

Canadian Cooperative Wildlife Health Centre  
Centre Canadien Coopératif de la Santé de la Faune



# Canada's Inter-agency Wild Bird Influenza Survey

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# Survey Background

How the survey works

Some results

Opportunities and successes

Ongoing challenges

# Reasons to initiate a survey

- HPAI H7N3 outbreak in BC poultry - 2004
  - Large economic consequences
  - Lack of baseline data about AI in wild birds
- Spread of HPAI H5N1 in Asia
  - Increasing concern worldwide
    - Fatal human disease and wild bird mortality
    - High socio-economic consequences

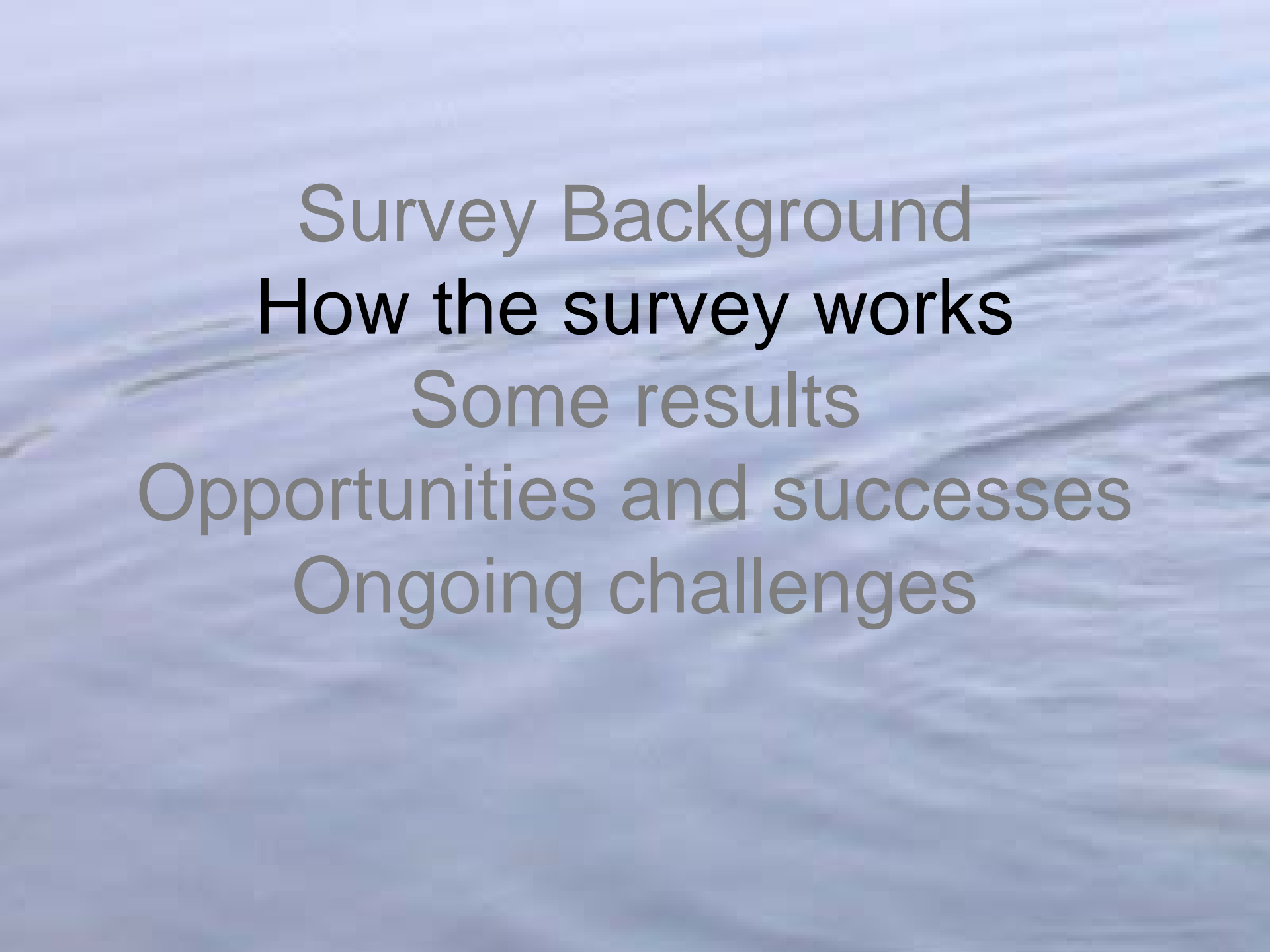
# Survey planning

- Planning – initiated December 2004
- Collaborators:
  - Federal/provincial/territorial agencies:
    - Wildlife
    - Agriculture
    - Public Health
  - NGOs
  - Academic institutions



# Survey Goals

- To inventory and characterize Influenza A viruses
- To survey for avian influenza viruses of national and international concern
- To establish an archive
- To enhance field, laboratory, and communications networks
- To complement surveillance activities in US and Mexico
- To enhance detection of HPAI strains in Canada

An aerial photograph of a coastline with a rainbow over the ocean. The text is overlaid on the image.

