Fly-tech to shed light on wild bird role in avian flu spread

FAO experts are part of an international scientific team behind an innovative project to track the migratory journey of ten whooper swans from Mongolia to their wintering grounds on the other side of the Himalayas – they hope the light solar-powered global positioning system (GPS) satellite transmitters strapped to the birds’ backs will help shed light on how wild birds may be involved in the spread of avian influenza.

On the ground, the scientists will pick up the traces of the birds’ movements from the radio signals emitted by their backpacks and bounced back to the ground from overhead satellites.

Recommendations from the FAO-OIE International Scientific Conference on Avian Influenza and Wild Birds in May in Rome include improving our understanding of wild bird behaviour, precise migratory strategies, locations of aggregation and convergence, and interactions between wildlife and domestic species.

In August, a team of international scientists from FAO and the U.S. Geological Survey (USGS) joined the Wildlife Conservation Society (WCS) and Mongolian Academy of Sciences (MAS) in the surveillance project, which is part of the Wild Bird Global Avian Influenza Network for Surveillance (GAINS) programme funded by USAID.

Whooper swans were captured by the international team on the grassland steppe of far eastern Mongolia, near the borders of Russian and China. Each year, swans moult their feathers after the breeding season, and during that flightless period, the birds were captured by biologists in boats and on foot. Small, 70-gram solar-powered transmitters were tied to the backs of 10 of the 8-kilogram large swans with backpack harnesses. The harnesses are made of Teflon ribbon that deteriorates and falls off of the birds within a few years.

The research is providing information on migration routes and informs governments about potential threats from diseases such as highly pathogenic avian influenza (HPAI). “We are working to understand the role wild birds may play in the spread of H5N1,” said Dr Scott Newman, International Wildlife Coordinator for Avian Influenza for FAO, seconded from WCS. “Although poultry and bird trade are probably the primary routes of movement, migratory birds are likely involved in some areas.”

Whooper swans drew increased attention after large numbers perished in Mongolia in 2005 and in western China in 2005 and 2006 in areas where few poultry are present. Subsequent sampling of the dead swans by WCS scientists Drs Martin Gilbert and William Karesh, verified that some of the swans were infected with HPAI.

This discovery suggested that HPAI may be moving through the region and potentially spreading from it, prompting the study to identify where these migratory bird populations fly in the winter. “Although we are sampling wild birds for avian influenza in the field, we will not be able to fully understand their role in this disease unless we better understand their movements,” said Dr Karesh, who is WCS’s director of the Field Veterinary Program in New York and coordinator of the GAINS system. “WCS samples birds in East Asia under the GAINS program, but when we find infected birds, we need to know where they are going.”

The whooper swan locations are being updated twice weekly on a project webpage that also includes access to the data in Google Earth format. A comprehensive database of information on international wild bird avian influenza surveillance and migratory bird activity is available on the WCS website at http://www.gains.org.

“The whooper swan project in Mongolia demonstrates the importance that FAO places on understanding the relationship between agricultural, wildlife, and human health,” Newman said.

Joint regional animal health centres

There is currently one joint regional animal health centre fully operational, in Bangkok. The centre planned for Bamako, Mali, is currently being established in collaboration with the World Organisation for Animal Health (OIE) and the African Union’s Inter-African Bureau of Animal Resources (AU-IBAR). Regional coordinators are being identified for offices covering other regions (Tunis, Beirut, Nairobi and Gaborone). Mid-range plans have been prepared for additional joint regional animal health centres in Latin America, Eastern Europe/Caucasus and Central Asia.

See FAO’s messages on what to do and what not to do on the avian flu website www.fao.org/avianflu
Africa

ECTAD is beginning the process of planning for the Bamako pledging conference scheduled for December 6-8. The African Union’s International Bureau of Animal Resources (AU-IBAR) has been given the lead technical role at the conference. Over the coming weeks, ECTAD staff will be working with counterparts from AU-IBAR and other platforms in Africa to develop the technical material to be presented to donors ahead of the conference.

An ECTAD veterinary expert and an operations officer have returned from a mission to Sierra Leone and Liberia, where they assessed country needs, evaluated national response capacity, assisted emergency preparedness response and began developing project proposals. The veterinary expert reported that Sierra Leone’s national HPAI taskforce is well organised and supported by a strong political commitment, transparency and a good level of cooperation between the animal and human health authorities. The taskforce has already begun some public information activities but financial constraints are severe. In Liberia, however, veterinary infrastructure is virtually nil (largely as a result of the damage caused by years of civil conflict) and an outbreak there would have devastating effects.

