

FEDERAL INTERAGENCY COMMITTEE ON INVASIVE TERRESTRIAL ANIMALS AND PATHOGENS



# ANIMAL PATHOGENS SUBCOMMITTEE

**2017-2021  
STRATEGIC AND WORK PLAN**

**LAST UPDATED NOVEMBER 25, 2019**

## MISSION

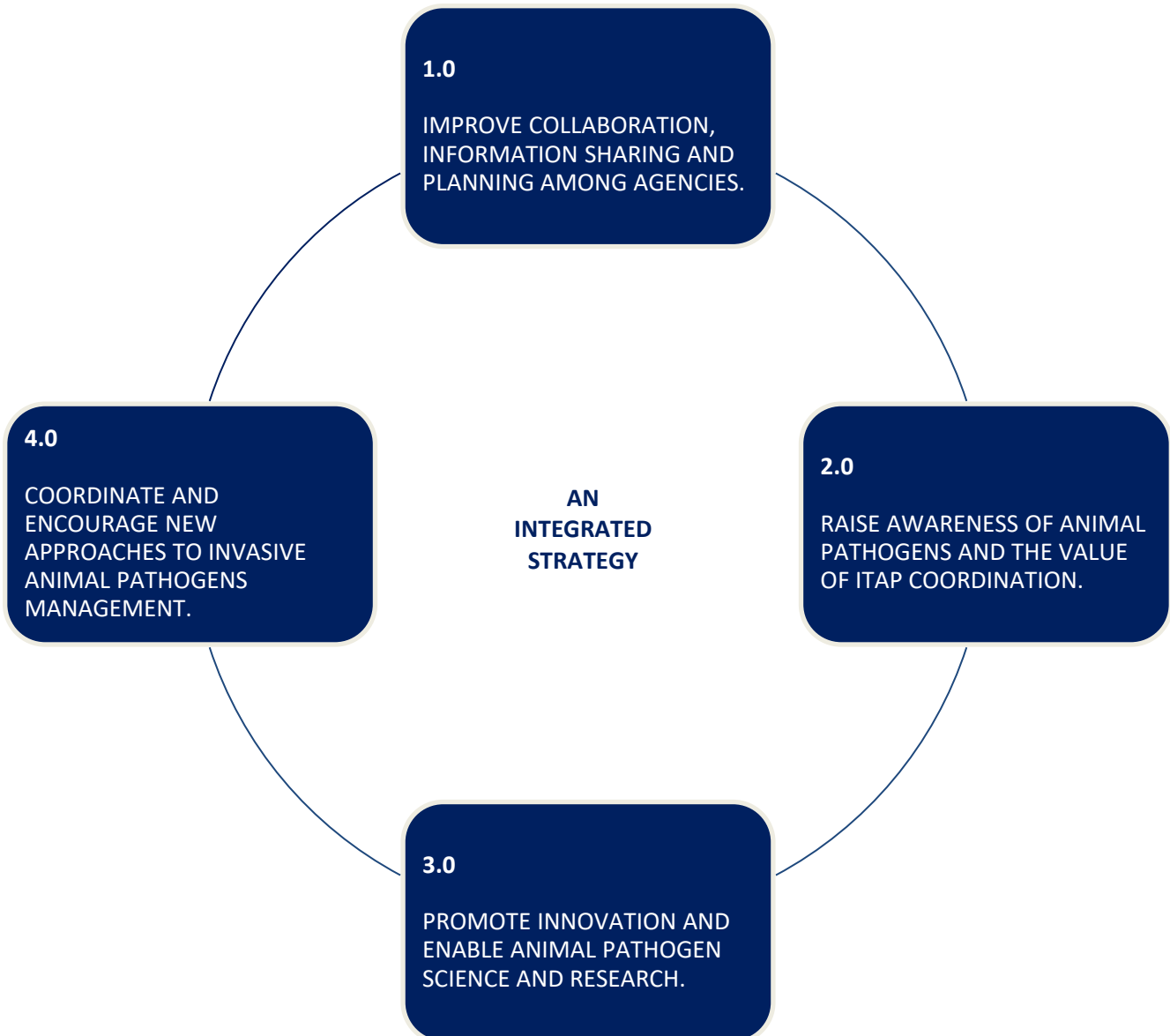
Coordinate, facilitate, and promote the proactive protection of agricultural, ecological, **wildlife** and human health from invasive animal pathogens\*.

