

OXFORD ECONOMICS

Potential Impact of the Gulf Oil Spill on Tourism



A report prepared for the
U.S. Travel Association



OXFORD
ECONOMICS

Contents

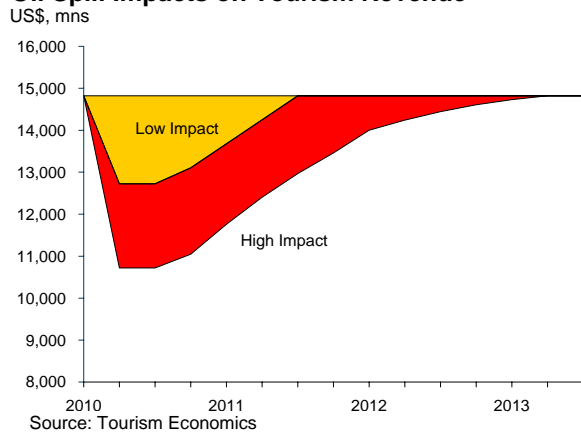
| | | |
|----------|--|-----------|
| 1 | Introduction..... | 2 |
| 1.1 | Summary of Findings | 2 |
| 1.2 | Overview | 3 |
| 2 | What Is At Stake? | 4 |
| 3 | Understanding the Impacts So Far | 6 |
| 3.1 | Decline in Gulf shore interest | 6 |
| 3.2 | Declining Traveler Intentions: TNS Survey | 7 |
| 3.3 | Declining Traveler Intentions: Louisiana Survey | 8 |
| 4 | What is the Outlook for Recovery? | 9 |
| 4.1 | Has the flow of new oil been permanently halted?..... | 9 |
| 4.2 | Where will the oil flow? | 9 |
| 4.3 | How long will cleanup take? | 10 |
| 4.4 | How will travelers react?..... | 10 |
| 5 | Case Studies and Potential Impacts | 11 |
| 5.1 | Duration of tourism impacts..... | 11 |
| 5.2 | Duration and Scale of Impacts | 14 |
| 5.3 | Description of Key Case Studies | 15 |
| 5.3.1 | Ixtoc Oil Spill..... | 15 |
| 5.3.2 | Other oil spills / HABs..... | 15 |
| 5.3.3 | Hurricane Katrina | 15 |
| 5.3.4 | Other hurricanes..... | 16 |
| 5.3.5 | <i>Exxon Valdez</i> | 16 |
| 5.3.6 | SARS / H1N1 | 17 |
| 5.3.7 | Asian Tsunami..... | 20 |
| 5.3.8 | Terrorism..... | 20 |
| 6 | Estimates of Impact..... | 21 |
| 6.1 | Summary of Impacts | 21 |
| 6.2 | Methodology..... | 22 |
| 7 | Mitigating Losses | 24 |

1 Introduction

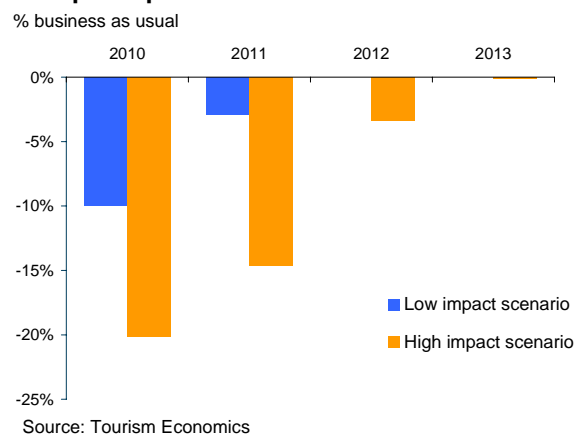
1.1 Summary of Findings

- Tourism is one of the top economic drivers of the Gulf region. Visitors to Congressional Districts along the Gulf coast spent in excess of \$34 billion in 2008, sustaining 400,000 jobs.
- Current indicators show double-digit declines in plans to travel to the region.
- The potential impact of the Deepwater Horizon oil spill could cost the U.S. coastal economies \$22.7 billion over a period of three years.
- A review of disasters affecting tourism destinations reveals that the impact endures beyond the resolution of the crisis itself due to brand damage and ongoing traveler misperceptions.
- The potential economic impacts of the crisis could be cut by one-third (\$7.5 billion) with the establishment of a \$500 million emergency marketing fund to counter misperceptions and encourage travel to the affected regions.

Oil Spill Impacts on Tourism Revenue



Oil Spill Impacts on Tourism Revenue



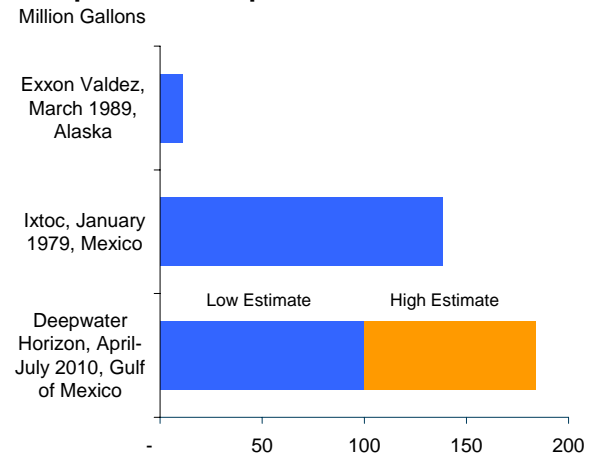
1.2 Overview

The Deepwater Horizon oil spill in the Gulf of Mexico is the largest offshore spill in U.S. history. Hundreds of millions of gallons have spilled since the explosion of the rig on April 20, 2010. The resulting oil slick covers at least 2,500 square miles. Large underwater plumes of oil not visible at the surface have also been reported. Estimates of the total spill range from 100 million to 184 million gallons of oil.

The spill has already had a massive impact on the environment and is severely affecting the economies of the region.

This study seeks to understand the current and potential damage to the tourism industry in the region over a likely prolonged period of impact. To do this, we look at a range of indicators of how the disaster is already affecting traveler behavior. To assess the potential longer term impacts, we assessed the duration and magnitude of impacts of a broad range of historic crises around the world as inputs into a risk-weighted scenario model.

Comparative Oil Spills

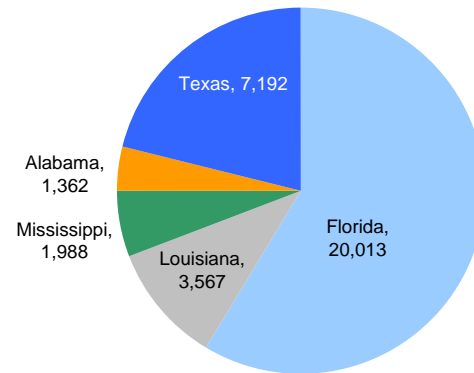


2 What Is At Stake?

- Tourism is one of the top economic drivers of the Gulf region. Visitors to the Gulf Coast Congressional Districts spent more than \$34 billion in 2008. The largest share of this spending is received by Florida with more than \$20 billion in visitor spending, followed by Texas with \$7.2 billion and Louisiana with \$3.6 billion.
- This spending sustains nearly 400,000 jobs within the Gulf Coast Congressional Districts.

