



# WILDLIFE VETS INTERNATIONAL

## **Sumatran Tiger Disease Surveillance** Meeting, TSI, Bogor, Indonesia, September 3-5, 2013

### **Summary**

At a recent meeting of Indonesian wildlife vets, facilitated and advised by Wildlife Vets International, a new organisation - the Sumatran Tiger Health Forum - was established to design and conduct a disease surveillance programme for tigers covering the whole of Sumatra. This is one of the most exciting veterinary developments in tiger conservation in recent years. It is the first programme of its' type in any tiger range state, and may lead the way to evidence-based disease prevention or mitigation strategies for wild tigers.

WVI will be involved with the Sumatran Tiger Health Forum as specialist veterinary advisor until it is well established and operating independently as intended. If successful, this Indonesian initiative could develop into a model that could be exported to other tiger range states to aid disease surveillance for the benefit of tigers throughout their global range.



Sumatran tigers

# 1. Background

A recent paper by Heard et al (2013)\* concluded that when any species was under threat from other factors, it becomes more vulnerable to the negative impact of disease. In the case of the tiger poaching/tiger-human conflict and habitat loss/degradation are currently recognised as the biggest threats to wild populations, but disease may already be having a significant impact. In Russia, morbillivirus (Canine Distemper Virus or CDV) has recently been identified as causing deaths in wild tigers, and there are disturbing, though unconfirmed, reports suggesting that this may also be occurring on Sumatra and perhaps elsewhere. However, no systematic disease surveys have yet been conducted in Indonesia. Although currently CDV is likely to be the virus that is posing the greatest risk to wild Sumatran tigers, there are many other disease agents worthy of consideration.

Following discussions early in 2012 and 2013 between Dr Retno and Dr Yohanna of Taman Safari Indonesia, Dr Lewis of Wildlife Vets International, Dr Suyanti of BKSDA Bengkulu & the Sumatran Tiger Conservation Forum (Forum HarimauKita) and Dr Wiwiek Bagja of the Indonesian Veterinary Medicine Association, it was decided to convene a meeting to initiate a disease surveillance programme for the Sumatran tiger. It will only be possible to design mitigation measures to protect the tiger from the effects of disease if we understand what disease threats they face. Therefore broad-based disease surveillance is the first step in developing a health management strategy for wild tigers.

The meeting was held at the Safari Lodge, Taman Safari Park, in Bogor September 3 - 5, 2013, and over twenty five Indonesian vets were invited to participate based on their direct veterinary involvement or interest in tiger conservation. Vets from every province on Sumatra attended, plus veterinary representatives from Sumatran tiger conservation organisations, diagnostic laboratories, and state veterinary services.

*\*Heard et al 2013, "The threat of disease increases as species move toward extinction"  
Conservation Biology, DOI: 10.1111/cobi.12143*

## 2. The formation of the Sumatran Tiger Health Forum

The meeting was opened by Tony Semanpau and Dr Retno of Taman Safari Park, Dr Wiwiek - president of the Indonesian Veterinary Medicine Association, Dr John Lewis of Wildlife Vets International, and Dr Ir. Bambang Novi, the Director of Biodiversity Conservation, Dept of Forestry.



Drs Lewis, Wiwiek, Novi and Semanpau at the opening ceremony

The value of any disease surveillance for Sumatran tigers will only be maximised if it is a long term programme, carried out for as long as there are tigers living wild on Sumatra. The first important principle established at the meeting was that any disease surveillance programme on Sumatra should be an Indonesian initiative, albeit informed by expert help from WVI and elsewhere. In this way it is hoped that the surveillance programme can be far more sustainable than were it to be led solely by foreign NGO's such as WVI.

An organisation was created to oversee disease surveillance and other health issues for tigers on Sumatra - the **Sumatran Tiger Health Forum (STHF)** - and Dr Retno of Taman Safari was elected as coordinator. A simple committee structure was developed so that the coordinator has help in investigating the variety of avenues necessary for a comprehensive programme of activities. All attendees were very keen to see the creation of the STHF and all agreed to participate in its' activities and contribute as much data as possible.