*\*Invasive Animal Pathogens are non-native, disease-causing agents carried by or affecting wild or domestic animals whose introduction causes or is likely to cause harm to human, animal, or plant health.*

## VISION

A nation that effectively predicts, prevents, and mitigates the harm caused by invasive animal pathogens.

## STRATEGIC GOALS



## 1.0 IMPROVE COLLABORATION, INFORMATION SHARING AND PLANNING AMONG AGENCIES.

### 1.1 Establish formal interagency network and protocol for information exchange and collaboration.

#### 1.1.1 Establish regular opportunities to share information on emerging threats, new research, and key developments for USG Agencies interested in invasive animal pathogens.

- *Hold annual meeting and quarterly conference calls focused on addressing key challenges and developments in Animal Pathogens Subcommittee related activities. (Ongoing; L: **Camille Harris**)*
  - *Establish liaisons between ITAP Subcommittees, as appropriate*
  - *Identify other animal pathogen working groups and establish liaisons as appropriate to share information (e.g. USDA Asian Longhorn? Wildlife Services WG, Darryl, TWS Wildlife disease group) Date?*
- *Establish a mechanism for ongoing communication and information exchange such as Slack, SharePoint, Science Base, or another network. (FY18 Q1; L: Alan Franklin; PP#001) **[Complete]** Alan to check the status*

#### 1.1.2 Establish and maintain a directory of all existing animal pathogen databases and future database needs.

- *Conduct a gap analysis of existing animal pathogen databases to inform and enable agencies to improve databases and models and communicate results (e.g. FDCC, PPFST). (FY21 Q4; L: **Kim Pepin**)*
  - *Travel issues/funding-send inquiry to see if there is interest*
- *Develop a list of links and contacts for existing databases. (FY17 Q4; L: Wendy Hall – Tentative; PP#003) **[Complete]***

### 1.2 Facilitate interagency collaboration in invasive pathogens management and research.

#### 1.2.1 Facilitate agency staff participation in the Animal Pathogens Subcommittee.

- *Invite agency members to participate in the Animal Pathogens Subcommittee using the standard invitation email. (Ongoing; L: **Alan Franklin**)*
  - *54 members, not looking for more, but do encourage more engagement of current members. Discussion about incentivizing participation by encouraging it to be an element of individual performance plans. Alan/Camille to write letter about member participation and encouraging this action.*

#### 1.2.2 Identify and share comprehensive information on management and research staff across agencies and their work in animal pathogens.

- *Identify and share existing models for coordinating Agency response to emergencies. (FY20 Q4; L: **Jeffrey Root**)*
  - *Stash to contact Jeff for follow up, publication?*
- *Create and maintain a list of federal scientists (including their scientific expertise) and managers participating in pertinent animal pathogens activities, and links to each website (e.g. Research Gate). (FY21 Q1; L: **Ben Rosenthal**, S: **Joyce Bolton**)*
  - *Ask subcommittee members to supply list of names for their entity (APHIS vet, APHIS Wildlife Services, DOD, NHS, FWS Veterinary, ARS, CDC, USGS, NOAA) to compile master list (Phil Andreozzi? To liaison)*

## 2.0 RAISE AWARENESS OF ANIMAL PATHOGENS AND THE VALUE OF ITAP COORDINATION.

### 2.1 Develop and provide information on the global emergence of animal pathogens and their threat to ecological, agricultural, and human health in the U.S.

- *Begin developing an overview white paper (leading to the fact sheet in 2.2) to inform the public and policy makers on the ecological, agricultural, and human health impacts of invasive animal pathogens. (FY21 Q1; L: Alan Franklin, S: Julie Lenocho)*
  - *Incorporate background studies of potential pathogens or species prior to their introduction to the nation or new regions within the U.S.*

### 2.2 Establish the compelling case for interagency collaboration and the Animal Pathogens SC as a facilitating mechanism for improving animal pathogen prevention, risk assessment, and control.