Visitor Spending in Gulf

Aggregate of Gulf Congressional Districts, \$ millions

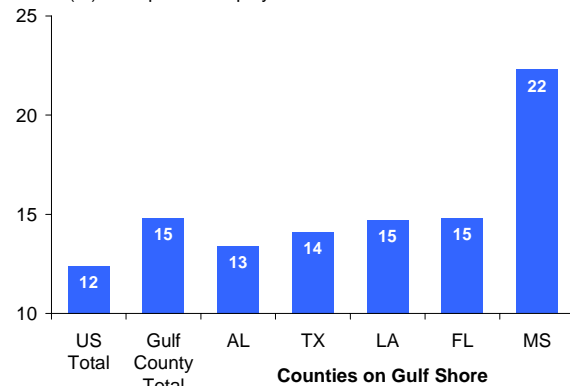


Source: U.S. Travel Association

- As a generator of employment, tourism is more important to the Gulf economies than to the rest of the country. Leisure and hospitality employment represent 15 percent of total private employment for the counties along the Gulf shore compared with 12 percent for the entire country. In Mississippi, 22 percent of private employment on the coast is in the leisure and hospitality sector.

Leisure and Hospitality Employment

Share (%) of all private employment

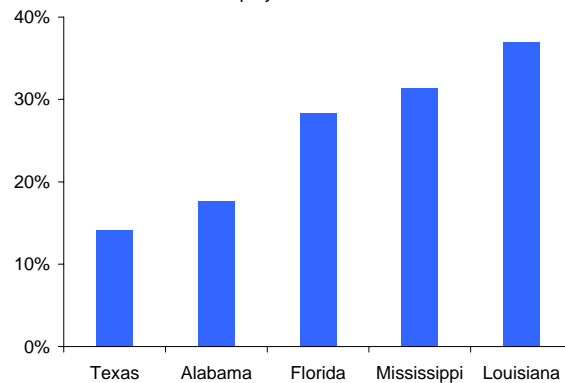


Source: BLS

- The 18 congressional districts touching the Gulf Coast represent a significant share of each state's total tourism economy. In Louisiana, nearly 40 percent of the state's tourism employment exists along the Gulf Coast. A full 25 percent of tourism employment in the five affected states is on the Gulf.

Gulf Shore Tourism Employment

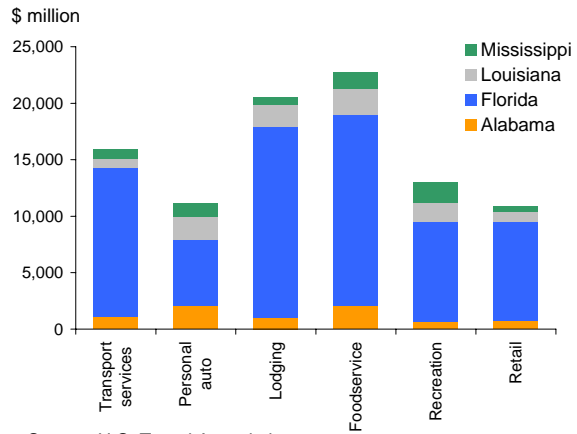
Share of State Tourism Employment



Source: U.S. Travel Association

- The visitor economy is a diverse composite of sectors. When destinations are affected by a disaster, the impacts are felt by a broad spectrum of hospitality, transport, recreation, and retail sectors.

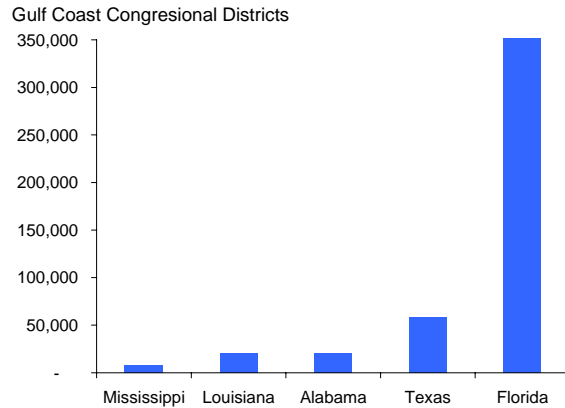
Visitor Spending



Source: U.S. Travel Association

- In addition, the real estate sector and rental income are highly tied to the tourism industry. More than 459,000 homes along the Gulf are for seasonal or recreational use, representing 7 percent of all homes in the congressional districts along the shore.
- The current crisis puts into jeopardy not only rental income and the ancillary spending of guests, but also real estate values.

Homes for Seasonal or Recreational Use



Source: U.S. Census

3 Understanding the Impacts So Far

The high profile of the oil spill has led to incredibly widespread economic impacts. Although the losses have been concentrated where oil has come ashore, tourists have shifted away from the entire region in significant numbers. Though hard figures are not yet available, several surveys and indicators help provide a range of the impacts which are being, or will be, experienced.

The available research tells us a few things about the crisis for the tourism sector in these early days. First, travel intentions are down significantly for the Gulf. Second, misperceptions abound regarding which areas are affected. And third, travelers believe the impacts of the disaster will be felt for a long time.

3.1 Decline in Gulf shore interest

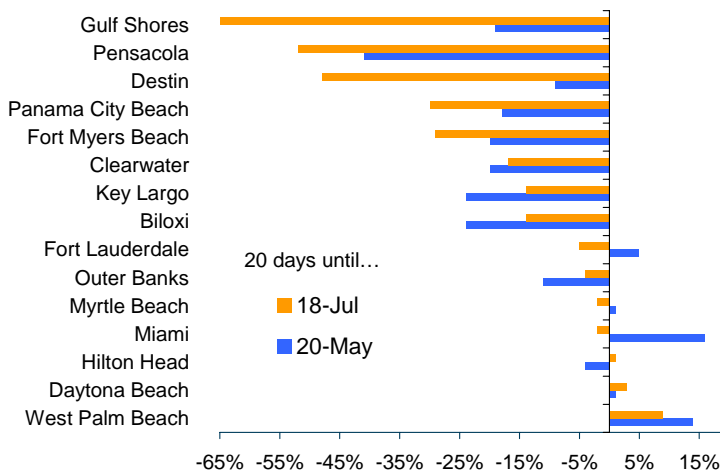
With nearly 47 million monthly visitors, TripAdvisor® is the world's largest travel website featuring consumer reviews for destinations, hotels, B&Bs, inns and restaurants, offering tools to search everything from flights to vacation rental properties. The company has provided two revealing snapshots of the decline in searches for Gulf shore destinations.

The chart below shows the percentage drop in the share of TripAdvisor U.S. page views for various destinations for the 20 days leading up to May 20 and to July 18 compared to the same 20-day period one year earlier. The effect of the oil spill on interest in the region is striking and in most cases has only increased over time.

This decline in searches represents a leading indicator of booking as fewer travelers are planning trips to the region. Consumers searched 52 percent less for Pensacola, Fla. in July, 65 percent less for Gulf Shores, Ala., and 48 percent less for Destin, Fla.

