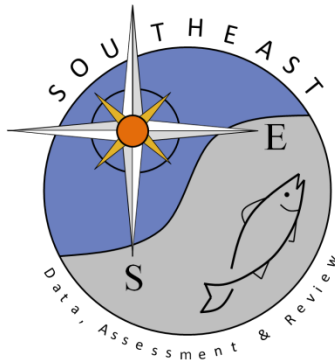


# Building a Timeline of Major Socioeconomic Events Affecting Lobster Fisheries in St. Thomas and St. John USVI

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SEDAR57-DW-05

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## Building a Timeline of Major Socioeconomic Events Affecting Lobster Fisheries in St. Thomas and St. John USVI

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### Introduction

In this working paper we summarize socioeconomic events that potentially influenced spiny lobster landings in St. Thomas and St. John. Figure 1 provides a general timeline of the events identified thus far. The events are sorted into 3 categories: economic, environmental, or regulatory. Some details regarding how each event affected the lobster fishery are included in Tables 1-3. The information summarized in this working paper is intended to serve as a starting point for further discussion of major events. After the SEDAR 57 Data Workshop (June 20-22 2018), this pre-decisional draft working paper should be updated to highlight the most significant events and elaborate on how they affected the spiny lobster fishery of St. Thomas and St. John.

In addition to summarizing major socioeconomic events, we compiled time series of quantitative socioeconomic indicators. Table 4 includes the monthly unemployment rate for St. Thomas, St. John and Water Island (US Virgin Islands Department of Labor 2018). The monthly unemployment time series is also plotted in Figure 2.

### Conclusion

Stock assessments conducted through the SEDAR framework in the US Caribbean traditionally do not incorporate quantitative socioeconomic data. However, documenting major socioeconomic events is useful as it provides supplemental information that can be used to better interpret changes observed in the spiny lobster fishery of St. Thomas and St. John. Additionally, by expanding and elaborating on the events summarized here, this document will help identify key socioeconomic events and indicators that can be used to quantitatively investigate responses observed in the fishery data that are related to major socioeconomic events.

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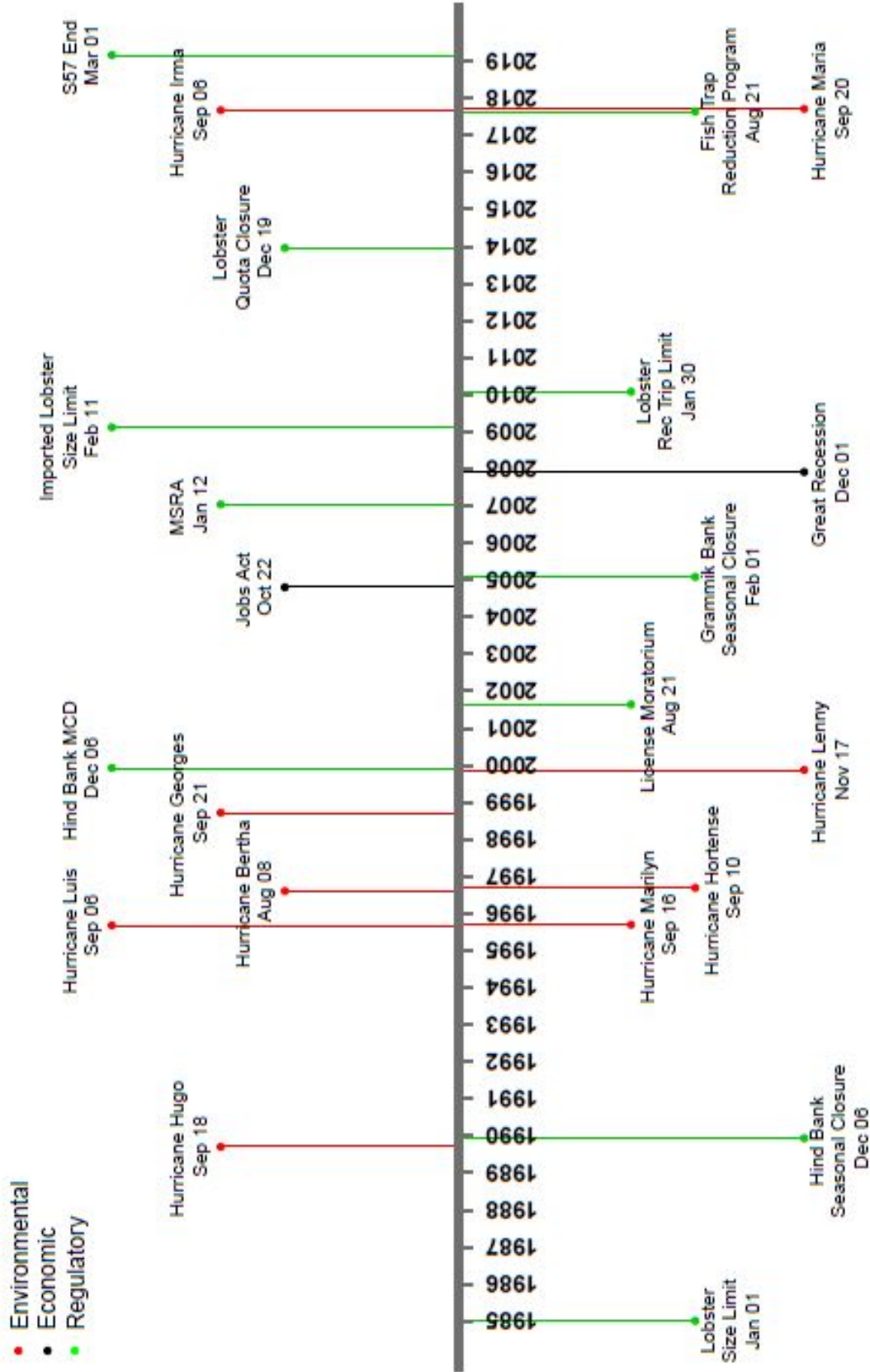


