



Ecotourism in Cotopaxi, Quilotoa, & The Galapagos

By: Angelique, Elana, and Abby

What Is Ecotourism?

Travel to fragile, pristine and usually protected areas that strive to be low impact and usually small scale. It helps educate the traveler, provides funds for conservation, directly benefits the economic development and political empowerment of local communities and fosters respect for different cultures and for human rights (Darino, 2006).



Major Sites Of Ecotourism In Ecuador



Image: Wikimedia

Cotopaxi



Image: Constantine

The Galapagos Islands

Quilotoa



Image: Naturegalapagos

Cotopaxi: Quick Facts

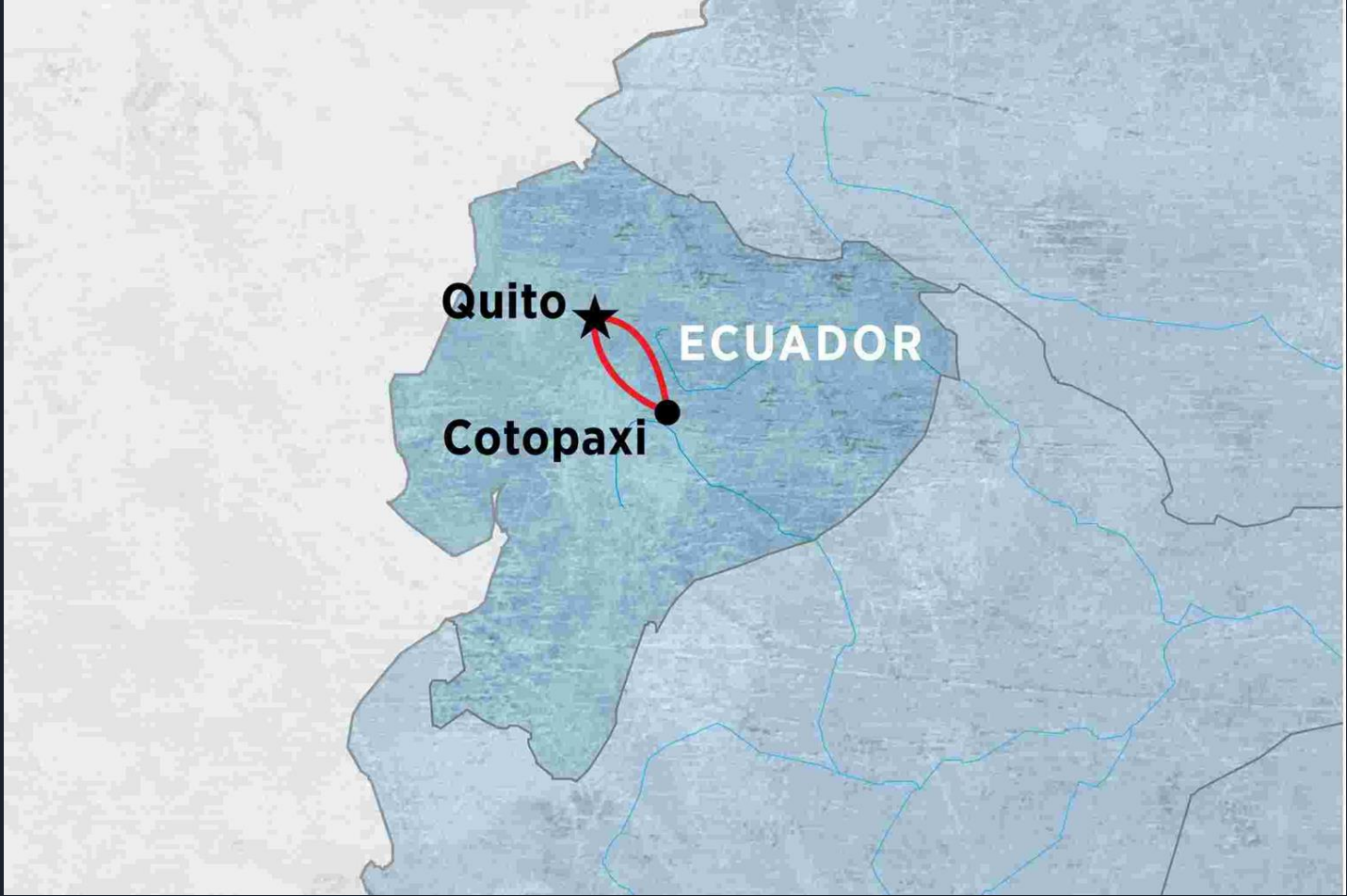
- Location: Cotopaxi, Ecuador / Pichincha
- Parent Range: Andes
- Highest Point: 5,897m (19,347ft)
 - Second highest summit in Ecuador
- Last Eruption: Aug. 2015 - Jan. 2016
- First Ascent: Nov. 28th, 1872 by Wilhelm

Reiss and Angel Escobar



Image source: <http://www.ecuadorexplorer.com/wp-content/uploads/2013/03/Cotopaxi2.jpg>

(Source: "Cotopaxi," 2017)



Cotopaxi is located 50 km (31 miles) south of Quito
“Cotopaxi.” 2017).