Share of TripAdvisor U.S. Page Views

% change on same 20-day period one year ago



Source: TripAdvisor

| TripAdvisor Page Views % Change in Share of U.S. | | | |
|---|--------|--------|--------|
| Twenty days until... | 20-May | 20-Jun | 18-Jul |
| West Palm Beach | 14% | 17% | 9% |
| Daytona Beach | 1% | -4% | 3% |
| Hilton Head | -4% | 0% | 1% |
| Miami | 16% | 1% | -2% |
| Myrtle Beach | 1% | 3% | -2% |
| Outer Banks | -11% | -8% | -4% |
| Fort Lauderdale | 5% | -1% | -5% |
| Biloxi | -24% | -16% | -14% |
| Key Largo | -24% | -28% | -14% |
| Clearwater | -20% | -26% | -17% |
| Fort Myers Beach | -20% | -31% | -29% |
| Panama City Beach | -18% | -31% | -30% |
| Destin | -9% | -25% | -48% |
| Pensacola | -41% | -52% | -52% |
| Gulf Shores | -19% | -47% | -65% |

Source: TripAdvisor

A more detailed look at the data in the above table shows that the impact may already be extending beyond where oil has come to shore. For example, the Outer Banks has been consistently negative since the crisis began, as has much of the Florida Gulf coast, even though oil has only been spotted in the state's panhandle region. Also, it is noteworthy that the east coast of Florida has experienced increases in interest, possibly as an alternate destination.

3.2 Declining Traveler Intentions: TNS Survey

TNS is a leading provider of market research and conducted a representative survey of U.S. households regarding their travel intentions and how they have changed. The survey was conducted in June and found that 10 percent of those already intending to travel to the Gulf region had changed their plans due to the oil spill. Another 22 percent had decided not to go for unspecified reasons, leaving only 68 percent of would-be travelers to the region holding onto their plans.

This figure is substantial in two regards. First, it represents the average for the entire Gulf shore region though large parts have been untouched by oil. Clearly some regions are bearing the greater brunt of these cancellations. Second, these are changed plans only and therefore do not include any losses of trips that would have been planned and booked on short notice apart from the oil spill.

The TNS survey also asked which destinations were chosen as substitutes when Gulf trip plans were changed. Remarkably, North Carolina, Massachusetts and Maine were among the top alternative destinations indicating a high aversion even to proximity to the Gulf region.

3.3 Declining Traveler Intentions: Louisiana Tourism Survey

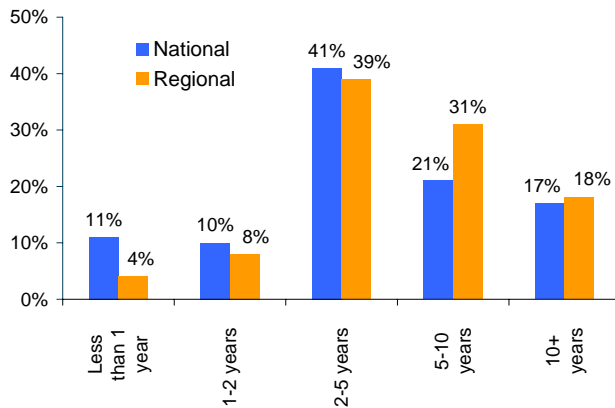
The Louisiana Office of Tourism commissioned two successive surveys which were fielded by MDRG. The first was a national survey conducted from May 19-21. The second was a regional survey of key visitor source markets conducted June 18-21.

The May survey found that 26 percent of those who had plans to visit the state of Louisiana had postponed or canceled their trip. The June survey, which focused on relatively nearby visitor markets in Texas, Mississippi and Florida, found that 17 percent had postponed or canceled their planned vacation to Louisiana.

Equally serious is the perception that this disaster will affect Louisiana for years to come. Nearly 80 percent of national respondents believed the disaster would impact the state for at least two years with nearly 40 percent stating that the impact will extend five years or longer. Regional respondents had an even bleaker view of the future with 88 percent indicating an impact of at least two years and nearly 50 percent expecting an impact lasting at least five years.

Perception of Effect on Louisiana

Share of respondents



Source: Louisiana Office of Tourism

Significant misperceptions were also identified by these surveys. For example, only 14 percent of national respondents realized that Louisiana oyster beds have not been contaminated with oil and only 45 percent of respondents believed that seafood at Louisiana restaurants is safe.

4 What is the Outlook for Recovery?

Estimating the eventual impact of the spill on the tourism economies of the Gulf faces several uncertainties. In order to begin to assess the duration and extent of the impact, ranges must be established for these variables. We note four critical uncertainties below as well as the most likely outcome for each.

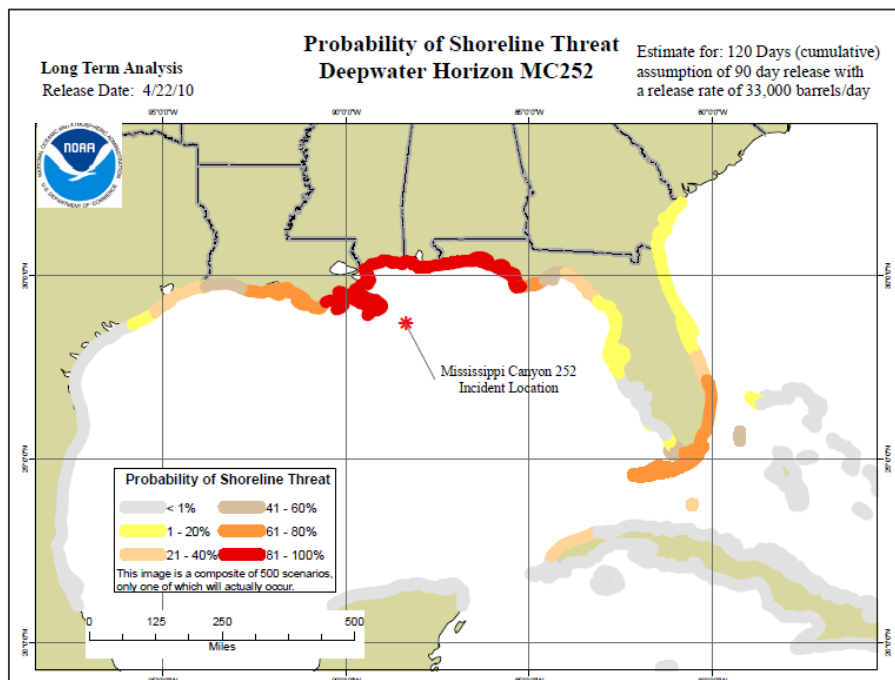
4.1 Has the flow of new oil been permanently halted?

At the time of writing, a cap has successfully stopped the flow of oil for three days. This is clearly encouraging, but the risk of additional oil flowing into the Gulf remains.

4.2 Where will the oil flow?

Somewhere between 100 million and 184 million gallons of crude has spilled. Projections indicate it could show up as far west as Corpus Christi, Texas, or as far north as North Carolina's Outer Banks. The most widely accepted forecasts are being conducted by The National Oceanic and Atmospheric Administration (NOAA) which has used computer models to estimate the likelihood of various oil flow scenarios:

- The coastlines from the Mississippi River Delta to the western panhandle of Florida: 81-100 percent oil probability
- Texas: low probability (less than 1 percent in the south to 40 percent near the Louisiana border)



- Florida Keys, Miami and Fort Lauderdale: 61-80 percent due to the potential influence of the Loop Current
- East coast of Florida and other Eastern Seaboard: 20 percent or less with impacts less likely north of North Carolina as the Gulf Stream moves away from the mainland

4.3 How long will cleanup take?

Here, estimates vary widely. The U.S. Coast Guard has talked about a multi-year process. The existence of oil plumes that have been found deep in the water column add uncertainty to any estimates of the time required for recovery. The comparably sized Ixtoc Oil Spill (140 million gallons) off Mexico's coast in 1979 suggests that affected beaches could return to pre-spill conditions within about three years.