Figure 1. Timeline of Major Socio-Economic Events Affecting Lobster Fisheries in St. Thomas and St. John from 1985 to present.

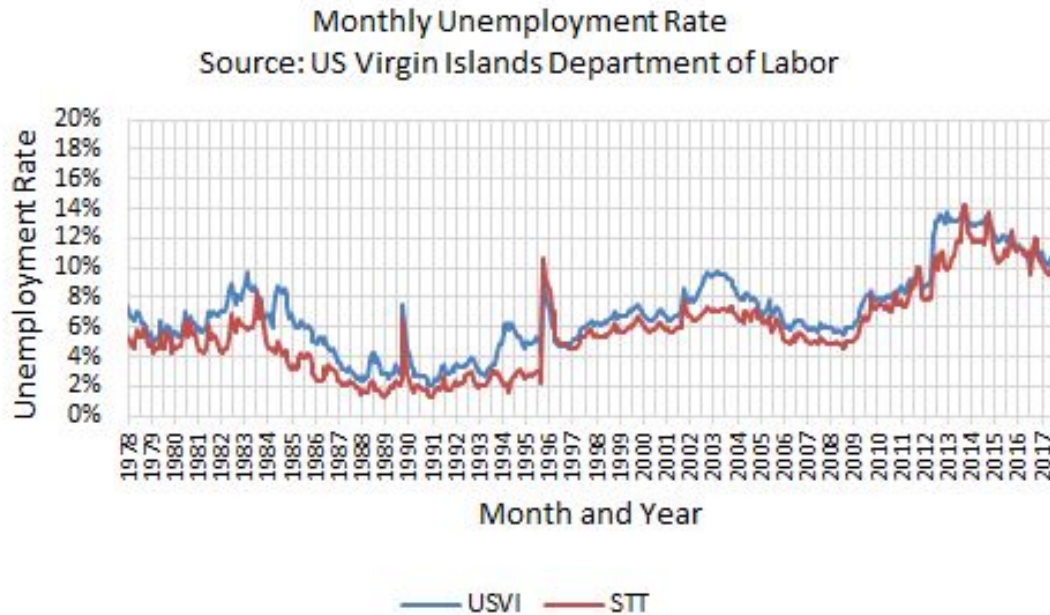


Figure 2. Rate of unemployment by month in the USVI and in St. Thomas, St. John and Water Island (STT). Source: US Virgin Islands Department of Labor 2018.