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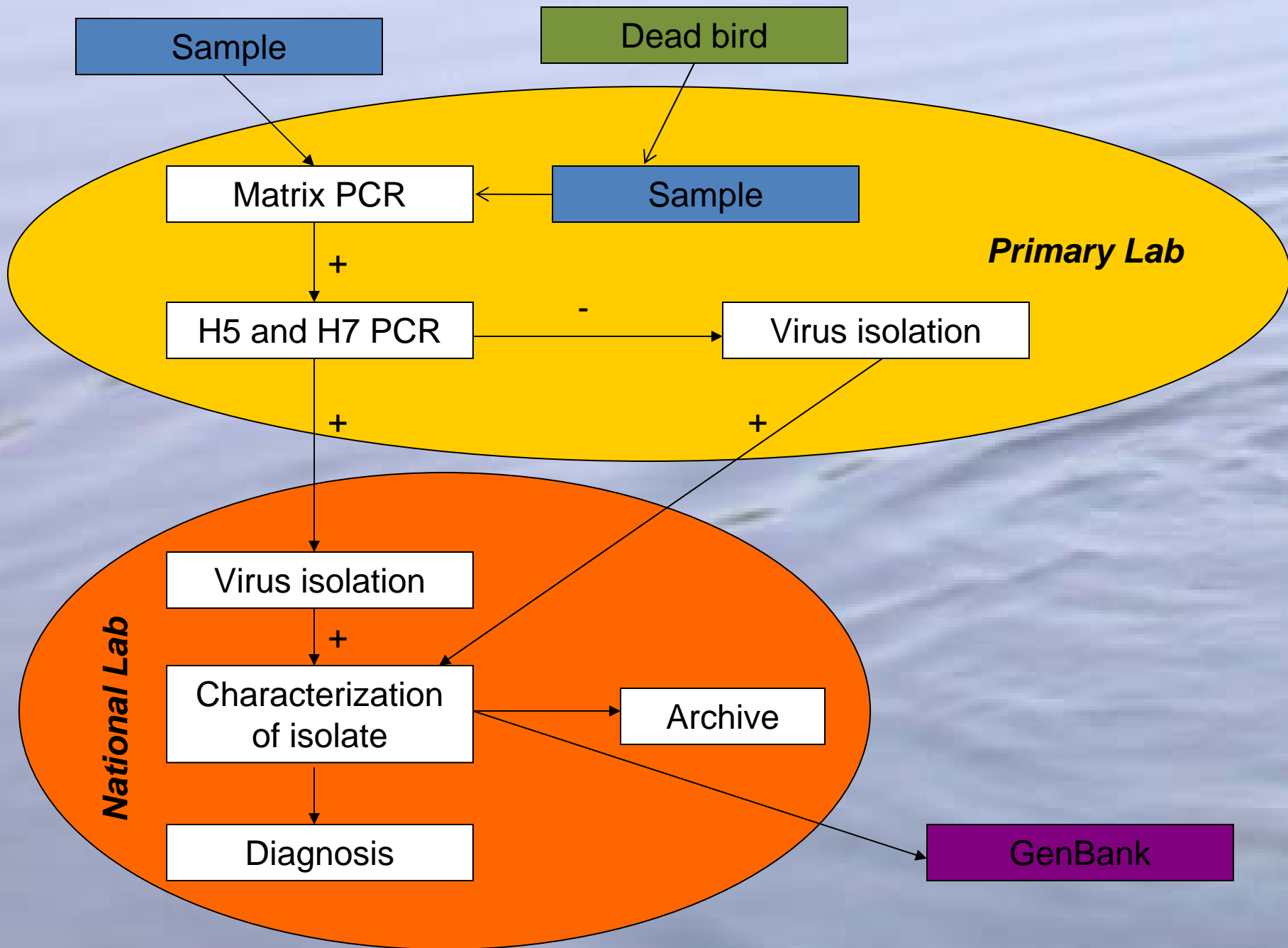
# Survey management