However, tar balls and patties could wash ashore for longer. Some of the mangrove swamps in the Yucatan Peninsula, an ecosystem similar to the one found off the Louisiana Gulf coast, are currently 80 percent recovered from that spill, and tar can still be found in some areas.

4.4 How will travelers react?

This is the true wild card. Leisure travelers have ultimate discretion in their choice of destination and may avoid regions which have only slight contamination or perhaps even the risk of oil. This can affect a destination for much longer than the disaster itself and may be the most significant factor in determining the eventual impact on the affected tourism economies. The next section of this report addresses this issue in more detail.

5 Case Studies and Potential Impacts

In order to understand the potential role of traveler behavior, we have assessed a range of disaster case studies to determine the range and duration of impacts. From these, we can then draw conclusions on the possible outcomes for the current oil spill.

5.1 Duration of tourism impacts

A number of comparable crises have been considered to determine a range of possible direct impacts on tourism in the affected areas. The duration and scale of the previous crises have been considered at a national or state level since data and case studies are more readily available. The impacts will clearly be higher for specific coastal areas.

Duration is calculated as the combined length of time that there was physical disruption to tourism services in addition to the time period for which perceptions were affected. This is measured as the time between the start of each event and the time that visits and spending return to business as usual estimates.

The scale of the current oil spill as well as the potential tourism disruption has no exact precedent. While earlier oil spills have been environmental disasters, the immense scale of the current oil slick implies that the potential damage is larger. And the proximity to unique fishing activity and tourism hotspots also places the event apart from previous events.

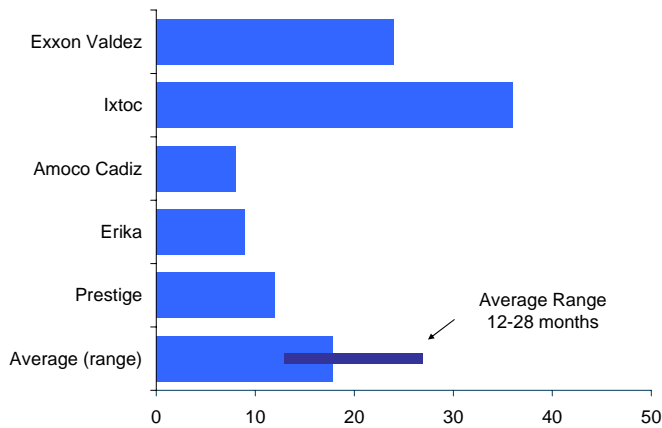
A variety of events have been examined in terms of duration and scale to determine the expected range of impacts on tourism activity:

- Previous oil spills
- Harmful Algal Blooms (HABs)
- Hurricanes
- SARS / H1N1
- Asian Tsunami
- Terrorist attacks

All of these events share some common characteristics in that they are either natural disasters or unpredictable events and that they have influenced perceptions of destinations even after the initial physical disruption is over. The following charts document the tourism impact duration of a wide range of events in terms of the months required to attain prior visitor spending peaks. The average ranges are based on a single standard deviation of the recorded durations.

Duration of Oil Spill Tourism Impacts

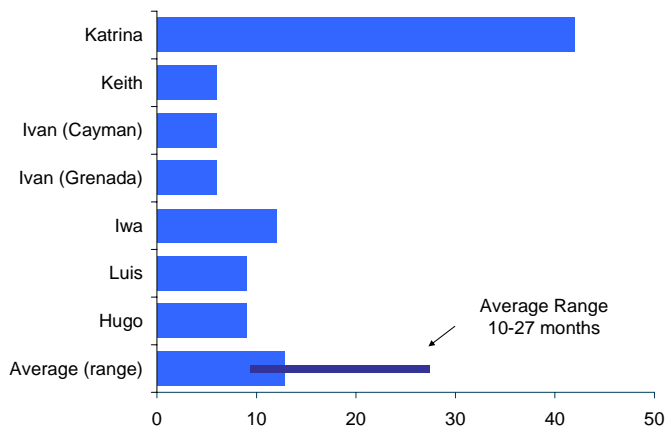
Months after initial disruption for visitor spending to return to baseline



Source : Tourism Economics

Duration of Hurricanes Tourism Impacts

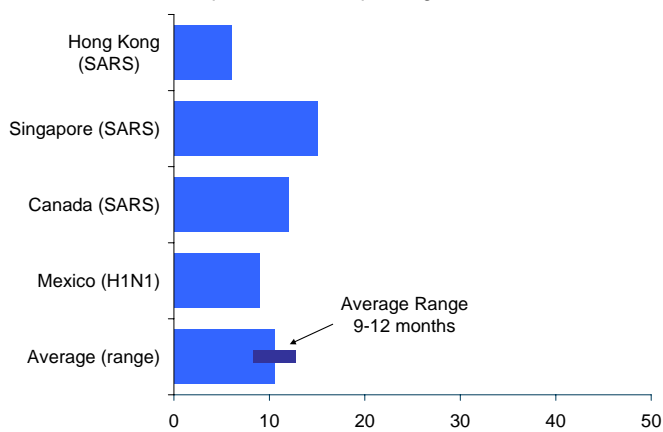
Months after initial disruption for visitor spending to return to baseline



Source : Tourism Economics

Duration of Pandemic Tourism Impacts

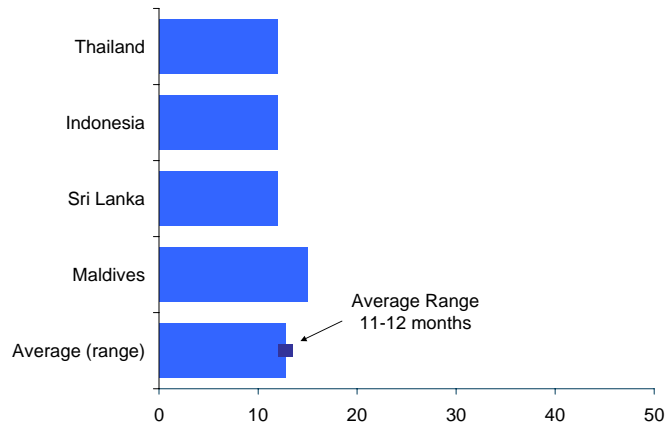
Months after initial disruption for visitor spending to return to baseline



Source : Tourism Economics

Duration of Asian Tsunami Tourism Impacts

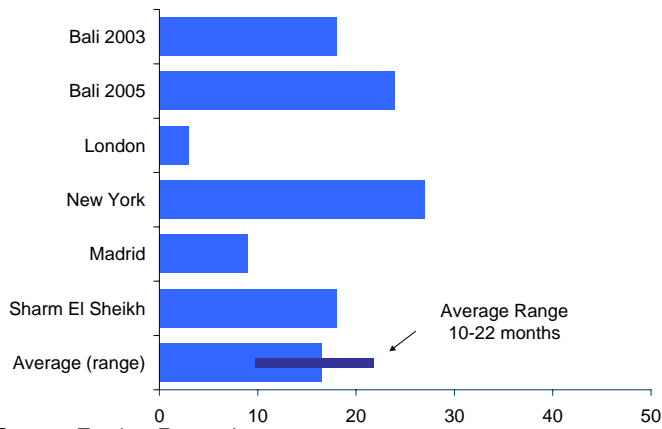
Months after initial disruption for visitor spending to return to baseline



