1. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “All these preliminary studies and interviews and collection of data and so on will help pinpoint both in time and in geographic terms where to look for the source; and it could be again, in this case, it could be again around the markets in Wuhan, but it could also be outside or further out, and therefore, there is no point jumping and starting to testing animals all over the place before having done this groundwork.”

1. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “We’ve learned a lot about the disease and we know that the vast majority of cases have no or mild symptoms so it would not be surprising if at that time there were a lot of mild cases that were undetected because we didn’t even know they were mild cases at that time. And that could explain how some of the people who had no link with the market could have been infected…”

3. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “What would be of great help is if we could get hold of the virus before it adapted to humans, before the version we have now, because then we would better understand how it adapted to humans, how it evolved and what are the changes in the make-up of the virus that most likely did this adaptation. Because now we can see different structures of the virus, we can see mutations
sometimes, but we don’t really understand which mutation is critical and which one is less
critical; because they are mutating all the time and in 99 per cent of the case this mutation
means nothing and we have to understand the critical ones.”

4. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “It’s not too
late, and as I said for the MERS virus, it took about a year before we found the source. So it’s
never too late but it’s important that we try to find the source and understand what happened at
the start of the event to avoid a repeat of this event and to avoid another spillover event in
coming years with other different viruses.”

1. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “But the vast
majority can be fixed, can be better organized, because it’s often a question of waste
management, it’s a question of people movement and goods movement, it’s a question of
separating live animals from animal products and from products that are fresh and cooked
products, it’s a question of separating fresh fruits and vegetables from meat products or from
live animals. It’s a question of separating the public from the live animals and the people
vending and slaughtering these animals; so it’s more about management than regulations and
inspections and cleaning and disinfections.”

6. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “Cats and
these felines are susceptible to the virus; studies with cats have also shown that cats can also
transmit the disease to other cats, so this is a group of animals that is interesting to look at,
because they are susceptible to the virus. Ferrets have also been shown to be susceptible to the
virus, dogs to some extent, but not as efficiently and other species, like domestic species, like
pigs, like poultry, chicken and turkey and the like do not seem to be susceptible to the disease,
which is good news because we are producing and raising these animals on a very large scale.”

7. SOUNDBITE (EN) - Dr Peter K. Ben Embarek, Food Safety and Zoonosis Expert, WHO:
“There has been discussion about mosquitos and whether other animals could transmit the virus
and that’s not the case. These viruses have very specific affinities to certain animal species and
again to their ability to attach and infect specific cells of different species. They cannot at all
invade and infect particular animal species so it’s not like can invade whatever they touch or
move into.”

8. SOUNDBITE (EN) - Dr Peter Embarek, Food Safety and Zoonosis Expert, WHO: “China has
most probably and most likely all the expertise needed to do the investigations; they have a lot of
very qualified researchers to do that, but as I said, it is often useful sometimes to have
discussions and collaborations with groups and with researchers and with people from all over
the world who have had, gone through similar events and similar studies and have things to
share, have experience to share and that has always enriched and improve the speed and quality
and likelihood of success of these very complex studies.”
Virus hunters continue search for animal link to COVID-19 infections in people

The key work of tracing the animal transmission source of the COVID-19 coronavirus infection in humans is ongoing and must be carried out to prevent future health emergencies, a top UN health agency scientist said on Friday, after the World Health Organization (WHO) confirmed more than 3.5 million cases of infection and 250,000 deaths globally.

Since the respiratory disease emerged in central China in late December, health officials have raced to locate where and how the virus was first transmitted from its animal host to humans.

It is believed that a now-closed Wuhan city wholesale market “played a role” in the outbreak, said Dr Peter Embarek, Food Safety and Zoonosis Expert at WHO, but it is not clear if it was the source.

“All these preliminary studies and interviews and collection of data and so on will help pinpoint both in time and in geographic terms where to look for the source; and it could be again, in this case, it could be again around the markets in Wuhan, but it could also be outside or further out, and therefore, there is no point jumping and starting to testing animals all over the place before having done this groundwork.”

In a videoconference with journalists, Dr Embarek highlighted the fact that many people showed few or no symptoms of infection with COVID-19, likely contributing to the outbreak’s rapid spread.

“We’ve learned a lot about the disease and we know that the vast majority of cases have no or mild symptoms, so it would not be surprising if at that time there were a lot of mild cases that were undetected because we didn’t even know they were mild cases at that time. And that could explain how some of the people who had no link with the market could have been infected.”

In previous coronavirus outbreaks, such as the MERS episode in 2012, finding the missing animal-human link has been far from easy, even though “everybody was looking for the source”, Dr Embarek explained.

In the end, it took months of epidemiological detective work and a slice of “luck” before the transmission link to camels was found, after health officials in Qatar reported two suspect cases linked to a farm, which were followed to confirm the link to the dromedaries.

“It’s not too late, and as I said for the MERS virus, it took about a year before we found the source,” Dr Embarek said. “So it’s never too late but it’s important that we try to find the source and understand what happened at the start of the event to avoid a repeat of this event and to avoid another spillover event in coming years with other different viruses.”

He added: “What would be of great help is if we could get hold of the virus before it adapted to humans, before the version we have now, because then we would better understand how it adapted to humans, how it evolved and what are the changes in the make-up of the virus that most likely did this adaptation. Because now we can see different structures of the virus, we can see mutations sometimes, but we don’t really understand which mutation is critical and which one is less critical; because they are mutating all the time and in 99 per cent of the case this mutation means nothing and we have to understand the critical ones.”

Echoing calls for stronger health controls on wet markets - a common feature of daily life throughout Asia - Dr Embarek noted that the “vast majority can be fixed, can be better organized, because it’s often a question of waste management”.
He added: “It’s a question of people movement and goods movement, it’s a question of separating live animals from animal products and from products that are fresh and cooked products, it’s a question of separating fresh fruits and vegetables from meat products or from live animals. It’s a question of separating the public from the live animals and the people vending and slaughtering these animals; so it’s more about management than regulations and inspections and cleaning and disinfections.”

Concerning the transmissibility of infection to various animals that regularly come into contact with humans, the WHO official noted that “cats and (these) felines are susceptible to the virus; studies with cats have also shown that cats can also transmit the disease to other cats, so this is a group of animals that is interesting to look at, because they are susceptible to the virus. Ferrets have also been shown to be susceptible to the virus, dogs to some extent, but not as efficiently and other species, like domestic species, like pigs, like poultry, chicken and turkey and the like do not seem to be susceptible to the disease, which is good news because we are producing and raising these animals on a very large scale.”

He also said that the new coronavirus could not be transmitted by mosquitos and parasites.

“There has been discussion about mosquitos and whether other animals could transmit the virus and that’s not the case,” Dr Embarek said. “These viruses have very specific affinities to certain animal species and again to their ability to attach and infect specific cells of different species. They cannot at all invade and infect particular animal species so it’s not like can invade whatever they touch or move into.”

Asked about the level of WHO collaboration with Chinese health authorities into tackling COVID-19, he responded that “China has most probably and most likely all the expertise needed to do the investigations; they have a lot of very qualified researchers to do that.”

At the same time, he noted that it was “often useful sometimes to have discussions and to have collaborations with groups and with researchers and with people from all over the world who have had - gone through - similar events and similar studies and have things to share, have experience to share and that has always enriched and improved the speed and quality and likelihood of success of these very complex studies.”