(Source:

Ecotourism In Cotopaxi

So what is there to do?

- Mountain climbing
- Mountain biking (downhill)
- Horseback ride

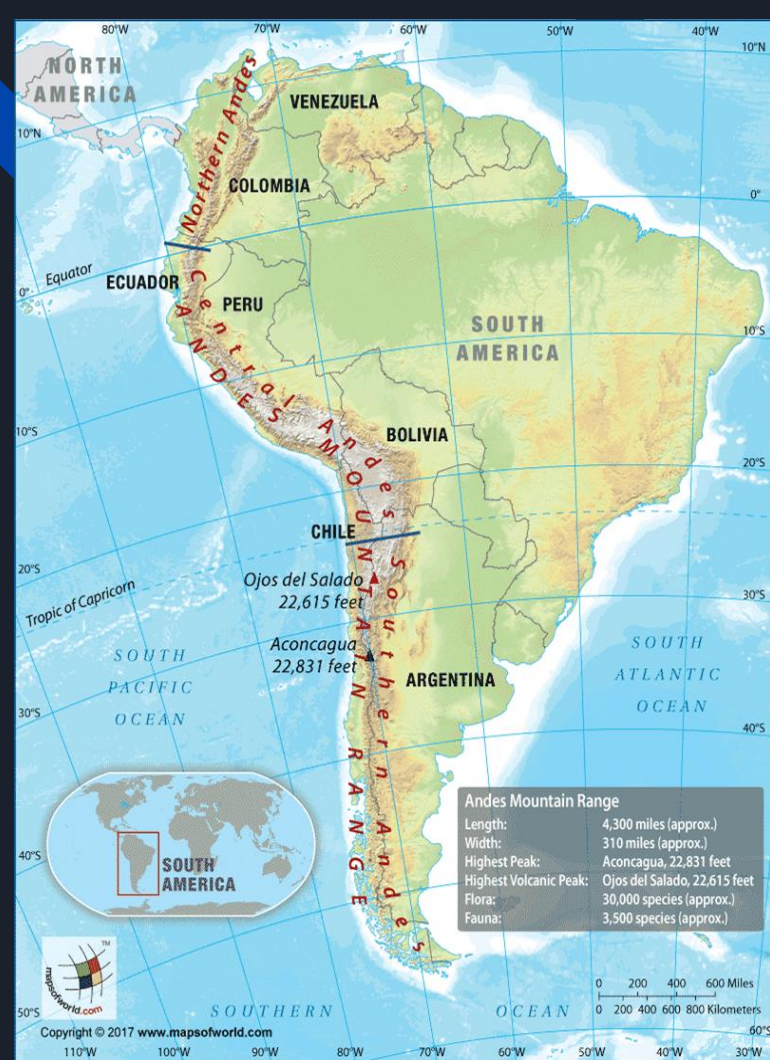
(Source: Caputo, 2013)



Does Ecotourism impact Cotopaxi?

- Few studies have been done on the impact of ecotourism specifically in Cotopaxi but in general these are the impacts on the Andes mountain range:
 - Visitors can have a wide range of impacts on soils, vegetation and wildlife
 - Activities can differ in the types and severity of their impacts
 - Ecosystems vary in both their resistance and speed of recovery from these impacts

(Source: Barros, et al., 2015)



Video of Cotopaxi Erupting in August 2015



The Galapagos Islands



The Galapagos Islands: Quick Facts

Location: About 1,000km off coast of Ecuador in Pacific Ocean

Geographic structure: 13 major islands, 6 smaller islands, and more than 40 islets. The islands are a volcanic archipelago

Total land area: 4,897 square miles

Total geographical area from Darwin Island to San Cristobal and Espanola:
28,000 square miles

Largest island: Isabela; 1771 square miles

Highest point: Wolf volcano on Isabela island with maximum altitude at 5600ft

(Source: Galapagos Travel Center, 2017)



Galapagos Islands: Geography



The Galapagos Islands are constantly changing through volcanic eruptions, the formation of lava fields, and erosion.

(Source: Galapagos Travel Center, 2017)



Galapagos Islands: A Brief History

- Pre-Columbian era visits from Ecuadorian indigenous tribes
- Discovered March 10, 1535 by Tomas de Berlanga; Islands originally called the Encantadas
- 1570 islands were named as Insulae de los Galopegos, or “Islands of the Tortoises”
- First 300 years after discovery, the islands were used by buccaneers, whalers, and sailors
- First permanent inhabitant was Patrick Watkins on Floreana in 1807
- Ecuador Claimed Galapagos 1832
- Charles Darwin visited islands 1835 on voyage of the *Beagle*. Theory of natural selection
- First Norwegian settlers arrived August 10, 1925 at Post Office Bay

(Source: Lundh, 2011)

(Source: Yacht La Pinta)

Galapagos Islands: Why so popular?