- *Produce an annual report on Subcommittee activities to share with policy makers and other stakeholders. (Ongoing; L: Camille Harris/Alan Franklin)*
- *Develop and publish joint descriptive fact sheet on the Animal Pathogens Subcommittee. (FY20 Q4; L: Camille Hopkins)*
  - *APHIS Gail Keirn (Alan to introduce)*
- *Provide and document case studies in which interagency collaboration has led to successful mitigation and loss prevention with respects to ecosystems, agriculture, and human health. (FY20 Q4; L: Katherine Richgels, Camille Hopkins, Alan Franklin, Sarah Bevins, Su Jewell, Thierry Work)*
  - *Bsal – Su Jewell (DOI/FWS)*
  - *Coral Disease – Thierry Work (USGS)?*
  - *New World Screwworm – Sam Gibbs (DOI/FWS)?*
  - *Avian Influenza Surveillance – Sarah Bevins (USDA/APHIS/WS)*
  - *Guidance: Incorporate existing GAO audits and other sources.*
  - *Draft Manuscript to enter into IPDS FY20 Q4*
    - *Consider commonalities in success stories that can be used as a blueprint for other agencies (national/international) dealing with invasive pathogens*
      - *Consider proactive vs. reactive approaches*
      - *Consider 1.2.2 - Identify and share existing models for coordinating Agency response to emergencies (commonalities across success stories)*
  - *Submit to Biological Invasions (FY20, Q4)*
- *Complete paper on Federal Priorities for Invasive Animal Pathogens to convey common priorities and establish a compelling case for greater ITAP engagement. (FY20 Q4; L: Alan Franklin)*
  - *Identify federal research priorities to maximize impacts and increase efficiency.*

### 2.3 Provide the definitive economic case for supporting interagency animal pathogens activities.

- *Begin to establish an economic sub-group to begin estimating animal pathogen impacts in economic terms. Focus on one specific animal pathogen (FY20 Q2; L: Alan Franklin)*
- *Compile a summary of available studies on invasive animal pathogens, including their ecological and economic impact on the U.S., costs to control, and costs of damage to human health, agriculture, recreation, food safety, national security and others. (FY21 Q1; L: Alan Franklin)*

## 2.4 increase Public Support and Awareness of ITAP Animal Pathogens Activities.

### 2.4.1 Create and distribute materials designed to highlight the value of the Animal Pathogens Subcommittee and its members.

- *Develop and post content for the Animal Pathogens Subcommittee specific webpage. (FY20 Q4; L: **Camille Harris/Alan Franklin, S: Joyce Bolton**)*
  - *Identify items for posting FY20 Q3; Post to website (fact sheet, others when available)*
- *Utilize text to develop a public-facing story map once the success stories manuscript is published (see 2.2). (FY20 Q2; L: **Camille Hopkins, S: Katie Richgels**)*
- *Develop and implement a mobile app/social media approach to highlight invasive pathogens issues, ongoing research, and management solutions in progress, pending the release of new administration policies. (Parking Lot; L: Camille Harris/Alan Franklin; PP#017) **[Parking Lot]***
- *Develop an online video or story map to convey animal pathogen risk and information (e.g. Penn State Emerging Disease Course). (Parking Lot/FY19 Q2; L: Camille/Alan) **[Parking Lot]***

## 3.0 PROMOTE INNOVATION AND ENABLE ANIMAL PATHOGEN SCIENCE AND RESEARCH.

### 3.1 Coordinate research to improve capabilities for invasive animal pathogens among federal agencies, state agencies, and academia.

#### 3.1.1 Identify improvements in animal pathogen surveillance and management methods with new innovative and marketable solutions (e.g. automated solutions such as drone delivered vaccines, automated surveillance for mosquito-borne pathogens, or decision support tools).

