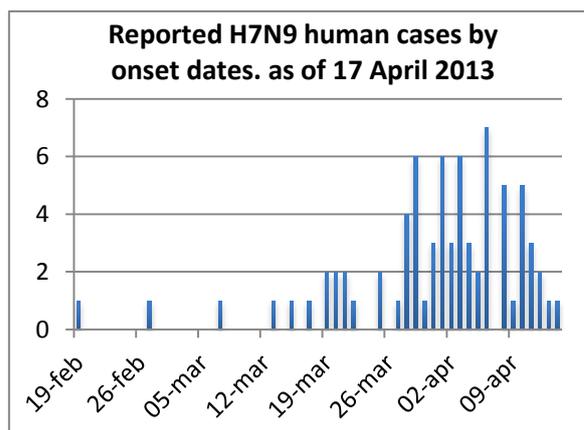
## Situation update

### Animals

- Sustained and coordinated surveillance efforts are needed to define the extent of the H7N9 virus spread in poultry or other species. Experience with H5N1 HPAI demonstrates that several years can pass between the first appearance of a small focus of human cases, as occurred in Hong Kong 1997, and the subsequent large global spread.
- In swine, 2 150 swabs and 2 000 sera have been tested in the National Reference Laboratory from 35 farms and 11 slaughterhouses in the affected provinces; all are negative. Additionally, in the framework of the USAID funded Emerging Pandemic Threats (EPT) project, there have been 5 000 samples taken from pigs in the Hunan Province (results pending).
- In birds - MOA announced provinces and national avian influenza reference laboratory collected ~**85 000 samples**, of which more than half has been tested. Of those tested, **39 have tested positive** for H7N9 avian influenza virus, all in Shanghai, Anhui, Zhejiang and Jiangsu provinces only in Live Bird Markets (in chickens, ducks, a captive pigeon, and the environment) and in one wild/feral pigeon found dead in Jiangsu.
- Chinese Quarantine authorities (AQSIQ) reported that Hong Kong and Macao have been testing for H5 and H7 in birds imported from mainland China, representing over 300 000 birds; all results were negative.
- The China Feather and Down Industrial Association reported that **feathers and down** are sterilized by heat during the production process and **will therefore not transmit avian influenza virus**. The Association reassured consumers that feather products are safe for use.

### Humans

- Total: **87 cases (18 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses):  
**Shanghai: 32 (11); Anhui: 3 (1); Jiangsu: 21 (4); Zhejiang: 27 (2); Beijing 1 (+ 1 asymptomatic) (0); Henan: 3 (0)**
- WHO published a risk assessment on 13 April ([www.who.int](http://www.who.int)):  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13)



## Virus Characteristics

- No changes to previous updates.

## FAO actions

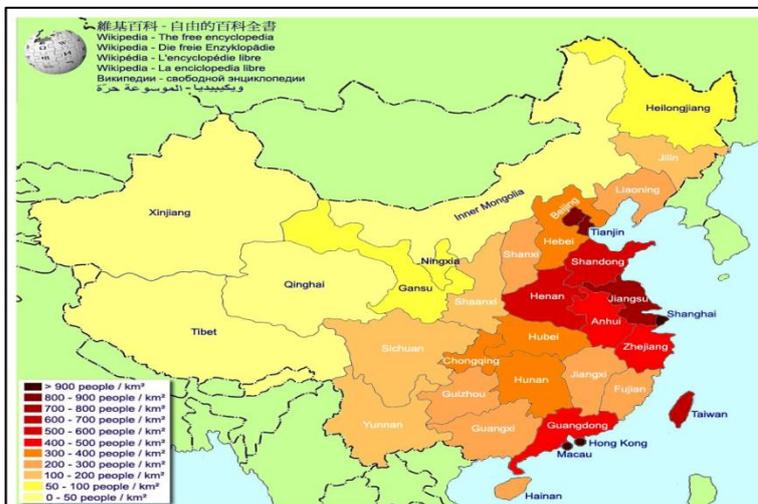
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China established an incident coordination team and is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.
- **FAO headquarters hosted (17-18 April) an expert meeting (ecologists, public health, wildlife, molecular biologists, communication experts, and FAO or OIE Reference Centres) on epidemiology of H7N9 to cross-review FAO/EMPRES drafts in risk assessment, risk management and surveillance methodologies. Upon completion, these will be shared with a limited number of key stakeholders including ECTAD officers.**

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Maps

### Human density in China      Poultry density in China



Source: [http://www.china-mike.com/wp-content/uploads/2011/01/map-china-provinces-population\\_density.jpg](http://www.china-mike.com/wp-content/uploads/2011/01/map-china-provinces-population_density.jpg)

# H7N9 situation update

FAO / EMPRES – Animal Health  
19 April 2013 17.30 Rome



## Overview

*Situation:* Influenza A subtype H7N9 with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 91 confirmed; 18 deaths; 1 contact not showing clinical signs. Some 1000 contacts are under medical observation.

*Locations:* 6 provinces/municipalities in China (Anhui, Jiangsu, Shanghai, Zhejiang, Shanghai, Henan, Beijing)

*Animal cases:* confirmed in pigeons, chickens, quail, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Since early April, the Liaoning Provincial Animal Husbandry and Veterinary Department carried out an **intensive investigation for H7N9 monitoring**, collecting more than 6 000 samples from poultry farms, live animal markets, poultry slaughterhouses, wildfowl habitats and other areas; as of 16 April **no H7N9 had been found**.
- The China State Forestry Administration has announced:
  - **Temporary suspension of receiving and selling of hunted birds for import and export.** No new licenses will be issued for the transport and handling of live hunted birds. Already obtained licenses have been temporarily suspended.
  - **Temporary suspension of facilities allowing human and wild animals contact.** Daily quarantine testing for exports of poultry to Hong Kong is ongoing. The number of live bird exports from mainland China to Hong Kong has significantly decreased. Since 3 April, the daily exports of live poultry (including pigeons) decreased ~39 percent.
- Shanghai Animal Disease Prevention Control Centre reported as part of their surveillance over 1 500 samples have tested negative.
- In swine, 2 150 swabs and 2 000 sera have been tested by the National Reference Laboratory from 35 farms and 11 slaughterhouses in the affected provinces. All resulted negative.
- In birds - MOA announced provinces and the National Avian Influenza Reference Laboratory collected approximately 85 000 samples. Of the more than half tested, 39 resulted positive for H7N9.
- Sustained and coordinated surveillance efforts are needed to define the extent of the H7N9 virus spread in poultry or other species. Experience with H5N1 HPAI demonstrates that several years can pass between the first appearance of a small focus of human cases, as occurred in Hong Kong 1997, and the subsequent large global spread years later.

### Humans

- Total: **91 cases (18 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses): Shanghai: 32 (11); Anhui: 3 (1); **Jiangsu: 22 (4); Zhejiang: 30 (2)**; Beijing 1 (+ 1 asymptomatic) (0); Henan: 3 (0)
- WHO published a risk assessment on 13 April ([www.who.int](http://www.who.int)):  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13)

## Virus Characteristics

- No changes.

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO is preparing guidance on risk assessment and influenza surveillance in domestic and wild animals for affected and at risk countries.
- FAO headquarters hosted an emergency risk assessment meeting on 17–18 April involving experts from a wide range of disciplines including ecology, wildlife, public health, molecular biology and food safety. FAO and OIE Reference Centres along with international, governmental and independent partners contributed. The meeting focused on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies drafted by FAO/EMPRES. Upon completion, these documents will be shared with a limited number of key stakeholders including ECTAD officers.

## Important links

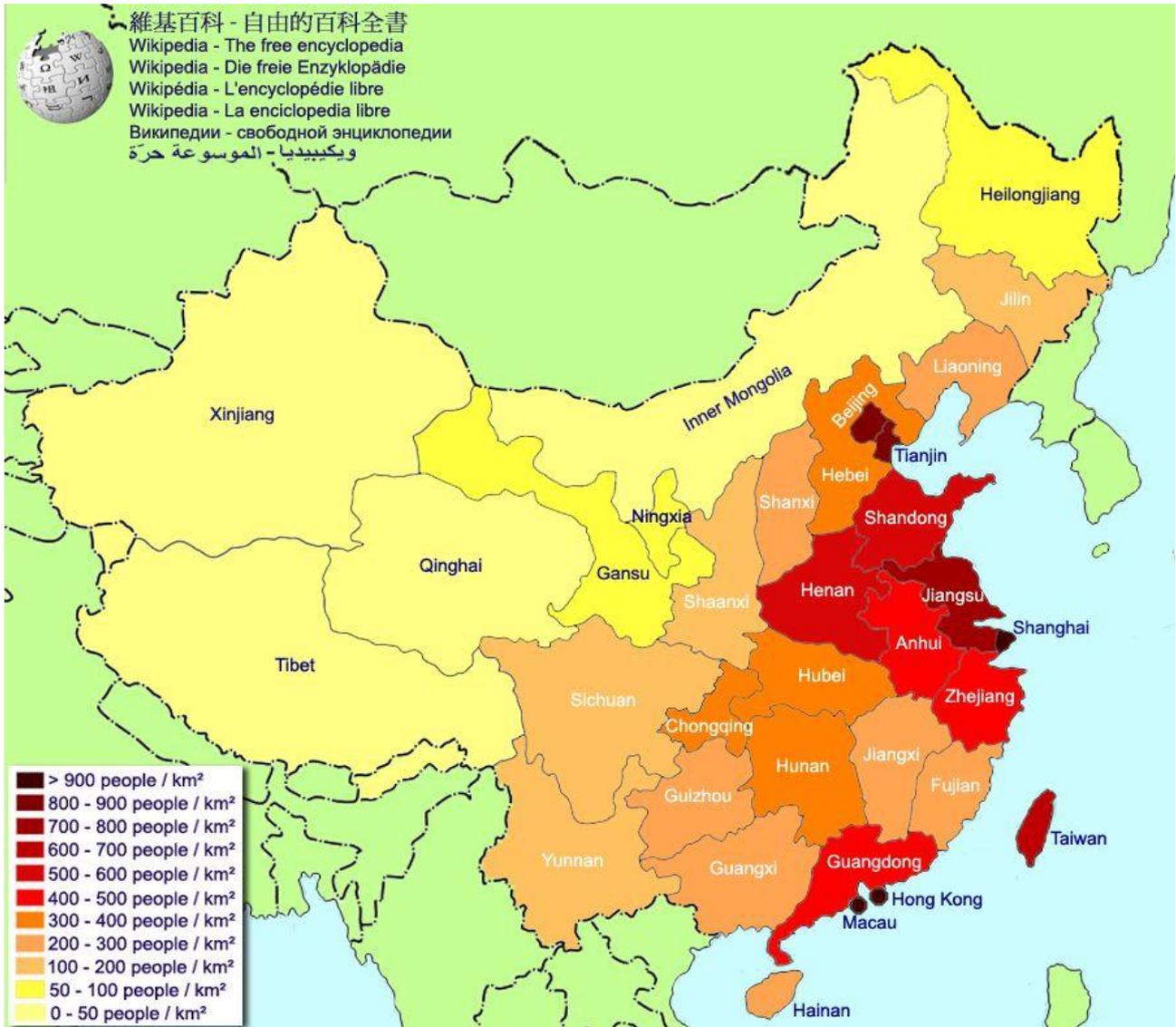
- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Maps

### Poultry density in China



### Human density in China



Source: [http://www.china-mike.com/wp-content/uploads/2011/01/map-china-provinces-population\\_density.jpg](http://www.china-mike.com/wp-content/uploads/2011/01/map-china-provinces-population_density.jpg)

## H7N9 situation update

FAO / EMPRES – Animal Health  
22 April 2013 17.00 Rome



### Overview

*Situation:* Avian Influenza A (H7N9) with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 103 confirmed; 20 deaths; 1 contact not showing clinical signs. Some 1000 contacts are under medical observation.

*Locations:* 7 provinces/municipalities in China (Shandong, Anhui, Jiangsu, Shanghai, Zhejiang, Shanghai, Henan, Beijing)

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

### Situation update

#### Animals

- On 22 April, **one pigeon sample resulted positive in Jiangsu Province**. The sample was taken from a pigeon-keeping household in Hai'an County, Nantong City. Test results were confirmed by the National Avian Influenza Reference Laboratory. The virus resulted genetically very similar to the one previously isolated in a pigeon on 4 April 2013. China notified OIE: [http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=13289](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=13289)
- On 21 April, the Inner Mongolia Autonomous Region established **wild bird monitoring and observation points** at Ulansuhai Nur, the largest lake in the Yellow River basin. Situated along the main route of Eurasia bird migration, this location is a habitat for over 600 million birds. Approximately 20 million birds of more than 260 species migrate through the area every year.
- On 19 April, the Beijing City Agricultural Department announced that **Beijing City allocated financial subsidies to segments of the affected poultry industry**, including: breeder enterprises, commercial layers, pigeon farms, backyard poultry raisers, broiler slaughtering enterprises. The subsidy period spans from 13 April to 13 May 2013. Subsidies include 3 yuan per adult egg-laying bird; 2 yuan per meat pigeon; 10 yuan for breeders. Subsidies for poultry product storage have been fixed at 700 yuan per tonne.
- The National Avian Influenza Reference Laboratory has detected **40 H7N9 positive animal samples** to date.

#### Humans

- Total: **103 cases (20 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses): **Shandong 1: (0)**; Shanghai: 32 (11); Anhui: 3 (1); **Jiangsu: 22 (4)**; **Zhejiang: 30 (2)**; Beijing 1 (+ 1 asymptomatic) (0); Henan: 3 (0)
- It should be noted that Shandong province has the highest poultry density in China.
- On 19 April, the Japan National Institute of Infectious Diseases produced a risk assessment of H7N9 in China: <http://www.nih.go.jp/niid/ja/diseases/a/flua-h7n9/2276-a-h7n9-niid/3477-riskassess-130418.html>
- WHO published a risk assessment on 13 April: [http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13)

### Virus Characteristics

- No changes.

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO HQ hosted an emergency, multidisciplinary risk assessment meeting on 17–18 April. Output documents on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies will be shared with ECTAD and the scientific community upon completion.
- **FAO / EMPRES Animal Health News publish several articles on H7N9 activities (links below).**

## Important links

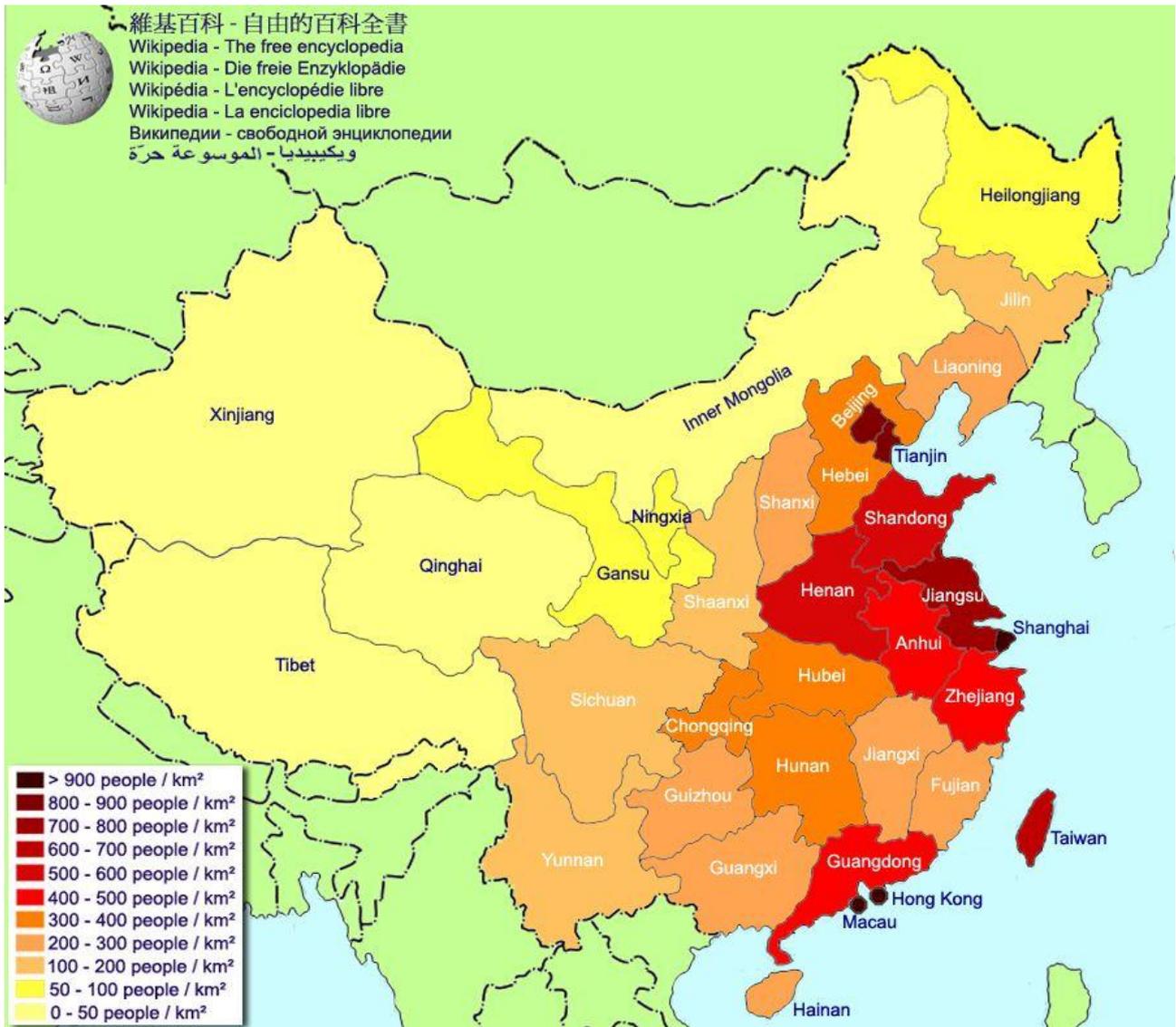
- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE): <http://www.oie.int>
- **EMPRES Animal Health News** (<http://www.fao.org/ag/againfo/programmes/en/empres/news.htm>):
  - [http://www.fao.org/ag/againfo/programmes/en/empres/news\\_190413.html](http://www.fao.org/ag/againfo/programmes/en/empres/news_190413.html)
  - [http://www.fao.org/ag/againfo/programmes/en/empres/news\\_190413b.html](http://www.fao.org/ag/againfo/programmes/en/empres/news_190413b.html)
  - [http://www.fao.org/ag/againfo/programmes/en/empres/news\\_120413b.html](http://www.fao.org/ag/againfo/programmes/en/empres/news_120413b.html)
- FAO press release and Frequently Asked Questions:
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  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Maps

### Poultry density in China



## Human density in China



Source: [http://www.china-mike.com/wp-content/uploads/2011/01/map-china-provinces-population\\_density.jpg](http://www.china-mike.com/wp-content/uploads/2011/01/map-china-provinces-population_density.jpg)

# H7N9 situation update

FAO / EMPRES – Animal Health  
23 April 2013 20.30 Rome



## Overview

*Situation:* Avian Influenza A(H7N9) with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 108 confirmed; 22 deaths; Some 1 000 contacts are under medical observation.