Source : Tourism Economics

Duration of Terrorism Tourism Impacts

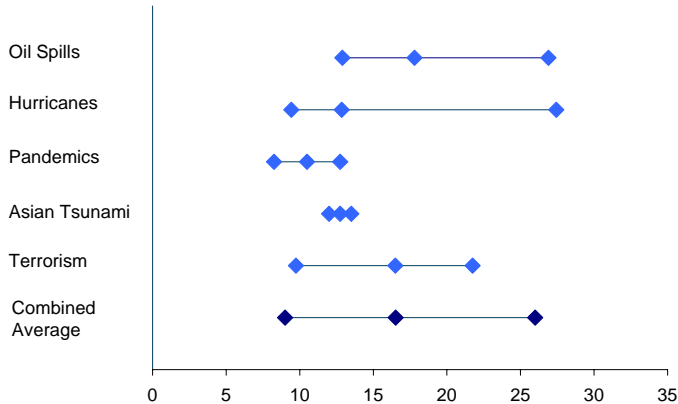
Months after initial disruption for visitor spending to return to baseline



Source : Tourism Economics

Tourism Disruption after Crises

Months after initial disruption for visitor spending to return to baseline
(typical range and average duration by type of event)



Source : Tourism Economics

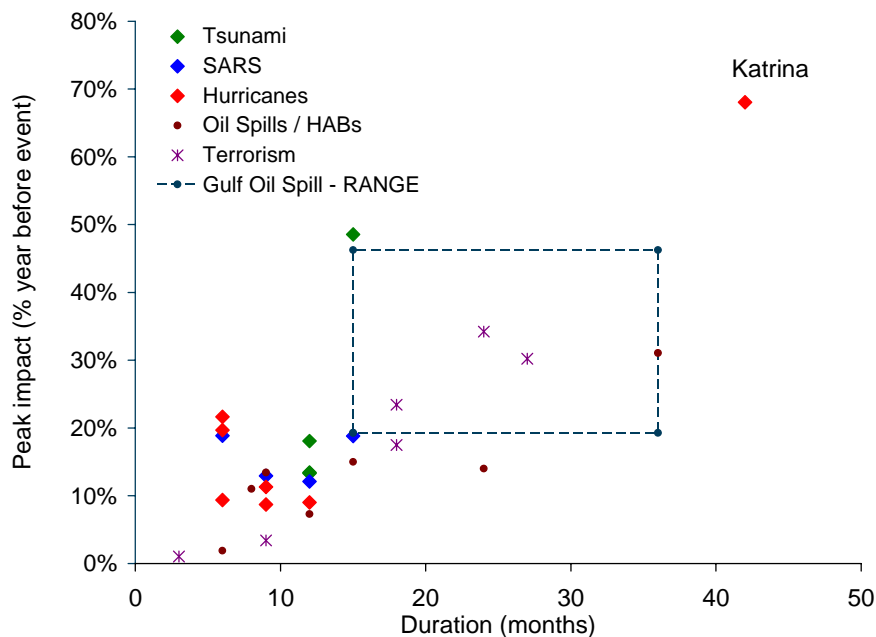
The far left and far right markers represent the range of impact duration. The middle marker represents the average of all observed timeframes.

5.2 Duration and Scale of Impacts

The following chart illustrates that there is a clear relationship between the length of the disruption and the overall scale of the tourism impact. In addition, we see that some relatively short-lived events can also have very large effects on tourism for that period. This is used as an input into calculating the range of possible impacts.

The analysis shows a broad range of impacts which provides a context for the current disaster. Some hurricanes have reported only a single-season impact while Katrina stands out in terms of its duration and scale of impact.

Event Duration & Scale



The left axis shows the peak percentage loss in tourism spending. The bottom axis shows the duration for spending to return to pre-disaster levels.

The dotted box represents the potential range of impacts, both in magnitude and duration, of the current crisis.

The dotted-line box represents the estimated range of impacts in terms of duration and scale for the current oil spill. This is based on current estimates of the length of time of cleanup as well as traveler uncertainty created by misperceptions. On this basis, the Deepwater Horizon oil spill impact could reasonably extend to three years beyond the initial spill.

5.3 Description of Key Case Studies

5.3.1 Ixtoc Oil Spill

- In 1979, an oil rig exploded off the coast of the Yucatan in Mexico. The Ixtoc well poured 140 million gallons of oil into the Gulf of Mexico. Massive slicks reached the northern Mexican Gulf coast and Texas, where it would eventually coat almost 170 miles of U.S. beaches. The beaches were largely clear within three years. However, it was five years before all tar mats on Texas beaches disappeared.
- The Deepwater Horizon spill is closer to and, therefore, affecting Louisiana marshlands that are more sensitive than the sparsely populated Texan and Mexican coastlines that Ixtoc reached. While beaches are relatively easy to clean, getting the oil out of the delta's fragile marshlands is much more difficult, according to scientists.

5.3.2 Other oil spills / Harmful Algal Blooms

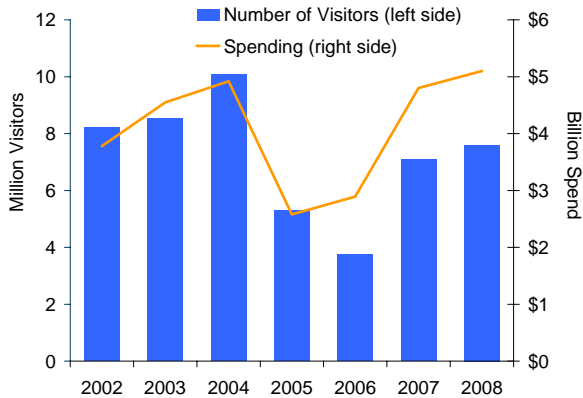
- Previous oil spills have involved huge cleanup operations and disruption to ocean activities such as fishing with some clear implications for tourism. However the potential disruption to numerous tourism destinations and activities is a unique feature of the current spill. It is likely that tourism disruption will be higher than suggested by previous spills.
- Harmful Algal Blooms (HABs) also present similar disruptions to coastal tourism activity. Previous effects have affected fishing activities more than broader coastal tourism activities.

5.3.3 Hurricane Katrina

- On August 29, 2005, Katrina's storm surge caused 53 different levee breaches in greater New Orleans, submerging 80 percent of the city. The storm surge also devastated the coasts of Mississippi and Alabama, making Katrina the most destructive and costliest natural disaster in the history of the United States with total damage of more than \$100 billion.
- In 2004, New Orleans received 10.1 million visitors. The city hosted 7.6 million in 2008, the last year of available figures, and remains roughly 25 percent below its pre-Katrina peak. Visitor spending in New Orleans finally recovered fully in 2008 with \$5.1 billion compared to \$4.9 billion in 2004, marking a three-year process to reach prior peak spending levels.

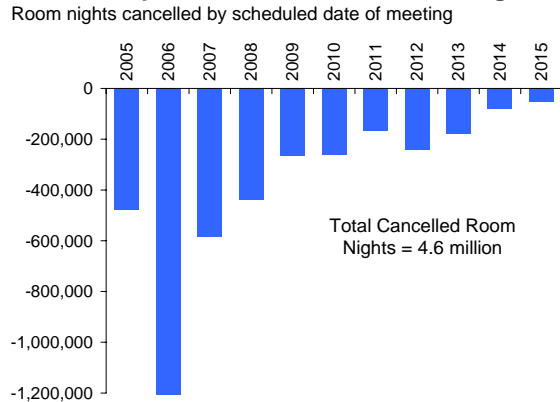
- The impact on the meetings sector endures to this day. After Katrina, 4.6 million cumulative room nights were canceled, extending out to 2025.