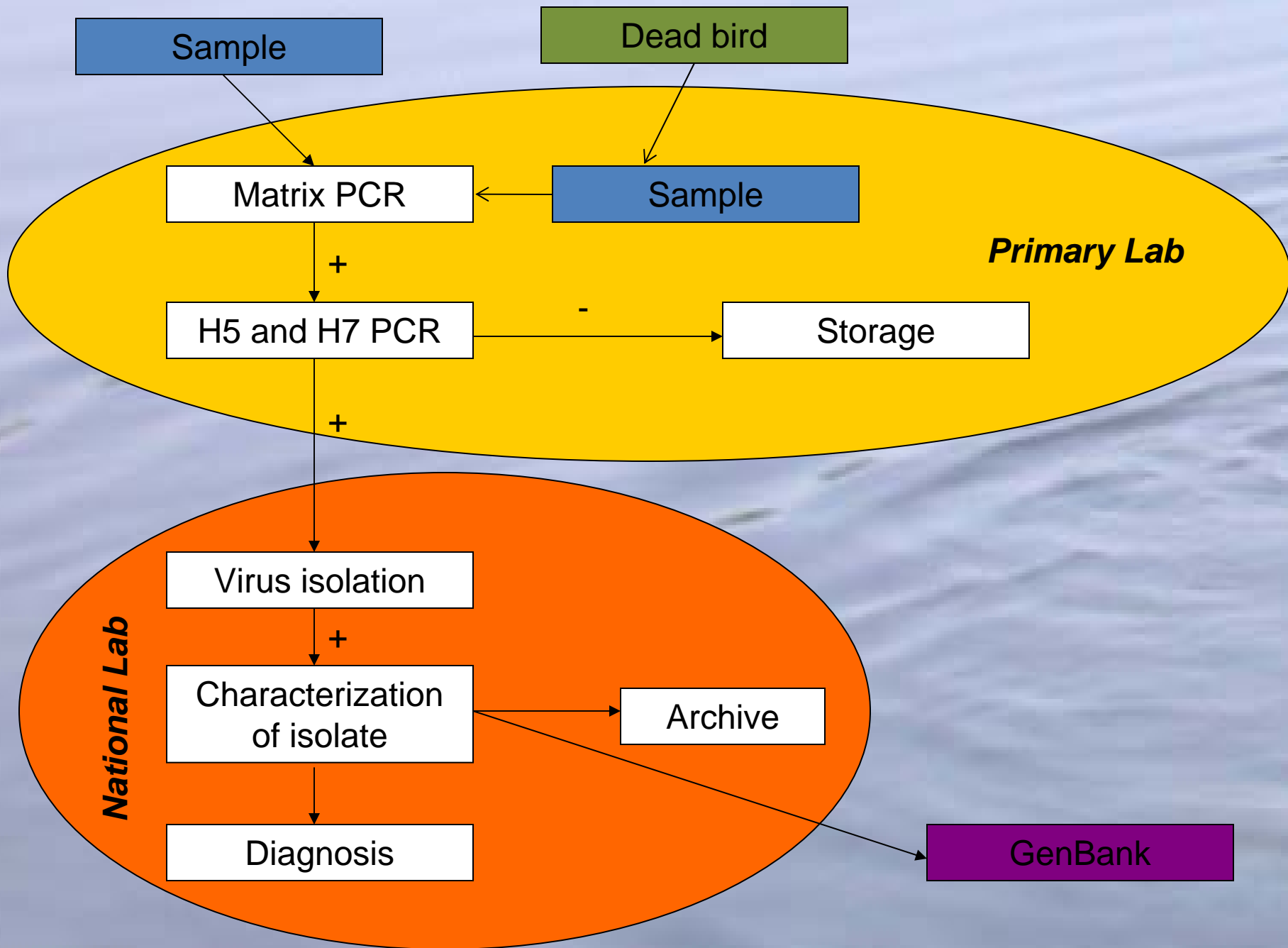
- Canadian Cooperative Wildlife Health Centre coordinates the survey
- Survey Steering Committee
  - Representatives from all collaborating agencies and organisations
- Survey Executive Committee
  - Representatives from primary federal and provincial/territorial agencies
- AI coordinator based at CCWHC headquarters.