*Locations:* 7 provinces/municipalities in China (Anhui, Henan, Jiangsu, Shandong and Zhejiang Provinces; and Beijing and Shanghai Cities)

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- On 22 April, **one pigeon sample resulted positive in Jiangsu Province**. The sample was taken from a pigeon-keeping household in Hai'an County, Nantong City. Test results were confirmed by the National Avian Influenza Reference Laboratory. China notified OIE.
- On 21 April, the Inner Mongolia Autonomous Region established **wild bird monitoring and observation points** at Ulansuhai Nur, the largest lake in the Yellow River basin; a habitat for over 600 million birds.
- On 19 April, the Beijing City Agricultural Department announced that **Beijing City allocated financial subsidies to segments of the affected poultry industry**, including: breeder enterprises, commercial layers, pigeon farms, backyard poultry raisers, broiler slaughtering enterprises.
- The National Avian Influenza Reference Laboratory has detected **40 H7N9 positive animal samples** to date.
- The Chinese National Avian Influenza Reference Laboratory published a scientific article<sup>1</sup> stating it is **imperative to take strong measures to control the spread of H7N9 viruses in birds and humans to prevent a pandemic**: <http://link.springer.com/content/pdf/10.1007%2Fs11434-013-5873-4.pdf>

### Humans

- Total: **108 cases (22 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses)
  - Provinces: **Anhui 4 (1)**; Henan 3 (0); Jiangsu 24 (3); Shandong 1 (0) and **Zhejiang 42 (6)**
  - Cities: Beijing 1 (+ 1 asymptomatic) (0) and Shanghai 33 (12)

## Virus characteristics

- To date, the Chinese Centre for Disease Control and the National Avian Influenza Reference Laboratory have submitted **genetic information on a total of 14 virus isolates**: 7 human, 2 environment, 4 chicks, and 1 pigeon to the Global Initiative on Sharing Avian Influenza Data (GISAID).

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).

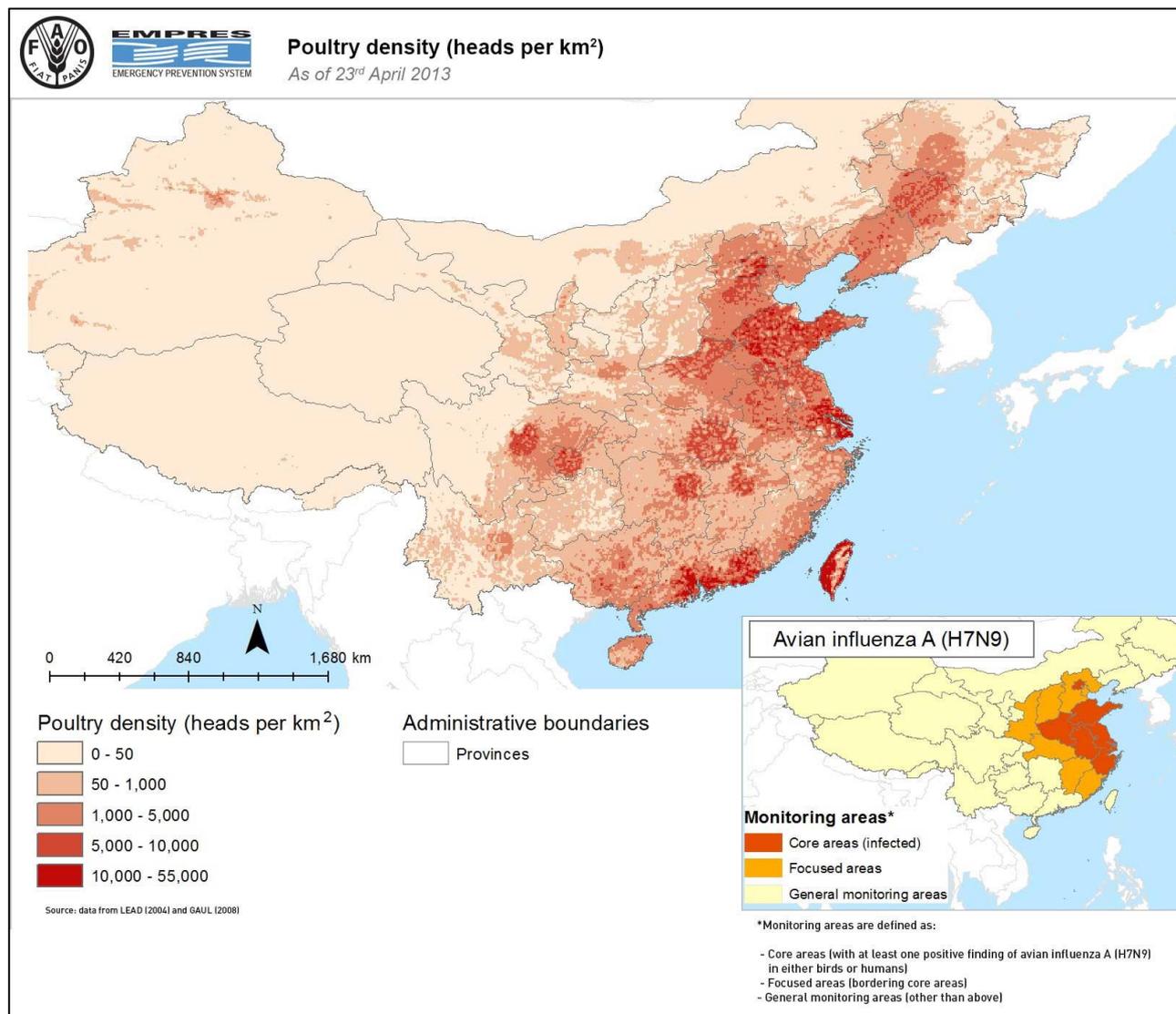
<sup>1</sup> Shi JZ (2013) Chin Sci Bull; doi: 10.1007/s11434-013-5873-4

- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO HQ hosted an emergency, multidisciplinary risk assessment meeting on 17–18 April. Output documents on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies will be shared upon completion.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/>
- Ministry of Forestry of the People's Republic of China: <http://www.forestry.gov.cn>
- WHO disease outbreak news: <http://www.who.int/csr/don/en/>
- WHO FAQ on H7N9 virus: [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/>
- World Organisation for Animal Health (OIE, WAHID):  
[http://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/WI](http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI)
- EMPRES Animal Health News (<http://www.fao.org/ag/againfo/programmes/en/empres/news.htm>):
- FAO press release and Frequently Asked Questions:
  - <http://www.fao.org/news/story/en/item/173655/icode/>
  - <http://www.fao.org/news/story/en/item/173704/icode/>

## Maps



# H7N9 situation update

FAO / EMPRES – Animal Health  
24 April 2013 19:00 Rome



## Overview

*Situation:* Avian Influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 109 confirmed; 22 deaths.

*Locations:* 8 provinces/municipalities [Anhui, Henan, Jiangsu, Shandong and Zhejiang Provinces; and Beijing and Shanghai Cities; and *Taiwan Province of China (infected in Jiangsu).*

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- On 24 April the National Avian Influenza Reference Laboratory confirmed:
  - **Henan Province: 2 environmental samples positive from over 550 samples.** Positives came from two farmers markets:
    - Jianshe-lu in Chuanhui District, Zhoukou City; and
    - Xiao Tai in Weishi County, Kaifeng City.
  - **Zhejiang Province: 1 sample positive out of 2 suspected samples** submitted from the Zhejiang animal authorities. Positive sample came from a chicken in the Chian market in Yiwu City, Jinhua City.
  - Gene sequence analysis showed **all isolates are highly homologous to the H7N9 strain isolated from pigeons** on 4 April.
  - **A total of 43 samples have tested positive to date.**
  - **The World Organisation for Animal Health (OIE) has announced it has fielded an expert mission to China** to be concluded by next week (no specific dates provided).

### Humans

- Total: **109 cases (22 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses):
  - Anhui 4 (1)
  - Beijing 1 (+ 1 asymptomatic) (0)
  - Henan 3 (0)
  - Jiangsu 24 (3)
  - Shandong 1 (0)
  - Shanghai 33 (12)
  - Taiwan Province of China 1 (0)
  - Zhejiang 42 (6)
- On 24 April, the Central Epidemic Command Centre of the **Taiwan Province of China confirmed its first case of H7N9.** A 53 year old male fell ill on 12 April (i.e. three days after his most recent commute back to Taiwan Province of China from Suzhou, Jiangsu Province. He reported he had not been exposed to birds or poultry in Suzhou nor had he consumed any undercooked poultry or eggs.
- On 22 April, the **Deputy Minister of Health of the Socialist Republic of Viet Nam affirmed that no case of human infection had been detected** yet in the country. However, he stated that for Viet Nam there was a high risk of H7N9 introduction and spread. Viet Nam is preparing H7N9 contingency plans.

## Diagnosis and virus characteristics

- The FAO/OIE network of expertise on animal influenza (**OFFLU**) is gathering information on **animal experiments with avian influenza A(H7N9) from animal health and public health reference laboratories** around the world. Experiments include birds and mammals.

- Initial findings in birds: **no clinical signs; high shedding** (mainly oropharyngeal; limited cloacal).
- **OFFLU is gathering validation data on molecular and serologic assays.** Data will be posted on [www.offlu.net](http://www.offlu.net).
- To date, the Chinese Centre for Disease Control and the National Avian Influenza Reference Laboratory have submitted genetic data on a total of 14 virus isolates (i.e. 7 human, 2 environment, 4 chicken and 1 pigeon) to the Global Initiative on Sharing Avian Influenza Data (GISAID).

## FAO actions

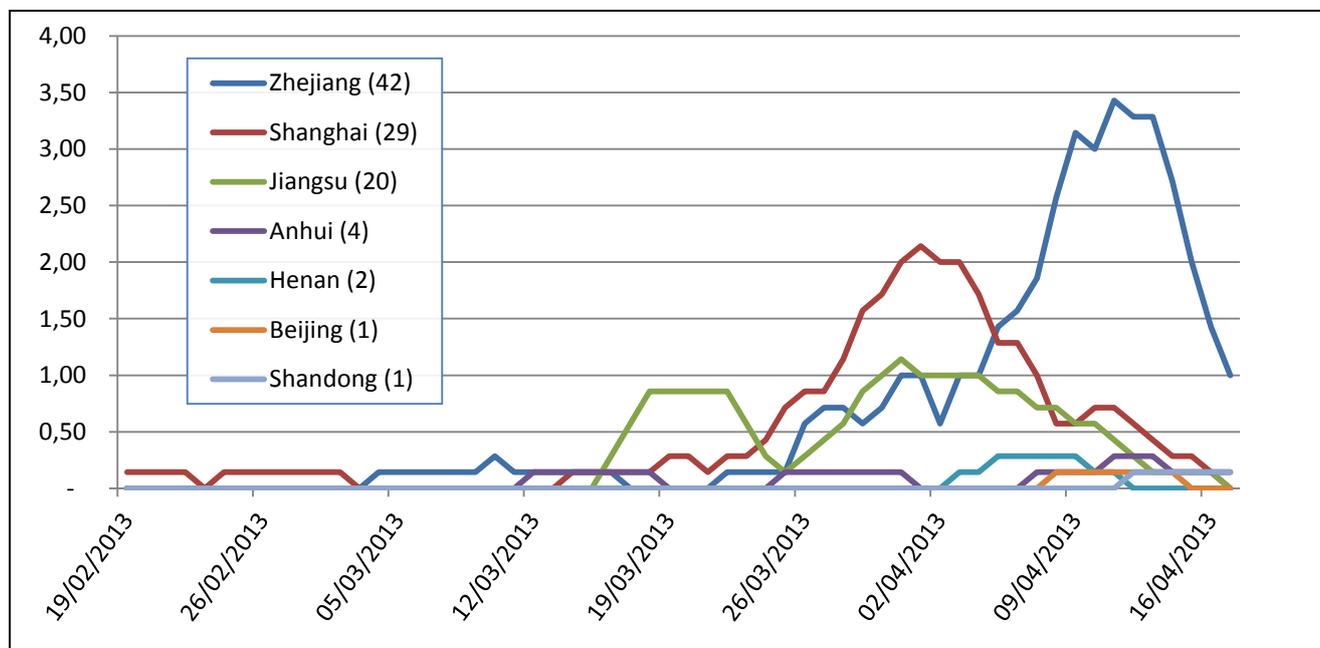
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO HQ hosted an emergency, multidisciplinary risk assessment meeting on 17–18 April. Output documents on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies will be shared upon completion.

## Important links

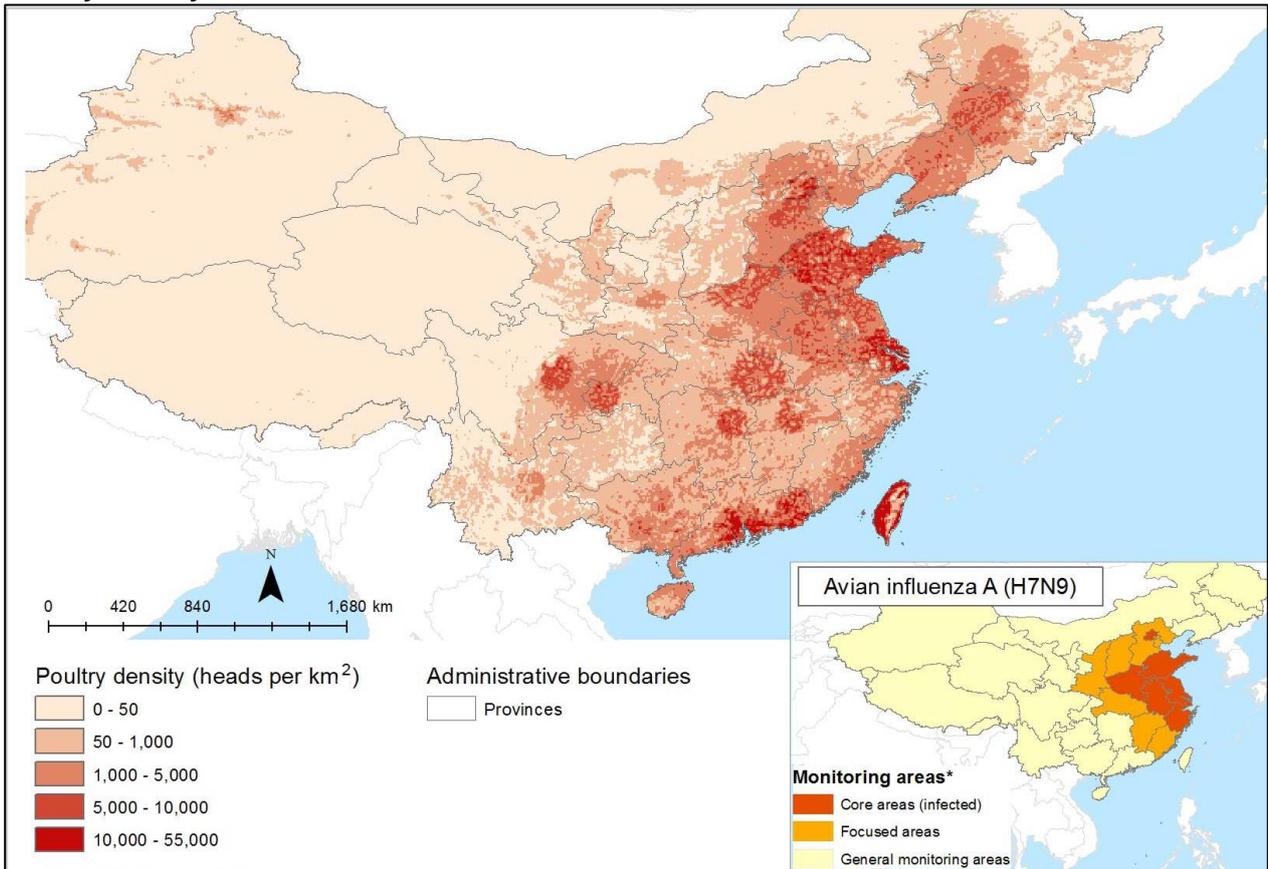
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- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO press release: <http://www.fao.org/news/story/en/item/173655/icode/>
- FAO Frequently Asked Questions: <http://www.fao.org/news/story/en/item/173704/icode/>

## Maps and graphs

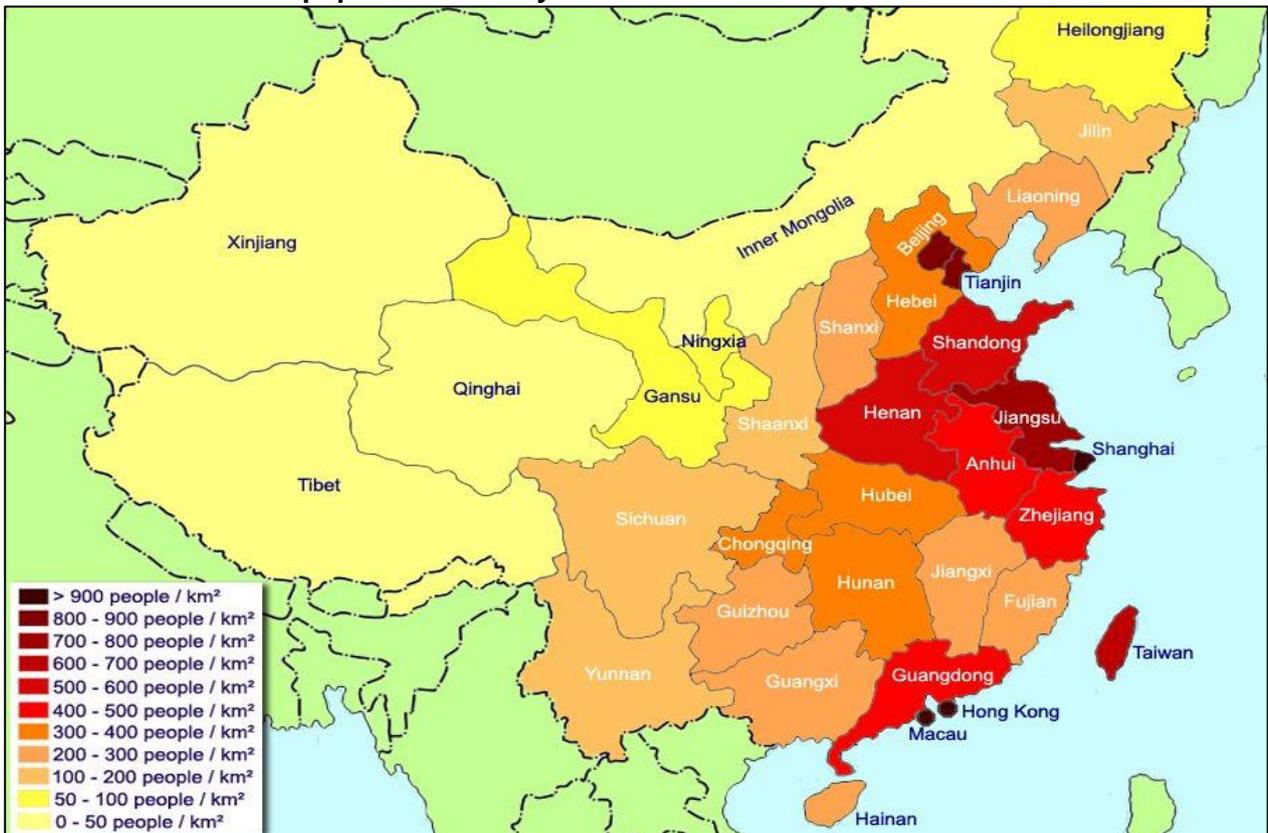
### Tendency of human cases in China (7 day rolling average)



**Poultry density**



**Provinces and human population density**



# H7N9 situation update

FAO / EMPRES – Animal Health  
25 April 2013 17:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 112 confirmed; 1 confirmation pending; 23 deaths.

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Henan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China.

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- No new information.
- A total of 43 samples have tested positive to date.