- Appeals to naturalists and biologists
- Charles Darwin's famous journey of the *Beagle*, Darwin's finches, and theory of natural selection
- Beautiful environment
- Large amount of different types of wildlife; home of at least 7,000 species
- One of the few places on the earth that has such a dense population of endemic species: 80% of the land birds, 97% of the reptiles and land mammals, and more than 30% of the plants are endemic
- 20% of the marine species cannot be found anywhere else in the world

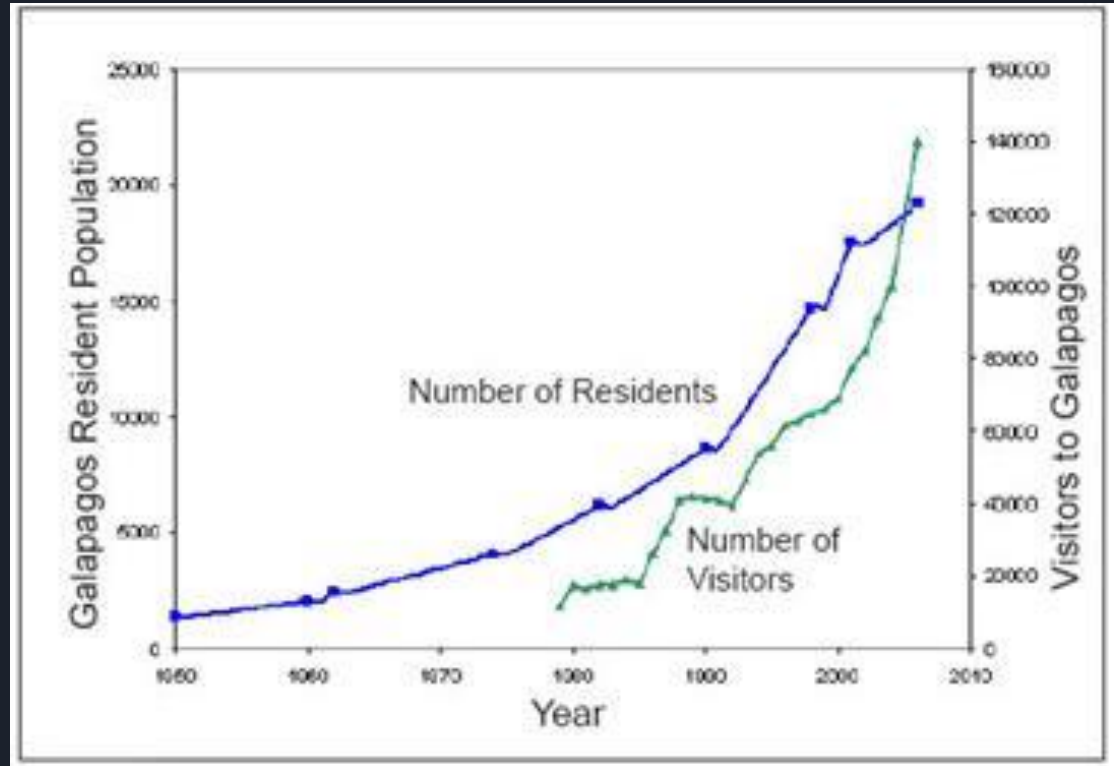
(Source: Galapagos Conservancy, 2016)



Galapagos Islands: Visitors and Residents

The number of visitors along with the number of residents in Ecuador grew exponentially since 1980. Eventually number of visitors surpassed the residential population reaching 140,000 annual visitors before the year of 2010.

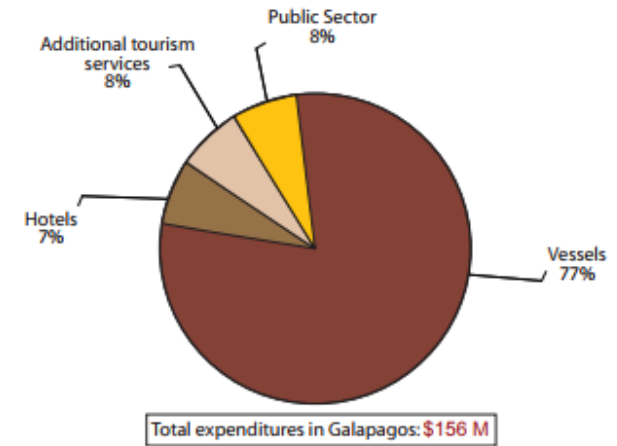
(Source: Galapagos Conservancy, 2016)



Galapagos Islands: Where the money goes

- Galapagos Entrance Fee: \$100 for foreign travelers, \$50 for children under age of 12. \$50
 - 40% directly to Galapagos National Park; in charge of protection and conservation of the islands
 - 20% Galapagos Municipalities of islands with permanent human residents: Santa Cruz, San Cristobal, Isabela, and Floreana
 - 10% Galapagos National Institute (in charge of immigration), and Galapagos Government Council
 - 5% to each Galapagos Marine Reserve, SICGAL, Ecuador Navy, and National System for Protected Areas
- 90% of income generated from maritime income goes towards airlines servicing the islands and cruise ships owned by mainland Ecuadorian companies
- In 2006 total expenditures in Galapagos totaled \$156million
 - \$120.12 million received by maritime vessels
 - \$10.92 million received by hotels
 - \$12.48 million received by public sector
 - \$12.48 million received by other tourism services

Figure 4. Galapagos tourism revenues by recipient



Note:

* Includes direct income from GNP entrance fees and tourism operation fees such as municipal permits, licenses and other fees.