- *Regularly assess new technologies with guest speakers and technology reviews at quarterly meetings. (Ongoing; L: **Camille Harris**)*
  - *GMO/GEO impacts (include Plant Pathogens, Invertebrates) L: Darryl; FY20 Q3*
- *Hold a “solutions” workshop at the annual meeting focused on innovations in animal pathogen surveillance and management. (FY20 Q1; L: **Katherine Richgels, Camille Hopkins**)*
  - *Put in proposal for AFS-TWS 2020 Symposium (Louisville, KY) focused on innovative solutions for invasive animal pathogens (seek sponsorship by Wildlife Disease Working Group (L: Alan))*
  - *Consider Special-Themed Issue of a Scientific Journal – (e.g., e.g. The Wildlife Professional (lay article) as outcome of symposium*
  - *Hold Biosensors cross-cutting in-person meeting (Ft. Collins, CO; parking lot)*
- *Identify technological improvements needed to detect and identify invasive animal pathogens of concern. (Ongoing; L: **David Suarez**)*
  - *Connect with David to narrow down objective (L: Alan/Camille)*

### 3.2 Identify funding sources for federal researchers and policy makers that funds collaborative research on invasive animal pathogens.

- *Develop a catalog of potential funding sources to serve as a guideline and reference for proposal writing and add information to the USDA annual grants document. (Ongoing; L: **Todd Atwood**)*
  - *Completed; Sharepoint?*
  - *Identify support mechanisms for long-term studies on animal pathogen invasions.*
- *Coordinate Inter-Agency budget initiatives emphasizing the benefits of leveraging resources (e.g. reducing waste and redundancy). (FY20 Q2; L: **Julie Leno**)*
  - *Circle back with Julie for update.*
  - *Teleconference to discuss initiatives and when appropriate, get the message out for successful projects.*
- *Develop a catalog of successful funding proposals and post to the ITAP website. (FY20 Q4; L: **Todd Atwood**)*
  - *Survey ITAP members to generate spreadsheet of relevant information.*

## 4.0 COORDINATE AND ENCOURAGE NEW APPROACHES TO INVASIVE ANIMAL PATHOGENS MANAGEMENT.

### 4.1 Recommend priorities for invasive animal pathogen threats and coordinate management across agencies.

#### 4.1.1 Explore a universal animal pathogen threat classification system.

- *Establish a sub-group to explore a universal real-time threat classification system. Camille/Darryl/Jonathan (FY20 Q21; L: **Kim Pepin**)?*
- *Identify existing threat classification systems to explore the development of a universal system. check with APHIS Vet/Wildlife Services domestic/wild animal model/ intelligence? (FY20 Q4; L: **Darryl**)*
- *Submit proposal to obtain funding for meeting (FY20 Q4) [Parking Lot]*
- *Define boundaries for classification system [Parking Lot]*
- *Develop prototype [Parking Lot]*
- *Consider Delphi method w/Bayesian framework [Parking Lot]*
- *Consider tools already developed (CDC OHZDP) [Parking Lot]*
- *USGS Powell Center application (January 2019 for 2020 meeting); National Center for Ecological Analysis & Synthesis; NIMBIOS (applications 3 times/yr); NIH RAPIDD [Parking Lot]*
- *Adaptive risk assessment tool for US – invasive animal pathogens [Parking Lot]*
- *Consider Richgels Bsal pub [Parking Lot]*
- *Customizable [Parking Lot]*

### 4.2 Educate and engage the public to assist in effective prevention of animal pathogen emergence and spread. [Parking Lot]

#### 4.2.1 Identify ongoing activities to coordinate and promote to the public for the prevention of animal pathogen spread. [Parking Lot]

- *Provide information for communications and presentations to the public and other non-federal agencies as requested (at the local, state, and national levels). (Ongoing; L: Christine Densmore; PP#030) [Parking Lot]*
- *Establish a system to track public communications and outreach. (FY17 Q4; L: Alan Franklin,; PP#031) [Parking Lot]*