### Humans

- Total: **112 cases (23 deaths)** + 1 asymptomatic; 1 confirmation pending
- Geographic breakdown (deaths in parentheses):
  - Anhui 4 (1)
  - Henan 4 (0)
  - Beijing 1 (+ 1 asymptomatic) (0)
  - Zhejiang 44 (6)
  - Shanghai 33 (12)
  - Jiangsu 24 (3)
  - Shandong 1 (0)
  - Taiwan Province of China 1 (0) – ex-Jiangsu
  - Jiangxi 1 (0) – waiting for confirmation by the National China CDC
- A recent study published in the *New England Journal of Medicine* indicated that human cases of H7N9 in China had a high percentage of exposure (~77%) to live animals, mostly chickens:  
[http://www.nejm.org/doi/full/10.1056/NEJMoa1304617?query=featured\\_home](http://www.nejm.org/doi/full/10.1056/NEJMoa1304617?query=featured_home)

## Diagnosis and virus characteristics

- The FAO/OIE network of expertise on animal influenza (OFFLU) is gathering information on animal experiments with avian influenza A(H7N9) from animal health and public health reference laboratories around the world. Experiments include birds and mammals.
- Initial findings in birds: no clinical signs; high shedding (mainly oropharyngeal; limited cloacal/fecal).
- OFFLU is gathering data on molecular and serologic assays. Data will be published on: [www.offlu.net](http://www.offlu.net).
- To date, the Chinese Centre for Disease Control and the National Avian Influenza Reference Laboratory have submitted genetic data on a total of 14 virus isolates (i.e. 7 human, 2 environment, 4 chicken and 1 pigeon) to the Global Initiative on Sharing Avian Influenza Data (GISAID).

## FAO actions

- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.

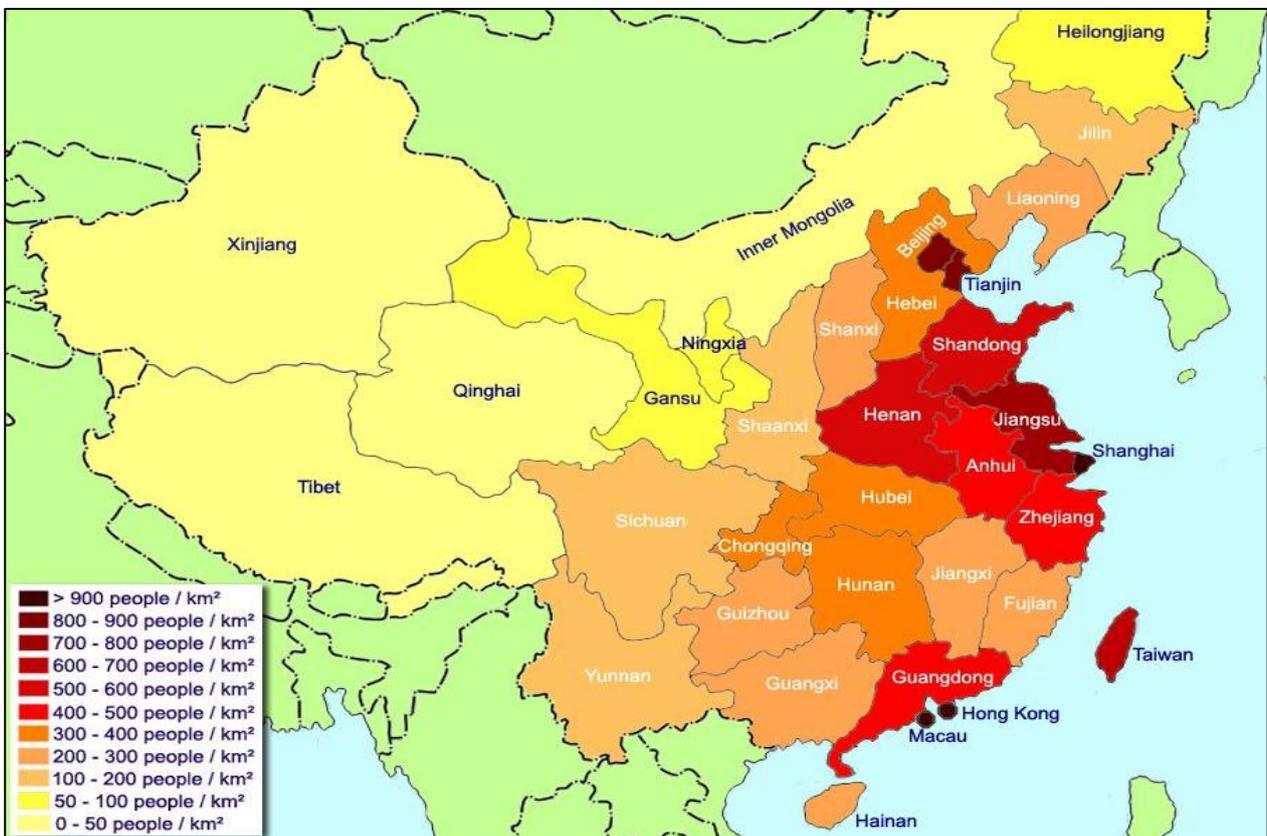
- FAO HQ hosted an emergency, multidisciplinary risk assessment meeting on 17–18 April. Output documents on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies will be shared upon completion.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/zwillm/yjgl/yqfb/>
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: <http://www.fao.org/news/story/en/item/173655/icode/>
- FAO Frequently Asked Questions: <http://www.fao.org/news/story/en/item/173704/icode/>
- FAO / EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
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- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)

## Map

### Provinces and human population density



# H7N9 situation update

FAO / EMPRES – Animal Health  
26 April 2013 17:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 119 confirmed; 24 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Henan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China.

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- China's National Avian Influenza Laboratory and FAO reference centre **confirmed 3 samples positive for H7N9 out of a suspected 6 samples submitted by Zhejiang** authorities. The samples came from a poultry business from Lin'an City, Hangzhou City. China has notified OIE.
- Total samples tested: 68 060. **Total found positive: 46.**

### Humans

- Total: **119 cases (24 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses):

o Anhui	4 (1)	o Jiangsu	27 (4)
o Henan	4 (0)	o Shandong	1 (0)
o Beijing	1 (+ 1 asymptomatic) (0)	o *Taiwan Province of China	1 (0)
o Zhejiang	45 (6)	o Jiangxi	2 (0)
o Shanghai	33 (12)	o Fujian	1 (0)
- A new case in Jiangsu shows mild clinical symptoms. The individual was detected by MoH's "early check – early treatment" campaign underway since 13 April 2013. (\*) Known to have travelled recently from Jiangsu.

## Diagnosis and virus characteristics

- The FAO/OIE network of expertise on animal influenza (OFFLU) is gathering information on animal experiments with avian influenza A(H7N9) from animal health and public health reference laboratories around the world. Experiments include birds and mammals.
- Initial experimental findings in birds are: no clinical signs; high shedding (mainly oropharyngeal; limited cloacal/fecal).
- OFFLU is gathering data on molecular and serologic assays. Data will be published on: [www.offlu.net](http://www.offlu.net).

## FAO actions

- On 26 April FAO HQ called on members to support the new **Global Framework on Control of Avian Influenza A(H7N9)** at a [side event](#) held during FAO Council. Total requested: USD 35 million.
- On 26 April 2013 FAO made public its **new web portal on H7N9**: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.

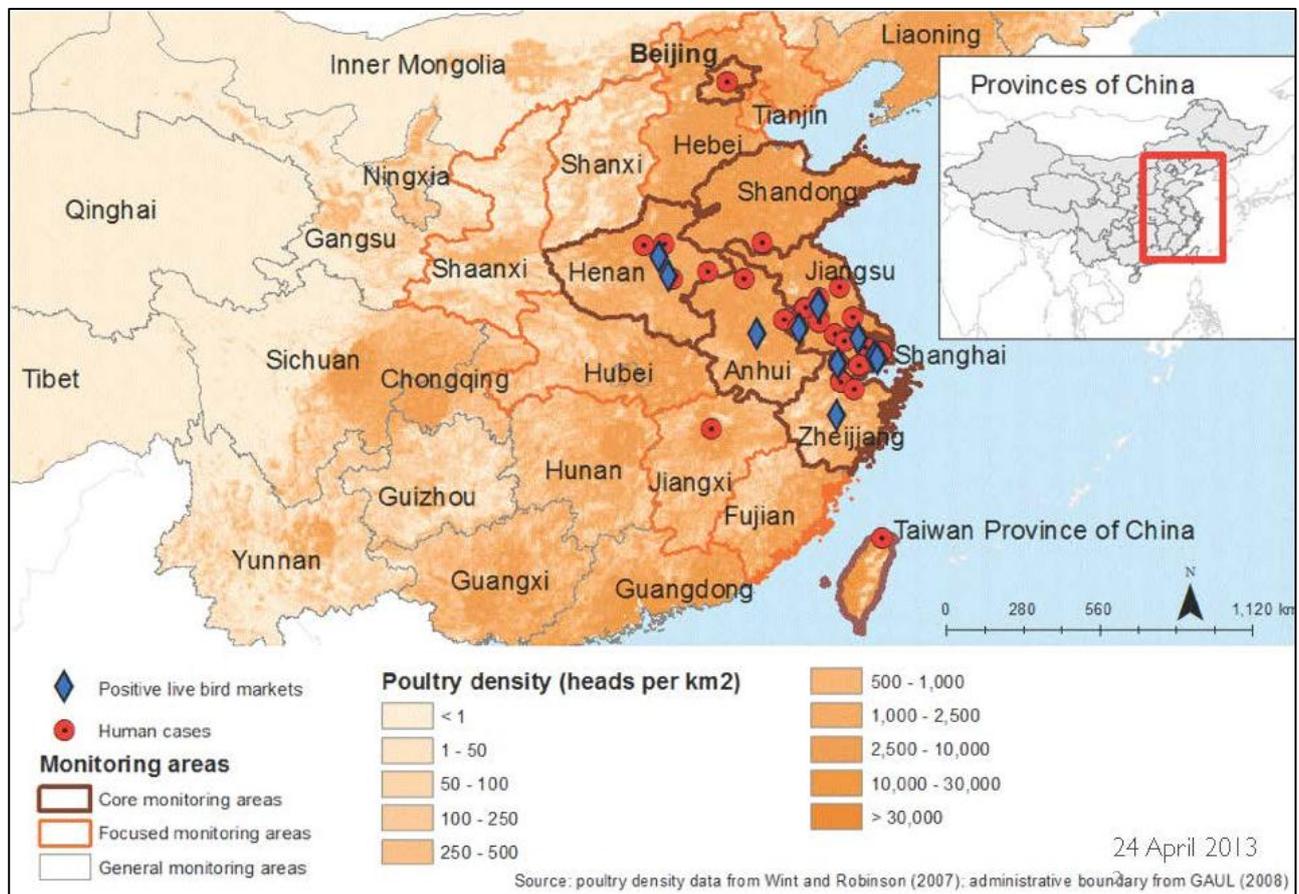
- FAO HQ hosted an emergency, multidisciplinary risk assessment meeting on 17–18 April. Output documents on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies will be shared upon completion.

## Important links

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- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: <http://www.fao.org/news/story/en/item/173655/icode/>
- FAO Frequently Asked Questions: <http://www.fao.org/news/story/en/item/173704/icode/>
- FAO / EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- WHO disease outbreak news: <http://www.who.int/csr/don/archive/year/2013/en/index.html>
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)

## Map

### Positive findings at live bird markets (24 April) and estimated poultry density



# H7N9 situation update

FAO / EMPRES – Animal Health  
29 April 2013 17:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 126 confirmed; 24 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **1 chicken sample tested positive for H7 subtype out of 130 poultry samples** collected from Lower East Side Dongguan Sanniao Wholesale Market in Guangdong Province, Dongguan City. The poultry showed no clinical signs. Guangdong has not reported any human cases.
- According to MoA to date nearly **400 000 samples have been collected nationwide; 220 000 have been tested and 46 swabs have resulted positive** (positive rate = 0.07 percent).
  - Locations: over 13 000 sites, including approximately: 2 500 live poultry markets, 330 poultry slaughterhouses, 8 800 poultry farms/villages, 340 wild bird habitats, 280 pig slaughterhouses, 30 pig farms and 630 environmental sampling points.
  - Samples include approximately: 150 000 sera and 70 000 swabs.

### Humans

- Total: **126 cases (24 deaths)** + 1 asymptomatic
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (1)	○ Jiangsu	27 (4)
○ Henan	4 (0)	○ Shandong	2 (0)
○ Hunan	1 (0)	○ *Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	5 (0)
○ Zhejiang	46 (6)	○ Fujian	2 (0)
○ Shanghai	33 (13)		
- On 24 April 2013 media reported the China's finance ministry announcement that it will **allocate USD 48.6 million to H7N9 prevention efforts**. Projects include: i) monitoring H7N9 cases; ii) conducting respiratory illness surveillance; and iii) expanding health insurance programs to cover more medication and services for H7N9 patients.
- The **Premier of the People's Republic of China** called for the strengthening of: i) control; ii) scientific research; iii) early detection; iv) early reporting; v) early diagnosis; and vi) early treatment. His stated objectives were to continue: i) ensuring quality and timely treatment; ii) reducing mortality; iii) strengthening international cooperation; and iv) fostering open and transparent communication.

## Diagnosis and virus characteristics

- The FAO/OIE network of expertise on animal influenza (OFFLU) is gathering information on animal experiments with avian influenza A(H7N9) from animal health and public health reference laboratories around the world. Experiments include birds and mammals.
- Initial experimental findings in birds: no clinical signs; high shedding (mainly oropharyngeal; limited cloacal/fecal).

- OFFLU is gathering data on molecular and serologic assays. Data will be published on: [www.offlu.net](http://www.offlu.net).
- Chinese authorities posted 5 additional sequences from human cases on website of the Global Initiative on Sharing Avian Influenza Data (GISAID).

## FAO actions

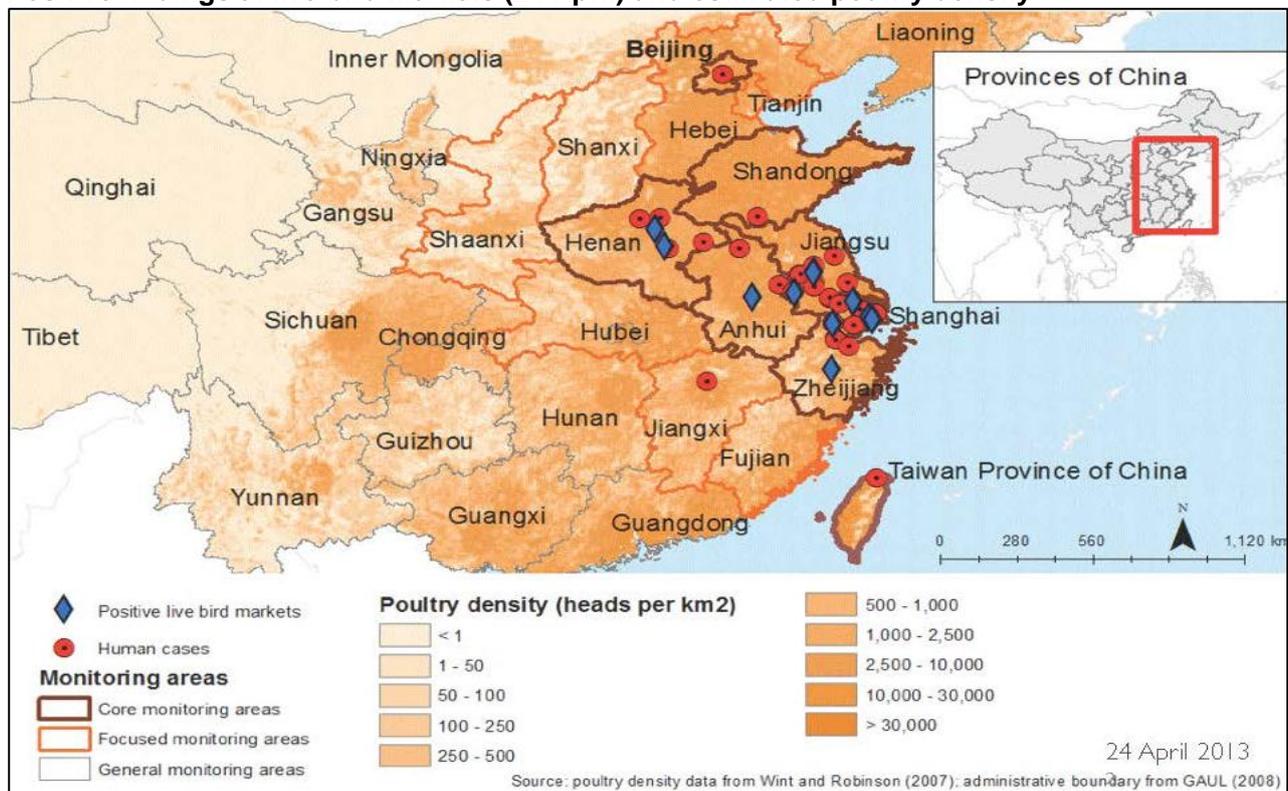
- On 26 April FAO HQ called on members to support the new Global Framework on Control of Avian Influenza A(H7N9) at a [side event](#) held during FAO Council. Total requested: USD 35 million.
- On 26 April 2013 FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event (animal involvement, human-animal-interface).
- ECTAD China links with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO HQ hosted an emergency, multidisciplinary risk assessment meeting on 17–18 April. Output documents on the epidemiology of H7N9 in relation to risk assessment, risk management and surveillance methodologies will be shared upon completion.

## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/zwl/m/yjgl/yqfb/>
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: <http://www.fao.org/news/story/en/item/173655/icode/>
- FAO Frequently Asked Questions: <http://www.fao.org/news/story/en/item/173704/icode/>
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- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)

## Map

### Positive findings at live bird markets (24 April) and estimated poultry density



# H7N9 situation update

FAO / EMPRES – Animal Health  
30 April 2013 18:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 127 confirmed; 24 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **Malaysian authorities have placed a temporary import ban on chicken meat from China. Containers already in route as of 23 April 2013 will be tested.**
- Chinese authorities in Guangdong province reported:
  - Dongguan City thoroughly cleaned and disinfected the Sanniao wholesale market using the municipality's contingency stock of disease control materials;
  - **compensation schemes were confirmed** for geese (USD 2.4 per bird) and chickens/ducks (USD 1.6 per bird); and
  - they would **strengthen measures according to the provincial H7N9 contingency plan**, including: monitoring of H7 subtypes, investigation, disinfection, control and law enforcement.
  - as of 28 April 2013 there have been **no new findings from surveillance**, which includes:
    - i) investigation of nearly 120 000 poultry farms and households keeping upwards of 400 million poultry; and
    - ii) collection of some 25 000 samples from large farms, backyard farms and live poultry markets.
- 1 chicken tested positive for H7 subtype out of 130 poultry samples collected from Lower East Side Dongguan Sanniao Wholesale Market in Guangdong Province, Dongguan City. The poultry showed no clinical signs. Guangdong has not reported any human cases.
- According to MoA to date nearly 400 000 samples have been collected nationwide; 220 000 have been tested and 46 swabs have resulted positive (positive rate = 0.07 percent).
- **The OIE mission to China has ended and reported that a press release will be forthcoming.**
- **Several municipalities in affected areas have started providing subsidies** to registered poultry farms and slaughtering enterprises suffering from the temporary trade bans.

### Humans

- Total: **127 cases (24 deaths)**
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (1)</li><li>○ Henan 4 (0)</li><li>○ Hunan 1 (0)</li><li>○ Beijing 1 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (6)</li><li>○ Shanghai 33 (13)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 27 (4)</li><li>○ Shandong 2 (0)</li><li>○ *Taiwan Province of China 1 (0)</li><li>○ Jiangxi 5 (0)</li><li>○ <b>Fujian 3 (0)</b></li></ul>
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## Diagnosis and virus characteristics

- The OIE/FAO network of expertise on animal influenza (OFFLU) is gathering information on animal experiments with H7N9 from animal health and public health reference laboratories (birds/mammals).

- OFFLU is gathering data on molecular and serologic assays. Data will be published on: [www.offlu.net](http://www.offlu.net).