**WVI** presented a comprehensive discussion document to the meeting as a guide to how a surveillance programme may be established and what issues must be resolved. The meeting followed the structure of this document and over 3 days the following items were comprehensively discussed:

- Identification and collation of existing information about wild Sumatran tiger health
- Identification of existing samples from wild tiger available for immediate analysis
- Standardised sampling and testing protocols for wild tigers and other wild felids
- Indirect methods of disease surveillance in wild tigers and other wild felids
- Standardised sampling and testing protocols for domestic and prey species
- Sampling strategy
- Identification of diagnostic laboratories in Indonesia, which tests they can perform
- Identification of which tests would have to be conducted outside of Indonesia - and where
- Information required with all samples and reports to the STHF
- Establishment of a biobank of samples with appropriate storage conditions
- How to transfer samples from the field to laboratories - practical and legal
- List of equipment & consumables needed by participating vets
- Data analysis
- Research necessary to advance disease surveillance for tigers, and who could conduct it.
- Funding of the surveillance programme
- Training needs for collaborating vets
- The specific issue of Canine Distemper Virus infections in wild tigers.

#### **4. Outputs from the meeting:**

- The establishment of the Sumatran Tiger Health Forum (STHF) to initiate and oversee disease surveillance activities for tigers across Sumatra, and advise on disease mitigation strategies should they become necessary.
- The appointment of a part-time coordinator for the STHF.

Taman Safari Indonesia generously agreed that the coordinator's role could be part of the job description for their senior vet, Dr Retno. Therefore the STHF has, in effect, a part-time paid coordinator for the time being.

- The STHF will act as a coordinating body for information and advice on tiger health, data recording and analysis, sample storage and in some cases a conduit through which samples can be submitted to appropriate laboratories for analysis. A summary of its data will be published once a year.
- The drafting of a disease surveillance plan for Sumatra, including practical details to assist collaborators in all aspects.

This will be based on the discussion document provided by WVI, but will not be finalised until all the verbal and written comments of meeting attendees are taken into consideration and incorporated as appropriate. The first version of the plan should be ready for distribution in early 2014. However, the plan is seen as a living document, and will be regularly updated in the light of experience and as the surveillance programme develops in the years ahead.

- The establishment of a biobank at Taman Safari, Bogor, to hold a variety of samples from tigers in appropriate conditions for future testing and research.

Taman Safari Indonesia kindly agreed to host the biobank and provide appropriate storage conditions for samples.

- WVI agreed to provide specialist advisory support and guidance for the STHF until it is well established and operating as intended.

#### **5. Next steps:**

- Finalising the first version of the disease surveillance plan will be a top priority for the forum over the next few months.
- Collaboration between numerous veterinary and conservation organisations will be essential for any effective surveillance programme for Sumatran tigers. Once the surveillance plan has been published by STHF, all conservation organisations working to help tigers on Sumatra that were not represented at the meeting will be contacted and invited to contribute to surveillance activities. HarimauKita (the Sumatran Tiger Conservation Forum) has already endorsed the activities of the STHF.
- Official recognition of the STHF is being sought from the Department of Forestry. This will provide a legal framework for the forum and facilitate sample collection, transfer, etc, within Indonesia.
- Dr John Lewis agreed to return in March 2014 to review progress with the committee of the STHF.



Dr Retno - senior vet at Taman Safari Indonesia  
& chair of the newly formed Sumatran Tiger Health Forum



Delegates at the discussion sessions



The meeting attendees

## **6. Conclusion:**

The establishment of the Sumatran Tiger Health Forum and the initiation of a disease surveillance plan for tigers covering the whole of Sumatra is one of the most exciting veterinary developments in tiger conservation in recent years. It is the first programme of its' type in any tiger range state, and may lead the way to evidence-based disease prevention or mitigation strategies for wild tigers.

Although in its' infancy, this Indonesian initiative could develop into a model that could be exported to other tiger range states. Such a move could accelerate the goal of establishing a global disease surveillance programme across all tiger habitats - a goal to which WVI gives its unreserved support.



Sumatran tiger - courtesy of the Wildlife Heritage Foundation

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