Socio-Political Complexities of Attempting to Address the Sustainability of Shorebird Harvest in the Western Atlantic Flyway

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Context and Concern

Shorebird hunting has been practiced by European colonists in the Caribbean and northern South America since the mid-1600s.

Although current pressure within the Flyway is incompletely known, unsustainable legal harvest and illegal harvest have the potential to limit positive growth of some shorebird populations.
Recent History

• Jul 2011 – SurveyMonkey® questionnaire on shorebird hunting by BirdsCaribbean; discussed at annual meeting and WHSG meeting.

• Sep 2011 – Satellite-tagged Whimbrels (Machi and Goshen) shot in Guadeloupe, catalyzed action.

• Feb 2012 – Shorebird Harvest Working Group formed to collaboratively address sustainability.
Hunting identified as a key threat in the AFSI.
Harvest Working Group

Periodic teleconferences, including those in French. Face-to-face workshops.

Basecamp site with teleconference notes, papers, proposals, reports. Some documents at shorebirdplan.org.

Cooperatively developed proposals successfully funded by the National Fish and Wildlife Foundation.

Match jointly provided by the partners, including government agencies in North American (CWS key) and the European Union. Birds Caribbean provided financial services to fund partners.

Additional funding to the USFWS, through USAID, to fund projects in select countries.
Flyway Biological Goal: Remove the direct threat of harvest as a factor limiting shorebird population growth by implementing a sustainable shorebird harvest. By 2025, ≥30% reduction in harvest.

Human Wellbeing Goal: Meet cultural and subsistence needs of people who harvest shorebirds, while achieving a sustainable shorebird harvest. By 2025, stakeholders agree to a 30% harvest reduction.
Seven Major Strategies

1) Assess biological and social aspects of harvest
2) Develop policies and regulations
3) Strengthen law enforcement & monitor compliance
4) Improve outreach and communication
5) Establish and maintain no-shooting reserves
6) Develop incentives to not hunt
7) Conduct basic shorebird research and monitoring
Shorebird Protection and Harvest Restrictions

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Legal Protection</th>
<th>Season</th>
<th>Bag Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full</td>
<td>Partial</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>all</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suriname</td>
<td>all</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>all</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>most</td>
<td>some</td>
<td>yes</td>
</tr>
<tr>
<td>USA</td>
<td>most</td>
<td>some</td>
<td>yes</td>
</tr>
<tr>
<td>Barbados</td>
<td>some</td>
<td>most</td>
<td>yes</td>
</tr>
<tr>
<td>French Overseas Departments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>French Guiana</td>
<td>most</td>
<td>some</td>
<td>no</td>
</tr>
<tr>
<td>Guadeloupe</td>
<td>half</td>
<td>half</td>
<td>yes</td>
</tr>
<tr>
<td>Martinique</td>
<td>half</td>
<td>half</td>
<td>yes</td>
</tr>
<tr>
<td>Guyana</td>
<td>none</td>
<td>none</td>
<td>no</td>
</tr>
</tbody>
</table>
France Overseas Departments, Collectivities and Special Status

Saint-Martin
Saint-Pierre and Miquelon
Saint-Barthélemy
Guadeloupe
Martinique
Saint-Martin Guadeloupe Martinique
Clipperton Island
French Guiana
In France, the setting of hunting regulations is based on three fundamental principles: 1) regulation is the responsibility of the state; 2) the right to hunt belongs to the owner of the land; and 3) game is a public good that belongs to no one.

There is no departmental federation in French Guiana. In Martinique, hunters join local associations (19) that lease or own wetlands for hunting (21 lots).
Shorebird Harvest Composition on Guadeloupe and Barbados (wetlands)

- Lesser Yellowlegs – 67% 
  *(Tringa flavipes)*
- Pectoral Sandpiper – 12% 
  *(Calidris melanotos)*
- Stilt Sandpiper – 6% 
  *(Calidris himantopus)*
- Greater Yellowlegs – 6% 
  *(Tringa melanoleuca)*
- Short-billed Dowitcher 
  *(Limnodromus griseus)* – 9%

Peeps more dominant in South America

Reed 2012; A. Levesque
Assessment - Harvest Use

In all regions, virtually all of the harvest is consumed.

Suriname - 22% of active hunters (n=93) also sold or distributed shorebird bushmeat (D. Mizrahi).

French Guiana - 48% of active hunters (n=85) sold or distributed shorebird bushmeat (A. Taylor).