## FAO actions

- On 26 April FAO HQ called on members to support the new Global Framework on Control of Avian Influenza A(H7N9) at [a side event](#) held during FAO Council. Total requested: USD 35 million.
- On 26 April 2013 FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- ECTAD China is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO work on risk assessment, risk management and surveillance methodologies is ongoing.
- FAO Regional Office for Asia and the Pacific is holding weekly tripartite meetings with regional OIE and WHO offices for coordination and information sharing.**

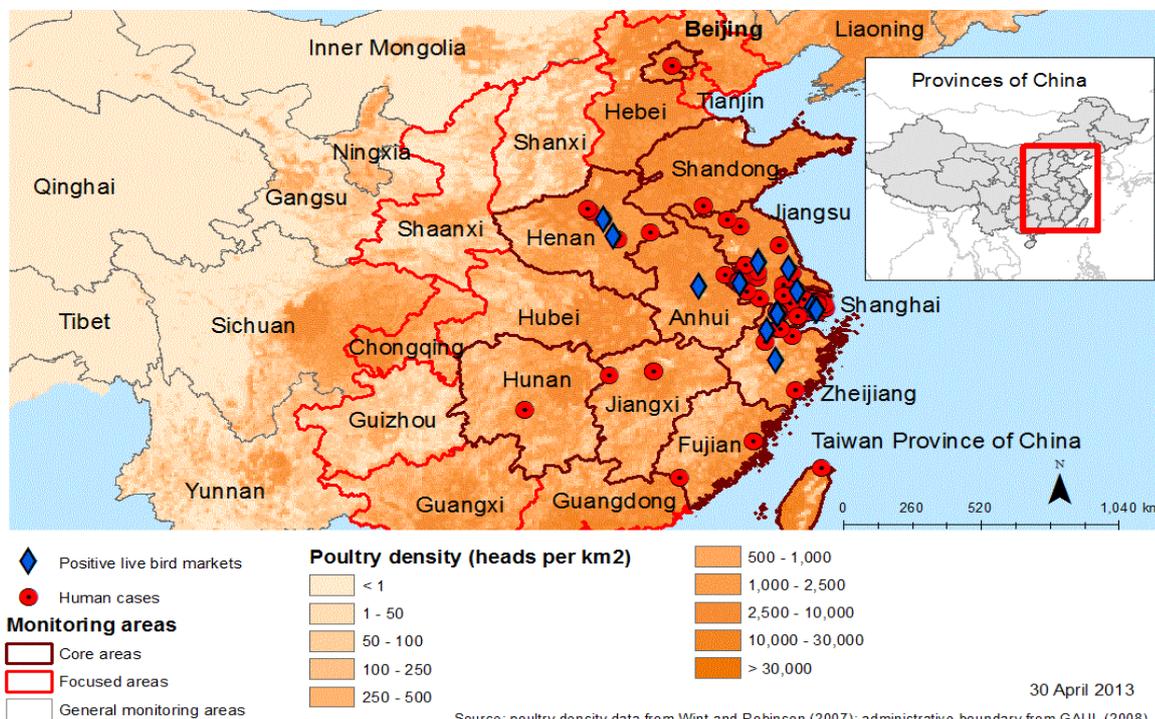
## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/zwl/m/yjgl/yqfb/>
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
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- FAO Frequently Asked Questions: <http://www.fao.org/news/story/en/item/173704/icode/>
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- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)

## Map



Avian influenza A(H7N9) human cases and positive findings at live bird markets over the estimated poultry density



## Legend definitions

- Core areas (with at least a positive findings of avian influenza A(H7N9) in either birds or humans)
- Focused areas (bordering core areas)
- General monitoring areas (other than above)

# H7N9 situation update

FAO / EMPRES – Animal Health  
01 May 2013 8:45 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 128 confirmed; 24 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- [Summary: Between 9 April and 1 May, the Shanghai ACDC collected 15 673+ samples, and tested avian influenza nucleic acid, the result was all negative. During the patrol of public border post, 0 vehicles transporting live birds found but other non-public border post, 20 vehicles transporting live birds found. Between 8 and 30 April, Shanghai city & the district animal health monitoring system inspected 5293+ farms (households), 117+ wholesale markets, 204+ cold storage supermarkets, two times at Railway Station (Line), 1 445 other related places.]
- Media reported from that a prevention and control of H7N9 avian influenza emergency teleconference meeting was held, and [officials decided that] from 3 to 5 May 2013, all live poultry markets in the province will be closed for one day, in turn, to carry out a comprehensive cleaning and disinfection work.
- **Malaysian authorities have placed a temporary import ban on chicken meat from China. Containers already in route as of 23 April 2013 will be tested.**
- Chinese authorities in Guangdong province reported:
  - Dongguan City thoroughly cleaned and disinfected the Sanniao wholesale market using the municipality's contingency stock of disease control materials;
  - **compensation schemes were confirmed** for geese (USD 2.4 per bird) and chickens/ducks (USD 1.6 per bird); and
  - they would **strengthen measures according to the provincial H7N9 contingency plan**, including: monitoring of H7 subtypes, investigation, disinfection, control and law enforcement.
  - as of 28 April 2013 there have been **no new findings from surveillance**, which includes:
    - i) investigation of nearly 120 000 poultry farms and households keeping upwards of 400 million poultry; and
    - ii) collection of some 25 000 samples from large farms, backyard farms and live poultry markets.
- 1 chicken tested positive for H7 subtype out of 130 poultry samples collected from Lower East Side Dongguan Sanniao Wholesale Market in Guangdong Province, Dongguan City. The poultry showed no clinical signs. Guangdong has not reported any human cases.
- According to MoA to date nearly 400 000 samples have been collected nationwide; 220 000 have been tested and 46 swabs have resulted positive (positive rate = 0.07 percent).
- The OIE mission to China has ended and reported that a press release will be forthcoming.
- **Several municipalities in affected areas have started providing subsidies** to registered poultry farms and slaughtering enterprises suffering from the temporary trade bans.

### Humans

- Total: **128 cases (24 deaths)**
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (1)	○ Jiangsu	27 (4)
○ Henan	4 (0)	○ Shandong	2 (0)
○ Hunan	1 (0)	○ *Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	5 (0)
○ Zhejiang	46 (6)	○ Fujian	3 (0)
○ Shanghai	33 (13)		

## Diagnosis and virus characteristics

- The OIE/FAO network of expertise on animal influenza (OFFLU) is gathering information on animal experiments with H7N9 from animal health and public health reference laboratories (birds/mammals).
- OFFLU is gathering data on molecular and serologic assays. Data will be published on: [www.offlu.net](http://www.offlu.net).

## FAO actions

- On 26 April FAO HQ called on members to support the new Global Framework on Control of Avian Influenza A(H7N9) at [a side event](#) held during FAO Council. Total requested: USD 35 million.
- On 26 April 2013 FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- ECTAD China is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO work on risk assessment, risk management and surveillance methodologies is ongoing.
- **FAO Regional Office for Asia and the Pacific is holding weekly tripartite meetings with regional OIE and WHO offices for coordination and information sharing.**

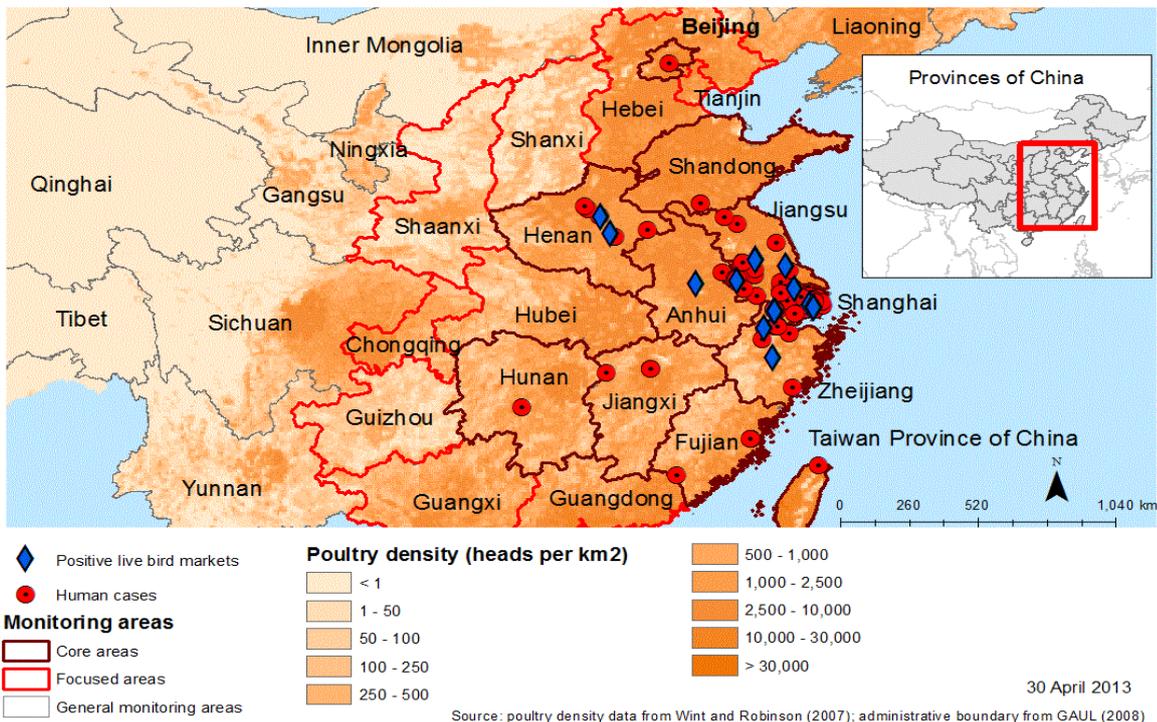
## Important links

- Ministry of Agriculture of the People's Republic of China: <http://www.moa.gov.cn/zwl/m/yjgl/yqfb/>
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
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## Map



**Avian influenza A(H7N9) human cases and positive findings at live bird markets over the estimated poultry density**



**Legend definitions**

- Core areas (with at least a positive findings of avian influenza A(H7N9) in either birds or humans)
- Focused areas (bordering core areas)
- General monitoring areas (other than above)

# H7N9 situation update

FAO / EMPRES – Animal Health  
02 May 2013 18:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 128 confirmed; 26 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (suspected poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Shanghai authorities reported:
  - Between 8 and 30 April, city and district authorities inspected over 5 000 household farms, more than 100 wholesale markets, 200 cold storage supermarkets, the railway station and nearly 1 500 other unspecified locales.
  - Between 9 April and 1 May animal health authorities collected more over 15 000 samples. All samples tested negative by PCR.
  - Movement control activities found 20 vehicles transporting live birds despite the current ban.
- Chinese authorities in Guangdong Province reported:
  - Between 3 and 5 May, each live bird market will be closed for a full day for cleaning and disinfection.
  - 1 chicken tested positive for H7 subtype out of 130 poultry samples collected from Lower East Side Dongguan Sanniao Wholesale Market in Guangdong Province, Dongguan City. This suspected sample has not yet been confirmed by the national authorities. The poultry showed no clinical signs. Guangdong has not reported any human cases.
- According to MoA to date nearly 400 000 samples have been collected nationwide; 220 000 have been tested and 46 swabs have resulted positive (positive rate = 0.07 percent).
- On 30 April EC's DG SANCO issued a communiqué to all CVOs of the 27 member Union recommending:
  - Laboratories closely collaborate with the EU Reference Laboratory for avian influenza in Weybridge, United Kingdom.
  - Review country contingency plans according to EU legislation for the control of avian influenza and update as necessary. Biosecurity measures applied at farm level should also be reviewed.
  - Raise the level of awareness and preparedness of involved sectors.
  - Ensure thorough border controls since a drop in consumption of poultry products in the Chinese region could lead to deviation of trade in poultry products to other countries including the EU.

### Humans

- Total: 128 cases (26 deaths)
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (1)</li><li>○ Henan 4 (0)</li><li>○ Hunan 2 (0)</li><li>○ Beijing 1 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (6)</li><li>○ Shanghai 33 (13)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 27 (6) *</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 5 (0)</li><li>○ Fujian 3 (0)</li></ul>
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\* According to MoH website 1 May

## Diagnosis and virus characteristics

- No change from previous updates. Follow [www.offlu.net](http://www.offlu.net).

## FAO actions

- On 26 April FAO HQ called on members to support the new Global Framework on Control of Avian Influenza A(H7N9) at [a side event](#) held during FAO Council. Total requested: USD 35 million.
- On 26 April 2013 FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- ECTAD China is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO work on risk assessment, risk management and surveillance methodologies are ongoing.
- FAO Regional Office for Asia and the Pacific is holding weekly tripartite meetings with regional OIE and WHO offices for coordination and information sharing.
- FAO is providing coordination and organization support to the USAID and partners event entitled "H7N9 Technical Programmatic Meeting" in Bangkok, 2–3 May 2013.

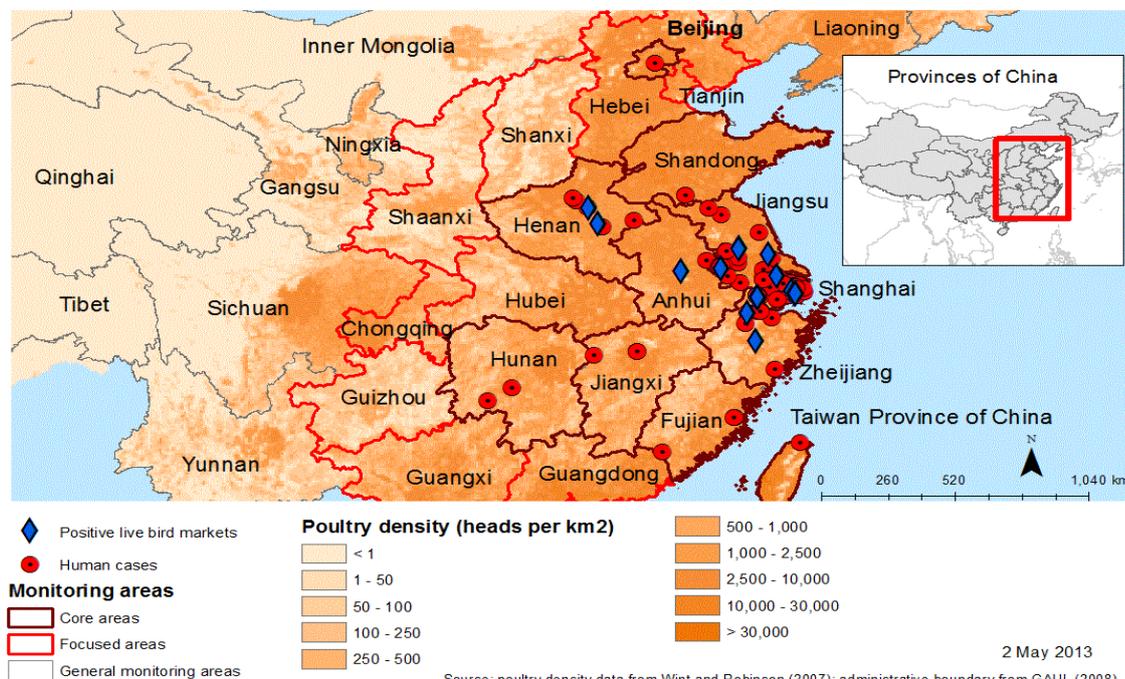
## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwllm/yjgl/yqfb/](http://www.moa.gov.cn/zwllm/yjgl/yqfb/)
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## Map



Avian influenza A(H7N9) human cases and positive findings at live bird markets over the estimated poultry density



## Legend definitions:

- Core areas (with at least a positive findings of avian influenza A(H7N9) in either birds or humans)**
- Focused areas (bordering core areas)**
- General monitoring areas (other than above)**

# H7N9 situation update

FAO / EMPRES – Animal Health  
06 May 2013 18:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 130 confirmed; 31 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- On 5 May the MoA reported to OIE that 5 samples tested positive for H7N9:
  - Jiangxi (1 chicken);
  - Shandong (3 environmental samples); and
  - Guangdong (first province to report H7N9 in birds without human cases).
- On 4 May the Jiangxi authorities started a cleaning and disinfection week for all live bird markets. Markets linked to human infection or positive samples will be disinfected 2x day; others 1x day.
- On 2 May Taiwan Province of China announced the ban of live bird slaughter and sales at traditional markets from 17 May onwards. During transition period (3–16 May) authorities will provide financial support to slaughtering facility owners and live bird traders.
- As of 5 May the National Avian Influenza Reference Laboratory confirmed 51 positive samples total.

### Humans

- Total: **130 cases (31 deaths)**
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (0)	○ Shandong	2 (0)
○ Hunan	2 (0)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	5 (1)
○ Zhejiang	46 (7)	○ Fujian	5 (0)
○ Shanghai	33 (13)		

## Diagnosis and virus characteristics

- No change from previous updates. Follow [www.offlu.net](http://www.offlu.net).

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- ECTAD China is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;
  - prepare a market chain analysis with local authorities to assist with tracing back and forward.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- FAO Regional Office for Asia and the Pacific (RAP) is holding weekly tripartite meetings with regional OIE and WHO offices for coordination and information sharing.
- FAO shared latest updates on surveillance, risk assessment, risk management and diagnostic protocols with USAID, WHO and OIE and other partners in the "H7N9 Technical Programmatic Meeting" organized by FAO RAP on behalf of USAID in Bangkok, 2–3 May 2013.

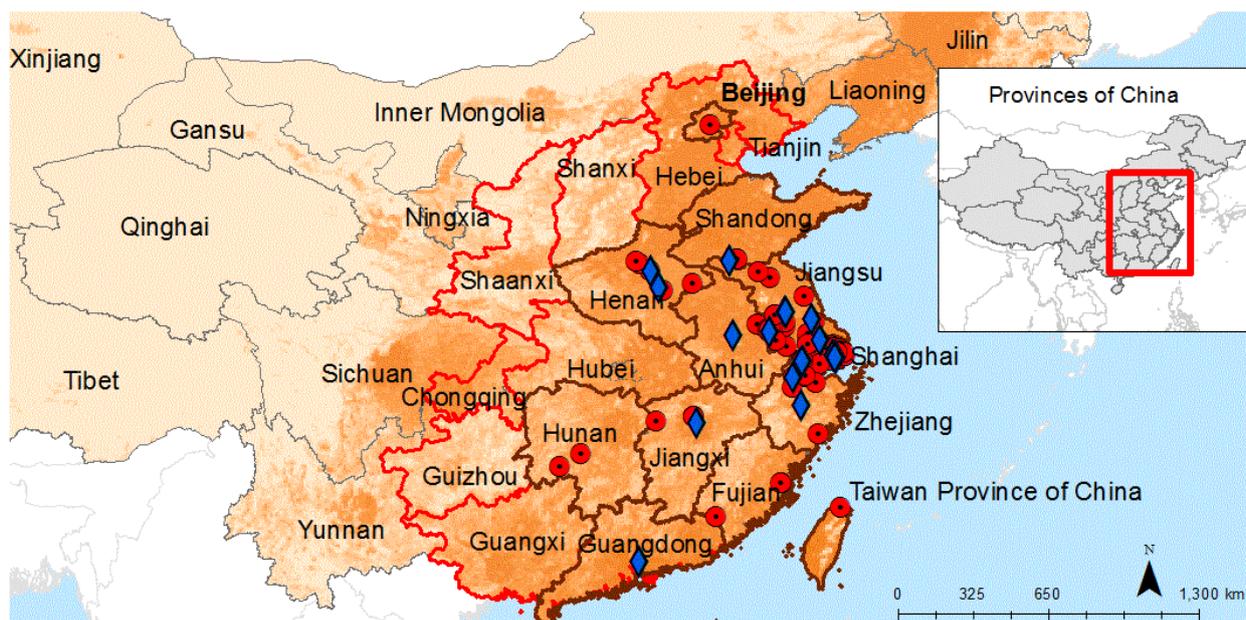
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- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- WHO disease outbreak news: [www.who.int/csr/don/archive/year/2013/en/index.html](http://www.who.int/csr/don/archive/year/2013/en/index.html)
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)

## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment over the estimated poultry density



6 May 2013

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

# H7N9 situation update

FAO / EMPRES – Animal Health  
07 May 2013 20:35 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 130 confirmed; 31 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **Guangdong:**
  - On 7 May provincial authorities allocated emergency funds for 210 tons of disinfectants; reagents for antibody detection for 140 000 samples and PCR reagents 4 800 samples.
  - Zhanjiang city Municipal Forestry Authorities have:
    - stopped accepting wildlife business license approvals as of 6 May 2013
    - suspended existing trading licenses for stalls trading of wild birds
    - conducted thorough disinfection of wildlife stalls
    - added two monitoring points for migratory birds in Heanzhen (Xuwen County) and Fuchengzhen (Leizhou City)
    - cleaned 13 farmers markets, 56 bird stalls, 5 wildlife farms
    - performed 103 unannounced checks on restaurants/hotels and food stalls
    - investigated seven illegal hunting locations
    - seized several wild bird species
    - announced the imminent campaign against illegal hunting and trading of wild birds
- Hebei Province, Huanghua City, Cangzhou City: strengthened migratory birds monitoring and established two monitoring sites in Nandangang and Haixing Wetlands.

