RESPONSE TO THE COMMENTS OF COSTA RICA ON THE REPORT SUBMITTED ON 30 APRIL 2017 BY THE EXPERTS APPOINTED BY THE COURT IN THE CASE CONCERNING MARITIME DELIMITATION IN THE CARIBBEAN SEA AND THE PACIFIC OCEAN (COSTA RICA V. NICARAGUA)

Costa Rica's written observations on our Report of 30 April 2017 were transmitted to us by a letter of the Registrar dated 2 June 2017. This letter also informed us that Nicaragua indicated that it would not make written observations on our Report.

In this document we address the comments made by Costa Rica:

Comment 1 (Ad paragraph 15)

During our first site visit we encountered a channel in the beach close to the western edge of the Los Portillos/Harbor Head Lagoon, which was most probably breached by Hurricane Otto (figures 2, 29, 30 and 31 of the Report). In the Report we indicate that the channel was draining water from the lagoon towards the sea (paragraphs 15, 19, 34, 101, 188 of the Report). During the first site visit (5 to 9 December 2016) the water level in Los Portillos/Harbor Head Lagoon and the adjacent areas was unusually high due to recent flooding caused by Hurricane Otto, which made landfall in the San Juan de Nicaragua area on 24 November 2016. In the interest of completeness, Costa Rica observes that the channel was also draining water from the wetlands of Isla Portillos. We agree with this observation. The channel was draining water from the lagoon and from the adjacent wetlands of Isla Portillos (see figure 29 of the Report). In the Report we mention the lagoon as the source of the flow due to two main reasons: (1) under normal conditions, Los Portillos/Harbour Head Lagoon is an enclosed water body with no outlet to the sea; (2) we consider that the lagoon was the main contributor to the flow.

Comment 2 (Ad paragraphs 25, 27, 153 and 161)

This comment refers to a marker found by both Parties in 2003 on the beach near Los Portillos/Harbor Head Lagoon (see figure 56 of the Report). In the Report, following the *Minute of the Fourth Technical Meeting of the Sub-Commission of Limits and Cartography* included in annex 15 of the Counter-Memorial of Nicaragua, we indicate that the co-ordinates of the marker were measured by both parties on 25 November 2003. However, Costa Rica observes that:

- (a) The "Minute" is not signed by Costa Rica and does not contain the co-ordinates of any marker.
- (b) The co-ordinates of the marker were measured by both parties on 21 February 2003.
- (c) The measured co-ordinates, as well as the calculated average co-ordinates, were subsequently recorded in a Report prepared by Nicaragua's INETER dated 23 March 2003, and these co-ordinates were given to the experts during the first site visit (see paragraph 161 of the Report).
- (d) The 23 March 2003 Report does not form part of the pleadings and the representatives of Costa Rica and Nicaragua agreed to provide the co-ordinates only for facilitating the location of the marker.

In response to the observations made by Costa Rica, it is pertinent from our standpoint to indicate two relevant facts:

- (a) The date at which the co-ordinates were measured does not have any impact on our investigation and Report.
- (b) The marker found in 2003 on the beach near Los Portillos/Harbor Head Lagoon and the co-ordinates provided by the Parties have not been used for locating the land point which most closely approximates to that identified by the first Alexander Award as the starting-point of the land boundary (second question of the Court). The co-ordinates provided by the Parties were simply used, unsuccessfully, to try to locate the marker (see paragraphs 41 and 161-164 of the Report).

Comment 3 (Ad paragraph 101)

Costa Rica states that the code indicated in paragraph 101 of the Report for the point measured in the second site visit at the western extremity of the water body of Los Portillos/Harbor Head Lagoon should be "Plw2" instead of "Plew2".

We agree with this observation. There is a typographical error and the reference should be "Plw2".

Comment 4 (Ad paragraph 106)

The Report describes a series of discontinuous coast-parallel lagoons in a coastal stretch of Isla Portillos, between the beach and an area covered by tree vegetation (see paragraph 106 and figures 41 and 42). Costa Rica points out that those lagoons were much more restricted during the second site visit than during the first site visit, carried out under exceptionally wet conditions mainly related to Hurricane Otto, which impacted on the area shortly before. We understand that the observation made by Costa Rica is not an objection to our Report, as

supported by figures 41 and 42, taken during the first and second site visits, respectively. In fact, the caption of figure 42 indicates: "Note that the lagoons were much less extensive than during the first site visit."