Discussions with USAID locally are based on developing prompt access to emergency kits in case of outbreaks, while planning is now under way to establish operational activities in these countries using funds from the Special Fund for Emergency and Rehabilitation Activities (SFERA), FAO’s rapid and flexible financing mechanism for helping meet countries’ needs by advancing non-earmarked working capital against donor commitments to avian influenza. SFERA is funded by the governments of China, France, Greece, Jordan, Norway, Saudi Arabia, Sweden and Switzerland.

FAO staff will take part in joint missions with the World Bank to Sierra Leone and Liberia at the end of September, and will also be undertaking a mission to Chad.

Latin America

Four inception workshops for FAO’s Latin America and Caribbean technical cooperation programmes (TCPs) have now been held in Buenos Aires (Argentina), San Salvador (El Salvador), Lima (Peru) and Bridgetown (Barbados).

Overall funding situation
20 September 2006

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**Funding Gaps**

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FAO handbook offers guidance to small poultry farmers

In order to help prevent a possible outbreak of avian flu in Latin America and the Caribbean and enhance public awareness of the threat posed by the disease, FAO has published a new handbook targeted especially to the region’s small-scale poultry farmers. The Guide to the prevention and control of avian flu in small-scale poultry farming in Latin America and the Caribbean (Guía para la prevención y el control de la gripe aviar en la avicultura de pequeña escala en América Latina y el Caribe) stresses the measures needed to ensure on-farm biosecurity and prevent contact between domestic poultry and potentially infected wild birds.

“This information is specifically designed to meet the needs of small-scale and farmyard poultry production units. The handbook stresses simple and affordable methods to prevent and control the disease,” said Joseph Domenech, Chief of FAO’s Animal Health Service.

The handbook is intended for widespread distribution and has been made available free-of-charge on FAO’s avian flu website. It will also be circulated among the staff of local veterinary services and livestock technicians working with small-scale producers in Latin America and the Caribbean. The book grew out of a similar publication aimed at small-holders in Southeast Asia.

FAO is concerned that if avian flu does appear in Latin America and the Caribbean it will threaten the food security of the most vulnerable groups in the region. In these countries, poultry generally accounts for over 70 percent of animal protein consumption. An outbreak would also have huge repercussions on this important livestock sub-sector. The American region is the world’s leading poultry producer (current stocks are 4,850 million head), with Brazil topping the list. The poultry industry, which is expanding throughout the continent, has become a major source of income and employment and makes an important contribution to rural and peri-urban development. Healthcare systems in the region’s small and financially-strapped countries would also encounter serious difficulties when trying to check the spread of the disease.

There is the possibility that wild birds could introduce the virus into the continent, and domestic poultry smuggling and informal trading within and between the countries in the region, as well as popular cockfighting contests, could also contribute to the expansion of avian influenza.

To address this threat, FAO recently approved four regional projects for the Southern Cone region, the Andean Region and Central America and the Caribbean* to enhance preventive measures and heighten their capacity to respond to any future outbreaks of bird flu.

The main thrust of these projects is to bolster the capabilities of countries to generate and share information on avian influenza, draw up early warning and rapid reaction plans and improve their understanding of the risk posed by migrating birds and trade in wild birds. Among other measures, epidemiological monitoring and diagnostic laboratories will be improved, as will cooperation with existing information networks such as the Global Livestock Early Warning System (GLEWS) and the OIE/FAO Expert Influenza Network (OFFLU).

*Crisis management
Dr Karin Schwabenbauer, former chief veterinary officer of the Federal Republic of Germany, has taken up a three-year position as interim head of the Crisis Management Centre (CMC) on secondment from her national government. More staff seconded from FAO member governments will be arriving shortly to take up positions within the CMC, funding for which is being provided by USAID and the government of Germany. The official launch of the centre, which will coordinate rapid assessment and deployment capacity for FAO’s avian flu programme, is scheduled for mid-October. The centre is a joint initiative of FAO and the World Organisation for Animal Health (OIE) and will collaborate closely with the World Health Organisation (WHO). A joint workshop bringing together staff from all three organisations was held on August 17 to strengthen inter-organizational cooperation by developing standard operating procedures.

*The Southern Cone: Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay. The Andean Region: Colombia, Ecuador, Peru and Venezuela. Central America (8 countries): Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama. The Caribbean: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St Kitts and Nevis, St Vincent and the Grenadines, Saint Lucia, Suriname and Trinidad and Tobago.
Wild birds on the web

The scientific committee of the FAO/OIE International Scientific Conference on Avian Influenza and Wild Birds in May has released its final recommendations. Readers will find these on the Avian Flu website at http://www.fao.org/docs/eims/upload//213826/AI_recommandationswildbirds.pdf

Wild bird surveillance

ECTAD staff hosted a meeting August 24-25 at FAO headquarters with representatives of the Centre de cooperation internationale en recherché agronomique pour le développement (CIRAD) and Wetlands International to review operational and technical progress on wild bird surveillance as part of the technical cooperation programme (TCP) projects for avian influenza.