### Humans

- Total: 130 cases (31 deaths)
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (0)	○ Shandong	2 (0)
○ Hunan	2 (0)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	5 (1)
○ Zhejiang	46 (7)	○ Fujian	5 (0)
○ Shanghai	33 (13)		

### Diagnosis and virus characteristics

- No change from previous updates. Follow [www.offlu.net](http://www.offlu.net).

### FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- ECTAD China is linking with Chinese animal health authorities to:
  - obtain information and contribute to current and planned surveillance and response activities;

- conduct a market chain analysis with local authorities to assist with tracing back and forward.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- FAO Regional Office for Asia and the Pacific (RAP) is holding weekly tripartite meetings with regional OIE and WHO offices for coordination and information sharing.
- On 6 May Viet Nam authorities held a conference on the H7N9 disease situation and prevention, control, preparedness and resource mobilization activities. WHO, FAO, the Vice Ministers of the Ministry of Health and the Ministry of Agriculture and Rural Development (MARD) chaired the conference. MARD reported that i) border controls have been strengthened; ii) over 500 historical poultry samples have been found negative for H7N9; iii) strengthened surveillance plans include 18 000 to be taken from 60 live bird markets starting from early May:  
<http://www.fao.org/asiapacific/vietnam/home/en/>

### Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
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- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)

### Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment over the estimated poultry density



- ◆ Positive findings in birds and/or the environment
- Human cases

#### Monitoring areas

- ▭ Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- ▭ Area 2 (bordering area 1)
- ▭ Area 3 (other than above)

#### Poultry density (heads per km<sup>2</sup>)

▭ < 1	▭ 500 - 1,000
▭ 1 - 50	▭ 1,000 - 2,500
▭ 50 - 100	▭ 2,500 - 10,000
▭ 100 - 250	▭ 10,000 - 30,000
▭ 250 - 500	▭ > 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

7 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
08 May 2013 17:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

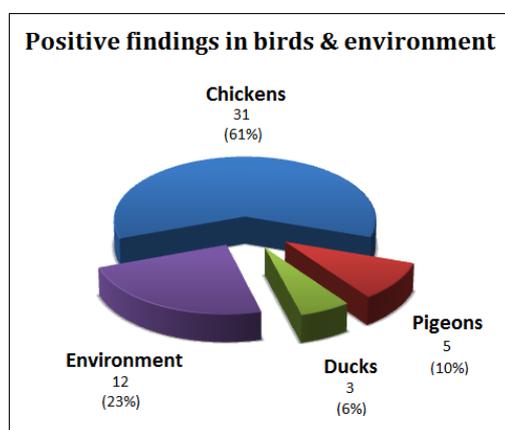
*Country:* People's Republic of China

*Number of human cases:* **131 confirmed; 31 deaths**

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, prepare market chain analysis, risk assessment, surveillance guidance and communication.



## Situation update

### Animals

- ◆ As of 5 May, 51 samples mainly from live bird markets/vendors were positive for H7N9. The pie chart shows the distribution of sample origin.
- ◆ No positive samples have been found on poultry farms or from pigs.
- ◆ No information is available on serologic results.

### Humans

- Total: **131** cases (31 deaths)
- Geographic breakdown (deaths in parentheses):
 

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (0)	○ Shandong	2 (0)
○ Hunan	2 (0)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (7)	○ Fujian	5 (0)
○ Shanghai	33 (13)		

### Diagnosis and virus characteristics

- To date, the Chinese Centre for Disease Control and the National Avian Influenza Reference Laboratory have submitted genetic data on a total of 19 virus isolates (i.e. 12 human, 2 environment, 4 chicken and 1 pigeon) to the Global Initiative on Sharing Avian Influenza Data (GISAID). Out of these, 3 sequences (1 chicken, 2 human) have also been posted on the NCBI Influenza Virus Resource database (GenBank).

### FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- ECTAD China is linking with Chinese animal health authorities to:

- obtain information and contribute to current and planned surveillance and response activities;
- conduct a market chain analysis with local authorities to assist with tracing back and forward.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- A teleconference with FAO/OIE network of expertise for animal influenza (OFFLU) laboratories and WHO collaborating centres is planned for **next week** to share findings on experimental infections in animals as well as diagnostic updates.

### Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
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- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
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- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

### Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment over the estimated poultry density



#### Avian influenza A(H7N9)

- ◆ Positive findings in birds and/or the environment
- Human cases

#### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

#### Poultry density (heads per km<sup>2</sup>)

< 1	500 - 1,000
1 - 50	1,000 - 2,500
50 - 100	2,500 - 10,000
100 - 250	10,000 - 30,000
250 - 500	> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

8 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
09 May 2013 17:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 32 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

The National Avian Influenza Reference Laboratory (FAO Reference Centre) reported that **out of 686 samples taken in Fujian, 1 environmental sample tested positive** for H7N9.

TOTAL H7N9 POSITIVE FINDINGS BY PROVINCE, as of 9 MAY 2013					
PROVINCE	Duck	Pigeon	Chicken	Environ.	TOTAL
Anhui	1	0	0	0	1
Fujian	0	0	0	1	1
Guandong	0	0	1	0	1
Henan	0	0	0	2	2
Jiangsu	0	2	11	0	13
Jiangxi	0	0	1	0	1
Shandong	0	0	0	3	3
Shanghai	0	3	10	7	20
Zhejiang	2	0	8	0	10
<b>TOTAL</b>	<b>3</b>	<b>5</b>	<b>31</b>	<b>13</b>	<b>52</b>

Positive samples originate mainly from LBM/vendors. No positive samples have been found on poultry farms or from pigs.

### Human cases (deaths in parentheses)

- Total: **131** cases (**32**)
- Geographic breakdown
 

<ul style="list-style-type: none"> <li>○ Anhui 4 (2)</li> <li>○ Henan <b>5</b> (0)</li> <li>○ Hunan 2 (0)</li> <li>○ Beijing 1 (+ 1 asymptomatic) (0)</li> <li>○ Zhejiang 46 (7)</li> <li>○ Shanghai 33 (13)</li> </ul>	<ul style="list-style-type: none"> <li>○ Jiangsu 27 (8)</li> <li>○ Shandong 2 (0)</li> <li>○ Taiwan Province of China 1 (0)</li> <li>○ Jiangxi 6 (1)</li> <li>○ Fujian 5 (0)</li> </ul>
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### Diagnosis and virus characteristics

- **One additional human sequence** from Taiwan Province of China has been submitted to the Global Initiative on Sharing Avian Influenza Data (GISAID), bringing the total to **20** (**13** human, 4 chicken, 2 environment and 1 pigeon). Out of these, 3 sequences (1 chicken, 2 human) have also been posted on the NCBI Influenza Virus Resource database (GenBank).

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- A teleconference with FAO/OIE network of expertise for animal influenza (OFFLU) laboratories and WHO collaborating centres is planned for next week to share findings on experimental infections in animals as well as diagnostic updates.

## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
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## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment over the estimated poultry density



### Avian influenza A(H7N9)

- ◆ Positive findings in birds and/or the environment
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

- |           |                 |
|-----------|-----------------|
| < 1       | 500 - 1,000     |
| 1 - 50    | 1,000 - 2,500   |
| 50 - 100  | 2,500 - 10,000  |
| 100 - 250 | 10,000 - 30,000 |
| 250 - 500 | > 30,000        |

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

9 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
10 May 2013 17:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 32 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples: 52 positive samples mainly from live bird markets/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- The National Avian Influenza Reference Laboratory reported that out of 686 samples taken in Fujian, 1 environmental sample tested positive for H7N9. The sample originated from Xiaobei market in Fuqing City, Fuzhou City. Notification has been sent to the OIE.
- Shanghai authorities reported:
  - live poultry trading and live bird markets (LBM) have been suspended
  - 114,276 birds have been culled so far
  - As of 9 May a total of 21,123 samples were collected (of which 20 tested positive)
  - Historical samples from LBMs and the dead pigs in the Huangpu River tested negative
  - In the past month, 48 vehicles with a total of 12,131 birds were prohibited to enter the city
  - 11 slaughtering facilities received a total of 263 million birds for slaughter (5,250 t equivalent). This was part of the economic impact mitigation measures
- MoA reported that H7N9 is having a major economic impact on the poultry industry and on farm households. State Council has called to stabilize the poultry industry and MoA held a meeting on 10 May to mitigate the loss of the poultry industry.

### Humans

- Total: 131 cases (32 deaths)
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 5 (0)</li><li>○ Hunan 2 (0)</li><li>○ Beijing 1 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (7)</li><li>○ Shanghai 33 (13)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 27 (8)</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li></ul>
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Shanghai municipality **lifted the emergency response level 3** as of today since 20 days have passed since the last human case and all 458 close contacts have been released.

### Diagnosis and virus characteristics

- One additional human sequence from Taiwan Province of China has been submitted to the Global Initiative on Sharing Avian Influenza Data (GISAID), bringing the total to **20 (13 human, 4 chicken, 2 environment and 1 pigeon)**. Out of these, **8 sequences** (1 chicken, **6 human, 1 environment**) have also been posted on the **NCBI Influenza Virus Resource database (GenBank)**.

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- A teleconference with FAO/OIE network of expertise for animal influenza (OFFLU) laboratories and WHO collaborating centres is planned for next week to share findings on experimental infections in animals as well as diagnostic updates.

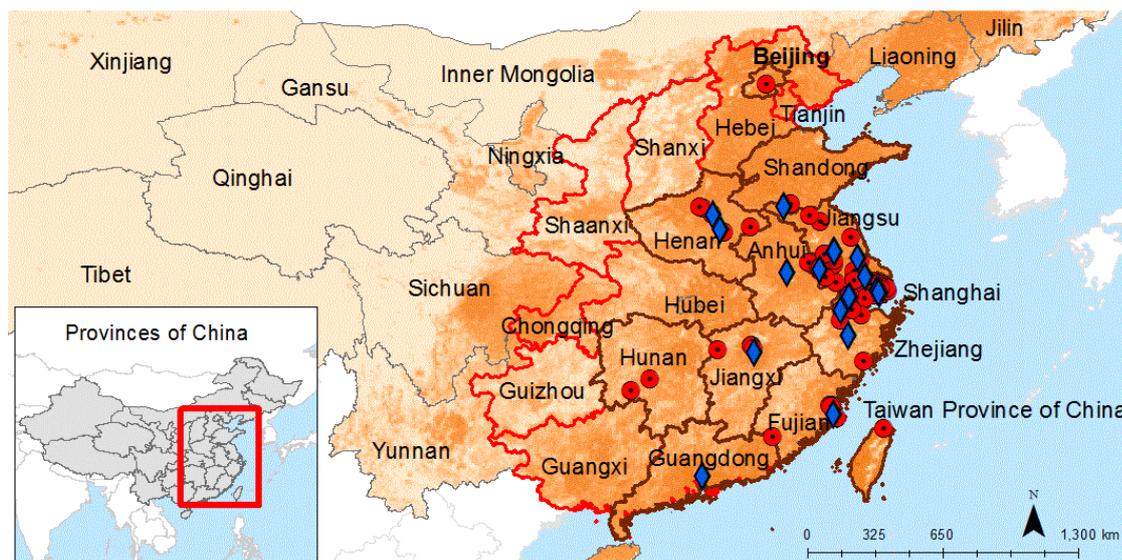
## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
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- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment over the estimated poultry density



### Avian influenza A(H7N9)

- Positive findings in birds and/or the environment in live bird markets / vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

- < 1
- 1 - 50
- 50 - 100
- 100 - 250
- 250 - 500
- 500 - 1,000
- 1,000 - 2,500
- 2,500 - 10,000
- 10,000 - 30,000
- > 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

10 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
13 May 2013 17:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; **35** deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples: 52 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- MoA reported that **economic losses** are estimated to **exceed 40 billion Yuan (USD 6.5 billion)**.
- On 10 May 6 ministries (agriculture, health, public security, transport, commerce, food and drugs) issued a note (1) requiring **temporary suspension of movement for live birds** originating from provinces where the virus was detected in humans and /or animal/environment, except for breeding stock having been tested and certified; and, (2) **allowing transport of breeding stock only between farms**, not through LBMs.
  - Encouraged slaughtering of live poultry close to the poultry production sites as well as the **marketing of chilled poultry products**
  - Emphasized the need to **increase consumer's awareness** on the safe consumption of chilled poultry products.

### Humans

- Total: 131 cases (**35** deaths)
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	5 (0)	○ Shandong	2 (0)
○ Hunan	2 (0)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (7)	○ Fujian	5 (0)
○ Shanghai	33 ( <b>14</b> )		
- MoH reported **2 additional deaths** without providing details on the location. **57 cases recovered**.
- An article in the Journal of the American Medical Association describes the major challenges with regard to an effective and timely **human vaccine for H7N9**:
  - The H7N9 vaccine may have limited effectiveness, similar as for seasonal influenza
  - Time for producing and distributing vaccines will take several months
  - Emergency Use Authorizations may be needed for H7N9 vaccines

<http://jama.jamanetwork.com/article.aspx?articleid=1686871>

## Diagnosis and virus characteristics

- No new information

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- A teleconference with FAO/OIE network of expertise for animal influenza (OFFLU) laboratories and WHO collaborating centres is planned this week to share findings on experimental infections in animals as well as diagnostic updates.

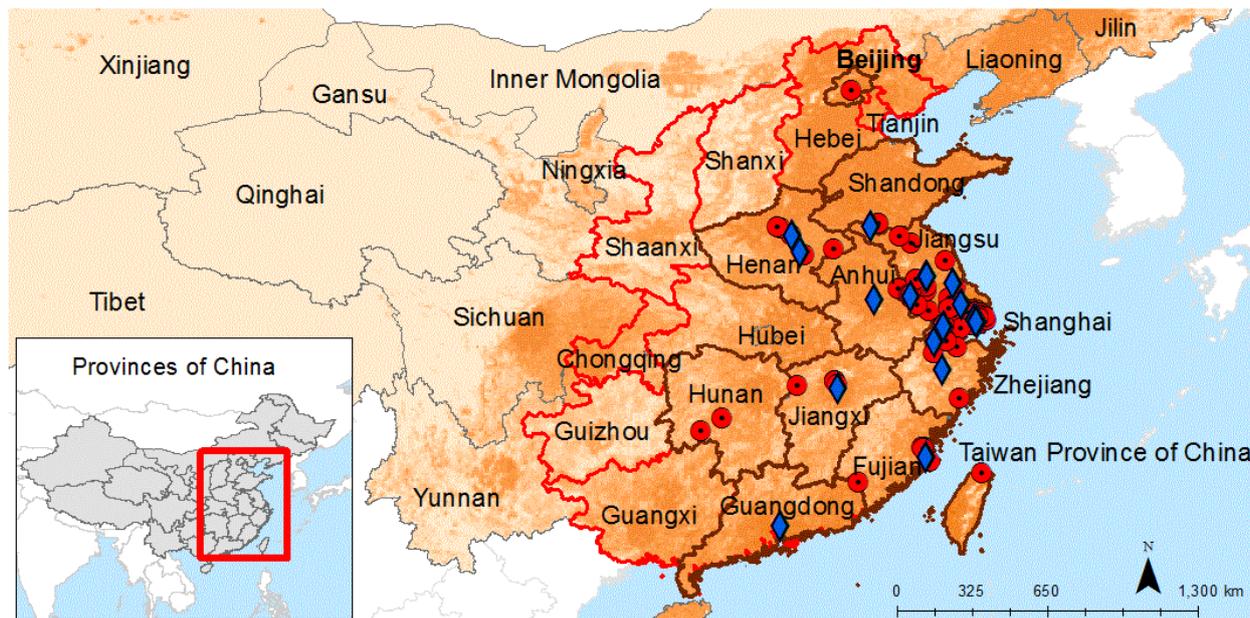
## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- WHO disease outbreak news: [www.who.int/csr/don/archive/year/2013/en/index.html](http://www.who.int/csr/don/archive/year/2013/en/index.html)
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



### Avian influenza A(H7N9)

- ◆ Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

< 1	500 - 1,000
1 - 50	1,000 - 2,500
50 - 100	2,500 - 10,000
100 - 250	10,000 - 30,000
250 - 500	> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

13 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
17 May 2013 17:40 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 36 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples: 52 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- A study published in Eurosurveillance shows that **all 12 human cases in Huzhou City, Zhejiang Province had exposure to poultry or LBMs. Of the 135 samples obtained from LBMs and yards linked with human cases, 38 tested positive.** In addition, 7 other LBMs, without links to human cases, were sampled. **Of 75 samples tested, 23 were positive.** No new human cases have been reported since the closure of LBMs.  
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20481>
- **Jiangsu and Shandong province authorities lifted the emergency level 4.** Surveillance and risk mitigation measures in LBMs are continuing.
- One suspect sample from a chicken in Fuli market, Licheng, Zengcheng City, Guangzhou City awaits confirmation by the National Avian Influenza Reference Laboratory.
- On 15 May MoA reported that out of 606,000 samples analyzed throughout the country, 52 tested positive for H7N9. No virus has been found on poultry farms and in pigs.

### Humans

- Total: 131 cases (36 deaths)
- No new human cases have been reported since one week
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (14)		

### Diagnosis and virus characteristics

- **3 more human isolates from Shanghai** have been posted on **GISAID**, bringing the total to 25.
- OFFLU laboratories report from animal experiments:
  - Mainly oropharyngeal shedding of H7N9 virus (From high to low: quail, chicken, geese. Ducks: low to no shedding and no contact transmission. Pigeons: no shedding).

- Serology: chicken sera show good reactivity with homologous H7N9 antigen, and fair reaction with Eurasian antigens (1-2 logs lower). This confirms that HI test may be used for serological surveillance studies and H7N9 circulation.

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO work on risk assessment, risk management and surveillance methodologies are being finalised
- On 15 May, the FAO/OIE network of expertise for animal influenza (OFFLU) and WHO collaborating centres held a teleconference to share laboratory findings. Data will be available on [www.offlu.net](http://www.offlu.net)

## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- WHO disease outbreak news: [www.who.int/csr/don/archive/year/2013/en/index.html](http://www.who.int/csr/don/archive/year/2013/en/index.html)
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



### Avian influenza A(H7N9)

- ◆ Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

< 1	500 - 1,000
1 - 50	1,000 - 2,500
50 - 100	2,500 - 10,000
100 - 250	10,000 - 30,000
250 - 500	> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

16 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
20 May 2013 20:45 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 36 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **Guangdong:**
  - **The sample from a chicken** in Fuli market, Licheng, Zengcheng City, Guangzhou City was **confirmed H7N9 positive** by the National Avian Influenza Reference Laboratory.
  - According to **investigation activities** by the provincial animal health authorities, the chicken could be **traced back to a chicken farm** using the all-in-all-out system in **Qianguanzhen, Yunan County**, Guangdong Province. As all chickens had been sold, environmental samples were taken and the farm disinfected.
- Hong Kong SAR quarantine authorities reported that Mainland China will **temporarily suspend export of poultry and poultry products (including chilled and frozen poultry, and poultry eggs) to Hong Kong SAR from areas within 13 km radius** of H7N9 positive findings. This decision is at present affecting one registered farm.
- MoA reported a total of **53 positive samples** for H7N9. No virus has been found on poultry farms and in pigs.