(Source: Self, R, Self, D, & Bell-Haynes, 2010)

(Source: SA Explorer)

Galapagos Islands: Tourist Activities

- Maritime cruises and tours
- Sailboating and Motor-Sailing
- Naturalist guided hikes
- Casual recreational activities: snorkeling, swimming, hiking and biking
- Diving
- Ziplining
- Staying in sustainable and eco-friendly lodges

(Source: IGTOA, 2015)





Galapagos Islands: Impacts of Ecotourism

- Galapagos Islands inscribed on “List of World Heritage in Danger” in 2007. Taken off list in 2010
- Invasive species brought from early settlers and new settlers
- Over-fishing
- Unwanted by-products: contamination from boat paint and engines, oil spills, overused sites
- Air pollution of motor vehicles
- Erosion of sensitive trails
- Plant disturbance
- Stress on wildlife
- Decline in quality of tourism experience
- Wildlife exposure to foreign diseases

(Source: Williams, & Guimaraes, 2010)

Case study: Giant Tortoises

2 minute video on human-like
influenza found in giant tortoises



An aerial photograph of the Quilotoa lake, a vibrant turquoise crater lake in the Andes. The lake is surrounded by steep, dark volcanic slopes with patches of snow and sparse vegetation. In the foreground, a wooden walkway with a railing leads down towards the lake, where several people can be seen walking. The sky is clear and blue.

Quilotoa

Quilotoa: QuickFacts

Location: most western volcano of the Andes, Ecuador

Elevation: 3,900m high (12,796ft)

Size: 3,000m wide (9842.52 ft)

Laguna Quilotoa: 240m (789 ft) deep

Current Status: Dormant

Past Eruptions: 8 eruptions every 10,000- 14,000 yrs within the last 200,000 years

Last Eruption: 1280

Source: (Pilot, 2015).



Morphology: Caldera

Hint: What is a caldera?

Is a crater that is formed by the mouth of a volcano sinking in upon itself due to a really large volcanic eruption.

Quilotoa V.S Cotopaxi



Location: Most western volcano of the Andes, Ecuador

Elevation: 3,900m (12,796ft)

Last Eruption: 1280

Status: Dormant



Location: Cotopaxi, Ecuador/Pichincha

Highest Point: 5,897m (19,347ft)

Last Eruption: Aug. 2015 - Jan.2016

Status: Active

Quilotoa: Brief History

The Legend: that it was named after a local princess (Pilot, 2015).

The truth: “quiru” meaning ‘for tooth’ and “toa” meaning ‘princess’ in Quechua language (Leviton,2017).

Last Eruption: 1280

- At the time was one of the worst worldwide eruptions
- “The eruption emptied ca. 11 cubic km of magma during 4 eruptive phases”
- Caused one the largest plumes of volcanic ash that traveled to the north mountain ranges of the Andes
- Pyroclastic flows met the Pacific Ocean
- Caldera formed

Source: VolcanoDiscovery





Located about 177 km (110 miles) southwest of Quito

Ecotourism In Quilotoa

Things to do?

- Swim in Laguna Quilotoa- if you dare!
- Kayaking in Laguna Quilotoa
- Camping
- Hike/walk/bike the Quilotoa Loop

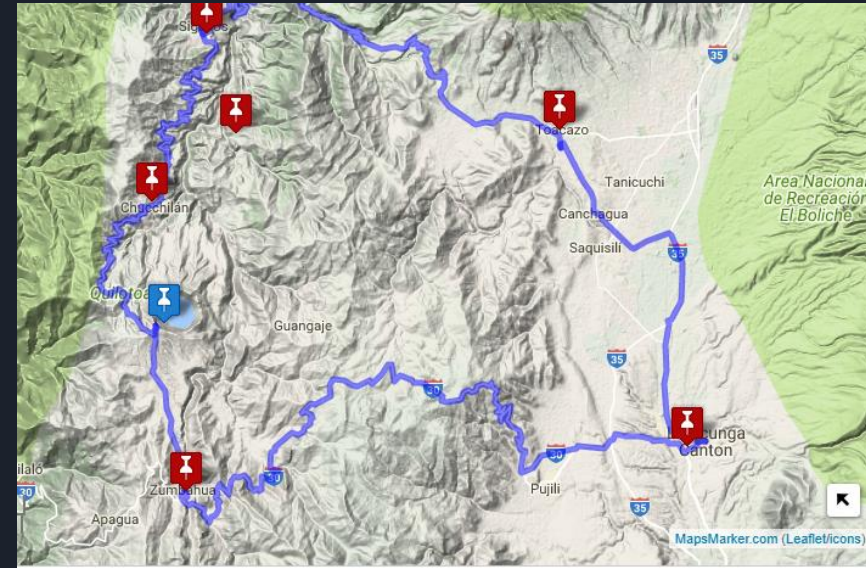
Source: (Pilot,2015).