Comment 5 (Ad paragraph 139)

Paragraph 139 of the Report indicates that: "The markers located at the Initial Point and the center of Plaza Victoria had iron pipes approximately 40 cm in diameter and 2 m long filled with concrete". Costa Rica observes that for the sake of accuracy, the sentence should read as: "The <u>reference</u> markers located <u>on the opposite margin of Los Portillos/Harbor Head Lagoon from</u> the Initial Point and at the center of Plaza Victoria has iron pipes and approximately 40 cm in diameter and 2 m long filled with concrete."

This observation is correct but does not have any detrimental impact on the answers to the questions posed by the Court, since we were not able to find any of the markers recorded in the Proceedings of the Costa Rica-Nicaragua Demarcation Commissions.

Comment 6 (Ad paragraph 195)

In paragraph 195 of the Report, we state that a potential physical change that may occur in the area is a sharp shift in the path of the San Juan River (avulsion) taking advantage of secondary channels (caños) located on its right margin in Isla Portillos and the topographic depression of Los Portillos/Harbour Head Lagoon (i.e. the lagoon might become the mouth of the river).

Costa Rica observes that the course of the lower reach of the San Juan River, up to a point just before its mouth, has been relatively stable for at least a century.

We would like to restate that the lower reach of the San Juan River has favourable geomorphological conditions for experiencing significant changes in its path. The channel is not subject to stabilisation or control measures and flows along a flat and unconfined coastal plain locally carved by abandoned channels that may reactivate during flood events. This concept is supported by the presence of a large abandoned channel (Taura River) indicating that the configuration of the river course has been affected by major changes in historical times (see figures 1 and 2 below). Moreover, if coastal recession proceeds in the future at a similar pace as in the recent past, then the eastward shift in the mouth of the San Juan River, related to the intersection between the retreating coastline and the meander located around 300 m inland, is rather likely, in the mid-term, especially considering the current sea-level rise scenario (see figure 88 of the Report). For instance, the coast has retreated around 940 m on the east side of Los Portillos/Harbor Head Lagoon between 1898 and 2009, yielding an average retreat rate of around 8.5 m/yr (see paragraph 192 and figure 86 of the Report).

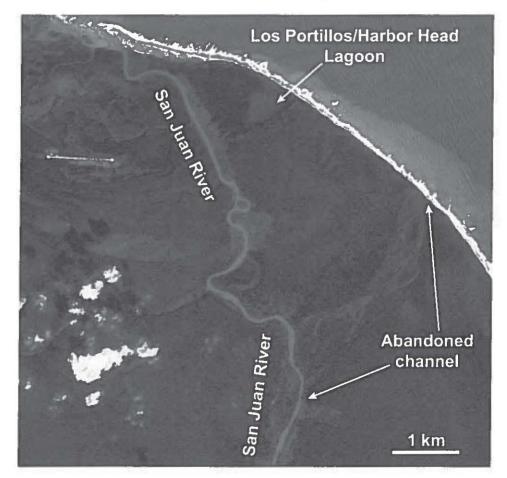


Figure 1. Landsat image from 2011 showing a large abandoned channel (Taura River) connected with the San Juan River that used to flow into the Caribbean Sea around 3 km south-east of Los Portillos/Harbor Head Lagoon. This channel was active in the 19th century (see Taura Branch in figure 51 of the report) and at least at the beginning of the 20th century (see figure 2 below).

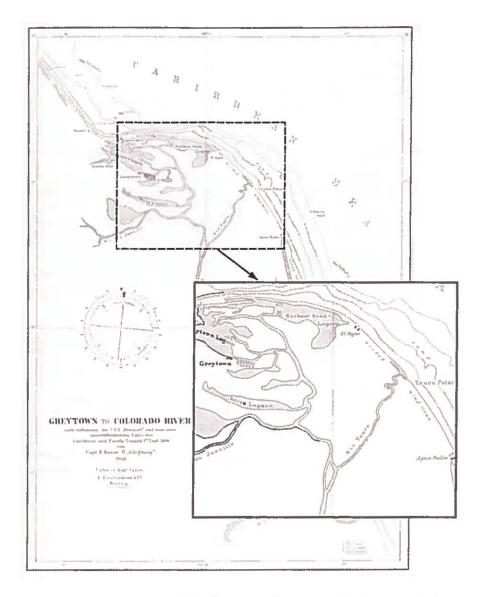


Figure 2. Map from 1903 depicting the Taura River as an active branch of the San Juan River (information provided by Costa Rica and Nicaragua to the experts).

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