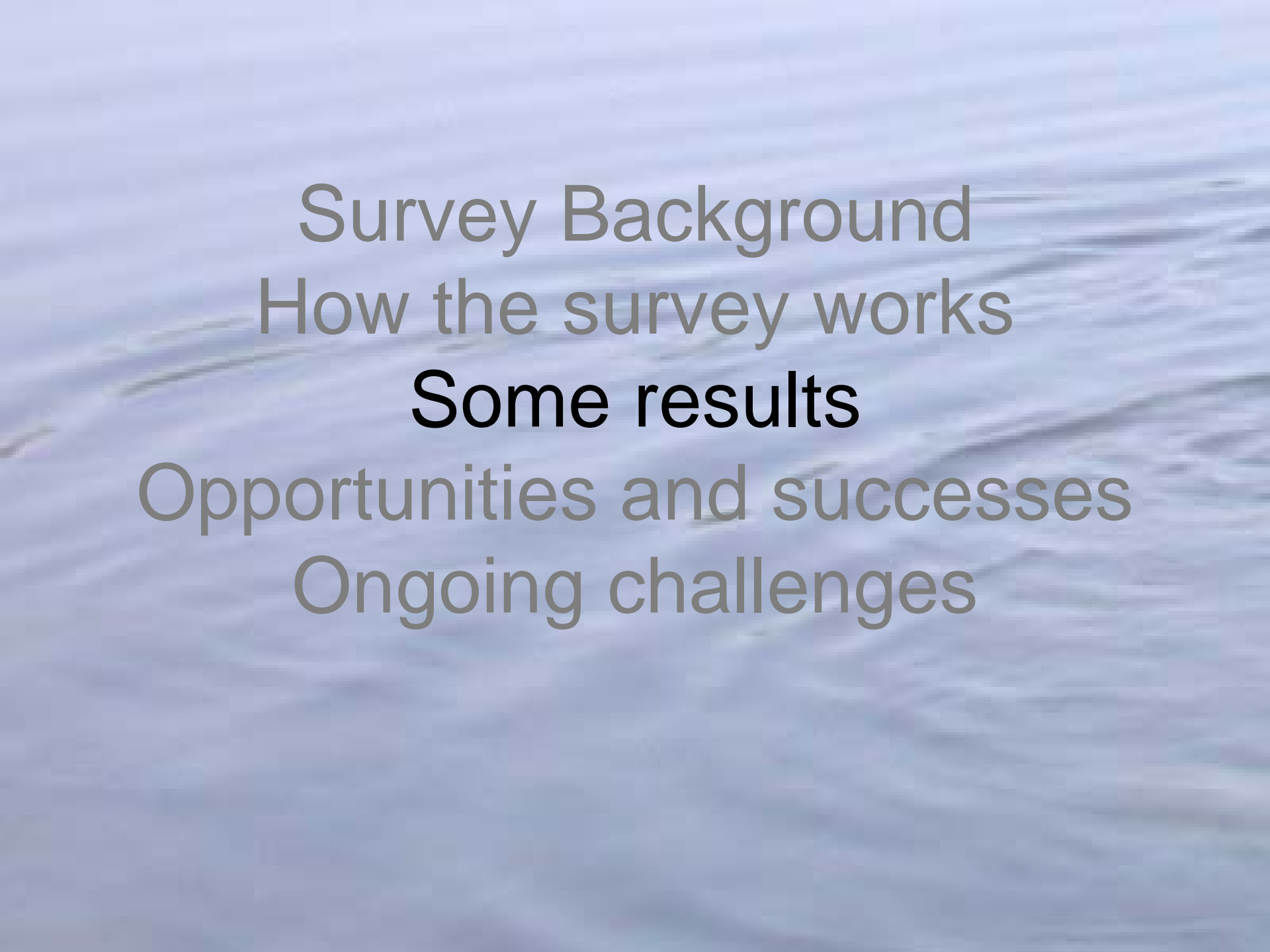
# Survey overview

- Live bird survey
  - Seasonal (summer and fall)
  - Across Canada
  - Focus on waterfowl
  - Healthy birds
- Testing of birds found dead
  - Year round
  - Across Canada
  - Some targeted species
    - Outbreaks and species at risk
  - Healthy and sick birds







An aerial photograph of a coastline with a rainbow arching over the ocean. The text is overlaid on the image.