Table 1. Major economic influences to the lobster fisheries in the United States Virgin Islands.

Region	Year	Event
USA	2004	Jobs Act. The Jones Act negatively impacted the USVI economy by increasing residency and income restrictions associated with tax exemptions, (U.S. Virgin Islands Bureau of Economic Research 2014).
Global	2007	Great Recession. Economic difficulties were made worse by declines in tourism market related to the world financial crisis (U.S. Virgin Islands Bureau of Economic Research 2014).

Table 2. Major environmental influences to the lobster fisheries in the United States Virgin Islands.

Region	Year	Event
St. Thomas	1989	Hurricane Hugo. Fishers in St. Thomas stated reefs degradation was primarily due to hurricanes damaging reefs and pollution (Kojis and Quinn 2006).
	1995	Hurricane Luis
	1995	Hurricane Marilyn
	1996	Hurricane Bertha
	1996	Hurricane Hortense

	1998	Hurricane Georges
	1999	Hurricane Lenny
	2017	Hurricane Irma
	2017	Hurricane Maria

Table 3. Major regulatory influences to the lobster fisheries in the United States Virgin Islands (USVI).

<b>Region</b>	<b>Year</b>	<b>Event</b>
USVI	1972	No-egg bearing. The U.S Virgin Islands Legislative Act 3330 prohibits the harvest of egg-bearing females and set a minimum carapace length of 3 inches.
Caribbean EEZ	1985	Spiny Lobster Size Limit. Spiny lobsters with a carapace length of less than 3.5 inches must be returned immediately to the water unharmed (49 FR 50049).
St. Thomas	1989	Hind Bank Seasonal Closure. Seasonal area closure for Red Hind spawning (54 FR 50624, 55 FR 46214). Later named Hind Bank Marine Conservation District in 1999. Fishing prohibited December 1 through February 28.
St. Thomas	2000	Hind Bank MCD. Hind Bank Marine Conservation District (MCD). Year-round area closure (64 FR 60132).
USVI	2001	License Moratorium. U.S. Virgin Islands Department of Planning and Natural Resources implemented a moratorium on the issuance of new commercial fishing licenses in their territorial waters 0-3 miles (DPNR 2016).
St. Thomas	2005	Grammik Bank Seasonal Closure. Seasonal spatial closures implemented to protect yellowfin grouper spawning (70 FR 300, 70 FR 62073). Fishing prohibited February 1 through April 30.
USA EEZ	2007	MSRA. The Magnuson-Stevens Reauthorization Act established annual catch limits and accountability measures (MSRA 2006).
Caribbean EEZ	2009	Imported Spiny Lobster Size Limit. Minimum carapace length of 3.5 inches implemented for imported spiny lobster to enhance the conservation of the spiny lobster resource and improve effectiveness of law enforcement related to such conservation (76 FR 82414).
Caribbean EEZ	2012	Spiny Lobster Rec Trip Limit. Bag limit of 3 spiny lobster per person per day with a vessel limit of 10 spiny lobster per vessel per day (76 FR 82414).
St. Thomas	2017	Fish Trap Reduction Program. The Virgin Islands Fish Trap Reduction Program requires that commercial fishers reduce their total amount of fish traps by 20% in St. Thomas/St. John.

Table 4. Unemployment rate by month for St. Thomas, St. John and Water Island (US Virgin Islands Department of Labor 2018).

