In recent months, the majority of people around the world became familiar with terms like “flatten the curve” and “social distancing,” and learned to appreciate what a pandemic is as well as what is sold at a wet market. This is also true for our WAZA institution members and their millions of visitors. As we work to reopen our zoos and aquariums and survive the economic fallout, we should consider how COVID-19 provides us with an opportunity to better conserve wildlife, ensure public health, and educate people on both. We can best do this using the One Health Approach. There may be no better time for One Health than when we are struggling with the impacts of a pandemic that originated in animals and which challenges human health and livelihoods, global economic security, and animal and ecosystem health.

Some WAZA members may not yet be familiar with the term ‘One Health’, although many have been practising it for years. An accurate definition is: ‘One Health is a collaborative effort of many different disciplines working locally, nationally, and globally to attain optimal health for people, animals and environments.’ (Deem et al., 2019). The mission statements of many of our facilities fit within the One Health framework.

The last decade has seen significant planetary health impacts due to anthropogenic causes which have resulted in increased recognition and support for the One Health initiative from many governmental and non-governmental organisations.

These impacts include the increase in emerging infectious diseases (EIDs) in plants, animals, and humans with many of these EIDs zoonotic (e.g. SARS-CoV-2 the causative virus of COVID-19) and/or diseases of conservation concern (e.g. Ebola in great apes, chytridiomycosis in amphibians, chestnut blight of chestnut trees). Climate change and associated impacts (e.g. Australian wildfires and over one billion animals dead as a result of the fires); to plastic pollutants, and the loss of biodiversity are all conservation and health challenges. To help mitigate these, and the many other, 21st-century conservation and public health challenges, zoo and aquarium staff as members of One Health teams have much to offer from our unique skill sets and expertise in animal husbandry, welfare, behaviour, and health, to our growing footprint of conservation and health initiatives around the world (Robinette et al., 2017).

‘One Health is a collaborative effort of many different disciplines working locally, nationally, and globally to attain optimal health for people, animals and environments.’
WAZA facilities have many roles to play within One Health. These roles provide benefits for biodiversity conservation and human health and include:

- Providing healthcare for zoo and aquarium wildlife, thus ensuring the sustainability of biodiversity;
- Conducting studies on diseases of conservation concern;
- Understanding diseases in zoo wildlife as sentinels for emerging diseases of humans and animals;
- Leading surveillance of diseases in wild animals at the interface of wildlife, domestic animals and humans;
- Contributing to the field of comparative medicine and the discovery of life;
- Demonstrating the importance of the natural world for human health and livelihoods; and
- Educating the public on the many ways that WAZA helps with the conservation of wildlife and public health (Deem, 2015; Robinette et al., 2017; Padda et al., 2018; Coolman et al., 2020).

During this time of uncertainty created by the COVID-19 pandemic, we have been given an opportunity to participate within One Health and to share this concept with our visitors as we highlight how and why animal and environmental health are essential for human health (Padda et al., 2018). Similar to the past two coronavirus epidemics — sudden acute respiratory syndrome (SARS) in 2003 linked to civet cats at a wet market, and Middle Eastern Respiratory Syndrome (MERS) first identified in 2012 and linked to dromedary camels — the current coronavirus pandemic demonstrates on a global scale, the challenges that threaten animal conservation and public health from the trade in wildlife and the potential of pathogen spillover from non-human to human animals. And people are listening. Additionally, with a three trillion-dollar price tag in the US alone, the economic fallout and impact on human livelihoods have been a catalyst for many people to begin to appreciate why we must work to optimise health across the One Health Triad of environmental, animal, and human health.
As we move past this pandemic into a new normal post-pandemic world, our facilities are more important than ever before. Not only do we provide educational, recreational, and health benefits for our visitors (Robinette et al., 2017; Coolman et al., 2020), we also provide in situ and ex situ conservation and science actions that help to save species and advance public health. COVID-19 has given us a unique opportunity to consider how each of our facilities may start to incorporate, or continue and expand, One Health approaches. We have a responsibility to our members and visitors to play our part. The public look to us as leaders in wildlife conservation. In the post-COVID pandemic world, they also expect us to be leaders in One Health as we strive to attain optimal health for people, animals and our environment.

References