Source: Ecuador Travel



Source: Ecuador Travel



MapsMarker.com (Leaflet/Icons)

Quilotoa Loop: What To Know

Pathways:

Latacunga>Pujili>Tigua>Zumbahua>Laguna
Quilotoa>Chugchilan>Isinlivi>Sigchos>Toacazo

How to get around the loop: Hiking, buses, donkey,
biking

Activities to do along the way:

- Market Plazas/Shopping
- Local Art Centers/ Mini-Museums
- Lodging/ Hotels
- Restaurants (Pilot,2015)

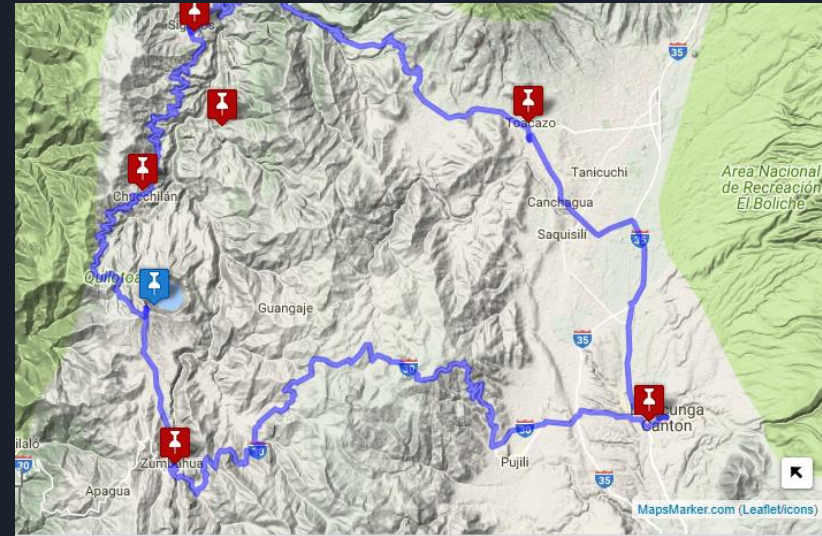
Duration: 3 - 5 days

Cost: \$150 - \$200/person (Andrew & Emily, 2015).

https://www.youtube.com/watch?v=5PkKZv1e_Hw



Image: Square space





Local NGOs In Ecuador

Fundación Octaedro:

- Bilateral film festival
- Invites worldwide filmmakers to Ecuador
- Goal: educate less fortunate kids & students about the world

Selva Viva:

- Runs an animal rehabilitation center in the Amazon, school and eco-lodge

Fundacion FEVI:

- Has worldwide tourists educate and volunteer with local Ecuadorian people who are homeless & less fortunate
- Volunteering opportunities include working with: women organizations, indigenous communities, human rights centers and public schools

Fundacion Natura:

- Mission Statement: Educate the public, preserve biodiversity & use natural resources sustainably
- Goal: to promote a sustainable future
- Volunteer Opportunities: Educate the public, maintain trails & reforestation projects (Halberstadt,2018).



International NGO's With Influence in Ecuador

Amnesty International:

- Established in 1961
- Fights for human rights worldwide & has had campaigns in Ecuador

Red Cross International:

- Mission: to help people worldwide, especially those who suffer from disease & disasters
- In Ecuador: has a free ambulance service & helps educate people with disaster preparedness techniques

UNICEF:

- General Assembly of United Nations
- Provides basic needs & essentials (food, shelter, medicine) to children worldwide (Halberstadt,2018).

Why NGO's Matter





Economic Impact Of Ecotourism

- As of 2017 travel and tourism contributed more than \$5000 million overall to the GDP of 185 countries
- Expected more than \$8000 million contributed to GDP by 2027
- Revenues from travel and tourism affects
 - Commodities
 - Industries
 - Sources of spending/suppliers of goods
 - Tourism investment spending
 - Government tourism spending
 - General GDP
 - Employment
- As of 2017 in Ecuador more than \$2000 million (more than 2.0% of economy GDP) was directly contributed from tourism and travel to the GDP
- Nearly \$3500 million contribution to GDP expected in 2027

(Source: Turner, 2017)

COUNTRY RANKINGS: ABSOLUTE CONTRIBUTION, 2016

TRAVEL & TOURISM'S DIRECT CONTRIBUTION TO GDP		2016 (US\$bn)
8	Mexico	76.7
11	Brazil	56.8
	World Average	19.1
20	Argentina	18.9
43	Chile	8.1
44	Peru	7.6
48	Venezuela	6.8
	Latin America Average	6.4
50	Colombia	6.1
68	Costa Rica	2.7
79	Ecuador	2.0
80	Guatemala	2.0

TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO GDP		2016 (US\$bn)
10	Mexico	165.9
11	Brazil	152.2
	World Average	57.3
24	Argentina	52.5
39	Chile	24.9
45	Peru	19.6
49	Venezuela	18.8
	Latin America Average	17.3
52	Colombia	16.7
70	Costa Rica	7.0
80	Guatemala	5.5
82	Ecuador	5.1

The tables provide brief extracts from the full WTTC Country League Table Rankings, highlighting comparisons with competing destinations as well as with the world and regional average. Averages in above tables are simple cross-country averages. The competing destinations selected are those that offer a similar tourism product and compete for tourists from the same set of origin markets. These tend to be, but are not exclusively, geographical neighbours.

(Source: Turner, 2017)

TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO EMPLOYMENT		2016 '000 jobs
4	Mexico	8659.2
6	Brazil	7003.2
	World Average	2152.9
27	Argentina	1579.9
32	Colombia	1379.3
34	Peru	1332.1
38	Venezuela	1017.2
	Latin America Average	847.8
44	Chile	793.6
64	Guatemala	513.1
82	Ecuador	344.0
98	Costa Rica	270.9

The tables provide brief extracts from the full WTTC Country League Table Rankings, highlighting comparisons with competing destinations as well as with the world and regional average. Averages in above tables are simple cross-country averages. The competing destinations selected are those that offer a similar tourism product and compete for tourists from the same set of origin markets. These tend to be, but are not exclusively, geographical neighbours.

(Source: Turner, 2017)

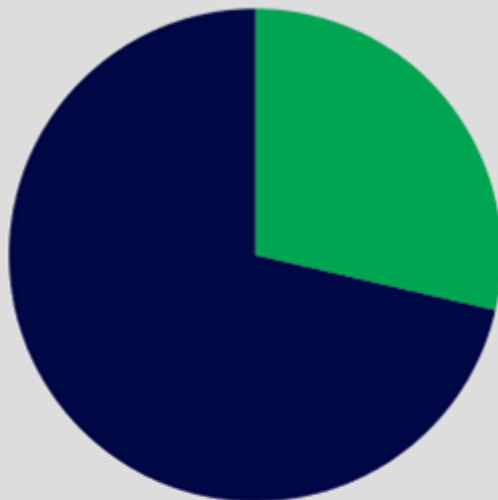
DIFFERENT COMPONENTS OF TRAVEL & TOURISM¹

ECUADOR

TRAVEL & TOURISM'S CONTRIBUTION TO GDP:
BUSINESS VS LEISURE, 2016

Leisure
spending
71.4%

Business
spending
28.6%



Leisure travel spending (inbound and domestic) generated 71.4% of direct Travel & Tourism GDP in 2016 (USD2,207.5mn) compared with 28.6% for business travel spending (USD883.8mn).

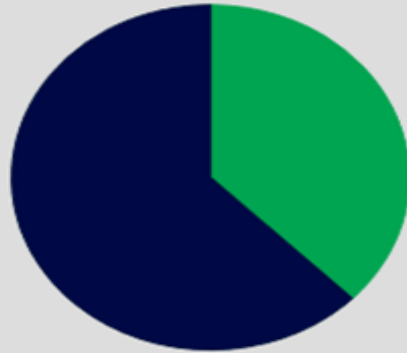
Leisure travel spending is expected to grow by 6.0% in 2017 to USD2,339.6mn, and rise by 5.0% pa to USD3,800.8mn in 2027.

Business travel spending is expected to grow by 5.5% in 2017 to USD932.8mn, and rise by 2.9% pa to USD1,240.6mn in 2027.

ECUADOR
TRAVEL & TOURISM'S CONTRIBUTION TO GDP:
DOMESTIC VS FOREIGN, 2016

Foreign visitor spending
62.6%

Domestic spending
37.4%



Domestic travel spending generated 37.4% of direct Travel & Tourism GDP in 2016 compared with 62.6% for visitor exports (ie foreign visitor spending or international tourism receipts).

Domestic travel spending is expected to grow by 0.2% in 2017 to USD1,157.0mn, and rise by 2.8% pa to USD1,522.2mn in 2027.

Visitor exports are expected to grow by 9.3% in 2017 to USD2,115.3mn, and rise by 5.2% pa to USD3,519.1mn in 2027.