New Orleans Tourism Recovery



Source: University of New Orleans

Katrina Impact on New Orleans Meetings



Source: New Orleans CVB

5.3.4 Other hurricanes

- Hurricanes have been considered that have significantly disrupted tourism infrastructure across Central America and the Caribbean measured at the country level. These tend to be short-lived events, with disruption of less than a full year but with very high short-term impacts.
- Hurricanes are expected annually to some degree, although the affected locations are unknown and short-term impact is comparable. However, the legacy of the impact does not tend to persist beyond the physical rebuilding.
- An obvious exception to general analysis here is Hurricane Katrina and its impact on Mississippi and Louisiana.

5.3.5 Exxon Valdez

- In 1989, the *Exxon Valdez* spill dumped nearly 11 million gallons of oil into Prince William Sound, and it spread down the Alaska coast, ultimately oiling 1,200 miles of shoreline.
- Recreation and tourism in the spill area dramatically declined in 1989 in Prince William Sound, Cook Inlet and the Kenai Peninsula. Injuries to natural resources led resource managers to limit access to hunting and fishing areas, and users such as kayakers were prevented from enjoying those beaches that harbored visible oil. Recreation was also affected by changes in human use in response to the spill, because areas that were

unaffected become more heavily used as activity was displaced from the oiled areas.

- More than 40 percent of businesses in the affected region reported significant or complete losses and visitor center inquiries fell 55 percent in the year after the spill. \$19 million in visitor spending was lost in one season.
- Of particular note, 27 percent of businesses in parts of Alaska with no oil reported moderate or significant losses
- A 2001 National Oceanic and Atmospheric Administration (NOAA) study surveyed 96 sites along 8,000 miles of coastline. The survey indicates a total area of approximately 20 acres of shoreline in Prince William Sound is still contaminated with oil. Oil was found at 58 percent of the 91 sites assessed.

5.3.6 SARS / H1N1

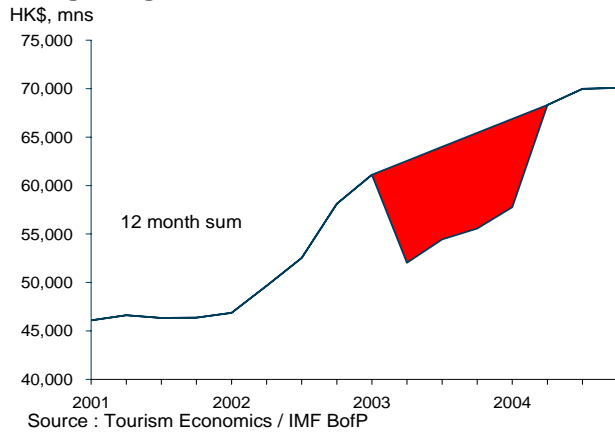
- The experience of SARS in 2003, followed by the Asia-wide avian flu outbreak, reminded the world of the active threat of serious global pandemics. None of the outbreaks to date (including swine flu in 2009) have caused global devastation on a level with true historic pandemics but there have been some significant impacts on local economies, not least from sharp falls in tourism arrivals to areas with a high perceived risk. In most observed cases these sharp falls have been short-lived, but it has taken on average a full year for activity to return to business as usual levels.
- Recorded SARS cases in 2003 were predominantly located in East Asia with adverse affects to travel across the region as confidence was hit. The important travel hubs of Singapore and Hong Kong were significantly affected. Travel spending in Hong Kong fell by 60 percent on a year-over-year basis in mid-2003, but a return to more normal travel patterns was evident within a year.
- The number of reported cases in Singapore was much lower than other countries, but its position as a regional travel hub meant that it was hit by low confidence in travel. Inbound revenues fell by 40 percent year-over-year in mid-2003 and it took more than a year for a return to baseline trends.
- Outside of Asia, a large number of reported cases in Toronto affected travel to Canada. Total inbound travel spending fell by more than 15 percent compared with the previous year. This can also be explained by a general blow to travel confidence from key Asian origin markets and highlights the importance of destination perceptions in travel decisions.

- The swine flu (H1N1) outbreak in 2009 was not as virulent as was feared and did not significantly disrupt global activity. However, the high number of initial cases in Mexico adversely affected tourism perceptions of the country. Tourism arrivals and revenue fell sharply in mid-2009 and remain low in early 2010, but almost back to levels experienced before the outbreak.
- The following charts show the losses in tourism spending by country on account of SARS and H1N1 (for Mexico). The upper line represents the pre-pandemic forecast. The lower boundary shows actual revenues.

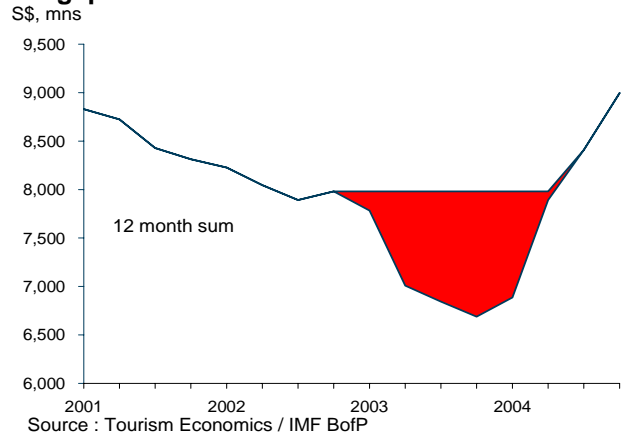
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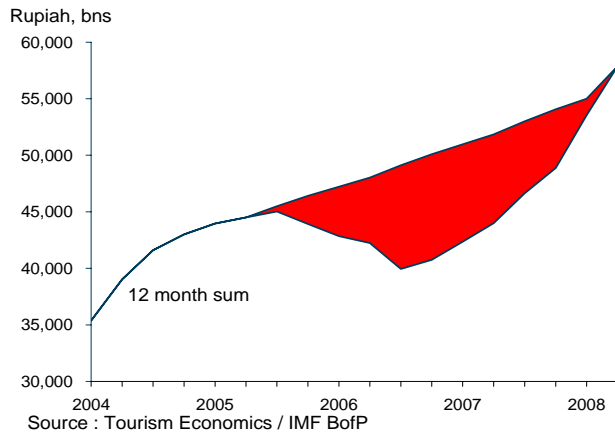
Hong Kong Inbound Tourism Revenue