**FY20-21 CONSOLIDATED ACTION LIST**

**Goal 1: Improve collaboration, information sharing and planning among agencies.**

Actions	FY20 Q1	FY20 Q2	FY20 Q3	FY20 Q4	FY21 Q1	FY21 Q2	FY21 Q3	FY21 Q4
<p>1. Hold annual meeting and quarterly conference calls focused on addressing key challenges and developments in Animal Pathogens Subcommittee related activities. (Ongoing; L: <b>Camille Harris</b>)</p> <ul style="list-style-type: none"> <li>Establish liaisons between ITAP Subcommittees, as appropriate</li> <li>Identify other animal pathogen working groups and establish liaisons as appropriate to share information (e.g. USDA Asian Longhorn? Wildlife Services WG, Darryl, TWS Wildlife disease group) Date?</li> </ul>	•	•	•	•	•	•	•	•
<p>2. Invite agency members to participate in the Animal Pathogens Subcommittee using the standard invitation email. (Ongoing; L: <b>Alan Franklin</b>)</p> <ul style="list-style-type: none"> <li>54 members, not looking for more, but do encourage more engagement of current members. Discussion about incentivizing participation by encouraging it to be an element of individual performance plans. Alan/Camille to write letter about member participation and encouraging this action.</li> </ul>	•	•	•	•	•	•	•	•
<p>3. Identify and share existing models for coordinating Agency response to emergencies. (FY20 Q4; L: <b>Jeffrey Root</b>)</p> <ul style="list-style-type: none"> <li>Stash to contact Jeff for follow up, publication?</li> </ul>				•				
<p>4. Create and maintain a list of federal scientists (including their scientific expertise) and managers participating in pertinent animal pathogens activities, and links to each website (e.g. Research Gate). (FY21 Q1; L: <b>Ben Rosenthal, S: Joyce Bolton</b>)</p> <ul style="list-style-type: none"> <li>Ask subcommittee members to supply list of names for their entity (APHIS vet, APHIS Wildlife Services, DOD, NHS, FWS Veterinary, ARS, CDC, USGS, NOAA) to compile master list (Phil Andreozzi? To liaison)</li> </ul>					•			
<p>5. Conduct a gap analysis of existing animal pathogen databases to inform and enable agencies to improve databases and models and communicate results (e.g. FDCC, PPFST). (FY21 Q4; L: <b>Kim Pepin</b>)</p> <ul style="list-style-type: none"> <li>Travel issues/funding-send inquiry to see if there is interest</li> </ul>								•

**Goal 2: Raise awareness of animal pathogens and the value of ITAP coordination.**

Actions	FY20 Q1	FY20 Q2	FY20 Q3	FY20 Q4	FY21 Q1	FY21 Q2	FY21 Q3	FY21 Q4
6. Utilize text to develop a public-facing story map once the success stories manuscript is published (see 2.2). (FY20 Q2; L: <b>Camille Hopkins, S: Katie Richgels</b> )		•						
7. Begin to establish an economic sub-group to begin estimating animal pathogen impacts in economic terms. Focus on one specific animal pathogen (FY20 Q2; L: <b>Alan Franklin</b> )		•						
8. Develop and publish joint descriptive fact sheet on the Animal Pathogens Subcommittee. (FY20 Q4; L: <b>Camille Hopkins</b> ) • APHIS Gail Keirn (Alan to introduce)				•				
9. Provide and document case studies in which interagency collaboration has led to successful mitigation and loss prevention with respects to ecosystems, agriculture, and human health. (FY20 Q4; L: <b>Katherine Richgels, Camille Hopkins, Alan Franklin, Sarah Bevins, Su Jewell, Thierry Work</b> ) • Bsal – Su Jewell (DOI/FWS) • Coral Disease – Thierry Work (USGS)? • New World Screwworm – Sam Gibbs (DOI/FWS)? • Avian Influenza Surveillance – Sarah Bevins (USDA/APHIS/WS) • Guidance: Incorporate existing GAO audits and other sources. • Draft Manuscript to enter into IPDS FY20 Q4 • Consider commonalities in success stories that can be used as a blueprint for other agencies (national/international) dealing with invasive pathogens • Consider proactive vs. reactive approaches • Consider 1.2.2 - Identify and share existing models for coordinating Agency response to emergencies (commonalities across success stories) • Submit to Biological Invasions (FY20, Q4)				•				
10. Complete paper on Federal Priorities for Invasive Animal Pathogens to convey common priorities and establish a compelling case for greater ITAP engagement. (FY20 Q4; L: <b>Alan Franklin</b> ) • Identify federal research priorities to maximize impacts and increase efficiency.				•				