ECUADOR
BREAKDOWN OF TRAVEL & TOURISM'S
TOTAL CONTRIBUTION TO GDP, 2016

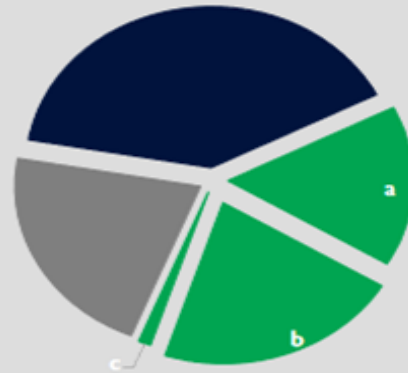
Direct
39.7%

Induced
21.7%

Indirect
38.6%

Indirect is the sum of:

- (a) Supply chain 16.3%
- (b) Investment 21.4%
- (c) Government collective 11%



The Travel & Tourism industry contributes to GDP and employment in many ways as detailed on page 2.

The total contribution of Travel & Tourism to GDP is nearly three times greater than its direct contribution.

¹ All values are in constant 2016 prices & exchange rates



Pros of Ecotourism

Pros:

- Income stays in the country
 - Helping local schools, clean water, healthcare
- Regular travel and tourism usually returns only about 20% of revenue back to local communities while ecotourism can return as much as 95%
- Positive impact on the community
 - Promotes locally grown food and crafted goods and preserves traditional practices and
- Don't need to rely on exploitative industries, allowing indigenous people to preserve their traditions without destroying land



Pros Of Ecotourism pt.2

Pros:

- Education
 - Provides the opportunity for not only environmentalists, but also tourists to learn more about the ecosystems, biology, and geology of a specific location
 - Educational programs about environment preservation
- Some of the money people spend on ecotourism goes toward conservation efforts, such as reforestation and endangered species repopulation projects

(Source: Clayton, 2017).



Cons of Ecotourism

Cons:

- Less money is made from ecotourism versus commercial tourism
- Attracts more people to reside in fragile areas
 - Between 1974 and 1997 the population of the Galapagos grew by almost 150 percent, and today there are about 27,000 year-round residents
- Ecosystem Degradation
 - Human presence can scare off prey
 - An increased number of travelers can lead to soil erosion and habitat loss
 - Higher demand of resources like food and water for travelers creates



Cons of Ecotourism pt. 2

Cons:

- Organizations jumping on the trend of ecotourism and claiming to be “ecotouristic” despite their negligence to adhere to eco-friendly policies
- Travel to the ecotouristic destinations are often far/long
 - Planes generate a huge amount of global pollution which can indirectly affect the local ecosystems of your travel destination
 - Cars and boats used for local transportation will have more direct negative effects

(Source: Clayton, 2017).



References

VolcanoDiscovery.(2017). *Quilotoa Volcano*. Retrieved from:
<https://www.volcanodiscovery.com/quilotoa.html>

Pilot, Mark. (2015). *Quilotoa Loop:Hiking Ecuador's Stunning Volcanic Crater Lake* (blog). Retrieved from:
<https://www.flyingandtravel.com/quilotoa-loop-ecuador/>

Leviton, Ira. (2017, Nov 26). *Laguna Quilotoa*. Retrieved from:
https://en.wikivoyage.org/wiki/Laguna_Quilotoa

Andrew & Emily. (2015). *How much does it cost to hike the Quilotoa loop?* (blog). Retrieved from:
<https://www.alongdustyroads.com/posts/2015/6/10/cost-of-hiking-the-quilotoa-loop-tour-ecuador>

Halberstadt, Jason. (1997-2018). *Ecuadorian Non-Profit Organizations*. Retrieved from:
http://www.ecuadorexplorer.com/html/about_ecuador/ngo_list.html



References Cont.

Darino, L. (2006). Exploring Ecotourism in Ecuador. *Columbia Business School*. Retrieved December 26, 2017, from https://www0.gsb.columbia.edu/mygsb/faculty/research/pubfiles/2264/Exploring_Ecotourism_in_Ecuador.pdf?_ga=1.18374523.311296924.1492619228

Cotopaxi. (2017, December 17). Retrieved December 26, 2017, from <https://en.wikipedia.org/wiki/Cotopaxi>

Caputo, L. (2013, October 25). Cotopaxi National Park Things to See and Do. Retrieved December 26, 2017, from <http://www.vivatravelguides.com/south-america/ecuador/andean-highlands/central-highlands/cotopaxi-national-park/cotopaxi-national-park-activities/>

Barros, A., Monz, C., & Pickering, C. (2015). Is tourism damaging ecosystems in the Andes? Current knowledge and an agenda for future research. *Ambio*, 44(2), 82-98. Retrieved December 26, 2017, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4329127/>

References Cont.