### Humans

- Total: 131 cases (36 deaths, **72 recovered**)
- No new human cases have been reported since one week
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 4 (1)</li><li>○ Hunan 2 (1)</li><li>○ Beijing 1 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (9)</li><li>○ Shanghai 33 (14)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 27 (8)</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li></ul>
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The WHO mission report is available on:

[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/ChinaH7N9JointMissionReport2013.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/ChinaH7N9JointMissionReport2013.pdf)

### Diagnosis and virus characteristics

- No new relevant information

### FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.

- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- On 15 May, the FAO/OIE network of expertise for animal influenza (OFFLU) and WHO collaborating centres held a teleconference to share laboratory findings. Data will be available on [www.offlu.net](http://www.offlu.net)
- **FAO carried out a Good Emergency Management Practices (GEMP) training in China last week.**
- **FAO's risk management guidelines** are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- Chief, AGAH (FAO Chief Veterinary Officer) was invited by WHO to present the status of avian influenza H7N9 at its governing body conference - the **World Health Assembly** – on 22 May, 2013 (Geneva)

### Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwlm/yjgl/yqfb/](http://www.moa.gov.cn/zwlm/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- WHO disease outbreak news: [www.who.int/csr/don/archive/year/2013/en/index.html](http://www.who.int/csr/don/archive/year/2013/en/index.html)
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

### Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



#### Avian influenza A(H7N9)

- ◆ Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

#### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

#### Poultry density (heads per km<sup>2</sup>)

< 1	500 - 1,000
1 - 50	1,000 - 2,500
50 - 100	2,500 - 10,000
100 - 250	10,000 - 30,000
250 - 500	> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

20 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
21 May 2013 21:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 36 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, a duck and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- As of 17 May 2017, **Taiwan Province of China limited poultry market chains to direct interactions between farms, wholesale markets and slaughterhouses**
- Hunan province authorities lifted the emergency response level 4.**
- Guangdong: The sample from a chicken in Fuli market, Licheng, Zengcheng City, Guangzhou City was confirmed H7N9 positive by the National Avian Influenza Reference Laboratory. **Notification has been sent to OIE**
- MoA reported a total of 53 positive samples for H7N9. No virus has been found on poultry or pig farms.

### Humans

- Total: 131 cases (36 deaths, 72 recovered)
- No new human cases have been reported since one week
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (14)		

### Diagnosis and virus characteristics

- Chinese authorities notified the OIE that the **intravenous pathogenicity index (IVPI) test in chickens is 0**. This means that chickens do not show any clinical signs after experimental infection.

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- On 15 May, the FAO/OIE network of expertise for animal influenza (OFFLU) and WHO collaborating centres held a teleconference to share laboratory findings. Data will be available on [www.offlu.net](http://www.offlu.net)

- FAO carried out a Good Emergency Management Practices (GEMP) training in China last week.
- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- Chief, AGAH (FAO Chief Veterinary Officer) gave a presentation on the status of avian influenza H7N9 at WHO's governing body conference, the **World Health Assembly** on 21 May 2013. He was joined by the DG WHO, ADG WHO, DG OIE, Minister of Health PRC.

## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwlm/yjgl/yqfb/](http://www.moa.gov.cn/zwlm/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
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- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



### Avian influenza A(H7N9)

- Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

< 1	500 - 1,000
1 - 50	1,000 - 2,500
50 - 100	2,500 - 10,000
100 - 250	10,000 - 30,000
250 - 500	> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

20 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
23 May 2013 20:20 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 36 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- On 23 May, MoA reported: **702,369 serum samples and 197,389 swabs** were collected at 42,250 places in 31 provinces. Out of these, 53 samples were positive for H7N9, of which 96% were taken at LBM and poultry vendors. No virus has been found on poultry or swine farms.

### Humans

- Total: 131 cases (36 deaths)
- No new human cases have been reported since one week
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (14)		

## Diagnosis and virus characteristics

- 6 human isolates from Shanghai** have been added to **GISAID** bringing the **total to 31**.
- A study published in the New England Journal of Medicine showed that the **M gene from 2 viruses isolated in Nanjing** (one human, one environmental) **are significantly different from three other viruses isolated from humans in Shanghai and Anhui**. The authors suggest that the H7N9 virus has probably circulated in birds for a considerable time allowing for reassortments to occur. <http://www.nejm.org/doi/pdf/10.1056/NEJMc1306100>

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- FAO Viet Nam** is organising a **risk modelling meeting for avian influenza** including H7N9 next week.
- Viet Nam, Lao PDR and Myanmar** are **scaling up surveillance efforts** and will be collecting additional samples in the framework of the USAID-funded FAO Project "Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries".

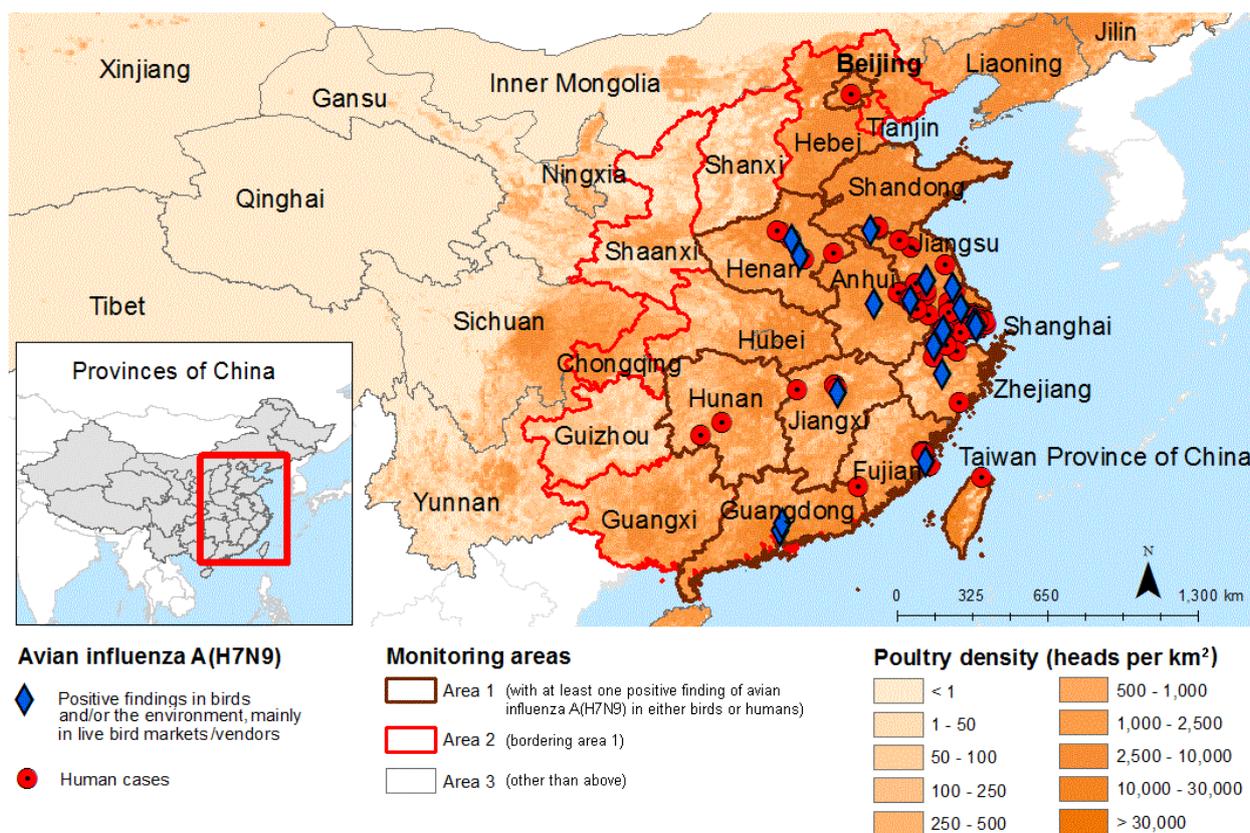
## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwllm/yjgl/yqfb/](http://www.moa.gov.cn/zwllm/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
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- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

20 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
24 May 2013 17:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 36 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Jiangxi province authorities **lifted the emergency response level 4.**

### Humans

- Total: 131 cases (36 deaths)
- No new human cases have been reported since one week
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	1 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (14)		
- **National Health and Family Planning Commission** announced the results of a **public opinion survey** on the measures taken to target communication. Television is most popular for aged people while websites and twitters have been useful for the younger population who was more actively searching for information.

### Diagnosis and virus characteristics

- A study published in *Science* indicates that **ferrets** (used as the animal model for human infection/disease) show relatively mild clinical signs but **shed at high titers** for 6 to 7 days. Transmission studies show that the virus is **transmitted via direct contact between ferrets** and to lower extent in case of airborne exposure. Experimentally infected **pigs shed virus** for 6 days but did not transmit the virus between them. Both **ferrets and pigs started shedding the virus before the onset of [mild respiratory] clinical signs.**  
<http://www.sciencemag.org/content/early/2013/05/22/science.1239844.abstract?sid=c8ac8c51-9e72-4a31-ba3f-5a84c8836de2>
- **2 isolates** from Nanjing (Jiangsu Province) were posted on **GenBank** (1 environmental, 1 human)

### FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.

- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- FAO Viet Nam is organising a risk modelling meeting for avian influenza including H7N9 next week.
- Viet Nam, Lao PDR and Myanmar are scaling up surveillance efforts and will be collecting additional samples in the framework of the USAID-funded FAO Project "Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries".

### Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwllm/yjgl/yqfb/](http://www.moa.gov.cn/zwllm/yjgl/yqfb/)
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- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource database: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

### Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



#### Avian influenza A(H7N9)

- Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

#### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

#### Poultry density (heads per km<sup>2</sup>)

	< 1		500 - 1,000
	1 - 50		1,000 - 2,500
	50 - 100		2,500 - 10,000
	100 - 250		10,000 - 30,000
	250 - 500		> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

20 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
27 May 2013 18:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 131 confirmed; 37 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **Anhui and Fujian** province authorities and **Beijing** municipality **lifted the emergency response level 4.**
- MoA issued a notice on next steps for surveillance and control of H7N9:
  - **Surveillance for H7N9 will be integrated** into regular avian influenza surveillance
  - Provinces with positive findings for H7N9 should focus surveillance on farms while unaffected provinces should focus on LBMs and slaughterhouses. In case of positive findings strict control measure and **trace-back** should be carried out
  - **Farms should be guided to scale up biosecurity**
  - **Use of H7 subtype vaccine is not allowed**
  - Enforce transport controls
- MoA announced that **H7N9 has been included in the Class II-reportable animal diseases.**
- **Beijing** Municipality reported that 679 environmental samples related to poultry as well as 3,401 faecal samples of wildfowl from 317 parks and 10 nature reserves of wetlands in the city tested negative.

### Humans

- Total: 131 cases (**37\*** deaths, **76** recovered)
- No new human cases have been reported since one week
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 4 (1)</li><li>○ Hunan 2 (1)</li><li>○ Beijing 1 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (9)</li><li>○ Shanghai 33 (14)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 27 (8)</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li></ul>
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\*MoH reported on additional death without specifying the location.

- **Beijing** Municipality reported that between 1 and 20 May, 39 human pneumonia cases were investigated, of which 1 was positive for H7N9. All 16,339 samples from influenza-like illness cases tested negative for H7N9 by PCR. **1422 surveillance samples from poultry workers and 1015 samples taken from general population tested negative by PCR.**

## Diagnosis and virus characteristics

- No new information available

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- FAO Viet Nam is organising a risk modelling meeting for avian influenza including H7N9 next week.
- Viet Nam, Lao PDR and Myanmar are scaling up surveillance efforts and will be collecting additional samples in the framework of the USAID-funded FAO Project "Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries".

## Important links

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- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
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## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



### Avian influenza A(H7N9)

- Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

	< 1		500 - 1,000
	1 - 50		1,000 - 2,500
	50 - 100		2,500 - 10,000
	100 - 250		10,000 - 30,000
	250 - 500		> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

20 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
28 May 2013 21:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 132 confirmed; 37 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Quarantine authorities report that **between 1 April and 26 May, China Mainland exported 867,544 live birds to Hong Kong and Macao. 57,493 live poultry samples taken before export at the registered farms tested negative for H7N9.**

### Humans

- Total: **132** cases (37\* deaths, 76 recovered)
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	<b>2</b> (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (14)		

\*MoH reported on additional death without specifying the location.

- Beijing** authorities report a **new human case of H7N9 in a 6-year old boy** living in Haidian District (Beijing) showing influenza like illness (ILI) with onset on 21 May. The case was detected in the framework of the ILI surveillance.

### Diagnosis and virus characteristics

- Two new human isolates from Fujian and Zhejiang** were posted on **GISAID** and **GenBank**; the 2 isolates (1 environmental, 1 human) from Nanjing (Jiangsu Province) on GenBank were also posted on GISAID. **Total: 35 isolates in GISAID and 15 isolates in GenBank.**

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- FAO Viet Nam is holding a risk modelling meeting for avian influenza including H7N9 this week.

- Viet Nam, Lao PDR, Myanmar and **Indonesia** are scaling up surveillance efforts and will be collecting additional samples in the framework of the USAID-funded FAO Project “Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries”.

## Important links

- Ministry of Agriculture of the People’s Republic of China: [www.moa.gov.cn/zwlm/yjgl/yqfb/](http://www.moa.gov.cn/zwlm/yjgl/yqfb/)
- Ministry of Forestry of the People’s Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
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## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



### Avian influenza A(H7N9)

- ◆ Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

< 1	500 - 1,000
1 - 50	1,000 - 2,500
50 - 100	2,500 - 10,000
100 - 250	10,000 - 30,000
250 - 500	> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

28 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
03 June 2013 17:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 132 confirmed; 37 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **LBM reopening:**
  - Several cities in different provinces reopened LBMs according to the media.
  - **Zhejiang** province authorities announced on 30 May:
    - **Conditions for reopening of LBMs include a joint risk assessment** by several involved authorities indicate that the market is at low risk of infection and has appropriate facilities and procedures in place
    - **Poultry consumption and trade patterns plans will be revised** including poultry slaughtering standards, reduction of live poultry slaughter points in markets and of live poultry trading volume in main cities by law before the end of 2013.

### Humans

- Total: 132 cases (37\* deaths, 76 recovered)
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	2 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (14)		

\*MoH reported on additional death without specifying the location.

- A **retrospective serologic study** did not find evidence for H7N9 infection in sera of poultry workers in eastern China between January and November 2012  
<http://www.nejm.org/doi/full/10.1056/NEJMc1305865>

### Diagnosis and virus characteristics

- **14 genetic sequences from human virus isolates from Shanghai** were posted on GISAID and GenBank. Total: 49 isolates in GISAID and 29 isolates in GenBank.
- A study published in The Lancet indicates that **H7N9 might have been generated through the reassortment of at least 4 viruses and has evolved into different lineages.**  
<http://www.sciencedirect.com/science/article/pii/S0140673613609381>

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- Viet Nam, Lao PDR, Myanmar and Indonesia are scaling up surveillance efforts and are collecting additional samples in the framework of the USAID-funded FAO Project "Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries".
- FAO Viet Nam has organised a risk modelling workshop for avian influenza <http://www.fao.org.vn/>
- FAO Indonesia carried out a H7N9 risk-based surveillance training**

## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwlm/yjgl/yqfb/](http://www.moa.gov.cn/zwlm/yjgl/yqfb/)
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## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



### Avian influenza A(H7N9)

- Positive findings in birds and/or the environment, mainly in live bird markets/vendors
- Human cases

### Monitoring areas

- Area 1 (with at least one positive finding of avian influenza A(H7N9) in either birds or humans)
- Area 2 (bordering area 1)
- Area 3 (other than above)

### Poultry density (heads per km<sup>2</sup>)

	< 1		500 - 1,000
	1 - 50		1,000 - 2,500
	50 - 100		2,500 - 10,000
	100 - 250		10,000 - 30,000
	250 - 500		> 30,000

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

28 May 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
05 June 2013 20:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 132 confirmed; 37 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- The Chinese OIE delegate presentation at the OIE General Session on 27 May, 2013, included:
  - From **702,639 serum samples** collected nationwide, **35 chicken samples tested positive out of which 25 samples taken in LBMs and 10 samples in farms.**
  - **More than 500 000 birds have been culled** on LBMs as part of the control interventions.
- **Shanghai authorities are preparing a law on the live bird trade management.** The draft text is published on national websites and authorities encourage citizens and stakeholders to provide comments. Contents include definitions and procedures regarding a) bird species; b) suspension of trade; c) traceability and management of poultry originating from areas outside Shanghai; d) certificates; e) market managers' responsibilities (including rest days; waste management; cleaning and disinfection; public information; development of contingency and response plan); f) poultry traders' responsibilities (including required certifications); g) staff health aspects; h) restriction on retail shops; and i) fines for non-compliance.

[http://www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/pdf/China\\_H7N9\\_final\\_.pdf](http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/China_H7N9_final_.pdf)

### Humans

- Total: 132 cases (37\* deaths, >76 recovered)
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 4 (1)</li><li>○ Hunan 2 (1)</li><li>○ Beijing 2 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (9)</li><li>○ Shanghai 33 (14)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 27 (8)</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li></ul>
---	---

\*National Health and Family Planning Administration (MoH) reported an additional death without specifying the location.

## Diagnosis and virus characteristics

No new information available

## FAO actions

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- FAO's risk management guidelines are available on <http://www.fao.org/docrep/018/aq241e/aq241e.pdf>
- FAO's surveillance guidelines and risk assessment summary are to be posted online 6 June, 2013.**
- Surveillance efforts** in the framework of the USAID-funded FAO Project "Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries" are ongoing in **at risk countries in S-E Asia and South Asia.**
- FAO Viet Nam organised a risk modelling workshop for avian influenza <http://www.fao.org.vn/>
- FAO Indonesia carried out a H7N9 risk-based surveillance training.
- FAO Egypt reported negative results to H7N9 carried out by authorities during their poultry surveillance efforts.**

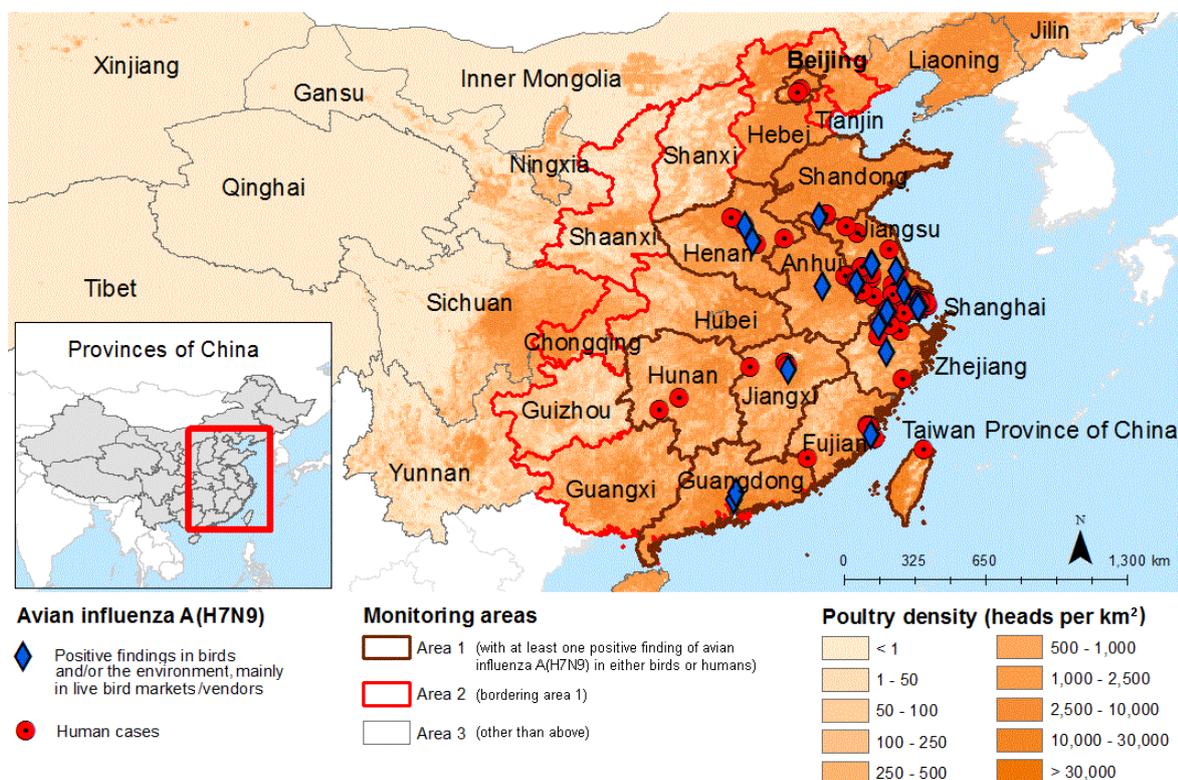
## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
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## Map



Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



# H7N9 situation update

FAO / EMPRES – Animal Health  
27 June 2013 18:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 132 confirmed; **40** deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from LBM/vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Central Government allocated **USD 48.9 million to assist with the poultry industry's recovery of losses** including subsidies for grandparent breeder chickens.
- **Thai authorities are increasing preparedness for H7N9** through simulation, action planning, and surveillance.