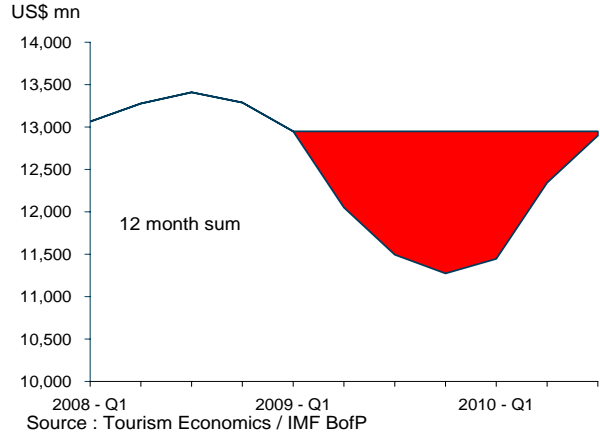
Singapore Inbound Tourism Revenue



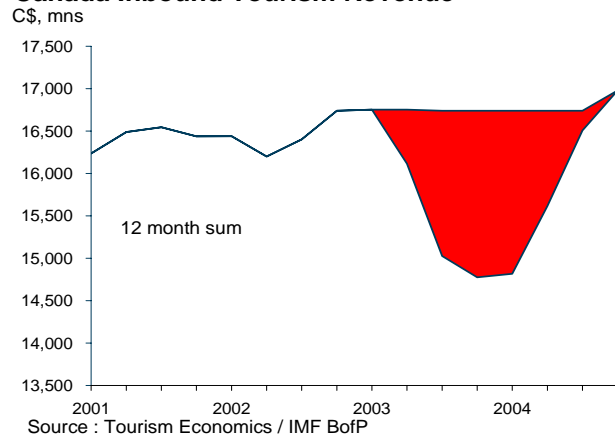
Indonesia Inbound Tourism Revenue



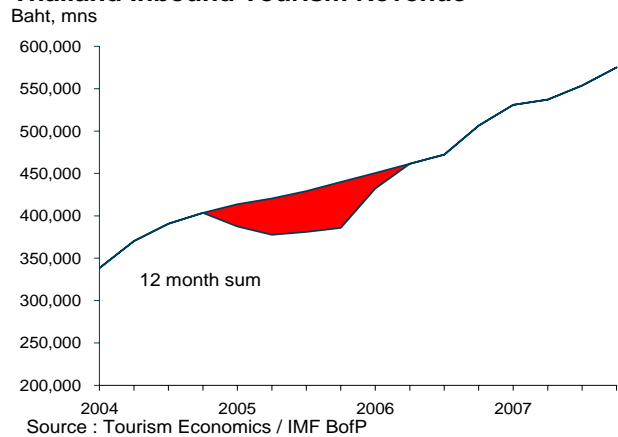
Mexico Inbound Tourism Revenue



Canada Inbound Tourism Revenue



Thailand Inbound Tourism Revenue



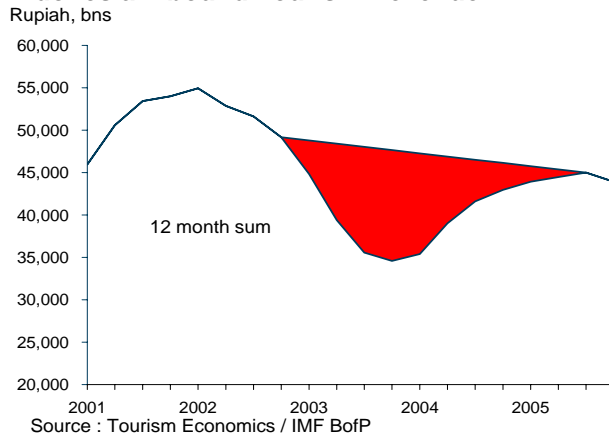
5.3.7 Asian Tsunami

- The Asian Tsunami of 2004 devastated coastal communities and resorts across Asia and rebuilding is ongoing in some cases, even though the actual event was brief. It still took at least a year in most cases to rebuild visitor confidence in destinations to return to business as usual.

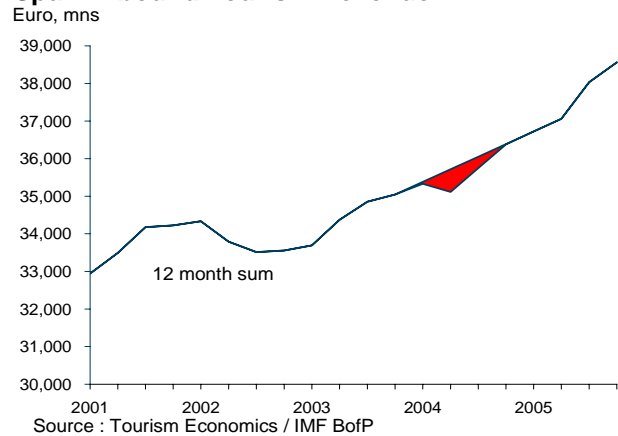
5.3.8 Terrorism

- The duration and scale of terrorism on tourism is largely dependent on the scale and unexpectedness of the incident. If there are already question marks regarding the safety of a destination then the effect will be lower than if a destination has previously been considered safe.
- For example, the 2005 Bali bombing caused less disruption than the 2003 incident, although comparison is complicated by the effect of the Tsunami in 2004 on Bali and Indonesia in general.
- Overall tourism event studies provides good examples of how the impact of an event can persist for many months and even years by altering tourists' perceptions of destinations.

Indonesia Inbound Tourism Revenue



Spain Inbound Tourism Revenue



6 Estimates of Impact

6.1 Summary of Impacts

Case studies provide historic benchmarks for both the duration and scale of the impact. The below table lays out the results of a model of potential impacts under two scenarios. The low impact scenario is based on the lower range of NOAA oil flow probabilities for each potentially affected region, observable impacts to date and lower boundaries of historic disaster impacts.

The model behind the high impact scenario is based on the high range of NOAA oil flow probabilities for each potentially affected region, observable impacts to date and upper boundaries of historic disaster impacts. Due to the scale of the current oil spill it is more likely that the disruption to tourism in the region will be towards the upper end of the historic range of impacts as reviewed in the previous section.

The disruption to visitor patterns is expected to last a minimum of 15 months. This implies a minimum impact scenario that tourism flows to the region return to “normal” levels by late 2011 and would entail an aggregate cost of \$7.6 billion in lost tourism revenues.

| Total Impact on Gulf Region | | | | | | |
|-----------------------------------|------------|-------------------|--------------------|-------------|-------------------|--------------------|
| | Low Impact | | | High Impact | | |
| Months | 15 | | | 36 | | |
| Impact on Tourism Revenues | | | | | | |
| | US\$ Bn | % 1 year outlook* | % 3 year outlook** | US\$ Bn | % 1 year outlook* | % 3 year outlook** |
| Total Region | \$7.6 | 12% | 4% | \$22.7 | 25% | 8% |
| Florida | \$6.3 | 13% | 5% | \$18.6 | 27% | 14% |
| Louisiana | \$0.7 | 17% | 6% | \$2.0 | 37% | 18% |
| Mississippi | \$0.4 | 19% | 7% | \$1.2 | 41% | 20% |
| Alabama | \$0.3 | 19% | 7% | \$0.8 | 41% | 20% |
| Texas | \$0.0 | 0% | 0% | \$0.1 | 1% | 0% |

* potential lost revenues in the first 12 months relative to business as usual for coast economies

** potential lost revenues over the next 36 months relative to business as usual for coast economies

However, there is a clear risk that impacts may be greater than this and that the crisis will adversely impact tourism arrivals for up to 36 months. In this high impact outlook, tourism flows to the region would not return to “normal” until early 2013, involving lost revenues of almost \$22.7 billion.