Turner, R., & Freiermuth, E. (2017). TRAVEL & TOURISM ECONOMIC IMPACT 2017 ECUADOR. *World Travel & Tourism Council* . Retrieved December 26, 2017, from <https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/ecuador2017.pdf>

Clayton, N. (2017, July 19). WorldTrips Blog. Retrieved December 26, 2017, from <http://www.worldtrips.com/blog/pros-and-cons-of-ecotourism>

Galapagos Travel Center. (2017). Galapagos Islands Geography. *Galapagos Islands.com*. Retrieved December 24, 2017, from <https://www.galapagosislands.com/nature/geography/>

Lundh, J. (2011, July 20). Galapagos: A Brief History. *Internet Archive Wayback Machine*. Retrieved December 24, 2017, from <https://web.archive.org/web/20110720084818/http://www.galapagos.to/TEXTS/LUNDH-3.HTM>

Yacht La Pinta. (2016, September 9). Brief History of the Galapagos Islands. *Galapagos Cruise & Tours 2017 and 2018*. Retrieved December 25, 2017, from <https://www.lapintagalapagoscruise.com/history-galapagos-islands/>

"Galápagos Islands." *The Columbia Encyclopedia, 6th ed.* . Retrieved December 26, 2017 from Encyclopedia.com: <http://www.encyclopedia.com/reference/encyclopedias-almanacs-transcripts-and-maps/galapagos-islands>

Galapagos Conservancy. (2016). Biodiversity. *Galapagos.org*. Retrieved December 24, 2017, from https://www.galapagos.org/about_galapagos/about-galapagos/biodiversity/

References Cont.

Galapagos Conservancy. (2016). Tourism and Population Growth. *Galapagos.org*. Retrieved December 25, 2017, from

<https://www.galapagos.org/conservation/conservation/conservationchallenges/tourism-growth/>

SA Explorer. (2012, September 18). Galapagos Entrance Fee: Where Does the Money Go? SA Expeditions. Retrieved December 26, 2017, from

<http://saexpeditions.com/blog/post/galapagos-entrance-fee-where-does-the-money-go>

Self, R, Self, D, & Bell-Haynes, J. (2010, December). Marketing Tourism In The Galapagos Islands Ecotourism or Greenwashing. ResearchGate. Retrieved December 26, 2017 from

https://www.researchgate.net/publication/296472771_Marketing_Tourism_In_The_Galapagos_Islands_Ecotourism_Or_Greenwashing

Epler, B, Watkins, G, & Cardenas, S. (2006-2007). Tourism and the Galapagos Economy. Socioeconomic Issues. Retrieved December 26, 2017 from

<https://www.galapagos.org/wp-content/uploads/2012/04/socio6-tourism-and-galapagos-economy.pdf>

IGTOA. (2015). Choosing a Galapagos Trip. International Galapagos Tour Operators Association

https://www.igtoa.org/travel_guide/choosing_a_trip

Williams, S, & Guimaraes, A. (2010, July 29). List of World Heritage in Danger: World Heritage Committee inscribes the Tombs of Buganda Kings (Uganda) and Removes Galapagos Island (Ecuador). UNESCO. Retrieved December 26, 2017 from

<http://whc.unesco.org/en/news/636>



Sources For Images

<https://pachajourneys.com.ec/wp-content/uploads/2016/05/quilotoa-pachajourneys-cover.jpg>

<https://www.mountain-forecast.com/locationmaps/Quilotoa.8.gif>

<https://www.flyingandtravel.com/quilotoa-loop-ecuador/>

<https://ecuador.travel/wp-content/uploads/2015/10/Ecuador-Travel-Lago.jpg>

<https://ecuador.travel/wp-content/uploads/2014/05/Laguna-Crater-Volcan-Quilotoa-TATIANA-HENR%C3%8DQUEZ-1.png>

<https://static1.squarespace.com/static/53172b1be4b0cc8a5401db4a/t/55b3bfd6e4b08415a075dd87/1437843424101/10+things+to+know+before+hiking+the+Quilotoa+Loop>

https://upload.wikimedia.org/wikipedia/commons/2/20/Cotopaxi_volcano_2008-06-27T1322.jpg

<http://constantine.typepad.com/.a/6a0120a7fc3be9970b01b8d2497a81970c-pi>

<https://naturegalapagos.com/wp-content/uploads/2013/10/Quilotoa.jpg>

<http://clipart-library.com/clipart/8cxrp5gzi.htm>

https://d2gg9evh47fn9z.cloudfront.net/800px_COLOURBOX24086640.jpg

https://www.peregrineadventures.com/sites/peregrine/files/styles/low-quality/public/elements/product/map/PSCOX_2015_WEB.jpg



Sources for Images Cont.

<http://www.markedbyteachers.com/as-and-a-level/geography/ecotourism-in-ecuador.html>

<https://www.ietravel.com/expedition/galapagos-islands-voyage>

<http://www.travelandleisure.com/trip-ideas/adventure-travel/how-to-travel-to-galapagos-islands>

<https://www.santacruzgalapagoscruise.com/unique-wildlife-galapagos-islands/>

<https://www.slashgear.com/galapagos-islands-wolf-volcano-erupts-for-first-time-in-33-years-26385304/>

http://www.galapagosisland.net/galapagos_islands/map.html

<https://www.pinterest.co.uk/QuasarEx/galapagos-animals/>

<https://www.galapagos.org/conservation/conservation/conservationchallenges/tourism-growth/>

<https://www.galapagos.org/wp-content/uploads/2012/04/socio6-tourism-and-galapagos-economy.pdf>

<https://worldofgalapagos.weebly.com/threats--conservation.html>