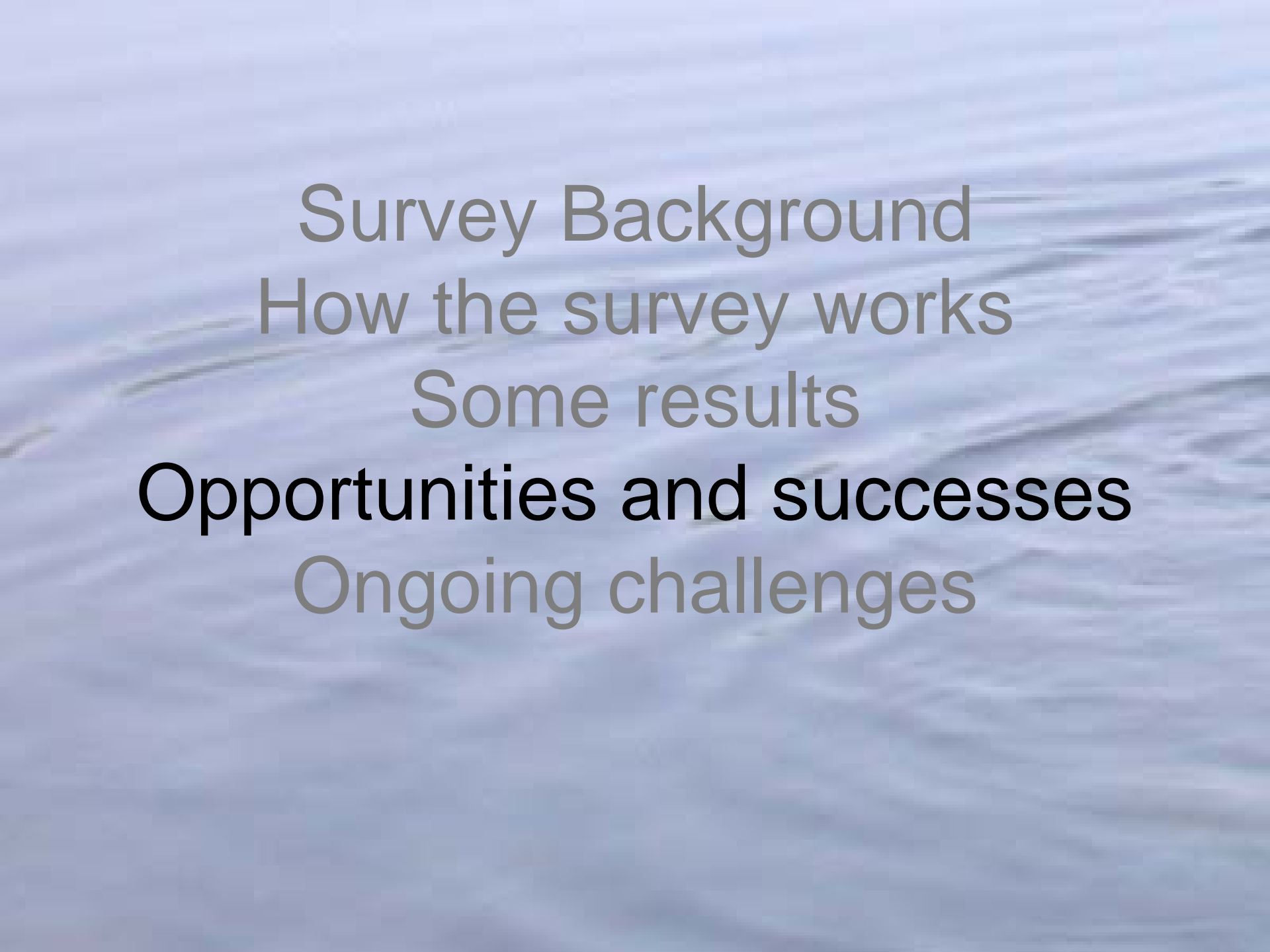
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<b>Survey Component</b>	<b>Year</b>	<b>Number of birds tested</b>	<b>Number of birds that tested positive by RRT-PCR (%)</b>
Live wild ducks	2005	4268	1572 (37)
	2006	3843	1173 (31)
	2007	5488	1342 (25)
	2008	1445	33 (2)
Other live waterfowl	2006	5763	327 (6)
	2007	1200	6 (1)
	2008	634	0
Birds found dead	2005	165	20 (12)
	2006	2863	105 (4)
	2007	3354	43 (1)
	2008	3014	45 (1)

An aerial photograph of a road with a rainbow in the sky. The road is a multi-lane highway with a yellow center line and white edge lines. The surrounding landscape is a mix of green fields and brownish-yellow areas, possibly a dry lake bed or a different type of terrain. The sky is a pale blue with some light clouds. A rainbow is visible in the upper left portion of the sky, arching over the road.