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1978	5.4	5.0	4.7	4.6	5.0	5.8	5.4	5.3	5.9	5.4	5.3	4.7
1979	5.1	4.3	4.6	4.5	4.7	5.6	4.5	4.6	5.6	5.2	5.2	4.2
1980	4.7	4.6	4.7	4.7	5.6	6.5	5.8	5.4	6.5	5.5	5.6	4.8
1981	4.8	4.4	4.4	4.2	4.6	6.1	5.3	5.2	5.5	5.3	4.9	4.4
1982	4.3	4.2	4.5	4.5	5.4	6.9	6.0	5.7	6.3	6.6	6.1	6.1
1983	5.9	6.0	5.8	6.0	6.0	6.6	8.5	6.6	7.5	7.0	6.0	5.0
1984	4.6	4.5	4.4	4.5	4.3	5.0	4.6	4.1	4.4	4.4	3.8	3.3
1985	3.2	3.4	3.2	3.3	3.9	4.3	4.0	4.0	4.3	4.1	3.5	2.9
1986	2.6	2.3	2.4	2.4	2.5	3.3	2.8	3.4	3.2	3.2	3.0	2.5
1987	2.4	2.3	2.1	2.2	2.1	2.4	2.3	2.2	2.2	1.9	1.9	1.4
1988	1.8	1.7	1.6	1.6	2.2	2.4	2.0	1.8	1.8	1.7	1.5	1.3
1989	1.4	1.7	1.6	2.0	1.9	2.4	2.2	2.1	2.5	6.6	4.4	2.9
1990	2.4	1.9	1.6	1.6	2.0	2.1	1.9	1.8	1.7	1.7	1.5	1.3
1991	1.3	1.8	1.9	1.9	1.8	1.9	2.7	1.7	1.8	1.8	2.1	2.1
1992	2.3	2.1	2.2	2.2	2.4	2.6	2.8	2.9	3.0	2.4	2.1	1.9
1993	2.1	2.0	2.1	2.1	2.3	2.5	2.7	3.1	2.9	3.0	2.7	2.4
1994	2.1	2.1	2.2	1.6	2.4	2.7	2.7	2.8	3.0	3.2	2.8	2.5
1995	2.7	2.8	2.8	2.7	2.8	3.0	3.0	2.8	2.2	10.7	9.3	8.8
1996	8.4	7.0	7.1	5.3	5.2	4.9	4.8	4.8	4.8	4.8	4.6	4.6
1997	4.6	4.6	4.7	5.0	5.3	5.4	5.4	5.6	5.8	5.8	5.6	5.3
1998	5.5	5.4	5.3	5.4	5.5	5.4	5.5	5.7	5.8	6.3	6.0	5.7
1999	5.8	5.7	5.7	5.8	6.0	6.1	5.9	6.1	6.5	6.7	6.5	6.2
2000	6.2	5.9	5.8	5.7	5.8	5.8	5.9	5.9	6.2	6.3	6.0	5.8
2001	5.9	5.8	5.7	5.7	5.8	5.9	5.9	6.0	6.5	7.9	7.1	6.8
2002	6.7	6.4	6.4	6.5	6.6	6.7	6.9	7.0	7.3	7.4	7.2	7.1
2003	7.2	7.1	7.1	7.1	7.2	7.2	7.2	7.1	7.4	7.3	7.1	6.9
2004	6.7	6.5	6.6	6.3	7.0	7.0	6.8	6.4	7.0	7.2	7.0	6.6
2005	6.7	6.2	6.4	6.3	6.7	6.2	5.6	6.0	6.6	6.3	5.8	5.4
2006	5.2	5.1	5.1	4.8	5.2	5.5	5.1	5.4	5.6	5.5	5.3	5.0
2007	5.0	5.0	4.9	5.1	5.1	4.9	5.3	5.1	5.2	5.1	4.8	4.9
2008	4.8	4.9	4.9	5.0	4.8	4.8	4.6	4.7	5.1	5.1	5.0	5.1
2009	5.2	5.4	5.8	6.0	6.5	6.8	6.5	6.6	7.4	8.2	7.4	7.2
2010	7.5	7.6	7.5	7.2	7.3	7.5	7.1	7.1	8.1	8.3	7.6	7.6
2011	7.9	7.4	7.4	7.9	8.4	8.9	8.6	8.9	10.0	10.0	8.2	8.0
2012	7.9	8.0	7.9	8.0	10.3	10.8	10.6	9.9	11.0	11.1	10.0	9.9
2013	10.0	10.0	10.6	10.8	11.7	11.9	11.7	12.4	14.2	14.2	12.4	12.2
2014	11.9	11.8	11.7	11.9	11.7	11.9	11.6	12.3	13.2	13.7	12.7	11.2
2015	10.7	10.6	10.4	10.5	10.7	11.3	10.8	11.4	12.2	12.6	11.5	11.1
2016	11.2	11.3	11.1	11.0	10.8	11.1	9.6	11.1	12.1	11.9	10.9	10.5
2017	10.3	10.0	9.7	9.6	9.5	9.9	9.1					