11. Develop and post content for the Animal Pathogens Subcommittee specific webpage. (FY20 Q4; L: <b>Camille Harris/Alan Franklin, S: Joyce Bolton</b> ) <ul style="list-style-type: none"> <li>Identify items for posting FY20 Q3; post to website (fact sheet, others when available)</li> </ul>					•				
12. Produce an annual report on Subcommittee activities to share with policy makers and other stakeholders. (Ongoing; L: <b>Camille Harris/Alan Franklin</b> )					•				•
13. Begin developing an overview white paper (leading to the fact sheet in 2.2) to inform the public and policy makers on the ecological, agricultural, and human health impacts of invasive animal pathogens. (FY21 Q1; L: <b>Alan Franklin, S: Julie Leno</b> ) <ul style="list-style-type: none"> <li>Incorporate background studies of potential pathogens or species prior to their introduction to the nation or new regions within the U.S.</li> </ul>						•			
14. Compile a summary of available studies on invasive animal pathogens, including their ecological and economic impact on the U.S., costs to control, and costs of damage to human health, agriculture, recreation, food safety, national security and others. (FY21 Q1; L: <b>Alan Franklin</b> )						•			

<b>Goal 3: Promote innovation and enable animal pathogen science and research.</b>								
<b>Actions</b>	<b>FY20 Q1</b>	<b>FY20 Q2</b>	<b>FY20 Q3</b>	<b>FY20 Q4</b>	<b>FY21 Q1</b>	<b>FY21 Q2</b>	<b>FY21 Q3</b>	<b>FY21 Q4</b>
15. Regularly assess new technologies with guest speakers and technology reviews at quarterly meetings. (Ongoing; L: <b>Camille Harris</b> ) <ul style="list-style-type: none"> <li>GMO/GEO impacts (include Plant Pathogens, Invertebrates) L: <b>Darryl</b>; FY20 Q3</li> </ul>	•	•	•	•	•	•	•	•
16. Identify technological improvements needed to detect and identify invasive animal pathogens of concern. (Ongoing; L: <b>David Suarez</b> ) <ul style="list-style-type: none"> <li>Connect with David to narrow down objective (L: <b>Alan/Camille</b>)</li> </ul>	•	•	•	•	•	•	•	•
17. Develop a catalog of potential funding sources to serve as a guideline and reference for proposal writing and add information to the USDA annual grants document. (Ongoing; L: <b>Todd Atwood</b> ) <ul style="list-style-type: none"> <li>Completed; Sharepoint?</li> <li>Identify support mechanisms for long-term studies on animal pathogen invasions.</li> </ul>	•	•	•	•	•	•	•	•
18. Hold a "solutions" workshop at the annual meeting focused on innovations in animal	•							

<p><i>pathogen surveillance and management. (FY20 Q1; L: Katherine Richgels, Camille Hopkins)</i></p> <ul style="list-style-type: none"> <li>Put in proposal for AFS-TWS 2020 Symposium (Louisville, KY) focused on innovative solutions for invasive animal pathogens (seek sponsorship by Wildlife Disease Working Group (L: Alan))</li> <li>Consider Special-Themed Issue of a Scientific Journal – (e.g., e.g. The Wildlife Professional (lay article) as outcome of symposium</li> </ul>								
<p>19. Coordinate Inter-Agency budget initiatives emphasizing the benefits of leveraging resources (e.g. reducing waste and redundancy). (FY20 Q2; L: Julie Lenocho)</p> <ul style="list-style-type: none"> <li>Circle back with Julie for update.</li> <li>Teleconference to discuss initiatives and when appropriate, get the message out for successful projects.</li> </ul>		•						
<p>20. Develop a catalog of successful funding proposals and post to the ITAP website. (FY20 Q4; L: Todd Atwood)</p> <ul style="list-style-type: none"> <li>Survey ITAP members to generate spreadsheet of relevant information.</li> </ul>				•				

<b>Goal 4: Coordinate and encourage new approaches to invasive animal pathogens management.</b>								
<b>Actions</b>	<b>FY20 Q1</b>	<b>FY20 Q2</b>	<b>FY20 Q3</b>	<b>FY20 Q4</b>	<b>FY21 Q1</b>	<b>FY21 Q2</b>	<b>FY21 Q3</b>	<b>FY21 Q4</b>
21. Establish a sub-group to explore a universal real-time threat classification system. Camille/Darryl/Jonathan (FY20 Q21; L: Kim Pepin?)	•							
22. Identify existing threat classification systems to explore the development of a universal system. check with APHIS Vet/Wildlife Services domestic/wild animal model/ intelligence? (FY20 Q4; L: Darryl)				•				