Brazil - Of all interviewees on the north coast (n=187), 63% hunted shorebirds (spot-lighting, “boomerang”, shocking wire). Used for food (Bosi de Almeida).

Barbados - Shooting swamps as social clubs with barbeques after shooting days.
Shorebird Bushmeat Use in Guyana

Some shorebirds harvested for personal use but most sold to supplement their fishing income.

Sold to meat vendors in established village markets or to individuals whom had placed specific orders.

Shorebirds are considered a delicacy among the Indo-Guyanese population.

Shorebirds were sold either dead or alive and either dressed or feathered.
Economic Supplement - Guyana

• Small shorebirds sold for US $5.00 for 20-25 individuals, and larger shorebirds were sold for US $10.00 for seven individuals.

• Given the daily (8 hours) minimum wage in Guyana is US $9.76, the sale of 100 small sandpipers directly to individuals would provide an additional daily income of US $20-25 to the shocker.
Policy Changes

Barbados – Voluntary limits on total harvest, daily harvest, species totals recommended by Barbados Wildfowlers Association enacted in 2012, with reasonable compliance.

Guadeloupe – Bag limits, season restrictions, and reduced hunting days instituted in 2013.

French Guiana – Closed hunting to all but 9 shorebirds in 2014 and instituted license requirement in 2017.
MOU with France, Canada and USA hunting agencies
- support for statutory changes
- cooperative design and analysis of projects
- collaborate on hunter group engagement (Martinique reporting)
- leverage funding opportunities
Law Enforcement and Awareness in Suriname
Woodbourne Refuge, Fosters Swamp Barbados

No Shooting Reserves

Mana ricefields, French Guiana
## Evaluating Progress

<table>
<thead>
<tr>
<th>Actions and Objectives</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action 1 - Assess Biological and Social Aspects of Harvest</strong></td>
<td></td>
</tr>
<tr>
<td>Obj. 1.1 - By 2020, a robust assessment of shorebird harvest is completed for Barbados, French Guiana, Guadeloupe, Martinique, and Suriname.</td>
<td>some</td>
</tr>
<tr>
<td>Obj. 1.2 - By 2025, a robust assessment is completed for northern Brazil, Guyana, Trinidad and any other jurisdiction where shorebirds are harvested.</td>
<td>on-track</td>
</tr>
<tr>
<td><strong>Action 2 - Develop Policies and Regulations</strong></td>
<td></td>
</tr>
<tr>
<td>Obj. 2.1 - By 2020, one positive policy change has occurred in each of four countries/departments.</td>
<td>on-track</td>
</tr>
<tr>
<td>Obj. 2.2 - By 2025, policies and regulations are developed in all countries/departments where shorebirds are harvested.</td>
<td>some</td>
</tr>
<tr>
<td><strong>Action 5 - Establish and Maintain No-Shooting Reserves</strong></td>
<td></td>
</tr>
<tr>
<td>Obj. 5.1 - Through 2025, Woodbourne Shorebird Refuge is consistently maintained to benefit shorebirds.</td>
<td>on-track</td>
</tr>
<tr>
<td>Obj. 5.2 - By 2025, three additional non-shooting shorebird reserves are established and maintained.</td>
<td>some</td>
</tr>
<tr>
<td><strong>Action 6 - Develop Incentives to Not Hunt</strong></td>
<td></td>
</tr>
<tr>
<td>Obj. 6.1 - By 2020, develop one initiative that promotes economic alternatives to shorebird harvest.</td>
<td>none</td>
</tr>
<tr>
<td>Obj. 6.2 - By 2025, develop one initiative that identifies substitute nutritional sources to shorebird consumption.</td>
<td>none</td>
</tr>
</tbody>
</table>
Continuing Work

• Non-response error in hunter surveys to improve harvest estimates.

• Some idea of crippling rate to adjust harvest estimates.

• Prioritize continuation of assessments to fill in the knowledge gaps to be able to go to governments and conservation and hunting stakeholders.

• Need ways to improve harvest estimates and compile across the region to compare to PBR/MSY models. Will need to decide how to make the decision about proportional mortality.
Continuing Work

• Need leadership commitment to ensure flyway-scale efforts continue.

• Try to develop a more comprehensive, regional approach to regulation development.

• Need to get jurisdictions to acknowledge the occurrence of hunting and identify tools to address the hunting issue if harvest appears to be high. Need more effort in Brazil and Suriname.