### Humans

- Total: 132 cases (**40\*** deaths)
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	2 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 ( <b>16</b> )		

\*MoH reported on additional death without specifying the location.

### Diagnosis and virus characteristics

- One new isolate from Jiangxi province has been added to both GISAID and Genbank; total posted isolates now 54 and 30, respectively.

### Other

- WHO published interim recommendations for laboratories handling human specimens suspected or confirmed of H7N9:  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/InterimRecLaboratoryBioriskManagementH7N9\\_10May13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/InterimRecLaboratoryBioriskManagementH7N9_10May13.pdf)

## FAO actions

- **FAO coordinated a USAID-organized, technical and policy meeting on H7N9 in Bangkok (24–25 June 2013)** hosted by the Government of Thailand. Main issues: i) overview of the H7N9 situation in China; ii) scientific updates iii) review of the toolbox for AI control; and iv) preparedness planning for countries. **No evidence of H7N9 was revealed by preliminary surveillance results on a limited number of samples from countries at high and moderate risk in the**

**region (Viet Nam, Laos, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal).**

Further surveillance activities are ongoing and supported by USAID. USAID press release:

<http://bangkok.usembassy.gov/062613pr.html>

- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO on assessing this event.
- Countries at risk are scaling up surveillance efforts and are collecting additional samples in the framework of the USAID-funded FAO Project “Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries”.
- FAO guidance on [risk management](#), [surveillance](#), [risk assessment](#) summary and [laboratory protocols and algorithms](#) are available [www.fao.org/ag/againfo/programmes/en/empres/H7N9/index.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/index.html)
- FAO has approved three Technical Cooperation Program (TCP) projects for H7N9 (global level, South-East Asia and South Asia). An inter-regional TCP for Africa is being prepared.
- **The Australian Animal Health Laboratory (AAHL), a FAO Reference Centre for Animal Influenza, carried out a backstopping mission in June to Thailand, Viet Nam, Laos, Myanmar, Bangladesh and Indonesia to ensure proper laboratory protocol application.**

### Important links

- Ministry of Agriculture of the People’s Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People’s Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
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# H7N9 situation update

FAO / EMPRES – Animal Health  
04 July 2013 17:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 132 confirmed; 40 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 53 positive samples mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- The MoA released the monthly **Official Veterinary Bulletin** which includes results of the H7N9 surveillance. Out of nearly 330 000 serum samples collected in April from over 26 000 locations, 29 samples tested positive. **Four serum samples originated from 2 layer farms in Henan and Shandong Province.** The rest of the serum samples originated from LBMs/traders in Jiangsu, Henan, Zhejiang Provinces and Shanghai City.

### Humans

- Total: 132 cases (40\* deaths)
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	27 (8)
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
○ Beijing	2 (+ 1 asymptomatic) (0)	○ Jiangxi	6 (1)
○ Zhejiang	46 (9)	○ Fujian	5 (0)
○ Shanghai	33 (16)		

\*MoH did not specify all locations.

### Diagnosis and virus characteristics

- Experimental infection of ferrets shows that H7N9 leads to high morbidity and high mortality; this is in contrast to earlier findings, which showed mild clinical signs (<http://www.sciencemag.org/content/early/2013/05/22/science.1239844.abstract?sid=c8ac8c51-9e72-4a31-ba3f-5a84c8836de2>). Higher infectious doses were linked to earlier disease onset and severity (<http://www.sciencedirect.com/science/article/pii/S0264410X13008803>).
- Total posted isolates on GISAID and Genbank are 54 and 30 respectively.

### FAO actions

- FAO coordinated a USAID-organized, technical and policy meeting on H7N9 in Bangkok (24–25 June 2013) hosted by the Government of Thailand. No evidence of H7N9 was revealed by preliminary surveillance results on a limited number of samples from countries at high and moderate risk in the region (Viet Nam, Laos, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan,

Nepal). Further surveillance activities are ongoing and supported by USAID. USAID press release: <http://bangkok.usembassy.gov/062613pr.html>

- On 14 June FAO urged countries to remain vigilant in the face of H7N9, warning that after an expected summer slow period, the virus is likely to become more active. FAO has stated that now is the time for countries to prepare in order to protect livelihoods. [http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013\\_FAO\\_vigilance\\_h7n9.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013_FAO_vigilance_h7n9.html)
- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
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- The Australian Animal Health Laboratory (AAHL), a FAO Reference Centre for Animal Influenza, carried out a backstopping mission in June to Thailand, Viet Nam, Laos, Myanmar, Bangladesh and Indonesia to ensure proper laboratory protocol application.

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# H7N9 situation update

FAO / EMPRES – Animal Health  
05 July 2013 09:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **133 confirmed; 43 deaths**

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

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## Situation update

### Animals

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### Humans

- Total: **133 cases (43\* deaths)**
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	<b>28 ** (8)</b>
○ Henan	4 (1)	○ Shandong	2 (0)
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○ Shanghai	33 (16)		

\*MoH did not specify all locations.

\*\*One retrospective human case co-infected with H3N2 and H7N9 was reported from Jiangsu Province.

### Diagnosis and virus characteristics

- Experimental infection of ferrets shows that H7N9 leads to high morbidity and high mortality; this is in contrast to earlier findings, which showed mild clinical signs. (Ferrets are the animal model as a proxy for human illness caused by influenza viruses). (<http://www.sciencemag.org/content/early/2013/05/22/science.1239844.abstract?sid=c8ac8c51-9e72-4a31-ba3f-5a84c8836de2>). Higher infectious doses were linked to earlier disease onset and severity (<http://www.sciencedirect.com/science/article/pii/S0264410X13008803>).
- Total posted isolates on GISAID and GenBank are 54 and 30, respectively.

### FAO actions

- FAO coordinated a USAID-organized, technical and policy meeting on H7N9 in Bangkok (24–25 June 2013) hosted by the Government of Thailand. No evidence of H7N9 was revealed by preliminary surveillance results on a limited number of samples from countries at high and

moderate risk in the region (Viet Nam, Laos, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal). Further surveillance activities are ongoing and supported by USAID. USAID press release: <http://bangkok.usembassy.gov/062613pr.html>

- On 14 June FAO urged countries to remain vigilant in the face of H7N9, warning that after an expected summer slow period, the virus is likely to become more active. FAO has stated that now is the time for countries to prepare in order to protect livelihoods. [http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013\\_FAO\\_vigilance\\_h7n9.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013_FAO_vigilance_h7n9.html)
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# H7N9 situation update

FAO / EMPRES – Animal Health  
07 August 2013 09:30 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **133 confirmed; 43 deaths**

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples:  
**54 positive samples** mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- The **MoA** announced their amended "**surveillance program for H7N9 avian influenza in animals** in the second half of 2013", starting this September. The purpose of the program is to timely remove H7N9 infected flocks and to generate scientific information. Targeted are chickens, waterfowl, pigeons, quail, wild birds and the environment in high risk areas. Pigs are no longer mentioned as targets. Each wholesale LBM nationwide will be tested through random sampling along with farmers markets' live bird trading booths, large scale poultry farms, backyard farms, poultry slaughterhouses and migratory bird habitats. 150 serum and swab samples each will be taken per LBM plus 30 environmental samples. The importance of timely reporting and strict disposal of infected flocks is emphasized.

### Humans

- Total: **133 cases (43\* deaths)**
- Geographic breakdown (deaths in parentheses):

○ Anhui	4 (2)	○ Jiangsu	<b>28 ** (8)</b>
○ Henan	4 (1)	○ Shandong	2 (0)
○ Hunan	2 (1)	○ Taiwan Province of China	1 (0)
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○ Shanghai	33 (16)		

\*MoH did not specify all locations.

\*\*One retrospective human case co-infected with H3N2 and H7N9 was reported from Jiangsu Province.

## Diagnosis and virus characteristics

- **Limited human-to-human transmission** of H7N9 has been described in a scientific article, investigating a man from Wuxi, Eastern China, who likely got infected while visiting a LBM and his 32 year-old daughter with no known exposure to poultry. The woman provided unprotected bedside care to her father and developed symptoms 6 days after their last contact. Phylogenetic analysis showed extremely high genetic similarity of the viruses isolated from father and daughter. Forty-three close contacts tested negative for the virus, indicating that no further human-to-human transmission has taken place. The article's full text is available at:  
<http://www.bmj.com/content/347/bmj.f4752.pdf%2Bhtml>.

**Note:** WHO already pointed out in a risk assessment from 13 April 2013 that '[...] possible family clusters suggest that limited human-to-human transmission may occur where there is close contact between cases and other individuals, as occurs in families and, potentially, healthcare settings.' [[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13.pdf)]

- Recent experiments with cell cultures show that the H7N9 virus is well adapted to infect and replicate in the human airway cells. Human alveolar epithelial cells in the lung were identified as a key target for H7N9 virus replication. When comparing different viruses, the H7N9 virus showed to infect and replicate in human bronchus cells just as well as the H1N1 virus, and far more efficiently than the H5N1 virus. [http://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(13\)70138-3/abstract](http://www.thelancet.com/journals/lanres/article/PIIS2213-2600(13)70138-3/abstract)

## FAO actions

- FAO coordinated a USAID-organized, technical and policy meeting on H7N9 in Bangkok (24–25 June 2013) hosted by the Government of Thailand. No evidence of H7N9 was revealed by preliminary surveillance results on a limited number of samples from countries at high and moderate risk in the region (Viet Nam, Laos, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal). Further surveillance activities are ongoing and supported by USAID. USAID press release: <http://bangkok.usembassy.gov/062613pr.html>
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**\*\* NOT FOR GENERAL DISTRIBUTION \*\***

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# H7N9 situation update

FAO / EMPRES – Animal Health  
08 August 2013 17:00 Rome



## Overview

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*Country:* People's Republic of China

*Number of human cases:* **133 confirmed; 43 deaths**

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**54 positive samples** mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- **In Sept 2013, MoA will begin their amended surveillance programme** for remainder of the year.
  - Objective: timely removal of H7N9 infected flocks and generation of scientific information.
  - Targets: chickens, waterfowl, pigeons, quail, wild birds and the environment in high risk areas. Pigs no longer mentioned as targets.
  - MoA will conduct random, nationwide sampling of wholesale live bird markets (LBMs), live bird trading booths in farmers markets, large scale poultry farms, backyard farms, poultry slaughterhouses and migratory bird habitats.
  - Veterinary services will take 150 serum, 150 swab and 30 environmental samples at each LBM.
  - Programme emphasizes the importance of timely reporting and strict disposal of infected flocks.

### Humans

- Total: **133 cases (43\* deaths)**
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 4 (1)</li><li>○ Hunan 2 (1)</li><li>○ Beijing 2 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (9)</li><li>○ Shanghai 33 (16)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu <b>28</b> ** (8)</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li></ul>
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\*MoH did not specify all locations.

\*\*One retrospective human case co-infected with H3N2 and H7N9 was reported from Jiangsu Province.

### Diagnosis and virus characteristics

- **Limited human-to-human transmission** of H7N9 has been described [in a scientific article](#)
  - Two cases: 1. Man from Wuxi, Eastern China likely got infected while visiting a LBM; 2. his 32 year-old daughter with no known exposure to poultry.
  - The woman provided unprotected bedside care to her father and developed symptoms six days after their last contact.
  - Phylogenetic analysis showed extremely high genetic similarity of the viruses isolated from father and daughter. Forty-three close contacts tested negative for the virus, indicating that no

further human-to-human transmission has taken place. Article:

<http://www.bmj.com/content/347/bmj.f4752.pdf%2Bhtml>.

- WHO pointed out on 13 April that possible family clusters suggest limited human-to-human transmission may occur where there is close contact between cases and other individuals: [http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13.pdf)
- Recent experiments with cell cultures show H7N9 virus well adapted to infect and replicate in the human airway cells. Human alveolar epithelial cells in the lung were identified as a key target for H7N9 virus replication. When comparing different viruses, the H7N9 virus showed to infect and replicate in human bronchus cells just as well as the H1N1 virus, and far more efficiently than the H5N1 virus. [http://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(13\)70138-3/abstract](http://www.thelancet.com/journals/lanres/article/PIIS2213-2600(13)70138-3/abstract)

## FAO actions

- FAO coordinated a USAID-organized, technical and policy meeting on H7N9 in Bangkok (24–25 June 2013) hosted by the Government of Thailand. No evidence of H7N9 was revealed by preliminary surveillance results on a limited number of samples from countries at high and moderate risk in the region (Viet Nam, Laos, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal). Further surveillance activities are ongoing and supported by USAID. USAID press release: <http://bangkok.usembassy.gov/062613pr.html>
- On 14 June FAO urged countries to remain vigilant in the face of H7N9, warning that after an expected summer slow period, the virus is likely to become more active: [http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013\\_FAO\\_vigilance\\_h7n9.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013_FAO_vigilance_h7n9.html)
- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- ECTAD China is working closely with Chinese health authorities and WHO.
- Countries at risk are scaling up surveillance efforts and are collecting additional samples in the framework of the USAID-funded FAO Project “Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries”.
- FAO guidance on [risk management](#), [surveillance](#), [risk assessment](#) summary and [laboratory protocols and algorithms](#) are available [www.fao.org/ag/againfo/programmes/en/empres/H7N9/index.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/index.html)
- FAO has approved three Technical Cooperation Program (TCP) projects for H7N9 (global level, South-East Asia and South Asia). An inter-regional TCP for Africa is being prepared.

## Important links

- Ministry of Agriculture of the People’s Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People’s Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
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- Latest WHO review: [http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/WHO\\_H7N9\\_review\\_31May13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/WHO_H7N9_review_31May13.pdf)
- WHO interim recommendations on laboratory biorisk: [http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/InterimRecLaboratoryBioriskManagementH7N9\\_10May13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/InterimRecLaboratoryBioriskManagementH7N9_10May13.pdf)
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource data base: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

# H7N9 situation update

FAO / EMPRES – Animal Health  
09 August 2013 17:00 Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **134 confirmed; 43 deaths**

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong (confirmed poultry), Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 54 positive samples mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

**In Sept 2013, China will begin implementing its amended surveillance programme in animals for remainder of the year.**

- Objective: timely removal of H7N9 infected flocks and generation of scientific information.
- Targets: chickens, waterfowl, pigeons, quail, wild birds and the environment in high risk areas. Pigs no longer mentioned as targets.
- Authorities will conduct random, nationwide sampling of wholesale live bird markets (LBMs), live bird trading booths in farmers markets, large scale poultry farms, backyard farms, poultry slaughterhouses and migratory bird habitats.
- Veterinary services will take 150 serum, 150 swab and 30 environmental samples at each LBM.
- Programme emphasizes the importance of timely reporting and strict disposal of infected flocks.

### Humans

- Total: **134 cases (43\* deaths)**
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 4 (1)</li><li>○ Hunan 2 (1)</li><li>○ Beijing 2 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (9)</li><li>○ Shanghai 33 (16)</li></ul>	<ul style="list-style-type: none"><li>○ Jiangsu 28 ** (8)</li><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li><li>○ Hebei 1 (0)</li></ul>
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\*MoH did not specify all locations.

- **On 9 August (today) a 51-year old woman tested positive for H7N9 by Guangdong Province Department of Health:**
  - Case found during screening for routine influenza-like illness
  - The woman works slaughtering poultry at a market.
  - An epidemiological investigation ongoing: 36 close contacts placed under medical observation;
  - Sample sent to the China CDC for confirmation and official reporting (not included in table above). <http://www.gdwst.gov.cn/a/zwxw/2013080910821.html>

### Diagnosis and virus characteristics

- **Limited human-to-human transmission** of H7N9 has been described [in a scientific article](#)
  - Two cases: 1. Man from Wuxi, Eastern China likely got infected while visiting a LBM; 2. his 32 year-old daughter with no known exposure to poultry.