The expected losses fall heavily on Florida due to the larger area at risk on both the Gulf and Atlantic coasts. However, the coastal areas of Louisiana, Mississippi and Alabama are more directly exposed to the disaster and the

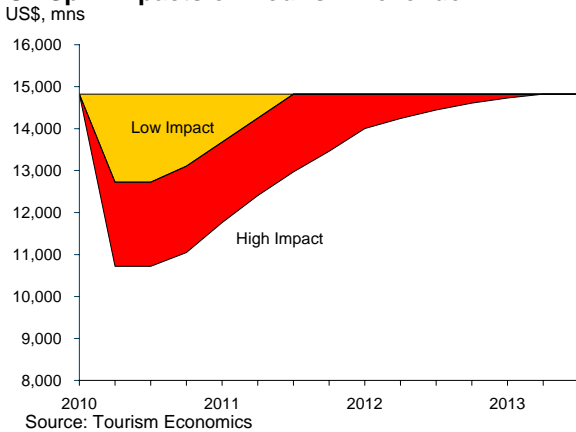
proportional effects are expected to be larger. The impacts for Texas are minimal in both scenarios due to the likely direction of oil flows.

In comparing these two scenarios, not only would tourism be affected for a longer period in the high impact scenario, but the initial impacts are also expected to be larger. This fits the usual profile of tourism impacts seen in previous extended crises. A large initial response is observed, driven by both the supply and demand side. This tends to be followed by a partial recovery as supply is restored but perceptions and demand still take time to return to normal levels.

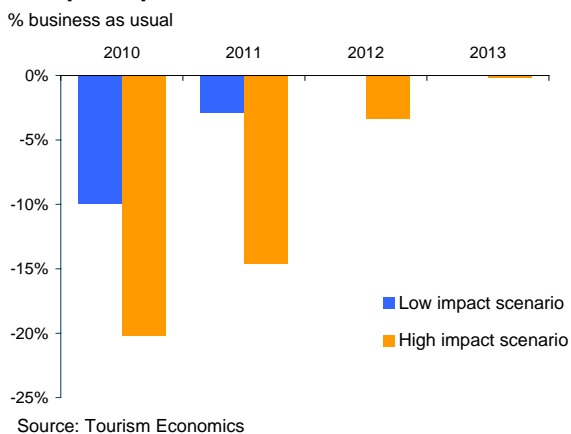
For example, visits to New Orleans fell sharply in the year following Katrina with a large drop in the number of available hotels and rooms. A little more than a year later, more than 80 percent of capacity had been restored but room demand lagged.

In the case of the Gulf Oil Spill, comparable impacts for 2010 are expected to be roughly twice as large under the high impact scenario as under the low impact scenario.

Oil Spill Impacts on Tourism Revenue



Oil Spill Impacts on Tourism Revenue



6.2 Methodology

Potential high and low tourism losses were identified from case studies and have been applied to Gulf Coast tourism revenues. Since these estimated impacts are derived from comparable case studies they are net impacts and include any offset from relief workers, government officials and media. It should be noted that the spending and activity patterns of these visitors are much more limited than leisure travelers.

A range of impacts for the Gulf Coast as a whole has been estimated according to the range of impacts in case studies. The expected duration of the crisis was estimated within the range of 15 to 36 months. However, the range of overall impacts is not purely due to different durations. Case studies also indicate a

range of proportional responses in tourism revenues, relative to pre-crisis levels. This informs the range of estimates of the peak one-year response to the crisis.

Specific ranges of impacts can be determined by adjusting the overall potential loss by the relative risk of oil reaching shores using the probabilities derived from NOAA ocean current and wind probabilities. Accordingly, the coastline between the Mississippi River Delta and the western panhandle of Florida are expected to experience the greatest proportional losses in tourism revenues in both low and high scenarios.

Potential losses are applied to tourism revenues for Gulf Coast congressional districts grouped by state, as described in Section 2. The exception is Florida since the full extent of its coastline is at risk to a relatively high degree.

This methodology has the important implication that Texas is expected to be largely unaffected despite having a large Gulf coastline. NOAA sees a minimal risk to the bulk of Texas shore. Less than 2 percent of its Gulf revenues are at risk in the worst case scenario.

7 Mitigating Losses

The difference between the low and high boundaries of the impact over a three year period is \$15 billion. This poses the question, “What can be done to move the impact toward the lower boundary?”

The range of potential impacts depends largely on the uncertainties described in Section 4. Namely:

- Has the flow of new oil been permanently halted?
- Where will the oil flow?
- How long will cleanup take?
- How will travelers react?

Of the four major uncertainties, the last one is the easiest to influence. As noted in many of the case studies and even in the current crisis, perceptions are critical to the recovery. In many instances, the impact of misperceptions on travel and tourism is greater than the effects of reactions to the real disaster. Current data from surveys and TripAdvisor show that this is happening already with vacationers avoiding the entire region, partly for lack of information.

Therefore, a critical part of the recovery strategy should include a robust communications and marketing plan for the entire region to both inform and motivate travel to the broadly affected region.

This is the key lever available to the travel and tourism industry to move the total impact toward the lower boundary of total impact over the next three years.

Separate research by Oxford has determined a range of tourism marketing ROI for various destination campaigns over the past decade. This analysis showed that some of the most effective campaigns were conducted after a crisis. This was observed in campaigns both for Canada after SARS and for Alaska after the *Exxon Valdez* spill. After eliminating outliers on both the low and high end, we found tourism marketing campaigns to yield a return of \$5 to \$64 in visitor spending for every dollar spent on marketing.

The industry has called for a dedicated emergency marketing fund of \$500 million as a means of reducing the medium and longer term impacts of the oil spill. If we assume an average ROI of 15:1 (which is conservative in light of a documented ROI of 20:1 for post-SARS campaigns in 2004), the \$500 million in marketing would generate \$7.5 billion in tourism spending in the regions affected by the oil spill.

Another way to describe this scenario is that \$500 million in marketing spending could relieve half of the \$15 billion uncertainty between the lower and upper boundaries of potential impact. This would effectively cut the total impact on the travel and tourism economy by a third in comparison to the high impact scenario.

| Expected Event Impacts | |
|--|-----------|
| \$ Million, Three-Year Cumulative | |
| Tourism Industry Loss | |
| Low Impact | \$ 7,621 |
| High Impact | \$ 22,737 |
| Difference | \$ 15,115 |
| Suggested Marketing | \$ 500 |
| Assumed ROI (Visitor spend per dollar marketing) | 15:1 |
| Visitor Spend Benefit | \$ 7,500 |
| % of High-Low Difference | 50% |
| % of High Impact Scenario | 33% |

OXFORD

Abbey House, 121 St Aldates
Oxford, OX1 1HB, UK
Tel: +44 1865 268900

LONDON

Broadwall House, 21 Broadwall
London, SE1 9PL, UK
Tel: +44 207 803 1400

BELFAST

Lagan House, Sackville Street
Lisburn, BT27 4AB, UK
Tel: +44 28 9266 0669

NEW YORK

817 Broadway, 10th Floor
New York, NY 10003, USA
Tel: +1 646 786 1863

PHILADELPHIA

303 Lancaster Avenue, Suite 1b
Wayne PA 19087, USA
Tel: +1 610 995 9600

SINGAPORE

No.1 North Bridge Road
High Street Centre #22-07
Singapore 179094
Tel: +65 6338 1235

PARIS

9 rue Huysmans
75006 Paris, France
Tel: + 33 6 79 900 846

email: info@tourismeconomics.com

www.oxfordeconomics.com

www.tourismeconomics.com