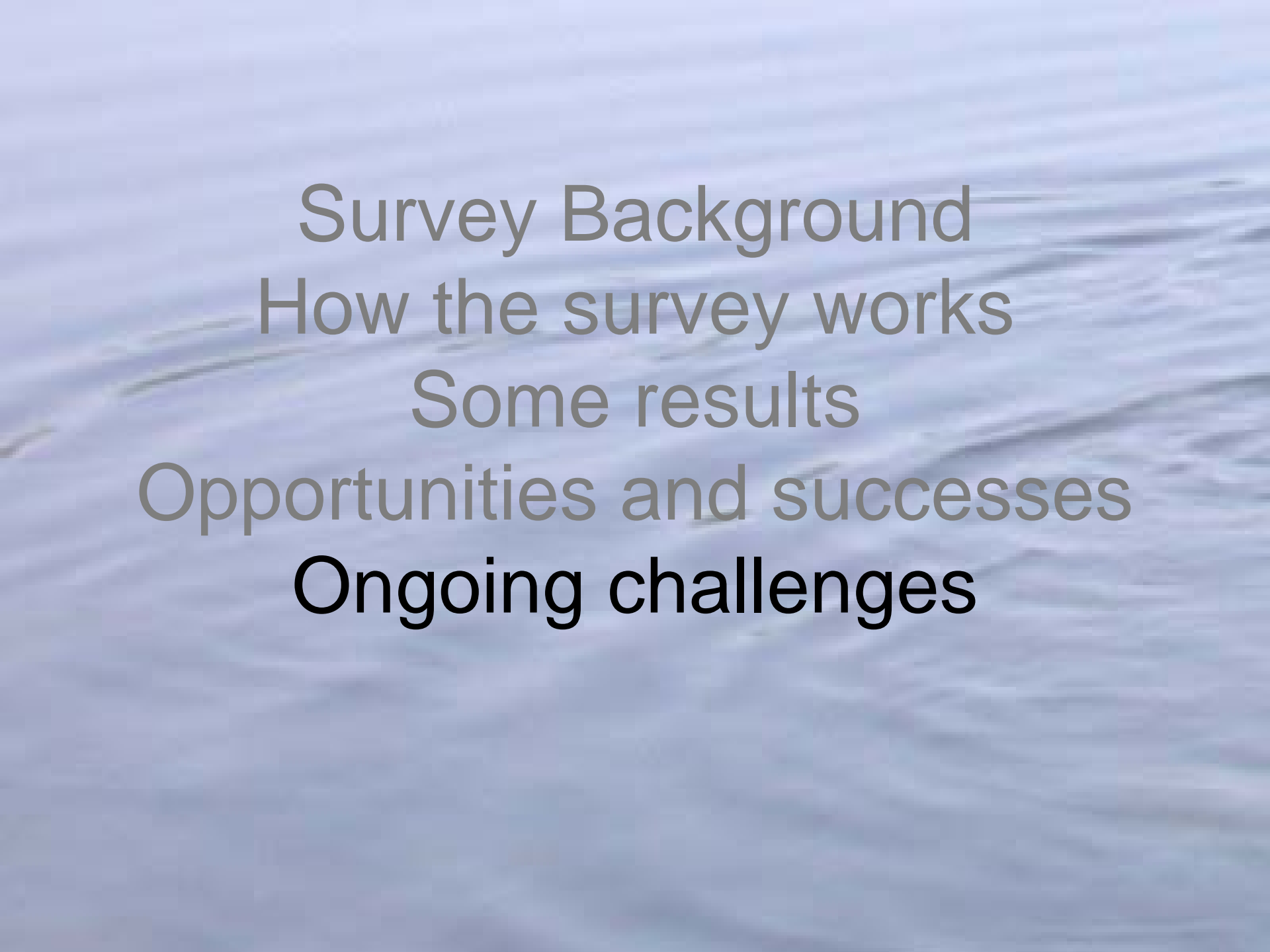
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# Survey successes

- Timely screening of over 30000 samples
- Hundreds of viruses detected, characterized and archived
- Field, laboratory and communications networks and systems have been strengthened and improved

# Other opportunities

- New research questions identified
  - Sampling method
  - Trapping method
- New research and surveillance partnerships and collaborations established
  - Moving beyond the survey to population and disease modelling and pandemic preparedness

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# Challenges – the successes of the future

- We can do better at collaboration
  - Need to practice to get better
  - Independent third party?
- Communication challenges
  - How to be relevant to all partners?
- Data management
  - Storage and retrieval