- Woman provided unprotected bedside care to father; developed symptoms 6 days post-contact.
- Phylogenetic analysis showed extremely high genetic similarity of the viruses isolated from father and daughter. Forty-three close contacts tested negative for the virus, indicating that no further human-to-human transmission has taken place.  
<http://www.bmj.com/content/347/bmj.f4752.pdf%2Bhtml>.
- WHO pointed out on 13 April that possible family clusters suggest limited human-to-human transmission may occur where there is close contact between cases and other individuals:  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_13Apr13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13.pdf)
- Recent cell culture experiments show H7N9 virus well adapted to infect and replicate in the human respiratory airway cells. Human alveolar epithelial cells in the lung were identified as a key target for H7N9 virus replication. When comparing different viruses, the H7N9 virus showed to infect and replicate in human bronchus cells just as well as the H1N1 virus but more efficiently than the H5N1 virus. [http://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(13\)70138-3/abstract](http://www.thelancet.com/journals/lanres/article/PIIS2213-2600(13)70138-3/abstract)

## FAO actions

- FAO coordinated a USAID-organized, technical and policy meeting on H7N9 in Bangkok (24–25 June 2013) hosted by the Government of Thailand. No evidence of H7N9 was revealed by preliminary surveillance results on a limited number of samples from countries at high and moderate risk in the region (Viet Nam, Lao PDR, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal). Further surveillance activities are ongoing and supported by USAID.:  
<http://bangkok.usembassy.gov/062613pr.html>
- On 14 June FAO urged countries to remain vigilant in the face of H7N9, warning that after an expected summer slow period, the virus is likely to become more active:  
[http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013\\_FAO\\_vigilance\\_h7n9.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/2013_FAO_vigilance_h7n9.html)
- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- Countries at risk are scaling up surveillance efforts and are collecting additional samples in the framework of the USAID-funded FAO Project “Emergency Surveillance response to Avian Influenza A (H7N9) in China and High Risk Countries”.
- FAO guidance on [risk management](#), [surveillance](#), [risk assessment](#) summary and [laboratory protocols and algorithms](#) are available  
[www.fao.org/ag/againfo/programmes/en/empres/H7N9/index.html](http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/index.html)
- FAO has approved four Technical Cooperation Program (TCP) projects for H7N9 (global level, South-East Asia and South Asia), and an inter-regional TCP for Africa. **Launching workshops for the Southeast Asia and Southern Asia TCP will be held mid-September 2013.**

## Important links

- Ministry of Agriculture of the People’s Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People’s Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO press release: [www.fao.org/news/story/en/item/173655/icode/](http://www.fao.org/news/story/en/item/173655/icode/)
- FAO Frequently Asked Questions: [www.fao.org/news/story/en/item/173704/icode/](http://www.fao.org/news/story/en/item/173704/icode/)
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
- FAO/OIE network of expertise on animal influenza: [www.offlu.net](http://www.offlu.net)
- WHO disease outbreak news: [www.who.int/csr/don/archive/year/2013/en/index.html](http://www.who.int/csr/don/archive/year/2013/en/index.html)
- Latest WHO review:  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/WHO\\_H7N9\\_review\\_31May13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/WHO_H7N9_review_31May13.pdf)
- WHO interim recommendations on laboratory biorisk:  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/InterimRecLaboratoryBioriskManagementH7N9\\_10May13.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/InterimRecLaboratoryBioriskManagementH7N9_10May13.pdf)
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: [www.cdc.gov/flu/](http://www.cdc.gov/flu/)
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource data base: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

# H7N9 situation update

FAO / EMPRES – Animal Health  
12 August 2013, 1800 hours; Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **135 confirmed; 44 deaths**

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 54 positive samples mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Guangdong Province, Hangzhou City:
  - **Emergency Task Force** on human infection, prevention and control urged that authorities daily cleaning, weekly disinfection and monthly rest days for live bird markets (LBMs).
  - Boluo town market (Boluo County, Hangzhou City) closed for 3 days due to the human case
  - **All LBMs under Hangzhou City administration closed on a rotational basis for 3 days of cleaning and disinfection.**
  - All 775 swabs taken from 28 poultry farms in Hangzhou City resulted negative.
  - On 11 August authorities conducted an epidemiological survey of H7N9 in all townships in Hangzhou City. In each township, authorities took 30 samples from 2 random poultry farms; 30 samples from every poultry slaughterhouse. In addition 15 samples of each species found in wholesale LBMs in Hui Cheng district. Testing is being carried out by the Hangzhou City ACDC. **All of the 1,588 samples from Boluo County tested negative.**
- Since June, nearly 30,000 poultry samples across the province were tested and resulted negative.

### Humans

- Total: **135 cases (44\* deaths, 87 discharged)**
- Geographic breakdown (deaths in parentheses):

<ul style="list-style-type: none"><li>○ Anhui 4 (2)</li><li>○ Henan 4 (1)</li><li>○ Hunan 2 (1)</li><li>○ Beijing 2 (+ 1 asymptomatic) (0)</li><li>○ Zhejiang 46 (9)</li><li>○ Shanghai 33 (16)</li><li>○ Jiangsu 28 (8)</li></ul>	<ul style="list-style-type: none"><li>○ Shandong 2 (0)</li><li>○ Taiwan Province of China 1 (0)</li><li>○ Jiangxi 6 (1)</li><li>○ Fujian 5 (0)</li><li>○ Hebei 1 (0)</li><li>○ Guangdong 1 (0)</li></ul>
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\*MoH did not specify all locations.

- **Guangdong:**
  - The 51 year old woman lives in Boluo County and worked in Boluo town farmers' market
  - The woman's son is under strict observation after having developed light fever on 9 August evening. Tests performed so far have been negative for H7N9.
- **A serological study** showed that 1 129 samples taken from the general population were negative, while 6% of 396 samples from poultry workers showed positive titers: <http://ow.ly/nQEbP>

## Diagnosis and virus characteristics

- New isolates have been submitted some GISAID and GenBank / OpenFlu database:

Host	GISAID	GenBank/OpenFluDB
Chicken	24	20
Duck	2	2
Environment	15	14
Human	48	31
Pigeon	5	3
Grand Total	94	70

## FAO actions

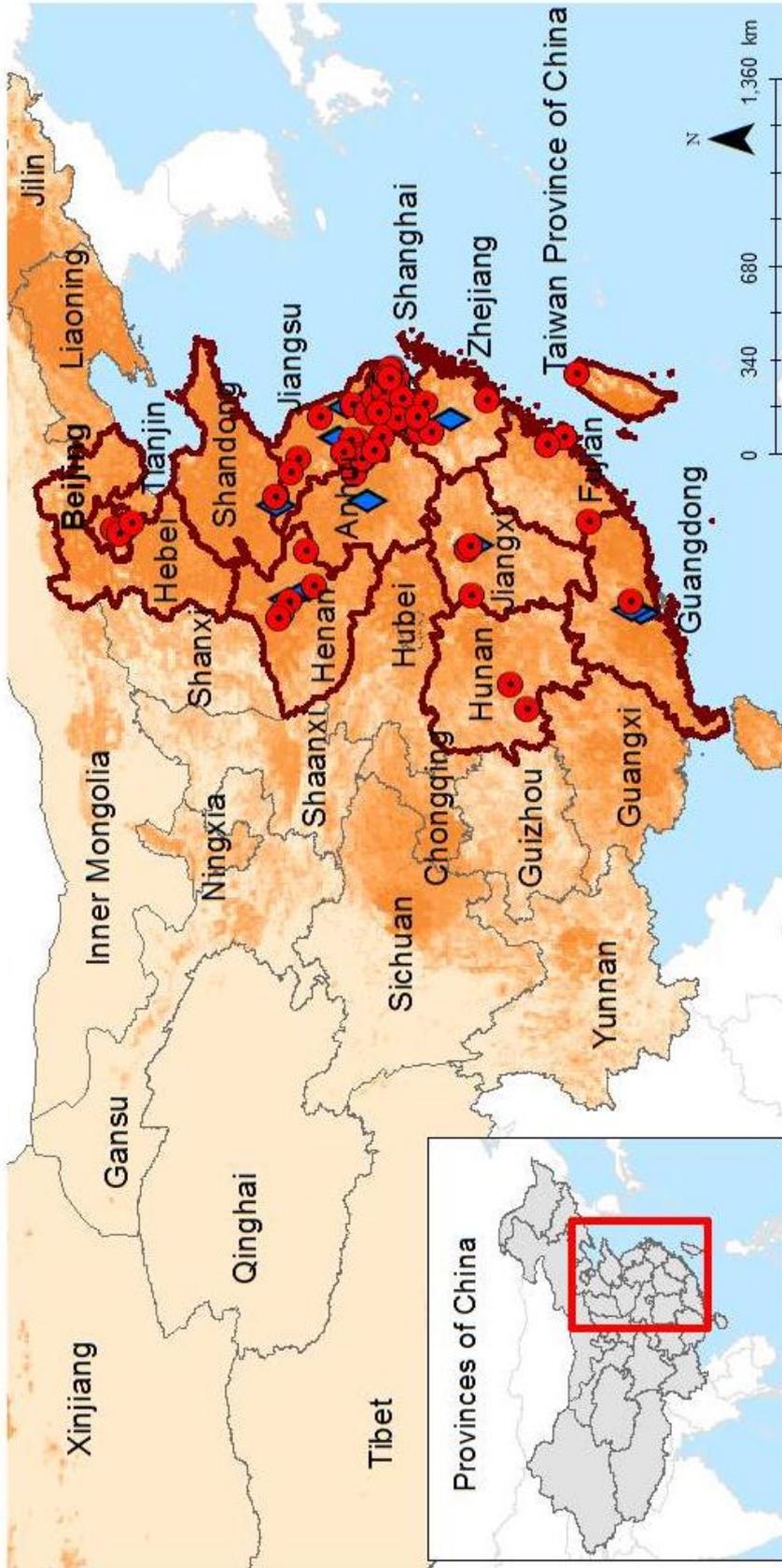
- FAO coordinated a USAID-organized meeting on H7N9 in Bangkok (24–25 June 2013) hosted by Thailand. No evidence of H7N9 from countries at high and moderate risk in the region (Viet Nam, Lao PDR, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal). Further surveillance activities are ongoing and supported by USAID: <http://bangkok.usembassy.gov/062613pr.html>
- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its new web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- At risk countries scaling up surveillance and sampling under a USAID-funded FAO project
- FAO guidance on [risk management](#), [surveillance](#), [risk assessment](#) and [lab protocols](#): [ow.ly/nQCE7](http://ow.ly/nQCE7)
- FAO approved four TCPs for H7N9: 1. Global, 2. Southeast Asia, 3. South Asia and 4. Africa. Asia launch workshops to be held September 2013.

## Important links

- Ministry of Agriculture of the People's Republic of China: [www.moa.gov.cn/zwl/m/yjgl/yqfb/](http://www.moa.gov.cn/zwl/m/yjgl/yqfb/)
- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO latest public messaging: <http://ow.ly/nQD2t>
- FAO Frequently Asked Questions: <http://ow.ly/nQDIF>
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
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- Latest WHO review: <http://ow.ly/nQDA7>
- WHO interim recommendations on laboratory biorisk: <http://ow.ly/nQDOn>
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/avianflu/h7n9-virus.htm>
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource data base: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

Map

Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



**Poultry density (heads per km2)**

- 500 - 1,000
- 1,000 - 2,500
- 2,500 - 10,000
- 10,000 - 30,000
- > 30,000

**20130812\_human\_cases**

**20130603\_animal\_cases**

**Infected provinces**

Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

12 August 2013

# H7N9 situation update

FAO / EMPRES – Animal Health  
13 August 2013, 13.30 hours; Rome



## Overview

*Situation:* avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* **135 confirmed; 45 deaths**

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 54 positive samples mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

## Situation update

### Animals

- Guangdong Province, Hangzhou City:
  - **Emergency Task Force** on human infection, prevention and control urged that authorities daily cleaning, weekly disinfection and monthly rest days for live bird markets (LBMs).
  - Boluo town market (Boluo County, Hangzhou City) closed for 3 days due to the human case
  - **All LBMs under Hangzhou City administration closed on a rotational basis for 3 days for cleaning and disinfection.**
  - All 775 swabs taken from 28 poultry farms in Hangzhou City resulted negative.
  - On 11 August authorities conducted an epidemiological survey of H7N9 in all townships in Hangzhou City. In each township, authorities took 30 samples from 2 random poultry farms; 30 samples from every poultry slaughterhouse. In addition 15 samples of each species found in wholesale LBMs in Hui Cheng district. Testing carried out by the Hangzhou City ACDC. **All of the 1,588 samples from Boluo County tested negative.**
- Since June, nearly 30,000 poultry samples collected throughout the province were found negative.

### Humans

- Total: **135 cases (45\* deaths, 87 discharged)**; Most human cases in Zhejiang Shanghai, and Jiangsu provinces/municipalities. **A serological study** showed that 1,129 samples taken from the general population were negative, while 6% of 396 samples from poultry workers showed positive titers: <http://ow.ly/nQEbP>.
- In southern **Guangdong Province - first human case** (11 August, 2013):
  - The 51-year old woman lives in Boluo County and worked in Boluo town farmers' market
  - The woman's son is under strict observation after having developed light fever on 9 August evening. Tests performed so far have been negative for H7N9.

### Diagnosis and virus characteristics

- **New isolates have been submitted some GISAID and GenBank / OpenFlu database:**

Host	GISAID	GenBank/OpenFluDB
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## FAO actions

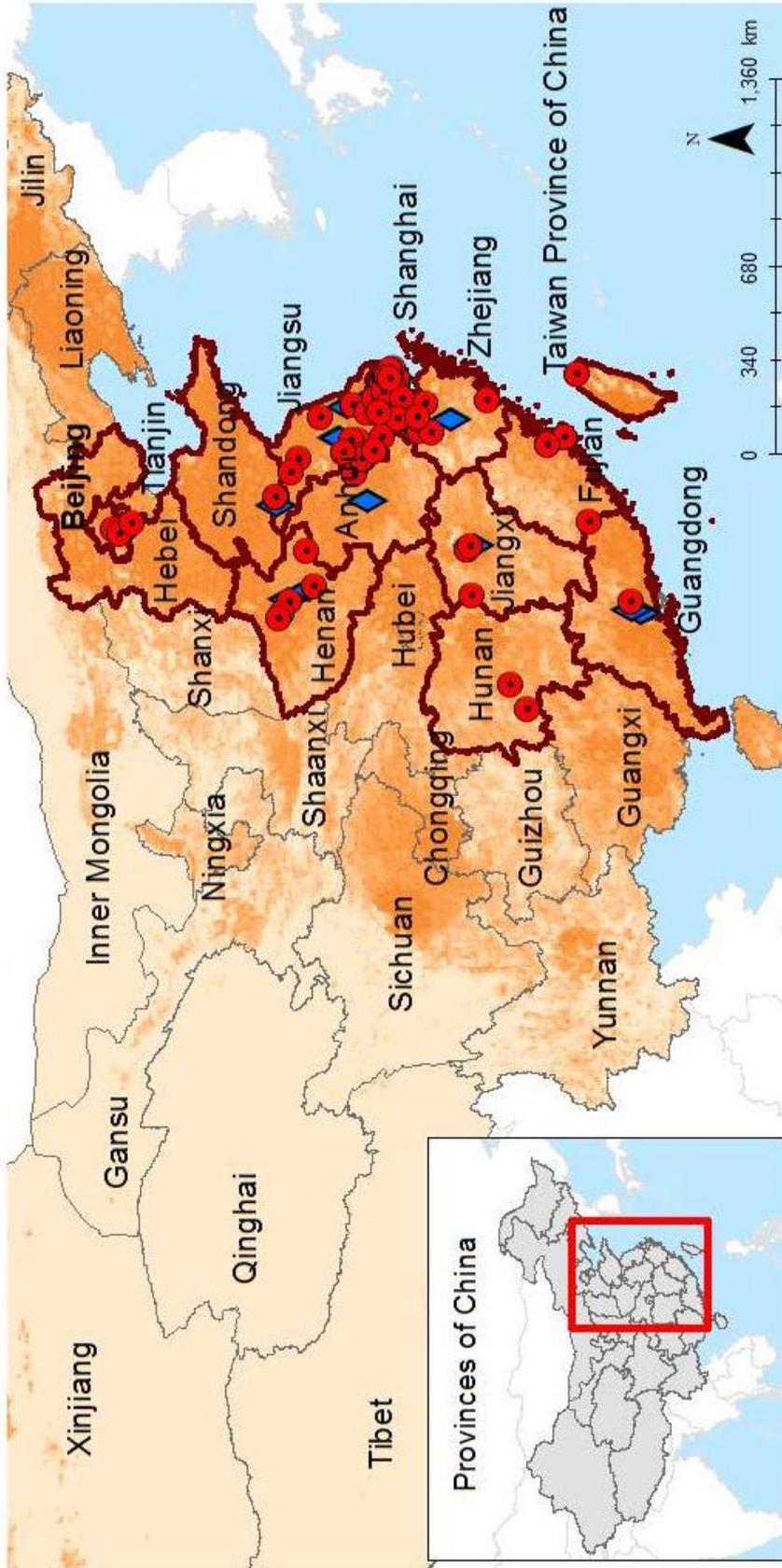
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## Important links

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- Ministry of Forestry of the People's Republic of China: [www.forestry.gov.cn](http://www.forestry.gov.cn)
- FAO latest public messaging: <http://ow.ly/nQD2t>
- FAO Frequently Asked Questions: <http://ow.ly/nQDIF>
- FAO/EMPRES Animal Health News: [www.fao.org/ag/againfo/programmes/en/empres/news.htm](http://www.fao.org/ag/againfo/programmes/en/empres/news.htm)
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- Latest WHO review: <http://ow.ly/nQDA7>
- WHO interim recommendations on laboratory biorisk: <http://ow.ly/nQDOn>
- World Animal Health Information Database: [www.oie.int/wahis\\_2/public/wahid.php](http://www.oie.int/wahis_2/public/wahid.php)
- Centers for Disease Control and Prevention: <http://www.cdc.gov/flu/avianflu/h7n9-virus.htm>
- Global Initiative on Sharing Avian Influenza Data: [www.gisaid.org](http://www.gisaid.org)
- NCBI Influenza Virus Resource data base: <http://www.ncbi.nlm.nih.gov/genomes/FLU/>

Map

Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors



12 August 2013  
Source: poultry density data from Wint and Robinson (2007); administrative boundary from GAUL (2008)

**H7N9 situation update**  
FAO / EMPRES Animal Health  
23 August 2013; 1900 hours, Rome



**Overview**

*Situation:* Avian influenza A(H7N9) virus with pandemic potential

*Country:* People's Republic of China

*Number of human cases:* 135 confirmed; 45 deaths

*Provinces/municipalities:* Beijing and Shanghai; Anhui, Fujian, Guangdong, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang and Taiwan Province of China

*Findings in animals:* H7N9 confirmed in pigeons, chickens, ducks and environmental samples: 54 positive samples mainly from live bird markets and vendors

*FAO actions:* liaise with China and partners, monitor situation, explore and assess virus characteristics, conduct market chain analysis, risk assessment, surveillance guidance and communication.

**Animal situation**

- **New research results show 8 positive out of 1,113 chicken samples from LBMs** in Rizhao (Shandong Province). Five isolates have been submitted to GenBank. In this study, other H7 viruses have been found (H7N7) which have known potential to infect mammals.
- MoA has provided guidelines for surveillance to be conducted in September 2013 in all provinces.

**Human situation**

- Total: 135 cases (45\* deaths)

**Diagnosis and virus characteristics**

- **Molecular analysis indicate that H7N9 most likely arose between mid-2011 and mid-2012. New isolates have been submitted some GISAID and GenBank / OpenFlu database:**

Host	GISAID	GenBank/OpenFluDB
Chicken	24	<b>25</b>
Duck	2	2
Environment	15	14
Human	48	<b>33</b>
Pigeon	5	3
Grand Total	94	<b>77</b>

**FAO actions**

- FAO coordinated a USAID-organized meeting on H7N9 in Bangkok (24–25 June) hosted by Thailand. No evidence of H7N9 from countries at high and moderate risk in the region (Viet Nam, Lao PDR, Myanmar, Indonesia, Cambodia, Bangladesh, Bhutan, Nepal). Further surveillance activities are ongoing and [supported by USAID](#).
- On 26 April FAO called for USD 35 million to support the new global framework on H7N9.
- On 26 April FAO made public its web portal on H7N9: [www.fao.org/h7n9](http://www.fao.org/h7n9)
- At-risk countries scaling up surveillance and sampling under a USAID-funded FAO project.
- FAO provided guidance on [risk management](#), [surveillance](#), [risk assessment](#) and [lab protocols](#).
- FAO approved four TCPs for H7N9: 1. Global, 2. Southeast Asia, 3. South Asia and 4. Africa. Asia launch workshops to be held September 2013.
- **The joint FAO/IAEA division in Vienna is holding a training course on H7N9 (19–30 August) for East European countries; In September a similar course will be conducted for Asian countries; FAO HQ officers gave a situation and technical overview.**

**Important links**

- [Ministry of Agriculture](#) of the People's Republic of China
- [Ministry of Forestry](#) of the People's Republic of China
- FAO public messaging [via AGA website](#)

- [FAO Frequently Asked Questions via FAO H7N9 website](#)
- [FAO/EMPRES Animal Health News](#)
- [FAO/OIE network of expertise on animal influenza](#)
- [WHO disease outbreak news](#)
- Latest [WHO review](#) as of 31 May
- [WHO interim recommendations on laboratory biorisk](#) as of 10 May
- [World Animal Health Information Database](#)
- [Centers for Disease Control and Prevention H7n9 page](#)
- [Global Initiative on Sharing Avian Influenza Data](#)
- [National Center for Biotechnology Information - Influenza Virus Resource database](#)

**Map**

Avian influenza A(H7N9) human cases and positive findings in birds and the environment, mainly in live bird markets / vendors

